



This Workplace Research Monthly includes the latest peer-reviewed articles, reports and evidence on a range of workplace health and safety, prevention, recovery at work and return to work topics that were published in March 2026 only.

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Description of Evidence Levels Definitions Used in this Review

- 1. Level of Evidence** – Certain study designs are scientifically stronger at answering a question. The scoring hierarchy we provided is presented below.

Level of Evidence	Description
Level 1	Evidence from a systematic/scoping review or meta-analysis of relevant studies.
Level 2	Evidence from a randomised controlled trial.
Level 3	Evidence from a controlled intervention trial without randomisation (i.e. quasi-experimental).
Level 4	Evidence from a case-control or cohort study.
Level 5	Evidence from a single case study, a case series, or qualitative study.
Level 6	Evidence from opinion pieces, reports of expert committees and/or from literature reviews.

- 2. Relevance** – Research carried out in Australia or similar countries is most relevant to Australian readers.

Level	Description
A	Study conducted in Australia or the study has been conducted outside Australia but confounders unlikely to affect relevance
B	Study conducted outside Australia and confounders likely to affect generalisability

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Enabling Healthy and Safe Workplaces

Health and Wellbeing

Environmental and occupational contributors to autoimmune, inflammatory, and musculoskeletal rheumatic disease: A review of emerging evidence and clinical implications

Purpose of review: Autoimmune and inflammatory rheumatic diseases as well as certain musculoskeletal diseases treated by rheumatologists result from a complex interplay between genetic predisposition and environmental factors. **Recent findings:** Accumulating research has examined the possible roles of physical trauma, psychological stress, pollutants, and occupational exposures as triggers or influencers of disease. We review and summarize existing evidence for these contributors for conditions including rheumatoid arthritis, systemic lupus erythematosus, psoriatic arthritis, spondyloarthritis, systemic sclerosis, Sjogren's syndrome, vasculitis, myositis and fibromyalgia. We highlight findings from case-control, cohort, and twin studies that associate trauma, chronic stress and environmental exposure with immune dysregulation and increased disease risk. We apply the GRADE framework to assess the strength of evidence and identify key research gaps. Summary tables are included to guide clinical assessment which could also support interdisciplinary communication in medico-legal contexts. **Summary:** These data have implications for disease etiopathogenesis; management; historical appreciation; public health, policy and safety; and legal considerations.

Ward et al. 2026.

Current Opinion in Rheumatology, vol. 38, no. 2.

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Keywords: Autoimmune disease; environment exposures; occupational risk; rheumatology; trauma.

Evidence Level: 1A

Link: https://journals.lww.com/co-rheumatology/fulltext/2026/03000/environmental_and_occupational_contributors_to.9.aspx

Interventions to improve mental well-being and sleep in paramedics: A scoping review

Background: Paramedics face unique occupational hazards, including high operational demands, trauma exposure, and shift work, all of which impact mental well-being. Suboptimal sleep is also common in this workforce and closely linked to adverse mental health outcomes. This scoping review synthesizes evidence to date on interventions to support paramedic mental well-being including sleep-based interventions.

Materials and methods: This review was pre-registered on the Open Science Framework (<https://doi.org/10.17605/OSF.IO/7VSD9>). Systematic database searches were conducted in October 2024 for original research published after 2004. Data were narratively synthesised, and findings reported following established guidelines. **Results:** Nineteen sources were included, involving 1,067 participants across seven countries. Seventeen interventions were examined, predominantly via randomized controlled trials (58%), utilizing a total of 43 different measurement scales to evaluate mental health and sleep outcomes. Interventions included psychological (37%), sleep, fatigue and/or shift work (32%), and complementary and alternative medicine (32%) approaches which primarily focussed on the individual-level (94%). Studies were limited by sample sizes, design and quality, limited long term follow-up, and low baseline symptoms. **Conclusions:** This review highlights a critical gap in robust, evidence-based, system-level interventions to address poor sleep and mental well-being in paramedics. Future research should prioritise co-designed, context-sensitive approaches, ideally integrated within organisational structures to ensure relevance and accessibility.

Wanstall et al. 2026.

PLoS One, vol. 21, no. 3.

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Keywords: Mental well-being; sleep; paramedics.

Evidence Level: 1A

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0344377>

Illicit cannabis use among workers in Australia: A nationally representative cross-sectional analysis of prevalence, determinants, and associated absenteeism

Introduction: Cannabis is the most used illicit substance among workers in Australia, yet the epidemiology of frequent use and risk of harm remains underexplored. This study investigated the prevalence and determinants of, as well as absenteeism associated with, weekly illicit cannabis use and risk of cannabis-related harm among Australian workers. **Method:** The study used data from the 2019 and 2022-23 National Drug Strategy Household Surveys (N = 24,954). **Results:** Weekly cannabis use was reported by 5.0 % (SE = 0.2) of respondents, while 2.2 % (SE = 0.1) were classified as at risk of harm. Workers in construction and hospitality, as well as labourers and tradesmen, exhibited elevated rates of use and harm. Significant determinants of weekly illicit cannabis use identified in multivariate regression models include being male, younger (14-39 years), never married, born in Australia, smoking (current or former), and heavy episodic drinking (HED). Determinants of being at risk of harm were being male, never married, born in Australia, residing in a major city, experiencing psychological distress, smoking (current or former), and HED. Current smoking showed the strongest associations with both outcome measures. Weekly illicit cannabis use and being at risk of harm were associated with 2.8 and 6.9 additional days absent from work due to illness or injury, respectively. **Conclusions:** By identifying the determinants and consequences of frequent illicit cannabis use and being at risk of harm among employed individuals, these findings provide key insights necessary to develop targeted behavioural change and workplace substance use interventions.

Di Censo et al. 2026.

Drug and Alcohol Dependence, vol. 280.

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Keywords: Epidemiology; occupational health; risk factors; substance-related harm; worker drug use; workplace absence.

Evidence Level: 4A

Link: <https://www.sciencedirect.com/science/article/pii/S0376871626000384?via%3Dihub>

Health's influence on alcohol use: A longitudinal study of working adults in Sweden

While alcohol's health effects are well documented, less is known about how health influences alcohol use and whether this varies by socioeconomic position (SEP). This study investigated the association between health-related quality of life (HRQoL), mental health, and alcohol use, and whether SEP moderates these associations. Baseline data from 7097 participants in the 2010 Stockholm Public Health Cohort were used. The exposures were HRQoL and mental health (good, moderate, poor); Outcomes (2014) were heavy episodic drinking (HED: ≥ 5 units/ ≥ 2 times/month) and heavy drinking (men: ≥ 21 units/week; women: ≥ 14 units/week). Logistic regression estimated odds ratios (OR), with interaction assessed using relative excess risk of interaction (RERI) and attributable proportion (AP). Joint exposure analyses used good health and high SEP as the reference group. Compared with good HRQoL, moderate (OR: 1.26, 95% CI: 1.02-1.56) and poor HRQoL (OR: 1.39, 95% CI: 1.08-1.78) were associated with higher odds of heavy drinking. Moderate HRQoL and low SEP had increased odds of HED (OR: 1.48, 95% CI: 1.02-2.15) and heavy drinking (OR: 1.62, 95% CI: 1.01-2.60), with evidence of additive interaction (RERI: 0.79; AP: 0.49). Mental health findings were less consistent: good mental health and low SEP was associated with increased HED (OR: 1.35), while moderate mental health and intermediate SEP was associated with decreased HED (OR: 0.66). Findings suggest a dose-response relationship between HRQoL and self-reported heavy drinking and an interaction between moderate HRQoL and low SEP. Associations with mental health were weaker and inconsistent.

Jonsson et al. 2026.

European Journal of Public Health, vol. 36, no. 2.

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Keywords: Alcohol use; working adults; health.

Evidence Level: 4B

Link: <https://academic.oup.com/eurpub/article/36/2/ckag037/8537033?login=false>

Daily associations of subjective and objective sleep parameters with restorative sleep and morning sleepiness in Japanese working adults

Restorative sleep and morning sleepiness are essential factors associated with daytime functioning among workers, yet their variability and determinants remain unclear. Previous studies have primarily focused on either subjective or objective sleep measures, with many cross-sectional investigations, although fewer longitudinal studies have considered the interaction with psychological and chronobiological factors. The aim of this study was to investigate both subjective and objective sleep parameters, along with psychological and chronobiological factors, and examine their influence on daily restorative sleep and morning sleepiness in healthy workers. Thirty-seven participants wore portable sleep monitoring devices over multiple days and completed daily subjective sleep assessments. Using multilevel linear mixed-effects models, we examined associations between sleep parameters and next-morning outcomes. The results indicated that longer subjective and objective total sleep time were associated with greater restorative sleep, while longer subjective and objective sleep onset latency were negatively associated with restorative sleep. Regarding morning sleepiness, longer subjective and objective total sleep time, as well as a higher proportion of deep sleep, were associated with reduced morning sleepiness. In contrast, a greater severity of depressive symptoms was associated with increased morning sleepiness. These findings highlight the value of considering both subjective and objective sleep parameters when evaluating daily sleep outcomes. In occupational medicine, assessing workers' sleep using both subjective and objective measures, while also considering depressive symptoms, could be beneficial.

Kawai et al. 2026.

Scientific Reports, vol. 16, no. 1.

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Keywords: Chronotype; depression; morning sleepiness; restorative sleep; wearable electroencephalography.

Evidence Level: 4B

Link: <https://www.nature.com/articles/s41598-026-43784-2>

Pulmonary functions and capacities and their associations with sociodemographic, physical and behavioural risk factors in firefighters

Introduction: Firefighters are exposed to toxic smoke and hazardous environmental conditions that place them at risk for pulmonary disorders. This study aimed to determine the prevalence of pulmonary symptoms and disorders among full-time firefighters in the City of Cape Town Fire and Rescue Service and to explore associations with sociodemographic, physical and behavioural risk factors. **Methods:** A cross-sectional, quantitative study was conducted among 278 full-time firefighters using convenience sampling. Data were collected using a researcher-generated questionnaire and spirometry measurements. Physical characteristics were assessed using bioelectrical impedance analysis. Descriptive and inferential statistics were applied (Kruskal-Wallis H, Chi-squared test, Pearson's correlation), with $p < 0.05$ denoting statistical significance. **Results:** More than half (53.60%) of firefighters presented with at least one pulmonary symptom. Coughing (54.36%) and nasal congestion (40.94%) were the most common symptoms. Pulmonary symptoms were more frequent among firefighters aged 30-49 years. Significant differences were found in pulmonary function between age categories ($p < 0.01$) and obesity in firefighters ($p < 0.01$). Negative correlations were found between FVC and BMI ($r = -0.35$), BG% ($r = -0.47$) and years of experience ($r = -0.21$). **Conclusions:** Findings highlight the occupational burden of pulmonary health risks and the need for regular screening and preventive strategies within firefighting populations.

Ras et al. 2026.

International Journal of Environmental Research and Public Health, vol. 23, no. 3.

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Keywords: Obesity; physical activity; occupational exposure; respiratory health; smoking; spirometry.

Evidence Level: 4B

Link: <https://www.mdpi.com/1660-4601/23/3/370>

Differences in cardiorespiratory fitness, physical activity, and pulmonary function across occupational groups and educational levels: A cross-sectional study

Background: Insufficient physical activity (PA) and low cardiorespiratory fitness (CRF) are risk factors for lifestyle diseases, including cardiovascular diseases. Lifestyle plays a major role in shaping CRF and overall health, and professional work is an important part of this. **Aims:** To examine associations between the type of work, industry, level of education, weekly working hours, and self-reported PA, CRF, pulmonary function using questionnaire-based assessment, submaximal exercise testing, and spirometry. **Methods:** A survey was conducted on occupation, hours worked per week, night shift work, education, age, and gender, as well as a PA survey based on the IPAQ-SF. The Åstrand-Rhyming fitness test was used to estimate VO₂max. Spirometry was performed to assess pulmonary function, with results including FVC, FEV₁, and the FEV₁/FVC ratio. The group consisted of 203 professionally active adults aged 40-70 (55.17% men, 39.41% blue-collar workers, mean age: 53.4). **Results:** Blue-collar workers reported higher self-reported weekly PA ($p = 0.0003$), and this result was significant for men ($p = 0.0003$). White-collar workers had higher estimated VO₂max ($p = 0.0467$), but when stratified by gender, only female blue-collar workers had lower values than female white-collar workers ($p = 0.0142$). Among industries the lowest self-reported weekly PA values were observed in male representatives of the professionals group, and the highest in agriculture and forestry workers. **Conclusions:** Among men, blue-collar workers reported higher self-reported weekly PA than white-collar workers, with no significant differences in estimated VO₂max. Among women, blue-collar workers did not report higher self-reported PA but had lower estimated VO₂max than white-collar women. These differences are small and should be interpreted cautiously.

Chróścielewska et al. 2026.

Annals of Medicine, vol. 58, no. 1.

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Keywords: Blue-collar workers; cardiorespiratory fitness; physical activity; pulmonary function; white-collar workers.

Evidence Level: 4B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC12964467/>

Estimating infected blacklegged tick encounters among outdoor workers in Minnesota

Outdoor workers are at increased risk of tick-borne diseases, yet we poorly understand the interaction between occupational risk factors and worker behavior. This study integrates active tick surveillance with worker-reported survey data to assess how occupational behaviors, demographic characteristics, and tick-prevention knowledge influence exposure to infected ticks. We collected blacklegged ticks (*Ixodes scapularis*) from three Minnesota counties to determine the infection prevalence and density of infected ticks for *Borrelia burgdorferi* and *Anaplasma phagocytophilum*. Molecular surveillance was coupled with outdoor worker surveys that ascertained exposure characteristics to model individual-specific probabilities of encountering infected ticks during their job responsibilities. From May to July 2023-2024, 872 ticks were collected, where 45.6% ($n = 398$) were infected with *B. burgdorferi* and 7.2% ($n = 78$) were infected with *A. phagocytophilum*. Across both years, maximum infected tick densities peaked in Carlos Avery Wildlife Management Area at 0.80 (0.22 [IQR 0.16, 0.48]) per 100 m², were intermediate in Lake Elmo Park Reserve at 0.35 (0.12 [IQR 0.05, 0.18]) per 100 m², and lowest in Whitewater Wildlife Management Area at 0.25 (0.04 [IQR 0.02, 0.13]) per 100 m². Forty-two survey responses revealed individual probabilities of encountering infected ticks ranged from ~ 5 to 65% for *B. burgdorferi* and ~ 0-25% for *A. phagocytophilum*. Our results suggest that outdoor workers have a high probability of encountering infected ticks through occupational exposure, which was marginally associated with demographic factors (e.g., age) and preventive behaviors (e.g., tick checks, repellent use). This study reports elevated *B. burgdorferi* infection prevalence from adult (62.1%) and nymphal (36.5%) blacklegged ticks within Minnesota.

Cassens et al. 2026.

EcoHealth, vol. 23, no. 1.

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Keywords: *Borrelia burgdorferi*; *Ixodes scapularis*; *Anaplasma phagocytophilum*; blacklegged ticks; disease risk; occupational health; tick-borne pathogen.

Evidence Level: 5B

Link: <https://link.springer.com/article/10.1007/s10393-025-01753-7>

Chronic respiratory diseases and lung cancer risk

Lung cancer (LC), the leading cause of death due to malignancy in both males and females, is common in patients with coexisting respiratory comorbidities. Many of these share common etiologies with LC such as smoking, biomass fume or occupational exposure, and ambient air pollution, but also a genetic predisposition and/or common pathophysiologic mechanisms, chief among them chronic inflammation, altered immune surveillance, cell injury and increased turnover, to name a few. This common thread puts patients with respiratory comorbidities at increased risk of developing LC. The present article reviews why patients with 5 of the most prevalent chronic respiratory diseases (COPD, asthma, Interstitial Lung Disease, Obstructive Sleep Apnea and Bronchiectasis) are at increased risk of LC and the potential pathological mechanisms underlying this clinically relevant association.

de-Torres et al. 2026.

Archivos de Bronconeumología, vol. 62, no. 3.

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Keywords: Asthma; bronchiectasis; COPD; interstitial lung disease; lung cancer; obstructive sleep apnea.

Evidence Level: 6B

Link: <https://www.archbronconeumol.org/es-pdf-S0300289625003837>

Work Health and Safety

Mortality from cancer and non-cancer diseases in the Lithuanian cohort of Chernobyl cleanup workers (2001-2020)

We examined the mortality risk from cancer and non-cancer diseases from 2001 to 2020 among Lithuanian Chernobyl cleanup workers exposed to ionizing radiation while working in areas contaminated by the Chernobyl nuclear power plant (NPP) accident. The mortality risk was estimated by calculating the standardized mortality ratio (SMR) with a 95% confidence interval (CI). A total of 1922 deaths were registered among the 5562 traced men. The all-cause mortality was slightly elevated (SMR = 1.07, 95% CI, 1.03-1.12), as was the mortality from all malignant neoplasms (SMR 1.15, 95% CI, 1.06-1.26), with the highest risk observed for smoking-related cancers (SMR 2.70, 95% CI, 2.44-2.99). The SMR for all circulatory diseases was also a little higher compared with the general Lithuanian male population (SMR 1.09, 95% CI, 1.02-1.18), particularly for cerebrovascular diseases (SMR 1.46, 95% CI, 1.22-1.74). For diseases of the circulatory system and all malignant neoplasms, the mortality risks were similar in both groups of documented external radiation doses (<100 and ≥100 mSv). The only exception pertains to hypertensive disease, where the SMR was higher in the dose group exceeding 100 mSv, compared with the dose group of ≤100 mSv (SMR 1.68, 95% CI, 1.03-2.74 vs. 1.4, 95% CI, 0.84-2.32, respectively). Continuing follow-up of mortality patterns of cancer and non-cancer diseases within the cohorts of Chernobyl cleanup workers provides important information about the long-term impact of the Chernobyl accident on health.

Steponaviciene et al. 2026.

International Journal of Cancer, vol. 158, no. 6.

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Keywords: Chernobyl; cancer; circulatory; ionizing radiation; mortality.

Evidence Level: 4B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/ijc.70155>

Individual, occupational, and dysphonia-related factors in operational and administrative military police officers

Purpose: To analyze occupational, individual, and dysphonia-related factors in military police officers in operational and administrative service. **Methods:** Observational, cross-sectional study with 482 police officers (77 administrative and 405 operational) from Belo Horizonte, Brazil. Data were collected through a questionnaire, sent via the Internet, with sociodemographic, occupational, and dysphonia-related questions, as well as the Brazilian Dysphonia Screening Tool (Br-DST) and the Job Stress Scale (JSS). The

sample included police officers on active duty, from the enlisted personnel, who were not in military training courses. Those who did not respond to the survey by the end were excluded. Descriptive and association analyses between categorical variables were performed using the chi-square or Fisher's exact test. **Results:** Police officers in administrative and operational services had different police service time, perception of social support at work, threat or aggression at work, and raised voice in intense noise. The probability of moderate/high dysphonia was similar for police officers on operational and administrative duty. Approximately 18% of officers reported straining to speak, and 9% reported hoarseness. Absence from work due to voice problems was low in both service levels. **Conclusion:** Police officers on operational duty reported shorter service time, greater exposure to threats and physical aggression, raised voice due to intense noise, and low social support at work. Those working in administrative roles had opposite characteristics, suggesting a less health-unfavorable work environment.

Moraes et al. 2026.

CoDAS, vol. 38, no. 2.

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Keywords: Dysphonia-related factors; military police officers; occupation.

Evidence Level: 4B

Link: <https://www.scielo.br/j/codas/a/vMBZKyGD39SXKzkrqPcrBBq/?lang=en>

Risk factors of occupational injuries and prevention strategy among Chinese frontline firefighters

Background: Occupational injuries among firefighters significantly impact their job performance. To reduce these injuries and enhance their professional capabilities, this study investigates and comprehensively evaluates the factors contributing to occupational injuries among frontline firefighters in China. It analyzes the underlying mechanisms of these injuries and proposes preventive strategies. **Material and methods:** This study employed questionnaire surveys and factor analysis methods to conduct a comprehensive investigation and comprehensive assessment of occupational injuries and their influencing factors among 200 firefighters in China. The research subjects were randomly selected from the grassroots firefighters in cities of Fujian Province. Among them, 179 firefighters successfully completed the questionnaire survey. Through exploratory factor analysis, the key factors influencing firefighters' injuries were identified.

Results: The injury rate among the participating firefighters in 2023 was 40.78%. The highest injury rate was observed during daily training (58.52%). Notably, the injury rate tends to decrease with increasing age. The most common types of injuries were sprains and strains (57.10%), with the knee joint exhibiting the highest incidence of injury among all body parts (47.00%). The primary factors influencing occupational injuries among firefighters include training factors, support factors, educational factors, and mental health factors, which collectively account for a variance contribution rate of 79.56%. **Conclusions:** Training, support, educational, and mental health factors are the 4 primary influences on firefighters' occupational injuries. The administrative department should strengthen the study and practice of physical fitness theory for firefighters, prioritize the prevention of occupational training injuries, enhance the scientific rigor of training programs, and promote the occupational health of firefighters. *Med Pr Work Health Saf.* 2026;77(1):1-10.

Song et al. 2026.

Medycyna Pracy. Workers' Health and Safety, vol. 77, no. 1.

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Keywords: Affecting factors; factors analysis; firefighters; occupational injury; occupational training; prevention strategy.

Evidence Level: 4B

Link: <https://medpr.imp.lodz.pl/Risk-factors-of-occupational-injuries-and-prevention-strategy-among-Chinese-frontline,215949,0,2.html>

Subjective assessment of working conditions on watercrafts

Objectives: Vessels constitute a unique type of workplace, primarily due to their operation in non-standard external environments and the spatial constraints inherent to their design. As a result, onboard working conditions play a critical role in ensuring the health and safety of crew members. This study aimed to

evaluate the subjective assessment of working conditions among seafarers and to analyze the relationship between perceived environmental burdens and job satisfaction. **Material and methods:** The study was conducted on a group of 300 employees working on inland, port, coastal, and Baltic Sea vessels. A questionnaire survey was used to collect data on the subjective evaluation of working conditions and the perceived intensity of environmental factors such as noise, vibrations, and microclimate. Correlations between these factors and job satisfaction were analyzed. **Results:** The assessment revealed that 84% of surveyed seafarers rated their overall working conditions positively. However, environmental burdens were prevalent: noise (82%), vibrations (71%), and microclimate (65%) were identified as the most common nuisances. A negative correlation was observed between the perception of environmental burdens and job satisfaction. **Conclusions:** Although the general assessment of working conditions on vessels was positive, noise, vibrations, and microclimate remain significant issues affecting the well-being and job satisfaction of seafarers. Preventive measures aimed at mitigating these burdens may contribute to improving occupational health and safety onboard vessels. *Int J Occup Med Environ Health.* 2026;39(1):1-15.

Pleban et al. 2026.

International Journal of Occupational Medicine and Environmental Health, vol. 39, no. 1.

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Keywords: Job satisfaction; occupational health; risk factors; surveys and questionnaires; working conditions; workplace.

Evidence Level: 5B

Link: <https://ijomeh.eu/Subjective-assessment-of-working-conditions-on-watercrafts,214744,0,2.html>

Pierced by force: Forensic reconstruction of two fatal high-energy workplace impalements

Impalement injuries represent a rare but forensically relevant form of penetrating trauma that combines characteristics of both blunt and sharp force injury. The mechanisms and reconstruction of such injuries are often complex, particularly in the context of high-energy occupational accidents. Two fatal occupational cases with unusual impalement-like mechanisms are presented. In the first case, a construction worker was struck by a falling metal scaffold tube, resulting in a vertical cranial impalement with destruction of the occipital region and posterior skull base. In the second case, a worker in a high-voltage tunnel sustained fatal injuries caused by a recoiling steel cable, leading to complete transection of the trachea and near-complete rupture of the aorta. Postmortem computed tomography (PMCT) in both cases enabled detailed three-dimensional reconstruction of the injury mechanisms and confirmed the high-energy trajectories of impact. These findings illustrate that impalement injuries, from a forensic perspective, should not be restricted to classical transfixion events. Complex high-energy mechanisms involving secondarily accelerated objects—such as falling rods or recoiling cables—can produce functionally equivalent injury patterns. Their forensic assessment requires interdisciplinary analysis integrating radiological, biomechanical, and technical expertise.

Babigian et al. 2026.

Legal Medicine, vol. 81.

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Keywords: Forensic pathology; high-energy trauma; impalement injury; occupational accident; postmortem CT; skull fracture.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S1344622326000349?via%3Dihub>

Managers' and safety representatives' perspectives on electronic monitoring and occupational health in the transport and logistics industries in Sweden

Objectives: Qualitative research on electronic monitoring in relation to occupational health remains limited. This study aimed to explore managers' and safety representatives' perspectives on how electronic monitoring in the transport and logistics industries has influenced the work environment, including job demands and available resources. **Methods:** A qualitative study design employing semi-structured interviews was used to collect open-ended data and explore the views of managers and safety representatives regarding electronic monitoring. Data were analysed using content analysis and consisted of 16 semi-structured interviews with participants from 15 organizations within the transport and logistics

industries in Sweden. **Results:** The content analysis identified two main categories: electronic monitoring and organizational culture (with sub-categories: purpose of electronic monitoring; and electronic monitoring and the social work environment); and electronic monitoring and employee well-being (with sub-categories: electronic monitoring and employee impact; and ethical surveillance practices).

Conclusions: Although electronic monitoring in the transport and logistics sectors offers security advantages, it may also adversely affect recovery, autonomy and team cohesion. To mitigate these risks, monitoring systems should be implemented ethically, with transparency and an emphasis on support rather than control. Furthermore, ensuring sufficient recovery time within driver schedules and workflows is essential for promoting occupational health.

Stadin et al. 2026.

International Journal of Occupational Safety and Ergonomics, vol. 32, no. 1.

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Keywords: Digitalization; electronic monitoring; integrity; job demands; occupational health; occupational safety and health; organizational culture; surveillance.

Evidence Level: 5B

Link: <https://www.tandfonline.com/doi/full/10.1080/10803548.2025.2524991>

Risk Assessment

Coupling force-adjusted hand-arm vibration exposure and its long-term associated hazard assessment concerning musculoskeletal disorders - methodological comparisons

When holding or carrying vibrating machines, the coupling forces play a major role in transmitting the vibrations to the hand-arm system. In an epidemiologic study, two recommended methods from ISO/TS 15230-2 are used to investigate the relationship between coupling force-adjusted vibration exposures and their related risk of musculoskeletal disorders of the upper limb. Therefore, coupling forces have been professionally estimated for 408 machines used by 683 male participants during their entire working life and coupling force-adjusted long-term vibration doses are calculated. Despite different approaches of the two methods, overall lower dose values are correlated to the risk of musculoskeletal disorders if the coupling force was adjusted. Considering the 10% increased risk of musculoskeletal disorders, the original cumulative vibration doses of 19571 m²/s⁴ fell to 15995 m²/s⁴ and 18119 m²/s⁴ according to two different coupling force-adjusted doses. These results show the necessity of consideration of coupling forces, especially for on-body measurements.

Raffler et al. 2026.

Ergonomics, vol. 69, no. 3.

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(<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Keywords: Coupling force adjusted-hand-arm-vibration; epidemiology; exposure-response relationship; musculoskeletal disorders; risk assessment.

Evidence Level: 4B

Link: <https://pubmed.ncbi.nlm.nih.gov/40020716/>

Ergonomics

Development of a fall-specific impact testing method to evaluate safety helmet performance and injury risk

Purpose: Despite falls accounting for the greatest number of fatal and non-fatal work-related traumatic brain injuries, current standards do not evaluate safety helmets under impact conditions representative of fall scenarios. This study's objective was to develop a test method that evaluates safety helmets under impact scenarios representative of falls. Construction STAR rating system that quantitatively compares safety helmet performance in the context of concussion and skull fracture risk is also outlined. **Methods:** A multi-step approach that combined information from previous literature, Occupational Safety and Health Administration (OSHA) accident reports, and oblique impact tests were used to develop a fall-specific safety helmet test methodology. The test methodology consisting of three impact locations (front boss, rear boss,

and rear), two impact velocities (5.5 and 6.8 m/s), and a 25-degree anvil was executed on a representative subset of one Type I and four Type II models. STAR scores, combining concussion and skull fracture risk, were calculated for each model and compared. **Results:** STAR scores demonstrated that Type II helmets reduced concussion risk by 32.7% and skull fracture risk by 57.5% when compared to the Type I model. Large variations in Type II performance were observed, with the top-performing Type II helmets reducing concussion risk by 28.7 and 33.2% compared to bottom-performing models. **Conclusions:** Type II helmets offer substantial benefits in head protection compared to Type I models for oblique fall-related impacts. By including both skull fracture and concussion risk in the STAR score, the proposed methodology can differentiate high and low-performing safety helmets.

Gagliardi et al. 2026.

Annals of Biomedical Engineering, vol. 54, no. 3.

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Keywords: Concussion; construction; falls; hard hat; head acceleration; oblique; risk; rotational; skull fracture.

Evidence Level: 3B

Link: <https://link.springer.com/article/10.1007/s10439-025-03930-9>

Chronic Health Issues

The health and economic burden of lung cancer in Australia: A dynamic model of quality of life and productivity loss

Background: Prior studies estimated lung cancer costs; none examined quality of life and work productivity in Australia via population-based models. **Objective:** Quantify lung cancer's burden in working-age Australians using a dynamic Markov lifetable, estimating quality-adjusted life years (QALYs) and productivity-adjusted life years (PALYs) lost. **Methods:** We developed a dynamic comparative Markov lifetable model to simulate both incident and prevalent cases of lung cancer among Australians aged 20-64 years from 2022 to 2031. Two parallel scenarios were modelled: (i) a base-case scenario reflecting individuals diagnosed in 2022 (incident model) and those living with lung cancer from 2012 to 2021 (prevalent model), and (ii) a counterfactual scenario in which no individuals had lung cancer. The differences between these simulations were used to estimate life years, QALYs, and PALYs lost. Model inputs were derived from previously published data. The economic value of productivity losses was estimated using the 2022 Australian gross domestic product (GDP) per full-time equivalent worker, applying a 5 % annual discount rate. **Results:** Over the twenty-year period, lung cancer is projected to result in the loss of 28,430 life years, 55,964 QALYs, and 60,310 PALYs, equating to AU\$14.45 billion in lost GDP. Sensitivity analyses confirmed the robustness of the model to variations in key parameters. **Conclusion:** Lung cancer imposes a substantial health and economic burden among working-age Australians. By combining QALY and PALY metrics within a dynamic modelling framework, this study provides a comprehensive assessment of the burden faced by this population and may inform future research and economic evaluations.

Ali et al. 2026.

Journal of Cancer Policy, vol. 47.

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Keywords: Australia; economic evaluation; lung cancer; productivity; quality of life.

Evidence Level: 4A

Link: <https://www.sciencedirect.com/science/article/pii/S2213538325001183?via%3Dihub>

Are the dimensions of positive health associated with work participation and receiving disability benefit? A cross-sectional study in outclinic patients with chronic gastrointestinal disorders

Objective: To describe work participation (WP) and receiving disability benefit (DB) in persons with chronic gastrointestinal disorders (CGID); to describe associations between the six dimensions of positive health (PH) and WP and DB, respectively; and to assess whether the type of CGID is associated with WP and receiving DB. **Design:** Cross-sectional and observational questionnaire study. **Setting:** Maastricht University Medical Centre+ (tertiary care hospital), including regional, supra-regional and national referrals.

Participants: 441 patients of working age (18-66 years) with CGID who visited the outpatient department of the Gastroenterology-Hepatology Clinic between March 2019 and June 2021 (mean±SD age: 45.0±14.7 years, 68.5% women). **Primary/secondary outcome measures:** Associations of PH dimensions and WP and receiving DB, respectively; association of type of CGID and WP, and receiving DB. The main independent variables (PH dimensions) were bodily functions, mental well-being, meaningfulness, quality of life (QoL), participation and daily functioning. **Results:** Among 441 working-age patients, 49% worked; 20% received DB (40% of non-workers). All PH dimensions related significantly to WP and DB (bivariate level). After adjusting for demographics and CGID type, better general health (dimension QoL) (OR 1.018; 95% CI 1.001 to 1.035, p=0.040) and daily functioning dimension (OR 1.030; 95% CI 1.013 to 1.047, p<0.001) related to higher WP. In the fully adjusted model, daily functioning showed the strongest association with receiving DB. Each one-point increase in Short Form-36 physical functioning was associated with a 2% lower likelihood of receiving DB (OR 0.975; 95% CI 0.959 to 0.992; p=0.004). **Conclusions:** Of the 441 working-age patients with CGID, only 49% worked; most non-workers did not receive DB. Of the PH dimensions, daily functioning appears most directly related to WP and receiving DB; CGID type had minimal impact.

Lemlijn-Slenter et al. 2026.

BMJ Open, vol. 16, no. 3.

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Keywords: Gastroenterology; health workforce; hepatobiliary disease; inflammatory bowel disease; motility disorders.

Evidence Level: 4B

Link: <https://bmjopen.bmj.com/content/16/3/e104440.long>

Loss of productivity among commercially insured patients with pulmonary arterial hypertension in the United States

Background: Despite advances in treatment, pulmonary arterial hypertension (PAH) remains a progressive condition with the onset of disease often in working-aged adults, leading to substantial economic burden and increased healthcare resource utilization despite the rarity of the disease. The aim of this study was to estimate productivity loss for patients with PAH. **Methods:** This was a retrospective cohort study of the Milliman Consolidated Health Cost Guidelines Source Data and the Merative MarketScan Commercial dataset between 01/01/2018 and 09/30/2023. Adult patients diagnosed and treated for PAH between 01/01/2019 and 08/31/2023 were identified and followed through the earliest of end of enrollment, or end of data. Outcomes were described as average workdays lost to receive healthcare services per-patient per-year (PPPY) and further assessed by healthcare setting. The cost of productivity loss was calculated based on the annual median household income. **Results:** The study included 1,588 commercially insured patients (mean age 52 years, 63% female). Between 2019-2023, the mean number of workdays lost ranged between 21 and 23 PPPY, equating to over 8% of annual workdays. The cost of loss of productivity ranged from \$8,828 to \$9,599 PPPY (in 2023 dollars). Across all study years, the largest proportion of workdays lost were attributed to emergency room (ER)/observation, followed by office visits, and outpatient facilities, altogether comprising two-thirds of total workdays lost. Inpatient hospitalization-related workday loss was approximately 11% of total workdays lost. Over the study period, the largest change in workdays lost was observed for ER/observation. **Conclusion:** This study demonstrates substantial workdays lost due to health services utilization among patients with PAH, further adding to the overall economic burden of PAH. Quantifying productivity loss in PAH patients provides critical insight into the broader societal costs of the disease, supporting the inclusion of indirect costs in future economic evaluations and healthcare policy decisions.

Watzker et al. 2026.

Journal of Medical Economics, vol. 29, no. 1.

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Keywords: Pulmonary arterial hypertension; disease burden; health care costs; indirect cost; productivity.

Evidence Level: 4B

Link: <https://www.tandfonline.com/doi/full/10.1080/13696998.2026.2642553#d1e348>

Quality of life and economic burden in Swedish adults with atopic dermatitis: A cross-sectional survey of patient reported outcomes

Atopic dermatitis (AD) is a chronic skin disease associated with impaired quality of life. Evidence from Sweden on out-of-pocket expenses and productivity losses remains limited. This study assessed the burden of AD among adults in relation to health-related quality of life (HRQoL), work productivity, activity impairment, willingness to pay for symptom relief, economic outcomes, considering comorbid asthma, allergies, depression and anxiety. A cross-sectional survey was conducted between 2024 and 2025 among 220 members of the Swedish Asthma and Allergy Patient Association. Validated instruments included the Dermatology Life Quality Index (DLQI), EuroQol five-dimensions, five-levels instrument (EQ-5D-5L), Patient Benefit Index, and Work Productivity and Activity Impairment questionnaire. Descriptive and regression analyses were performed. Respondents (89.8% female; mean age 43 years) reported moderate HRQoL impairment (mean DLQI 10.1). DLQI and EQ-5D-5L were worse among those with allergic or non-atopic comorbidities but did not differ by asthma status. Mean annual out-of-pocket costs and productivity losses were €900 (95% CI: 401.1-1,758.4) and €1,972 (95% CI: 1,198.7-2,828.0), respectively. Itch intensity and activity impairment were associated with lower HRQoL and higher costs. AD is related to worsened work and activity functioning and high economic burden, suggesting the need for improved support and management strategies for affected adults.

Metsini et al. 2026.

Acta Dermato-Venereologica, vol. 106.

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Keywords: Quality of life; economic burden; atopic dermatitis.

Evidence Level: 4B

Link: <https://medicaljournalssweden.se/actadv/article/view/45731>

Occupational Exposure

A systematic review of observational studies on long-term air pollution exposure and epigenetic alterations in adults

Background: Evidence suggests that environmental exposures induce epigenetic modifications that can have long-lasting effects on multiple health outcomes, and an in-depth review of the epidemiological evidence is urgent. We aimed to comprehensively assess the associations between long-term exposure to air pollution and epigenetic changes in adults. **Methods:** We systematically searched EMBASE, MEDLINE, and Web of Science databases for relevant articles published in English from inception through 17 November 2023. We assessed and narratively synthesised eligible studies on ambient (i.e. non-occupational) and epigenetic alterations in adults. We separately documented relevant occupational studies identified by the search. **Results:** We analysed 52 eligible articles, including 30 ambient air pollution and 22 occupational air pollution exposure studies. Long-term exposure to ambient particulate matter (PM) with aerodynamic diameters of $\leq 2.5 \mu\text{m}$ (PM_{2.5}) and $\leq 10 \mu\text{m}$, (PM₁₀), and nitrogen oxides (NO_x) showed no consistent association with global DNA methylation across different studies in adults. Two candidate-gene studies indicated that sex-determining region Y-box 2 (SOX2) hypermethylation was associated with ambient PM_{2.5} exposure. Results from epigenome-wide association studies suggest that long-term exposure to specific ambient air pollutants can alter blood methylation at up to 189 loci. In addition, decreased methylation of cg00475490 by polychlorinated biphenyls, increased methylation in cg08500171 associated with nitrogen dioxide (NO₂) exposure, and decreased methylation in cg17629796 associated with PM_{2.5} exposure were successfully replicated in external validation cohorts. Epigenetic alterations in specific genes were associated with multiple occupational exposures. **Conclusions:** We demonstrated that long-term exposure to air pollution is associated with locus-specific methylation changes and histone modification in adults. Further elucidation of these epigenetic changes through epidemiological and laboratory work could provide new avenues to identify potential biomarkers linked to air pollutant exposure and to clarify their impacts on health outcomes.

Yu et al. 2026.

Journal of Global Health, vol. 20.

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Keywords: Long-term air pollution; epigenetic alterations.

Evidence Level: 1A

Link: <https://jogh.org/2026/jogh-16-04087>

Occupational exposure to wood dust - Legal aspects and preventive strategies

Occupational exposure to wood dust is a major public health and occupational safety concern, particularly in woodworking, furniture production, and the wood-based materials industry. Its carcinogenic, allergenic, and toxic potential depends on wood species, physicochemical properties, processing methods, and applied chemical treatments. The aim of this review was to analyze occupational exposure to wood dust by synthesizing current evidence on worker health risks, measurement methods, legal regulations, and preventive strategies, in order to evaluate the adequacy of existing solutions and identify areas requiring further improvement. The review is based on 61 literature sources: publications, legal acts, official guidelines from international and national institutions (International Agency for Research on Cancer, National Institute for Occupational Safety and Health, Occupational Safety and Health Administration, American Conference of Governmental Industrial Hygienists, European Agency for Safety and Health at Work, Statistics Poland, Nofer Institute of Occupational Medicine, Polish Ministry of Health). Sources published 2010-2024 were analyzed with particular focus on dust characteristics, exposure limits, measurement methods, preventive measures, and regulatory frameworks. Exposure to wood dust contributes to both acute and chronic respiratory conditions, skin and eye irritation, and a higher incidence of upper respiratory tract cancers. Recent regulatory changes have expanded the classification of wood dust as a carcinogen to include all species. Despite existing occupational exposure limits (OELs), exceedances remain common in woodworking industries. Conventional monitoring methods may underestimate respirable and ultrafine particles (UFP <100 nm), which pose substantial health risks. Preventive strategies - including technical controls, ventilation, personal protective equipment, and medical surveillance - significantly reduce airborne dust concentrations and worker exposure. Findings indicate a need to update OELs and harmonize regulations with current scientific evidence. Effective prevention requires integrating legal requirements, engineering controls, process automation, and medical and educational interventions. Strengthening national standards within the European Union regulatory framework and improving measurement methods - especially for inhalable and ultrafine fractions - are essential to ensuring adequate worker protection. *Med Pr Work Health Saf.* 2026;77(1):61-70.

Mroczek et al. 2026.

Medycyna Pracy. Workers' Health and Safety, vol. 77, no. 1.

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Keywords: Dust prevention; legal regulations; occupational exposure; occupational exposure limits; occupational health and safety; wood dust.

Evidence Level: 1A

Link: <https://medpr.imp.lodz.pl/Occupational-exposure-to-wood-dust-legal-aspects-and-preventive-strategies,218073,0,2.html>

The micronucleus assay in exfoliated buccal cells for occupational exposure studies: An overview

This review describes the use of the micronucleus (MN) assay with exfoliated cells from the oral mucosa in occupational studies. The molecular mechanisms leading to formation of MN (chromosomal breakage and aneuploidy) are well known. In total, 222 articles have been published since the method was developed in 1982. The majority of investigations were conducted with agricultural workers, followed by petrol station attendants, painters, pathology/anatomy lab workers, and miners. Positive results were reported in the majority of studies (86%); Brazil, Italy, Mexico, and Turkey being the most productive countries. The use of this technique increased substantially in recent years, and a recent correlation analysis with data from MN studies with lymphocytes indicates that the method is useful for predicting the cancer risks of chemically and radiation-exposed workers. The methodological quality of the studies increased in recent years since standardized and validated guidelines have been published. However, major shortcomings are still the lack of adequate matching (in particular in regard to nutrition and intake of dietary supplements), the lack of chemical exposure measurements, and the use of inadequate (DNA-nonspecific) stains. The most pronounced effects were seen in metal production workers, miners, petrol station attendants, agricultural

workers, and pathologists. The sampling of cells from the oral cavity is noninvasive and requires no cultivation under sterile conditions is required. The currently available data indicate that this fast and easy-to-perform procedure provides valuable information about combined effects of chemical exposures and about the efficiency of safety measurements. Therefore, it should be used in the future for the routine surveillance of workers.

Wultsch et al. 2026.

Mutagenesis, vol. 41, no. 1-2.

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Keywords: Buccal cells; exposure; micronucleus; nuclear anomalies; occupation.

Evidence Level: 1B

Link: <https://academic.oup.com/mutage/article/41/1-2/4/8237194?login=false>

Occupational exposure to welding fume in Australian workplaces

This study aimed to provide information on exposure to welding fume in workplaces in Australia, and the use of control measures in these workplaces. Personal and static samples of welding fume particulates and gases were collected at 20 workplaces whilst welding was being undertaken. Study personnel also recorded observations of the workplace. Total welding fume particulate concentration in the breathing zone was above 1 mg/m³ (the newly established workplace exposure standard). Peak concentrations of ozone were above the peak limitation standard of 0.1 ppm for most workers when they had their head over the welding area. Very few workplaces had active ventilation in place and functioning at the time of the worksite visits, most workplaces relying on natural ventilation coming from the large workspaces, high ceilings and open doors. The use of respiratory protective equipment was sub-optimal; about a quarter of participants used no respiratory protection while welding. This study provides the first comprehensive information on concentration of welding fume particulate and gases in Australian workplaces and the use of relevant control measures. The findings suggest there is considerable scope for improvement in the control of exposure to welding fume.

Driscoll et al. 2026.

Industrial Health, vol. 64, no. 2.

User License:

Keywords: Fume; ozone; respiratory protection; ventilation; welding.

Evidence Level: 3A

Link: https://www.istage.jst.go.jp/article/indhealth/64/2/64_2025-0048/pdf/-char/en

Evaluation of metal removal from skin exposed to stainless steel and cement particles: Insights from an in vitro permeation study

Occupational exposure to metal-containing particles can pose significant risks to skin health, particularly in environments where materials such as stainless steel and cement are handled. This study evaluates the effectiveness of simple aqueous cleansing methods-water and soapy water-for removing metals from the skin after exposure to stainless steel particles (SSP) and cement dust, with the aim of informing dermal decontamination practices. Using an in vitro skin permeation model with Franz diffusion cells, we assessed the extent of metal absorption following exposure, with decontamination applied 15 min post-contact. Quantification of permeated metals was performed via ICP-MS. Notably, soapy water significantly reduced dermal retention of lead (Pb) from cement dust, from 305 ± 111 ng/cm² (untreated) to 7.74 ± 0.7 ng/cm² (p < 0.05). Conversely, the same procedure increased skin retention of nickel (Ni) and chromium (Cr), suggesting a wash-in effect. For SSP exposure, soapy water was effective in reducing permeation of all tested metals. These findings emphasize the need for tailored skin cleansing strategies and contribute to the development of protective and cleansing formulations aimed at mitigating metal-induced skin toxicity.

Magnano et al. 2026.

Toxicology in Vitro, vol. 111. .

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Keywords: Cement particles; dermal decontamination; Franz cells; ICP-MS; metal permeation; stainless steel (SPP).

Evidence Level: 3B

Link: <https://www.sciencedirect.com/science/article/pii/S0887233325001675?via%3Dihub>

Is occupational exposure to radiofrequency electromagnetic fields associated with glioma risk? An Australian population-based family case-control study

Objectives: This study investigated occupational exposure to radiofrequency electromagnetic fields (RF EMF) using two job-exposure matrices (JEMs) and risk of glioma. **Design:** Population-based family case-control study. **Setting:** Cases were recruited from participating hospitals in the Australian states of New South Wales, Queensland, Tasmania, Western Australia and Victoria between January 2013 and November 2017. **Participants:** The study population consisted of 467 cases of glioma and 367 family controls recruited for the Australian Genomics and Clinical Outcomes of Glioma case-control study between 2013 and 2017. Participants completed questionnaires on demographic and other information, including a detailed occupational history. **Exposures:** Exposure to RF EMF was estimated using both the multicountry case-control study INTEROCC JEM and the Canadian JEM (CANJEM). **Primary outcome measures:** ORs and 95% CIs were calculated from logistic regression models adjusted for relatedness between cases and controls, sex, age, ethnicity, education level, smoking status and alcohol consumption. **Results:** There was no statistically significant positive association overall for risk of glioma when applying either JEM. For the highest compared with the lowest quartile of lifetime exposure, results using the INTEROCC JEM showed an OR of 0.74 (95% CI 0.47 to 1.15) for electric fields and 0.92 (95% CI 0.58 to 1.45) for magnetic fields, while the CANJEM showed an OR of 0.85 (95% CI 0.54 to 1.32). We also did not observe associations when applying different assumptions regarding latency or time windows or with glioma grade. **Conclusion:** Overall, this study found no evidence of an association between occupational RF EMF exposure and glioma. Future research should focus on refining occupational RF EMF exposure assessment.

Mate et al. 2026.

BMJ Open, vol. 16, no. 3.

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Keywords: Cancer; case-control studies; occupational & industrial medicine.

Evidence Level: 4A

Link: <https://bmjopen.bmj.com/content/16/3/e107281.long>

Cognitive performance and lifetime occupational exposures in a regional Australian population: A distributed lag mixtures approach

Examination of exposures over a lifetime of employment and work-related disease has largely focused on the effects of single agents. In reality, workers are exposed to mixtures of agents. In a community cohort of 1621 older participants (Hunter Community Study) with a mean age of 68.0 years (SD 6.8 yr), cognitive performance was assessed using the Audio Recorded Cognitive Screen, and lifetime occupational histories used to retrospectively estimate yearly exposures to a range of chemicals from the Finnish job-exposure matrix. This study utilised Bayesian Kernel Machine Regression - Distributed Lag Models to investigate potential time windows of increased susceptibility to cognitive effects following retirement. Furthermore, the research explored exposure-response relationships between multiple chemicals, with adjustments for covariates identified from a directed acyclic graph. Analysis identified a window of susceptibility from welding fume exposures 17 years after commencement of work at age 18. The negative effects from lead (Pb) at levels below current exposure standards were identified. Bivariate interactions from co-exposure of carbon monoxide to lead, toluene and trichloroethylene were identified, the magnitude of which may not be statistically meaningful. This study identified effects on cognition post-retirement associated with occupational exposures to a mixture of chemicals encountered throughout the participants' working life.

Knott et al. 2026.

International Journal of Environmental Health Research, vol. 36, no. 3.

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Keywords: BKMR-DLM; cognition; distributed lag; mixtures; occupational exposure.

Evidence Level: 4A

Link: <https://www.tandfonline.com/doi/full/10.1080/09603123.2025.2520897>

Assessing the impact of World Trade Center (WTC) exposures on post-bronchodilator lung function: Insights from WTC survivor population

Objectives: To assess the effects of World Trade Center (WTC) exposures, obesity, and smoking on post-bronchodilator (post-BD) lung function in WTC Survivors. **Methods:** Data included 5,243 participants enrolled in WTC Environmental Health Center (WTC EHC) program between 2005 and 2022. WTC-related exposures included dust-cloud exposure and occupational/residential roles. Lung function included post-BD spirometry (FEV₁, FVC) and impulse oscillometry (R5, R20, AX). Multivariable linear and quantile regressions assessed associations with WTC exposures, BMI, and smoking, adjusting for demographics. **Results:** Dust-cloud exposure and Worker status were associated with elevated AX, R5, and R20, indicating small airway dysfunction. Spirometry showed minimal impact from dust exposure, though Workers had lower FEV₁ and FVC than Residents. Obesity and smoking were consistently linked to poorer lung function, with effect sizes surpassing WTC exposure. No significant interactions were found between BMI and WTC exposures. **Conclusions:** WTC exposures are associated with small airway dysfunction, especially in Workers. Obesity and smoking independently worsen lung function, underscoring the importance of both environmental and physiological risk factors in disaster-exposed populations. Post-BD oscillometry adds critical sensitivity in detecting injury to small airways.

Wang et al. 2026.

PLoS One, vol. 21, no. 3.

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Keywords: World Trade Center; post-bronchodilator lung function; survivor.

Evidence Level: 4B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0344458>

Occupational silica exposure drives systemic immune dysregulation and tumor microenvironment susceptibility: Evidence from a real-world study

Background: Occupational exposure to carcinogenic dusts such as silica is a well-established risk factor for cancer. However, the molecular mechanisms linking early exposure to tumor-promoting microenvironmental changes remain poorly defined. Emerging evidence suggests that chronic immune dysregulation and remodeling of the tumor microenvironment (TME) may serve as critical intermediates. **Methods:** We analyzed occupational health data from 5,482 industrial workers in Anhui Province, China. Explainable machine learning models were constructed using exposure profiles and hematological immune parameters to predict carcinoembryonic antigen (CEA) positivity, with feature contributions interpreted via SHAP values. Experimental validation involved silica-stimulated THP-1 monocytes and colorectal cancer (CRC) cell lines to assess inflammatory activation and paracrine regulation of CEA. Silica- and CRC-associated genes were integrated from public databases to construct protein-protein interaction networks, identify hub genes, and evaluate prognostic significance using TCGA and GSE39582 datasets. Single-cell RNA sequencing (scRNA-seq) analysis was used to resolve cell type-specific expression patterns. **Results:** Among 14 algorithms tested, CatBoost exhibited the highest predictive performance for CEA positivity. SHAP analysis highlighted the monocyte-to-lymphocyte ratio and silica exposure as dominant contributors. Mediation analysis confirmed that systemic inflammation partially mediated the silica-CEA association. In vitro, silica activated NF- κ B-dependent IL-6 secretion in THP-1 cells, and conditioned media dose-dependently upregulated CEA expression in CRC cells—an effect attenuated by NF- κ B inhibition or IL-6 neutralization. Multi-omics analysis identified 42 overlapping genes linking silica exposure to CRC, with enrichment in cytokine signaling, adhesion, and matrix remodeling pathways. A hub gene-based risk score was significantly associated with overall survival. scRNA-seq analysis revealed elevated expression of inflammation- and adhesion-related genes in tumor-associated macrophages. **Conclusions:** Occupational silica exposure induces macrophage-driven inflammatory signaling that promotes early CEA elevation and TME remodeling. Integrating machine learning with experimental and multi-omics validation provides a translational framework for identifying exposure-responsive biomarkers and immune-related cancer risk in occupational settings.

Hao et al. 2026.

Frontiers in Immunology, vol. 2.

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Keywords: Carcinoembryonic antigen (CEA); occupational exposure; silica dust; tumor microenvironment; tumor-associated macrophages.

Evidence Level: 4B

Link: <https://www.frontiersin.org/journals/immunology/articles/10.3389/fimmu.2026.1775236/full>

Association of long-term exposure to air pollution with sleep among middle-aged and older adults in China: A nationwide study from 2015 to 2018

Background: This study aims to evaluate the associations of long-term exposure to five major air pollutants (PM_{2.5}, PM₁₀, NO₂, SO₂, and CO) with sleep duration and quality among middle-aged and older Chinese adults. **Methods:** This study used data from 14856 adults aged 45 and above participating in the China Health and Retirement Longitudinal Study (CHARLS). Changes in nocturnal sleep duration between baseline (2015) and follow-up (2018) were categorized into three groups: reductions ≥ 1 h, 1.5 h, or 2 h. The increase in the number of days with restless sleep at follow-up was defined as a deterioration in sleep quality. We used the STET model to estimate air pollution exposure and calculate the concentration differences over 1- or 2-year periods preceding each interview. We investigated the associations of exposure differences to five pollutants with sleep duration and quality through generalized linear mixed and ordinal logistic regression models. Interaction analyses were employed to identify potential effect modifiers. **Results:** All 1-year exposure differences to air pollution positively correlated with reductions in sleep duration of both ≥ 1.5 h and ≥ 2 h. CO exposure demonstrated the highest risk for a ≥ 1.5 h reduction (OR = 1.451; 95% CI: 1.065-1.975) and a ≥ 2 h reduction (OR = 1.557; 95% CI: 1.135-2.135) per 1 $\mu\text{g}/\text{m}^3$ increment. Higher exposure levels to PM_{2.5}, PM₁₀, NO₂ and SO₂ correlated with elevated risks of sleep quality deterioration. NO₂ exposure demonstrated the highest risk, with a 22.3% higher risk per 10 $\mu\text{g}/\text{m}^3$ increment (95% CI: 1.039-1.439). Pollutants affected sleep duration and quality in varying temporal patterns. Overall, 1-year exposure difference considerably impacted the sleep duration, while 2-year exposure difference significantly impacted the sleep quality. We also found that the air pollution's adverse impacts on sleep quality were especially significant for those living in urban areas. **Conclusion:** Long-term exposure to air pollution is associated with adverse sleep outcomes in middle-aged and older populations.

Cao et al. 2026.

PLoS One, vol. 21, no. 3.

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Keywords: Air pollution; sleep; exposure; China.

Evidence Level: 4B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0336665>

Prenatal occupational exposure to endocrine-disrupting chemicals during pregnancy and adult male reproductive hormones

Research question: Does maternal occupational exposure to endocrine-disrupting chemicals (EDC) during pregnancy affect reproductive hormone concentrations in adult sons? **Design:** Data from a cross-sectional study of 2326 Swiss conscripts collected between 2005 and 2017 were analysed. On inclusion, the conscripts' mothers completed a detailed questionnaire about their pregnancy. A job-exposure matrix was used to assess exposure to 10 categories of potential EDC. Reproductive hormones - FSH, LH, total and free testosterone, oestradiol and sex hormone-binding globulin (SHBG) - were determined in serum samples from all conscripts whose mothers were exposed to EDC during pregnancy (n = 138) and a random sample of non-exposed conscripts (n = 276). Multiple linear regression analyses were adjusted for potential confounders. **Results:** Prenatal exposure to phthalates or alkyl phenolic compounds was significantly associated with higher FSH concentrations ($a\beta = 0.26$, 95% CI 0.03-0.49, and $a\beta = 0.22$, 95% CI 0.02-0.42, respectively) and prenatal exposure to pesticides was significantly associated with higher SHBG concentrations ($a\beta = 0.22$, 95% CI 0.05-0.38). No statistically significant associations were found between other EDC categories and reproductive hormones. **Conclusions:** Maternal occupational exposure to certain types of EDC during pregnancy was associated with the concentrations of reproductive hormones in adult sons. These findings require replication in larger, prospective population studies.

Blanc-Petitjean et al. 2026.

Reproductive Biomedicine Online, vol. 52, no. 3.

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Keywords: Endocrine-disrupting chemicals; occupational exposure; prenatal exposure; reproductive hormones.

Evidence Level: 4B

Link: [https://www.rbmojournal.com/article/S1472-6483\(25\)00443-2/fulltext](https://www.rbmojournal.com/article/S1472-6483(25)00443-2/fulltext)

Consistently higher and steeper apparent temperature-heat-related illness risk among occupational cases in Korea: Evidence from national emergency department surveillance

Background: Heat-related illness (HRI) is increasing under climate change, particularly in humid regions.

While heat alerts increasingly rely on apparent temperature (AT), evidence linking AT conditions to differential HRI risk by occupational status remains limited. **Methods:** We linked national emergency department (ED)-based HRI surveillance with daily national mean AT for June-September 2015-2024. We summarized bin-wise mean daily counts and estimated bin-specific incidence rate ratios (IRRs; reference = 24 °C) using Poisson regression. **Results:** HRI increased non-linearly with AT in both groups, and occupational IRRs tended to be higher than non-occupational IRRs at warmer bins. At 31 °C, occupational IRR was 37.07 vs. 23.86 for non-occupational; at 33 °C, 104.75 vs. 72.25; and at 34 °C, 167.22 vs. 141.06.

Conclusion: Workers may experience higher HRI risk under rising AT, underscoring the need for worker-centered prevention and heat-risk communication in humid climates.

Park et al. 2026.

Frontiers in Public Health, vol. 14.

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Keywords: ED surveillance; Poisson IRR; apparent temperature; climate change; heat-related illness; heat-risk communication; occupational vs. non-occupational.

Evidence Level: 4B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2026.1786564/full>

Occupational exposure to industrial dust and rates of Multiple Sclerosis

Background and objectives: Exposure to lung irritants such as smoking and organic solvents has been associated with increased risk of multiple sclerosis (MS), particularly among genetically susceptible individuals. The aim of this study was to investigate the association between occupational exposure to industrial dust and MS and to assess potential interactions with smoking and HLA-DRB1*15:01. **Methods:** We conducted a Swedish population-based case-control study. Patients with incident MS age 16-70 years were consecutively identified by neurologists at 40 clinics (2005-2015). Eligibility criteria for participants were age 16-70 years, residence in Sweden, and a neurologist-confirmed diagnosis of MS according to the McDonald criteria. Controls without MS were randomly sampled from the national population register using density sampling and frequency-matched to cases on age, sex, and residential area. Occupational dust exposure was assessed using questionnaire data. Logistic regression was used to estimate odds ratios (ORs) and 95% CIs. Additive interactions between dust exposure and smoking and between dust exposure and HLA-DRB1*15:01 were assessed by calculating the attributable proportion (AP) due to interaction. An AP >0 is considered evidence of interaction. **Results:** The analytic sample included 2,070 participants and 2,899 controls. The mean age at index was 34.4 years for participants and 35.4 years for controls. Women comprised 72.5% of participants and 75.1% of controls. Industrial dust exposure was associated with increased rate of MS (OR 1.30, 95% CI 1.05-1.63), with a dose-response relationship with duration (OR per 1-year exposure 1.03, 95% CI 1.00-1.06). Evidence of additive interactions was observed between dust exposure and smoking (AP 0.32, 95% CI 0.03-0.62) and between dust exposure and HLA-DRB1*15:01 (AP 0.25, 95% CI 0.002-0.52). Participants who smoked, were exposed to dust, and carried the HLA-DRB1*15:01 allele had an 11-fold increased rate of MS (OR 11.1, 95% CI 5.7-21.9), compared with those without any of these risk factors. **Discussion:** Occupational dust exposure was associated with increased rate of MS, particularly in combination with smoking and HLA-DRB1*15:01, suggesting joint effects of occupational, environmental, and genetic risk factors. The reliance on self-reported occupational histories and potential residual confounding are important limitations. Further studies are warranted to clarify underlying mechanisms and to inform preventive strategies.

Alfredsson et al. 2026.

Neurology, vol. 106, no. 7.

User License:

Keywords: Industrial dust; occupational exposure; multiple sclerosis.

Evidence Level: 5B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC13001619/>

Occupational exposure to antimony from cement additives: Speciation and health risk insights

Antimony (Sb) is an emerging environmental contaminant of concern due to its persistence, bioaccumulation potential, and toxicity. Its trivalent form [Sb(III)] is of particular relevance, as it is classified as a suspected human carcinogen. In the cement industry, Sb-based additives are increasingly used to mitigate water-soluble hexavalent chromium [Cr(VI)], a highly toxic and allergenic compound. However, the environmental fate, chemical speciation, and occupational exposure to Sb during cement handling are still poorly characterized. This study developed and validated a robust analytical workflow combining citric acid-EDTA extraction with HPLC-ICP-MS/MS detection for accurate Sb(III)/Sb(V) differentiation in complex industrial matrices. The method ensured oxidation-state preservation and achieved recovery values up to 68%. The workflow was applied to commercial additives, premixed cements, and personal air filters collected from workers during bagging operations. Sb(III) was identified as the predominant species in both bulk materials and airborne particulate matter. Airborne Sb concentrations ranged from 0.00004 to 0.00114 mg m⁻³, remaining below international occupational exposure limits. The predominance of Sb(III) in both bulk materials and airborne particulate matter underscores the importance of chemical speciation in occupational exposure assessment. The validated workflow offers a practical approach for monitoring antimony species in cement production environments and supports evidence-based risk management.

Fontanella et al. 2026.

Chemosphere, vol. 399.

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Keywords: Antimony speciation; cement additives; HPLC-ICP-MS/MS; worker safety.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S0045653526000718?via%3Dihub>

Rare earth elements exposure and osteoarthritis in Chinese community residents: Insights from epidemiology and network toxicology analyses

The relationship between exposure to rare earth elements (REEs) and osteoarthritis, as well as the underlying mechanism, remain unclear. In 798 Chinese community residents, the associations between urinary REEs and the risk of osteoarthritis were evaluated using logistic regression, weighted quantile sum regression, and Bayesian kernel machine regression. Network toxicology analysis was employed to propose potential mechanistic hypotheses. In single analysis, elevated urinary concentrations of praseodymium (odds ratio [OR]: 1.18; 95% confidence interval [CI]: 1.05, 1.32), gadolinium (OR: 1.19; 95% CI: 1.05, 1.36), and ytterbium (OR: 1.14; 95% CI: 1.05, 1.26) were significantly associated with increased risk of osteoarthritis. Mixture analyses indicated that REEs mixture was positively associated with the risk of osteoarthritis. Pathway enrichment analysis indicated that calcium signal-cytoskeleton disorder may involve gadolinium related-osteoarthritis, and hypoxia-ferroptosis axis may involve ytterbium related-osteoarthritis, with key molecules like IL-6 and TFRC identified. Exposure to REEs, particularly praseodymium, gadolinium, and ytterbium, is associated with an increased risk of osteoarthritis in a Chinese community population. These findings highlight the potential role of REEs as environmental risk factors for osteoarthritis and underscore the need for further investigation into the underlying mechanisms.

Liu et al. 2026.

Ecotoxicology and Environmental Safety, vol. 312.

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Keywords: Mixture analysis; network toxicology analysis; osteoarthritis; rare earth elements.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S0147651326002964?via%3Dihub>

Sedentary Practices

Resistance exercise training on musculoskeletal, metabolic and psychological health in sedentary office workers: Systematic review and meta-analysis

Purpose: To consolidate the emerging evidence on the effectiveness of resistance training (RT) in reducing the health risks among sedentary office workers. **Methods:** Four electronic databases were searched for evidence from its inception till september 20, 2024. Studies were included if they examined any form of RT program targeting musculoskeletal, metabolic, or psychological health outcomes in office workers aged 18 years or older using PICOS criteria (Population - office workers, Intervention - RT program, Comparison - placebo or sham control and Outcomes - musculoskeletal, cardiometabolic and psychological health variables). Two reviewers independently screened the studies for risk of bias and assessed the certainty of the evidence. **Results:** Out of 60 identified studies, 17 studies were eligible for narrative synthesis, and 16 were included in the meta-analysis. Modest reductions in neck (SMD = -1.76, I² = 88%, p < 0.00001) and shoulder discomfort (SMD = -13.29, I² = 91%, p < 0.00001), while marginal improvement in shoulder (SMD = 4.13, I² = 99%, p = 0.03) and neck extensor muscle strength (SMD = 9.07, I² = 9%, p < 0.00001). The cardiometabolic and mental health risk markers remain unaltered. High uncertainty of evidence was observed due to high heterogeneity, risk of bias, inconsistency and publication bias. **Conclusion:** Limited evidence demonstrate supervised RT programs of any dose has a potential to improve muscular strength and discomfort while potential cardiometabolic and mental health risk outcomes remain unaltered. However, more high-quality research trials are needed to understand the effects of RT on health benefits.

Chandrasekaran et al. 2026.

Journal of Occupational Rehabilitation, vol. 36, no. 1.

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Keywords: Cardiometabolic risk; office worker; pain; sedentary; strength training; worker.

Evidence Level: 1A

Link: <https://link.springer.com/article/10.1007/s10926-025-10273-8>

Physical Activity

Impact of cold air exposure on respiratory physiology during light-to-moderate physical activity in healthy adults

Working in cold environments presents unique physiological challenges, and this study sought to investigate the specific impacts of cold air exposure on ventilation during light-to-moderate physical activity simulating occupational work demands. Fourteen healthy adults (3 females; age: 24 ± 6 years) completed five 20-min treadmill walking bouts across three environmental conditions (20°C, 10°C, and 0°C) in a randomized, crossover design. Respiratory variables, including minute ventilation (VE), breathing frequency (RR), and tidal volume (V_t), were measured, as well as heart rate (HR) and ratings of perceived exertion (RPE). Data were analyzed using repeated-measures ANOVA. VE was significantly higher at 0°C compared to both 10°C (mean difference [Δ]: +2.08 L·min⁻¹, p < 0.001) and 20°C (Δ: +1.62 L·min⁻¹, p < 0.001) during the final exercise stage. This increased ventilation was primarily driven by a significant increase in V_t at 0°C compared to 10°C (Δ: +0.11 L, p = 0.002) and 20°C (Δ: +0.13 L, p = 0.002). RR and RPE did not differ between conditions, while HR was modestly affected by temperature. Cold air exposure significantly alters ventilatory patterns during light-to-moderate physical activity. Increased ventilation observed at colder temperatures is primarily mediated by increases in V_t. These findings provide insight into acute cold-air respiration and highlight implications for performance in austere environments.

Chapman et al. 2026.

Psychological Reports, vol. 14, no. 5.

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Keywords: RPE; cold exposure; exercise; heart rate; occupational work; respiration; tidal volume; ventilation.

Evidence Level: 3A

Link: <https://physoc.onlinelibrary.wiley.com/doi/10.14814/phy2.70801>

Musculoskeletal Health

Whole-body vibration exposure and chronic low back pain among heavy machine operators and long-haul truck drivers in Tanzania: A cross-sectional study

Background: The Workers Compensation Fund (WCF) in Tanzania has noted an increased rate of injury claims for work-related musculoskeletal disorders (WRMSDs), particularly chronic low back pain among truck drivers and heavy machine operators. These trends indicate a likelihood of occupational exposure to whole-body vibration (WBV), nevertheless local and contextual evidence is needed to guide policy and decision-making. This study aimed to quantify and characterize the WBV exposure and examined its association with self-reported 12-month chronic low back pain among heavy machine operators and long-haul truck drivers in Tanzania. **Methods:** We conducted an analytical cross-sectional study of 632 participants in 2023 with a total of 141 WBV measurements. The WBV was measured at the seat-operator interface and analyzed using the International Organization for Standardization - ISO 2631-1:1997 to derive 8-h equivalent daily exposure, A(8). A standardized and pretested questionnaire was used to collect information on WRMSDs related factors. Data were analyzed using regression models and Chronic low back pain was defined as self-reported low back pain during the preceding 12 months. **Results:** The mean A(8) was 0.63 m/s² (SD = 0.20) in the mining and 0.51 m/s² (SD = 0.08) in the transportation. In the mining sector, 71% (n = 41) of measurements were ≥0.5 m/s² A8 - exposure action value (EAV). The 12-month prevalence of chronic low back pain was 42.5%. In adjusted models, WBV exposure ≥0.5 m/s² was associated with higher prevalence of chronic low back pain (adjusted RR 1.22; 95% CI 1.01-1.47), as were working in the mining sector (adjusted RR 1.36; 95% CI 1.05-1.75), increase in body mass index (BMI) (adjusted RR 1.02; 95% CI 1.00-1.04) and reporting leg pain symptoms (adjusted RR 2.36; 95% CI 2.04-2.73). **Conclusion:** A significant number of measurements exceeded the Directive 2002/44/EC EAV, and a substantial proportion of workers reported chronic low back pain, suggesting a potential relationship. Preventive interventions to reduce WBV exposure could benefit heavy machine operators and truck drivers. Longitudinal studies with repeated measurements are warranted to better characterize exposure variability and WRMSDs.

Nyarubeli et al. 2026.

Frontiers in Public Health, vol. 14.

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Keywords: Tanzania; low back pain; mining; occupational exposure; transportation; truck drivers; whole-body vibration.

Evidence Level: 4B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2026.1735367/full>

Social and occupational factors are associated with musculoskeletal pain prevalence in the general population: A population-based cohort study

Objective: Musculoskeletal pain (MP) is a leading cause of disability worldwide, affecting individual well-being and public health. However, in the literature, the prevalence of MP varies considerably because of methodological inconsistencies, selection biases, and differences in case definitions. This study aimed to estimate the population-based prevalence of MP in France and identify key demographic, socioeconomic, and occupational factors associated with MP. **Methods:** This cross-sectional study used baseline data for the CONSTANCES cohort study, a large, population-based epidemiological study with participants representative of the French adult population (18-69years old). Inverse probability weighting was used to correct for selection bias and to improve the generalizability of prevalence estimates. MP was assessed with the Nordic Musculoskeletal Questionnaire, with significant pain defined as lasting >30days in the past 12months. Multivariate logistic regression models were used to identify factors associated with low back pain, estimating odds ratios (ORs) and 95% confidence intervals (CIs). **Results:** Among 193,436 participants, 46.2% reported pain in at least one anatomical site. The most affected areas were the low back (26.6% adjusted prevalence), shoulder (21.4%), neck (19.0%), and knee (19.1%). Odds of low back pain was associated with female sex (OR: 1.39 [95% CI: 1.32-1.47]), older age, obesity, depression (1.71 [1.62-1.80]), and comorbidity burden (1.20 [1.15-1.25]). Odds of low back pain was associated with moderate or high occupational physical activity (OR: 1.33 [1.20-1.50] and 1.69 [1.48-1.93]) but was inversely associated with

very active leisure-time physical activity (0.82 [0.70-0.96]). Education level but not household income was a significant socioeconomic factor associated with MP. **Conclusion:** MP imposes a substantial burden on the French population, particularly among individuals with physically demanding jobs and low education levels. These findings highlight the paradox of physical activity associated with MP.

Bailly et al. 2026.

Joint Bone Spine, vol. 93, no. 2.

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Keywords: Low back pain; musculoskeletal diseases; musculoskeletal pain; pain; physical activity.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S1297319X25001460?via%3Dihub>

Factors associated with the timing of initial visit to healthcare providers for injured workers with low back pain claims: A multijurisdiction retrospective cohort

Purpose: Evidence shows that patient outcomes following musculoskeletal injury have been associated with the timing of care. Despite the increasing number of injured workers presenting with low back pain (LBP) in primary care, little is known about the factors that are associated with the timing of initial healthcare provider visits. This study investigated factors that are associated with the timing of initial workers' compensation (WC)-funded care provider visits for LBP claims. **Methods:** We used a retrospective cohort design. A standardised multi-jurisdiction database of LBP claims with injury dates from July 2011 to June 2015 was analysed. Determinants of the time to initial general practitioner (GPs) and or musculoskeletal (MSK) therapists were investigated using an accelerated failure time model, with a time ratio (TR) > 1 indicating a longer time to initial healthcare provider visit. **Results:** 9088 LBP claims were included. The median time to first healthcare provider visit was 3 days (interquartile range (IQR) 1-9). Compared to General practitioners (GPs) (median 3 days, IQR 1-8), the timing of initial consultation was longer if the first healthcare providers were MSK therapists (median 5 days, IQR 2-14) ($p < 0.001$). Female workers had a shorter time to first healthcare provider visit [TR = 0.87; 95% CI (0.78, 0.97)] compared to males. It took twice as long to see MSK therapists first as it did to see GPs for injured workers [TR = 2.12; 95% CI (1.88, 2.40)]. Professional workers and those from remote areas also experienced delayed initial healthcare provider visits. **Conclusions:** The time to initial healthcare provider visit for compensable LBP varied significantly by certain occupational and contextual factors. Further research is needed to investigate the impact of the timing of initial visits to healthcare providers on claim outcomes.

Mekonnen et al. 2026.

Journal of Occupational Rehabilitation, vol. 36, no. 1.

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Keywords: Health services accessibility; low back pain; occupational injuries; primary health care; time to treatment; Workers' compensation.

Evidence Level: 4B

Link: <https://link.springer.com/article/10.1007/s10926-025-10268-5>

Negative economic impact of work disability because of chronic low back pain from the patient perspective: A French cross-sectional study of 195 patients

Objective: To investigate the economic effect of work disability because of chronic low back pain (cLBP) from the patient's perspective. **Design:** We conducted a retrospective monocentric cross-sectional study from January 2010 to December 2019. **Setting:** The study was conducted in a university hospital in a tertiary care setting. **Participants:** The study included 195 patients (N=195) with cLBP and work disability who were referred for unit multidisciplinary rehabilitation using functional restoration from January 2010 to December 2019. **Interventions:** All data were collected at a single point in time, immediately before beginning a functional restoration program. They were demographic, socio-professional, economic (change in income, a negative value indicated a loss of income at the time of work disability), and LBP-related data. **Main outcome measures:** The main outcome measure was change in income because of work disability, related or unrelated to work injury and unemployment. **Results:** We studied 195 workers (mean age, 42.6y; 47.7% women; duration of work disability because of cLBP, 11mo). We observed a median decrease in income of -14.3% (interquartile range [IQR], 29.9) in the study population. Loss of income appeared higher

for unemployed patients (-29.82% IQR 15.6) and lower for those on sick leave related to work injury (-9.5% IQR 24). Two subgroups of patients were described according to the level of income loss: high-income loss and low-income loss, on the basis of the main outcome measure dichotomized using the median.

Conclusions: Work disability because of cLBP has a negative economic effect from the patient's perspective. Loss of income differs between different compensation categories. Further investigations remain necessary to identify factors associated with loss of income in larger samples of patients with cLBP. **Logiou et al. 2026.**

Archives of Physical Medicine and Rehabilitation, vol. 107, no. 3.

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Keywords: Chronic low back pain; economic effect; income loss; patient perspective; rehabilitation; work disability.

Evidence Level: 4B

Link: [https://www.archives-pmr.org/article/S0003-9993\(25\)00872-X/fulltext](https://www.archives-pmr.org/article/S0003-9993(25)00872-X/fulltext)

Guiding and Supporting Mental Health and Wellbeing

Mental Health

The relationship between mental health and employment status among United States veterans: A systematic review

Introduction: Post-9/11 U.S. veterans experience disproportionately high rates of mental health conditions. They are also more likely than non-veterans to be unemployed. Many studies have examined potential relationships between those phenomena. We aimed to systematically review this literature. **Materials and methods:** Articles published between September 2001 and September 2021 were identified using PubMed, Web of Science, and Google Scholar. These studies were cohort, cross-sectional, mixed methods, or qualitative studies that reported associations between mental health status or diagnoses and employment and were published in English. Primary mental health conditions of interest were post-traumatic stress disorder (PTSD), alcohol use disorder, bipolar disorder, depression, and other mood, psychiatric, or eating disorders. Two authors screened identified articles for inclusion, and disagreements were resolved by a third author. **Results:** Twenty-eight articles met inclusion criteria. Three reported PTSD to be positively associated with unemployment, although 7 found null results. Seven of 9 studies examining depression found positive associations between depression and unemployment, with 2 studies showing null findings. One study reported impaired job performance among veterans with alcohol or substance use disorder, but 2 studies on alcohol use disorder reported no significant association with unemployment. Study methodologies varied significantly, including in their populations, employment definitions, and choice of potential confounders. **Conclusions:** The review suggests a relationship between depression and employment status, but evidence for relationships between other conditions and employment status is mixed, which may be because of significant methodological differences between individual studies. Future work should address this by using a generalizable sample of post-9/11 veterans, a standardized definition of unemployment, and base the statistical model on a theoretical framework describing the relationship between mental health and employment.

Bailey et al. 2026.

Military Medicine, vol. 191, no. 3-4.

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Keywords: Mental health; employment status; veterans.

Evidence Level: 1A

Link: <https://academic.oup.com/milmed/article/191/3-4/e571/8266678?login=false>

Cumulative trauma, neural circuits, and burnout: An integrative model of healthcare worker post-traumatic stress syndromes

Background: Frontline healthcare workers (HCWs) experience unique patterns of repeated, chronic, and unpredictable traumatic event exposure, coupled with physiologic stress in the setting of shift-work circadian rhythm disruption, contributing to high rates of post-traumatic stress syndromes (PTSS) and

substantial workforce and economic burden. The neurobiology underlying HCW-specific risk remains incompletely understood. **Objective:** To synthesise epidemiological, neuroimaging, physiological, and interventional evidence into a mechanistic model of HCW PTSD and to identify priorities for biomarker-guided prevention and care. **Method:** Literature for this narrative review was identified through a comprehensive search of peer-reviewed articles in PubMed, PsycINFO, and Google Scholar up to May 2025. Studies were included if they addressed (1) the epidemiology of PTSD in healthcare settings, (2) risk and protective factors specific to occupational trauma exposure, (3) neural, physiological, or molecular mechanisms associated with stress-related disorders in trauma-exposed personnel, or (4) interventions targeting PTSD/PTSS in HCWs and first responder populations. **Results:** Across studies, PTSS prevalence among HCWs is variable (\approx 15-74%). Repeated, chronic, and unpredictable occupational trauma, exacerbated by circadian disruption, appears to destabilise frontal-limbic circuits and systemic stress pathways, culminating in allostatic overload. Converging data suggest that multimodal biomarkers, including resting-state and task-evoked fMRI metrics, MR spectroscopy, heart rate variability, sleep architecture, cortisol and inflammatory indices can identify prodromal dysregulation and define risk stratification. **Conclusions:** Longitudinal, multimodal cohort designs are critically needed to track trajectories and evaluate neuroscientifically-informed treatment modalities for PTSS in this population. Framing HCW PTSS as an occupational neurobiological injury highlights the need to identify and prevent functional decline. A biomarker-guided strategy that links brain-circuit measures with autonomic, sleep, and molecular indices may offer a path to earlier identification, precision interventions, and improved outcomes for a critically at-need population that is essential to our workforce.

Taren et al. 2026.

European Journal of Psychotraumatology, vol. 17, no. 1.

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Keywords: Post-traumatic stress disorder; first responder; healthcare; interventions; neurobiology.

Evidence Level: 4B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC12997488/>

Electroconvulsive therapy and occupational functioning in individuals with major depression

Purpose: Electroconvulsive therapy (ECT) is a well-established treatment for severe depressive episodes, but its effect on subsequent occupational functioning remains unclear. This study examined labour market trajectories among individuals with major depression treated with ECT, compared to similar individuals with depression who did not receive ECT. **Methods:** This population-based cohort study included all patients aged 15-55 with a first-time hospital contact for major depression (ICD-10 codes F32 and F33) in Denmark between 2000 and 2022. Patients treated with ECT were identified using the Danish National Patient Registry and matched 1:5 by age and sex to patients not treated with ECT. Labour market outcomes were assessed using data from the Danish Register for Evaluation of Marginalisation, tracking changes in employment and social transfer payments from one year before to three years after ECT/matching. Sequence analysis and Cox proportional hazards regression were used to evaluate time to regained employment, categorized as \leq 6 months, 7-12 months, and 1-3 years. **Results:** We included 6672 ECT-treated patients and 27,940 matched non-ECT individuals. At baseline, ECT patients had lower employment rates (6.9 % vs. 39.5 %) but higher education and marriage rates. ECT was associated with slower return to work within 6 months (adjusted HR: 0.59, 95 % CI: 0.54-0.64), but similar or faster return at 7-12 months (HR: 1.12, 95 % CI: 1.01-1.24) and 1-3 years (HR: 1.05, 95 % CI: 0.96-1.14). **Conclusion:** ECT was linked to delayed short-term occupational recovery, but comparable or improved long-term return to work, supporting its continued use in treating major depression.

Bjørn-Rozing et al. 2026.

Journal of Affective Disorders, vol. 397.

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Keywords: Depression; electroconvulsive therapy; employment; psychiatry; sickness absence.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0165032725023341?via%3Dihub>

Moral distress and occupational burnout in US physicians

Importance: Exploring the relationship between moral distress and occupational burnout is necessary to understand the association between these constructs. **Objective:** To evaluate moral distress among physicians and US workers, and to explore the association of moral distress with burnout, intent to leave (ITL) current position, and intent to reduce clinical work hours (ITR). **Design, setting, and participants:** This cross-sectional national survey study included physicians from all specialties and a probability-based sample of employed nonphysicians. Participants were aged 29 to 65 years. Data were collected between October 19, 2023, and March 5, 2024. Data were analyzed from June 30 to October 20, 2025. **Main outcomes and measures:** Moral distress was measured using the Moral Distress Thermometer (MDT, range 0-10), with a high level of moral distress defined by a score of 4 or higher. Burnout was measured using the complete Maslach Burnout Inventory (MBI). Professional fulfillment was measured using the Stanford Professional Fulfillment Index. ITL and ITR were measured using a standardized item with response options of none, slight, moderate, likely, and definitely. **Results:** This survey study included 5741 physicians and 3501 nonphysician US workers. The median (IQR) age of physicians was 53 (44-62), and included 3262 men (58.0%), 2255 women (40.1%), and 107 individuals who responded other (1.9%). The mean (SD) moral distress score for physicians was 3.29 (2.81), with 2243 (39.1%) reporting a high level of moral distress (4 or more considered high). On multivariable analysis, women physicians had higher odds of moral distress (OR, 1.29; 95% CI, 1.12-1.48). Compared with internal medicine subspecialists, emergency medicine physicians (OR, 3.16; 95% CI, 2.27-4.4) and general internal medicine physicians (OR, 1.92; 95% CI, 1.42-2.59) were more likely to report high levels of moral distress. Mean emotional exhaustion and depersonalization scores, as well as the proportion of physicians with burnout, were higher with each 1-point increase in moral distress score. The overall correlation between the emotional exhaustion score and moral distress score was $R = 0.55$ ($P < .001$) while the correlation between the depersonalization score and moral distress score was $R = 0.50$ ($P < .001$). Additionally, 1068 of 3477 physicians (30.7%) with a moral distress score less than 4 had burnout symptoms compared with 1675 of 2231 physicians (75.1%) with scores of 4 or more ($P < .001$). The prevalence of ITL and ITR was higher for each 1-point increase in moral distress score. For example, 619 of 3404 physicians (18.2%) with low moral distress reported ITL within 24 months compared with 748 of 2171 (34.5%) among those with high moral distress ($P < .001$). Compared with other US workers, physicians had markedly higher odds of experiencing moral distress (OR, 4.40; 95% CI, 3.84-5.06). **Conclusion and relevance:** In this survey study, moral distress was common among physicians and experienced at higher rates than the general US working population. Understanding the differences between moral distress and burnout may allow organizations to more effectively implement interventions to address both concerns among clinicians.

Tutty et al. 2026.

JAMA Network Open, vol. 9, no. 3.

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Keywords: Moral distress; burnout.

Evidence Level: 4B

Link: <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2846921>

Psychosocial Issues

Effort-reward imbalance at work and health: Review and critical appraisal of three decades of research

Objective: This paper discusses the contribution of a widely used theoretical model of the psychosocial work environment, effort-reward imbalance (ERI), to occupational health research. It highlights the development of this approach, its measurement, and its main findings over the past three decades, focusing on epidemiological investigations. Furthermore, several limitations and challenges in view of far-reaching changes of modern work are discussed. **Methods:** Based on systematic reviews, meta-analyses, and an extended search for key publications, this discussion paper sets out the main evidence of associations of the model's measures with health risks, prioritizing prospective investigations. Complementing results addressing psychobiological markers as potential pathways underlying these associations, as well as findings on the model's expansion beyond paid work, are briefly summarized.

Results: Currently available findings document consistent, moderately elevated related risks of ischemic heart disease (IHD) and depression following exposure to ERI. Quasi-experimental findings on physiological parameters as potential mediators of the link with IHD support this evidence. Results on a range of other disorders, in particular metabolic diseases, drug-related disorders, and indicators of reduced health functioning, while supportive, are less robust. **Conclusions:** This paper synthesizes three decades of international research on ERI as a parsimonious model of adverse psychosocial working conditions. At the same time, conceptual and methodological limitations-particularly in light of rapid changes in modern work and employment-point to priorities for future refinement and application of the model.

Siegrist 2026.

Scandinavian Journal of Work, Environment and Research, vol. 52, no. 2.

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Keywords: Work; health; imbalance; research.

Evidence Level: 1A

Link: <https://www.sjweh.fi/article/4267>

Conceptualizing stigma in the injured worker literature: A scoping review

Purpose: Injured workers experience stigmatization, but the current literature has not applied a stigma lens to this demographic. Stigmatizing experiences are described, but not by readily using the term "stigma," making it difficult to locate these works. The purpose of this scoping review was to identify the terms and phrases that are being used to describe the stigmatizing experiences of injured workers. **Methods:** A scoping review was conducted, searching MEDLINE, PsycINFO, and CINAHL for papers that described the stigma experiences of injured workers. The main objectives were to determine (i) whether the term "stigma" was used (and if it was a major or minor term) and (ii) what terms were used to describe these stigmatizing experiences. Post hoc, the terms were grouped into components of popular stigma theories (Attribution Theory, Modified Labeling Theory, and the Regressive Self-Stigma Model). **Results:** 100 articles were included in the review. 48% of the studies used the term "stigma," but of these studies, only 11 (23%) used "stigma" consistently throughout their papers. There were 271 unique terms identified that described the stigmatizing experiences injured workers face, which most commonly described cognitive and behavioral forms of stigma. **Conclusions:** This review confirmed that a stigma lens has not been adopted to describe the experiences of injured workers, but that prominent theories of public and structural stigma explain these experiences well. This review also consolidated the various terms used to describe stigma experiences of injured workers, which will improve accessibility of the current literature for knowledge users and interested parties.

Popovic et al. 2026.

Journal of Occupational Rehabilitation, vol. 36, no. 1.

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Keywords: Attitude; Injured workers; Occupational injury; Scoping review; Social discrimination; Social stigma.

Evidence Level: 1A

Link: <https://link.springer.com/article/10.1007/s10926-025-10280-9>

Social engagement and depressive symptoms in Korean older adults: The potential moderating role of employment status

Background: Social engagement is known to alleviate depressive symptoms among older adults, and continued employment in later life may serve as a key mechanism for sustaining social engagement. However, the impact of employment on mental health can vary depending on job quality and socioeconomic conditions. This study aims to examine the association between social engagement, employment status, and depressive symptoms among older adults in South Korea. **Methods:** This study utilized data from the Korea Community Health Survey conducted biennially from 2017 to 2023, excluding 2021. The analytic sample consisted of 199,205 adults aged 65 years and older. Depressive symptoms were assessed using the Patient Health Questionnaire-9. The effects of social engagement, categorized by informal and formal engagement, were analyzed in subgroups based on employment status. Associations

were examined using multivariable logistic regression analysis. **Results:** All types of social engagement were significantly associated with depressive symptoms, with the strongest associations observed for contact with friends and participation in leisure or recreational activities. Employment status served as effect modifier of these relationships, with employed older adults generally showing a lower likelihood of depressive symptoms compared to their unemployed counterparts. The negative association with employment was particularly pronounced in the domains of friend contact and all types of formal social engagement. **Discussion:** Our findings highlight the importance of promoting formal social engagement as a potential intervention strategy for preventing depression among older adults and emphasize the need to consider appropriate forms of employment as part of this strategy.

Lee et al. 2026.

PLoS One, vol. 21, no. 3.

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Keywords: Social engagement; depressive symptoms; employment status.

Evidence Level: 4B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0342299>

Suffer at work, vent at home: Linking workplace ostracism to family undermining from an emotional resource perspective

Although workplace ostracism has been widely recognized as a harmful organizational stressor, its cross-domain spillover effects on employee family behaviors and the underlying mechanisms remain insufficiently explored. This study investigates the relationship between workplace ostracism and employees' family undermining, focusing on the underlying mechanisms from the perspective of emotional resource depletion, specifically regulatory emotional self-efficacy and surface acting. A total of 609 employees from private enterprises in China were surveyed using the Workplace Ostracism Scale, Regulatory Emotional Self-Efficacy Scale, Surface Acting Scale, and Family Undermining Scale. The results indicate that workplace ostracism is significantly positively associated with employee family undermining, and is linked to family undermining through three pathways: (1) the independent mediating role of regulatory emotional self-efficacy; (2) the independent mediating role of surface acting; (3) the serial mediation of regulatory emotional self-efficacy and surface acting. These findings deepen understanding of the mechanisms underlying the association between workplace ostracism and family interactions and provide theoretical and practical implications for organizational management and employee mental health.

Lin et al. 2026.

Acta Psychologica, vol. 264.

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Keywords: Corporate employees; emotional labor; family undermining; regulatory emotional self-efficacy; workplace ostracism.

Evidence Level: 4B

Link: [https://linkinghub.elsevier.com/retrieve/pii/S0001-6918\(26\)00393-8](https://linkinghub.elsevier.com/retrieve/pii/S0001-6918(26)00393-8)

Work and family conflicts and abnormal eating behaviors in occupational populations: The mediating role of Big Five personality traits

Background: Work-Family Conflict (WFC) and Family-Work Conflict (FWC) are prevalent psychosocial stressors among working populations, closely associated with mental and behavioral health outcomes. However, the ways in which these conflicts relate to abnormal eating behaviors (EBS) remain insufficiently understood. Personality traits may function as psychological resources that shape individuals' stress responses, offering a potential explanatory account. Guided by the Conservation of Resources (COR) theory, this study examined the associations between WFC, FWC, and EBS, and evaluated the independent and moderating roles of the Big Five personality traits. **Methods:** A cross-sectional survey of 4579 working adults assessed WFC, FWC, EBS, and the Big Five traits (Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness). Descriptive statistics and correlation analyses were conducted. Hierarchical regression models were used to test whether WFC/FWC were associated with EBS after adjusting for the Big Five traits. To examine moderation, interaction terms were then tested for personality traits that

showed significant associations with EBS in the adjusted models (agreeableness, conscientiousness, and neuroticism). All models controlled for gender, occupation, monthly household income, smoking status, and BMI. **Results:** Both WFC and FWC were positively associated with EBS, with FWC showing a stronger association ($\beta = 0.266$, $p < 0.001$) than WFC ($\beta = 0.145$, $p < 0.001$). These associations remained significant after adjusting for the Big Five traits (WFC: $\beta = 0.161$, $p < 0.001$; FWC: $\beta = 0.189$, $p < 0.001$). In terms of personality, agreeableness and conscientiousness were inversely associated with EBS ($\beta = -0.096$ and -0.176 , both $p < 0.001$), whereas neuroticism was positively associated with EBS ($\beta = 0.039$, $p < 0.001$). Moderation analyses indicated that only the WFC \times agreeableness interaction was significant ($\beta = 0.051$, $p < 0.05$), while other interaction terms were non-significant, suggesting a trait-specific rather than universal moderation pattern. Higher EBS scores were also observed among males, smokers, and overweight/obese individuals. **Conclusion:** This study demonstrates that work-family conflicts are robustly associated with abnormal eating behaviors, and that personality traits provide additional explanatory value in terms of independent associations and limited, trait-specific moderation. Consistent with COR theory, the findings suggest that individuals with lower agreeableness or conscientiousness and higher neuroticism may be more vulnerable to stress-related maladaptive eating. Given the cross-sectional design, these findings reflect correlational associations rather than causal effects; longitudinal research is needed to verify these relationships across cultural contexts.

Luo 2026.

Acta Psychologica, vol. 264.

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Keywords: Abnormal eating behaviors; Big Five personality traits; family-work conflict; hierarchical regression; moderation; work-family conflict.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826003574?via%3Dihub>

The association of psychosocial work quality with changes in the mental health of young adults starting career work

Objective: This study investigated whether (i) young adults' mental health problems change when starting career work, (ii) potential changes in mental health problems differ by psychosocial work quality, and (iii) mental health problems during adolescence moderate potential changes in mental health by psychosocial work quality. **Methods:** We used data from the TRacking Adolescents' Individual Lives Survey (TRAILS) cohort. Follow-up time was 2-4 years. Mental health was measured with the youth and adult self-report scales. Longitudinal fixed-effects regression analyses were applied to estimate within-person changes in mental health of young adults entering career work with good, moderate, or poor psychosocial work quality (N=850) and model adolescent mental health as effect modifier of this change (N=766). **Results:** When psychosocial job quality of the first career job was ignored, mental health problems did not significantly change among young adults after having entered career work compared with not having career work. Taking psychosocial job quality into account, mental health problems increased among young adults starting career work in poor psychosocial quality compared with not having career work (adjusted mean score increase 0.12, 95% confidence interval 0.03-0.21). No significant changes in mental health problems were found for young adults entering work with moderate-to-good psychosocial work quality. We found no evidence for adolescent mental health problems as moderator. **Conclusion:** Psychosocial work quality potentially plays a role for young workers' mental health. Improving poor psychosocial work quality of young adults might contribute to a mentally healthier start of one's working life.

van Veen et al. 2026.

Scandinavian Journal of Work, Environment and Health, vol. 52, no. 2.

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Keywords: Psychosocial work quality; mental health; career; young adults.

Evidence Level: 4B

Link: <https://www.sjweh.fi/article/4263>

Supervisor and coworker trust as predictors of work engagement and burnout among migrant workers: The moderating role of language proficiency and contact with co-national coworkers

Introduction: Migration has become a crucial factor influencing social and economic landscapes in the Global North, creating challenges for workplace integration. In this study we describe how supervisor and coworker trust increase work engagement and decrease burnout among migrant workers. **Methods:** The hypotheses were tested with a cross-sectional study based on the Job Demands-Resources (JD-R) theory and using well established questionnaire tools. **Results:** We showed that secondary level factors: supervisor and coworker trust act either as resources (from β [standardized coefficient] = 0.126, CIs = [0.001, 0.326] to β = 0.302, CIs = [0.184, 0.421] for particular subscales) or demands (from β = -0.090, CIs = [-0.127, 0.025] to β = -0.270, CIs = [-0.298, -0.116] for particular subscales), depending on primary level variables, located in individual and environmental conditions. We further show how the primary level factors influence the aforementioned relationships: host-country language proficiency moderates the relationship between coworker trust and burnout (B [unstandardized measure] = 0.960; CIs = [0.002, 1.918]; f^2 [standardized measure] = 0.242) and that contact with co-national coworkers (B = 0.315; CIs = [0.046, 0.584]; f^2 = 0.215) moderates the relationship between coworker trust and burnout. **Discussion:** Results indicate that coworker trust positively predicts work engagement and reduces burnout, particularly for migrants with high host country's language proficiency, irrespective of work's dominant language proficiency. Conversely, limited interaction with co-national coworkers strengthen the effects of workplace distrust on burnout. Our findings suggest that fostering inclusive workplaces and linguistic support may increase migrants' psychosocial well-being. Supporting communication and in particular the development of trust in culturally diverse work environments can increase employee health and wellbeing by decreasing burnout (from 3% to 23% depending on its dimension) and enhancing engagement (from 12% to 23% depending on dimension). The results may also be an insight to organizational and public health policies creators, referring to United Nations' Sustainable 2 Development Goal 3: Good Health and Well-Being and 8: Decent Work and Economic Growth.

Kulisz et al. 2026.

Frontiers in Public Health, vol. 14.

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Keywords: JD-R theory; burnout; language proficiency; migration; psychosocial resources; work engagement; workplace trust.

Evidence Level: 4B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2026.1755139/full>

Modelling the risk of professional disengagement from a cohort study of 181,676 workers in the south of France

Objective: This study determines a set of medical, occupational, and social risk factors of professional disengagement that can be documented early in occupational health practice. **Method:** This study was carried out on a cohort of French workers. Data were extracted from computerised occupational health medical follow up records. The professional disengagement risk was assessed by healthcare professionals. Logistic regression models were applied. **Results:** 181,676 workers were included. Of these, 4.05% had a high professional disengagement risk index (PDRI) and 13.0% a moderate risk. Women (OR: 1.21) and 50-61-year-old (OR: 5.17) workers appear to be the most at high risk. White-collar (OR: 1.63) and blue-collar (OR: 1.60) have a higher at risk compared with manager. The main disorder risk factors of high PDRI were mental disorders (OR: 8.79), musculoskeletal disorders including shoulder (OR: 6.23), arm (OR: 3.80), or hand (OR: 3.21) and kidney disorders (OR: 5.57). Recognition of a professional disengagement (OR: 7.55) or long/iterative sick leave (OR: 5.08) is associated with high PDRI. Occupational exposure associated with high PDRI include "poor interpersonal relationships" (OR: 6.05), "job insecurity" (OR: 4.14) and "conflicts of values" (OR: 3.88). Exposure to noise (OR: 1.33) and heavy work (OR: 1.25) are associated with a high PDRI, however some physical exposures appear to be 'protective' such as lower limb postures (OR: 0.68) or whole-body vibrations (OR: 0.64). **Conclusions:** Mental and musculoskeletal disorders, poor working relationships, job insecurity and conflicts of values all appear to be avoidable risk factors for professional disengagement. These results reinforce the importance of targeted prevention and orientates future research to refine the accuracy of the variables and better distinguish gradients and thresholds of risk.

Bellagamba et al. 2026.

PLoS One, vol. 21, no. 3.

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Keywords: Professional disengagement; risk factors; France.

Evidence Level: 4B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0346149>

Traumatic workplace fatalities: The lived experiences of coworkers

Background: Workplace fatalities are sudden, traumatic events that can have significant psychological and emotional consequences for those exposed to them. **Objective:** To explore coworkers' lived experiences of workplace fatalities, with particular attention to their exposure and trauma responses. **Method:** A qualitative descriptive study with semi-structured interviews was undertaken to understand the lived experiences of coworkers exposed to traumatic workplace fatalities. Eighteen participants from five industry groups took part. Thematic analysis was used to understand and interpret the interviews, guided by Carlson and Dalenberg's (2000) conceptual framework of traumatic experiences. **Results:** Exposure to traumatic workplace fatalities includes the experience of confronting visual, auditory and tactile experiences. Participants described peritraumatic responses such as emotional withdrawal, panic, numbness and shock, as well as acting instinctively to assist the victim. Posttraumatic trauma responses included re-experiencing and avoidance, with some reporting secondary and associated responses such as PTSD, suicidal ideation and relationship breakdowns. Investigative processes were also described as retraumatising and distressing. **Conclusions:** This study identifies that coworkers can be significantly affected by traumatic workplace fatalities, often experiencing emotional and psychological harm as secondary victims. The investigative process that follows can compound their distress and be retraumatising. Findings highlight a clear need for trauma-informed support that addresses both immediate and ongoing psychological needs of coworkers. Better recognition and response to their experiences and needs are essential in reducing further harm.

Rawlings et al. 2026.

European Journal of Psychotraumatology, vol. 17, no. 1.

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Keywords: Workplace death; coworkers; mental health; occupational stressors; PTSD; psychological impact; secondary victims; trauma.

Evidence Level: 5B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC12973795/>

Psychosocial career preoccupation and organisational commitment at higher educational institutions in Ghana: The role of workplace friendship

Empirically, the study examined how psychosocial career preoccupation [PCP] directly affects organizational commitment [OC] and indirectly affects the same via workplace friendship [WF] among administrative and teaching staff in public higher education institutions in Ghana. The numerical orientation to the data analysis supported the use of the explanatory research design and quantitative approach. The population included both administrative and teaching staff in public higher education institutions in Ghana with at least one year of service. Structured questionnaires were issued for the primary data collection via the convenience sampling technique and the response rate was 96% (288 valid responses from 300 approached participants). The unit of analysis was at the individual level. SMART-PLS software (version 4.1.0.8) was used for the data processing. The repeated indicator structural modelling technique was employed to configure the model reflectively to test the hypotheses. PCP fails to contribute significantly to predicting OC directly ($\beta = 0.045$, $p = 0.250$). However, PCP contributes significantly in a strong manner to predicting WF ($\beta = 0.454$, $p < 0.001$), and WF significantly predicts OC ($\beta = 0.442$, $p < 0.001$). WF successfully mediates the predictive relationship between PCP and OC with a significant indirect effect ($\beta = 0.201$, $p < 0.001$). Higher education policymakers in Ghana are advised to develop and enforce policies that promote the integration of career development with social support systems within institutions, mandating structured programs that address employees' career advancement while actively

encouraging workplace friendship networks. It is advisable for higher education administrators and human resource practitioners in Ghana to prioritize cultivating workplace friendships as a strategic resource to enhance organisational commitment while implementing comprehensive career development programs that address psychosocial career preoccupations. These results provide an innovative, contextually relevant perspective on the mediating role of workplace friendship in translating career concerns into organisational commitment within Ghanaian higher education, thus enhancing current theoretical frameworks by demonstrating the indirect pathway through social relationships rather than direct effects of career preoccupations.

Amfo-Antiri et al. 2026.

PLoS One, vol. 21, no. 3.

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Keywords: Psychosocial career preoccupation; higher educational institution; workplace friendship.

Evidence Level: 5B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0340460>

Fostering Work Participation

Return to Work

Mapping vocational rehabilitation interventions for people with chronic low back pain: A scoping review

Purpose: Low back pain (LBP) is the leading cause of years lived with disability worldwide. Clinical guidelines recommend multidisciplinary rehabilitation for managing chronic LBP. This scoping review maps vocational rehabilitation (VR) interventions delivered within the healthcare sector for individuals with chronic LBP. It explores (1) which professional groups are involved and how they collaborate, (2) the setting, (3) the duration, intensity, and components of interventions, and (4) how work status is assessed.

Methods: A systematic search across six databases (MEDLINE, Embase, CINAHL, AMED, OT Seeker, and Scopus) was conducted in September 2023 and updated in October 2024, following PRISMA-ScR guidelines. Studies were included if they involved working age individuals with chronic LBP receiving VR initiated within the healthcare sector. Articles published before 2013, from outside Europe, or with > 50% of participants on sick leave > 12 months were excluded. **Results:** Of 7032 records, 26 articles representing 21 studies from seven European countries were included. Interventions varied in duration (1-12 weeks or until return-to-work (RTW) or a new plan was established), intensity (a few hours to 30 h/week), complexity, and follow-up periods (5 weeks to 5 years). Interdisciplinary collaboration was most common (six studies), although descriptions were limited. Interventions ranged from simple to complex, with up to seven components. Nineteen different methods were used to assess work status. **Conclusion:** Substantial heterogeneity in intervention design and RTW outcome measures limits comparability and evidence synthesis. Clearer definitions of collaboration and standardized RTW reporting are needed to inform future development of VR in healthcare contexts.

Frydenlund et al. 2026.

Journal of Occupational Rehabilitation, vol. 36, no. 1.

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Keywords: Chronic pain; low back pain; return to work; vocational rehabilitation; work retainment.

Evidence Level: 1A

Link: <https://link.springer.com/article/10.1007/s10926-025-10308-0>

Return-to-work after carpal tunnel release across surgical techniques: A narrative review

Carpal Tunnel Syndrome (CTS) is the most common upper-limb entrapment neuropathy and remains a major contributor of work-related disability. While Carpal Tunnel Release (CTR) reliably improves symptoms, functional recovery is less consistently reported. Return-to-Work (RTW) has emerged as a practical functional outcome, but definitions and reporting remain heterogeneous. We conducted a narrative review of English-language studies reporting RTW or work-absence outcomes following open, endoscopic, ultrasound-guided, ultraminimally invasive, and microinvasive CTR techniques. Due to

variability in study design and RTW definitions, findings were synthesised descriptively. Across the literature, RTW durations progressively shortened as procedural invasiveness decreased. Open CTR commonly reported RTW at four to six weeks, endoscopic techniques at two to four weeks, and ultrasound-guided approaches at approximately 10-21 days. Recent ultraminimally invasive and microinvasive systems frequently reported RTW within one to two weeks when performed under local anaesthesia. These findings highlighted RTW as a meaningful functional benchmark and underscore the role of imaging-guided access minimisation in accelerating postoperative recovery.

Lobos et al. 2026.

Medicina, vol. 62, no. 3.

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Keywords: Return-to-Work; carpal tunnel release; carpal tunnel syndrome; microinvasive surgery; minimally invasive surgery; ultrasound-guided surgery.

Evidence Level: 1A

Link: <https://www.mdpi.com/1648-9144/62/3/557>

Ethnic inequalities in return to work post first stroke: Findings from a population-based cohort study in South London

Background: Return to work post stroke is affected by sociodemographic factors and disability. We explored ethnic differences in employment among White, Black African, Black Caribbean, and other ethnic minority groups at 1 and 5 years post first stroke in a population-based cohort. **Methods:** Data on individuals with first-ever stroke were obtained from the South London Stroke Register ([SLSR] patients registered between 1995 and 2025). Analysis was restricted to individuals in employment at the time of first stroke (N=1737, 67% men, mean age: 54 years [SD: 12.1]), with employment status assessed at 1 year and 5 years follow-up. Associations between ethnicity and employment status (employed, retired or other) were examined using multinomial logistic regression adjusting for a range of sociodemographic (age, sex, study period, socioeconomic deprivation) and clinical factors (eg, stroke severity and management, co-occurring health conditions, functional indicators) at baseline and follow-up. **Results:** After adjusting for baseline factors (socioeconomic deprivation/stroke severity/health conditions), Black African (relative risk ratio [RRR] 0.47 [95% CI 0.29-0.75]) and Black Caribbean (RRR, 0.40, [0.22-0.75]) groups were significantly less likely to be employed at 1 year post stroke than White individuals. At 5 years, only Black African individuals were less likely to be employed (RRR, 0.59 [95% CI, 0.30-1.15]). Similar ethnic disparities were observed at 1 year and 5 years in relation to clinical factors assessed at follow-up. **Conclusions:** Black survivors of stroke were ~50% less likely to be employed 1 year after stroke compared with White survivors, with Black African disadvantage persisting at 5 years after stroke. These persistent disparities were not explained by sociodemographic, stroke severity, and functional/health indicators. More research is required to better understand what drives the ethnic disparities in poststroke return to work.

Khanolkar et al. 2026.

Journal of the American Heart Association, vol. 15, no. 6.

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Keywords: Employment; ethnicity; health inequalities; return to work.

Evidence Level: 4B

Link: <https://www.ahajournals.org/doi/10.1161/JAHA.125.047841>

Effect of depressive symptoms on return to work after lumbar spine fusion surgery: A retrospective registry study

Study design: Retrospective registry study. **Objective:** To investigate the influence of depressive symptoms on return to work (RTW) after lumbar spine fusion (LSF) surgery over a two-year follow-up. A secondary objective was to evaluate the development of depressive symptoms separately in patients who succeeded or failed to RTW after surgery. **Background:** Depressive symptoms are overrepresented in patients undergoing LSF surgery. The effect of depressive symptoms on RTW after LSF surgery has not yet been widely studied. **Materials and methods:** A total of 348 consecutive patients available to the workforce underwent LSF surgery. Depressive symptoms were evaluated at baseline and three, 12, and 24 months

postoperatively using the MHI-5. Lower scores have been shown to indicate greater depressive symptoms, and a cutoff score of ≤ 68 indicates current major depressive disorder (MDD). Cumulative RTW and MHI-5 scores were prospectively followed up at the aforementioned time points. **Results:** Before surgery, almost half (46%) of the patients had MDD. The presence of preoperative MDD indicated a lower RTW at two years [72% vs . 82%, adjusted HR: 0.77 (95% CI: 0.61 to 0.98)]. The probability of RTW was correlated with an increase in the MHI-5 score until the inflection point of 70, after which a further increase in the MHI-5 score no longer increased the probability of RTW. In addition, the MHI-5 score was significantly higher than baseline at three months postoperatively [13 points (95% CI: 10 to 15)] and remained higher in patients who RTW during two years. However, only a marginal increase in MHI-5 was observed in those who failed to RTW. This finding indicates fewer depressive symptoms in patients who successfully RTW. **Conclusion:** Patients with preoperative MDD were less likely to RTW after LSF surgery. After surgery, depressive symptoms diminished in the group who did successfully RTW.

Laurén et al. 2026.

Spine, vol. 51, no. 6.

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Keywords: MDD; MHI-5; RTW; depressive symptoms; lumbar spine fusion; major depressive disorder; return to work.

Evidence Level: 4B

Link:

https://journals.lww.com/spinejournal/fulltext/2026/03150/effect_of_depressive_symptoms_on_return_to_work.7.aspx

Work ability during the return to work process: Results from a mixed methods follow-up study among employees with common mental disorders

Purpose: A main goal during the return to work (RTW) process after a long-term sickness absence due to common mental disorders (CMDs), is to restore and maintain employees' work ability to enable their sustained work participation. This study jointly examined employees' work ability ratings and experiences during their RTW process with CMDs. **Methods:** In a mixed methods follow-up study of N = 286 participants, work ability was quantitatively assessed with the Work Ability Score (WAS, range 0-10) at baseline (week before clinical discharge) and after 6, 12, 18, and 30 months. In a sub-sample, the qualitative work ability experiences of N = 32 participants were analysed at 6 and 12 months, and were jointly evaluated with the quantitative data. **Results:** The mean WAS increased during the first 18 months of follow-up. Three groups of qualitative work ability experiences emerged: Employees with (1) poor work ability (WAS 0-3), who did not RTW yet and described great difficulties in coping with everyday life, (2) moderate work ability (WAS 4-6), who mainly did RTW, but still showed a certain level of fragility, and (3) good to very good work ability (WAS 7-10), who mainly returned to work and reported many individual and work accommodations to maintain their work ability. **Conclusion:** The present study provides new insights into different aspects of work ability experiences, especially during the later RTW phases, where restoring and maintaining work ability is essential for a sustained work participation. This knowledge may help RTW stakeholders to better tailor support during the RTW process.

Sikora et al. 2026.

Journal of Occupational Rehabilitation, vol. 36, no. 1.

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Keywords: Common mental disorders; long-term sickness absence; mixed methods; return to work; work ability.

Evidence Level: 5B

Link: <https://link.springer.com/article/10.1007/s10926-024-10262-3>

Presenteeism and Absenteeism

Present but overlooked: A scoping review of instruments and approaches for measuring presenteeism related to alcohol, tobacco, and drug use

Purpose: The use of alcohol, tobacco, and other drugs (ATOD) can impact workplace productivity. Whilst presenteeism has a greater impact on productivity than absenteeism, it is less visible and often receives less attention. Measuring ATOD-related presenteeism is important for identifying the impact of AOD use and evaluating workplace AOD interventions. However, there is no standard approach to determining ATOD-related presenteeism. The aim of this scoping review was therefore to identify and describe different approaches and instruments used to determine ATOD-related presenteeism. **Methods:** A scoping review of publications up to and including December 2024 was undertaken across three major databases: Scopus, Ovid Medline, and the Latin-American and Caribbean System on Health Sciences (LILACS). The population was workers for whom ATOD-related presenteeism was reported, the concept was presenteeism, and the context was the workplace. **Results:** The review included 27 original studies. The most common approach (n = 22 studies) was indirect, which involved examining differences in presenteeism between workers who did and did not use ATOD. Direct approaches-asking participants explicitly about their ATOD-related presenteeism-were less common (n = 5 studies) and focussed exclusively on alcohol. Across both approaches, there was substantial variation in instruments (n = 4 direct, n = 10 presenteeism, n = 18 ATOD), use of validated instruments, recall periods, and ways of reporting findings, which may compromise the interpretation and synthesis of studies. **Conclusion:** This scoping review provides an evidence base for informing approach and instrument selection. It establishes the need for further research on the impact of different approaches and instruments on findings. This information is essential to encourage more rigorous and standardised approaches to determining ATOD-related presenteeism and evaluating workplace interventions.

Thompson et al. 2026.

Journal of Occupational Rehabilitation, vol. 36, no. 1.

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Keywords: Alcohol and other drugs; instruments; measurement; presenteeism; productivity; workplace.

Evidence Level: 1A

Link: <https://link.springer.com/article/10.1007/s10926-025-10317-z>

Occupational health interventions' impact on absenteeism and economic returns: A systematic review and meta-analysis

Objective: Health-related productivity losses impose a significant burden on health systems and economies. Occupational health interventions (OHI) are increasingly promoted as preventive strategies to reduce work-related illness and enhance productivity. However, their effectiveness often remains unclear, creating a lack of guidance to those deciding on their implementation. The aim of this review was to evaluate the effectiveness of OHI in reducing sickness absenteeism and generating economic returns, focusing on mental health, physical health, and workplace atmosphere interventions (eg, work climate enhancement, leadership training). **Methods:** A systematic literature search following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guideline was conducted throughout December 2024. Risk of bias was assessed with Joanna Briggs Institute checklists. A random-effects meta-analysis synthesized OHI effects on sick days and return on investment (ROI). **Results:** Of 2624 identified studies, 68 across eight industries met eligibility criteria. From these, 23 were included in the meta-analysis: 11 reporting on sick days, and 12 on ROI. OHI were associated with a non-significant reduction in absenteeism [-0.18 days; 95% confidence interval (CI) -2.80-2.43; P=0.890] and a tendency of positive ROI (1.92; 95% CI -0.34-4.17; P=0.096), albeit with statistical uncertainty.

Conclusion: We only found effect of OHI on ROI, however, absence effects on sick days do not necessarily imply a lack of effectiveness. We hypothesize that ROI benefits reflect improvements in presenteeism, although not directly measured. Overall, this review guides OHI selection and implementation, urges standardized evaluation, and prioritizes research on presenteeism measurement, non-OECD settings, and qualitative success factors.

Backes et al. 2026.

Scandinavian Journal of Work, Environment and Health, vol. 52, no. 2.

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Keywords: Health related productivity; absenteeism; economic returns.

Evidence Level: 1A

Link: <https://www.sjweh.fi/article/4265>

How is long-term sickness absence due to different mental disorders associated with future disability pension risk? A population-based prospective cohort study in Finland

Objectives: The rise in mental disorders in Organisation for Economic Co-operation and Development (OECD) countries warrants close consideration, as mental disorders cause long-term sickness absences (LTSA) and increase the risk of disability pensioning (DP). This study compared how different mental disorders as a basis for LTSA pose risks for a subsequent DP. **Design:** Population-based prospective cohort study. **Setting and participants:** 18-59-year-old Finns starting a new psychiatric LTSA in 2020. LTSA was measured through sickness allowance accumulated over 12 months. A 48-month follow-up started from the onset of LTSA. Six mental disorder types were identified. **Outcome measures:** The outcome variable was the time in months to a first paid DP spell. Using Cox proportional hazards regression stratified by sex, the DP risks of different mental disorders were examined, adjusting for comorbidity, length of LTSA and sociodemographic variables. The risks are presented as absolute risk differences and both unadjusted and covariate-adjusted HRs. **Results:** Compared with depression-related LTSA, psychoses (HRs 2.93 (95% CI 2.55 to 3.36) for women/2.99 (95% CI 2.67 to 3.36) for men) and other mood disorders (HRs 1.64 (95% CI 1.40 to 1.92)/1.49 (95% CI 1.25 to 1.78)) were associated with higher covariate-adjusted HRs, while anxiety disorders (HRs 0.65 (95% CI 0.59 to 0.72)/0.76 (95% CI 0.67 to 0.87)) and psychiatric sleep disorders (HRs 0.47 (95% CI 0.38 to 0.59)/0.58 (95% CI 0.44 to 0.78)) showed lower HRs. Higher age, lower education and socioeconomic status, comorbid mental disorders, chronic diseases and longer LTSA increased the risk. **Conclusions:** Different mental disorders as basis for LTSA pose differing risks for permanent work disability. Among mental disorders, depression poses a relatively average risk for DP. Although anxiety and sleep disorders commonly cause LTSA, they are not associated with high DP risks. Psychotic and bipolar disorders are especially detrimental to work ability in today's work life.

Perhoniemi et al. 2026.

BMJ Open, vol. 16, no. 3.

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Keywords: Epidemiology; mental health; psychiatry; public health.

Evidence Level: 4B

Link: <https://bmjopen.bmj.com/content/16/3/e106029.long>

Work productivity, associated risk factors and costs on presenteeism and absenteeism in Chinese patients with young-onset type-2 diabetes in Hong Kong

Aims: Those with young-onset type-2 diabetes (YOD), diagnosed before age of 40 years, experience heightened risk of complications. The economic burden extends beyond medical costs, impacting work productivity. **Materials and methods:** Chinese patients with YOD were recruited between June 2023 and April 2024 in the Precision Medicine to redefine Insulin Secretion and Monogenic diabetes Trial in Hong Kong (NCT04049149). Presenteeism and absenteeism were measured using the World Health Organization Health and Performance Questionnaire. **Results:** Of the 639 invited participants, 603 (94%) completed the questionnaire, with 444 employed participants with type-2 diabetes (40.1% female, 80.4% 40-50 years, 32.9% 5-10 years with diabetes, 53.3% hemoglobin A1c (HbA1c) <7.0%, 75.2% low-density lipoprotein cholesterol <2.6 mmol/L, 42.3% body mass index $\geq 25 < 30$ kg/m²). Participants reported mean presenteeism score of 7.34/10, 93.9% experiencing productivity loss with 0.48 mean sick days. Increased productivity was associated with females, child care, flexible work schedules and higher salary. Reduced productivity was related to, albuminuria, use of lipid-lowering medications and more sick leaves. With approximately 38 700 patients with YOD in Hong Kong, territory-wide productivity losses are projected to reach US\$444 million annually (presenteeism: US\$419 million, absenteeism: US\$25 million). **Conclusions:** This study is the first to quantify productivity costs in Chinese patients with YOD, highlighting the need for

work place policies, intensive treatment and management strategies to enhance support for individuals with YOD.

Liu et al. 2026.

Diabetes, Obesity and Metabolism, vol. 28, no. 3.

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Keywords: Work productivity; young - onset diabetes.

Evidence Level: 4B

Link: <https://dom-pubs.pericles-prod.literatumonline.com/doi/10.1111/dom.70352>

The impact of early postoperative urinary incontinence on presenteeism after robot-assisted radical prostatectomy for prostate cancer: A prospective cohort study

Objectives: Urinary incontinence (UI) in the first 3 months after robot-assisted radical prostatectomy (RARP) frequently impairs work performance, yet its quantitative impact on presenteeism remains unclear. This prospective cohort study longitudinally evaluated how early postoperative UI influences presenteeism among employed Japanese men undergoing RARP. **Methods:** We consecutively enrolled 92 employed male patients scheduled for RARP and assessed them preoperatively, at discharge, and at 1- (PS-1) and 3-month (PS-3) post-surgery. Outcomes were the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF), WHO Health and Work Performance Questionnaire (HPQ)-Presenteeism Scale, King's Health Questionnaire (KHQ), and Kessler Psychological Distress Scale (K6). **Results:** Of the 92 eligible participants, 85 (92.4%) completed the PS-1 and 80 (87.0%) completed the PS-3 assessment. Median ICIQ-SF total scores increased from 0 (IQR 0-2) preoperatively to 9 (6-12) at PS-1, remaining elevated at 7 (4-10) at PS-3 ($p < 0.001$). Mean HPQ-presenteeism declined from $81.4\% \pm 13.9\%$ preoperatively to $64.9\% \pm 18.8\%$ at PS-1, partially recovering to $75.3\% \pm 16.1\%$ at PS-3 ($p < 0.001$). At PS-1, UI impact on daily life ($\rho = -0.45$) and ICIQ-SF total ($\rho = -0.43$) were moderately associated with lower presenteeism; at PS-3, correlations persisted and extended to multiple KHQ subscales ($\rho = -0.41$ to -0.53). **Conclusions:** Early postoperative UI after RARP produces a clinically meaningful reduction in work productivity, greatest at PS-1 and still evident at PS-3. Targeted continence care and occupational support during this window may mitigate productivity loss and facilitate sustainable return to work.

Nakayama et al. 2026.

Lower Urinary Tract Symptoms, vol. 18, no. 2.

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Keywords: Presenteeism; prostate cancer; quality of life; urinary incontinence.

Evidence Level: 4B

Link: <https://onlinelibrary.wiley.com/doi/10.1111/luts.70055>

Workers Compensation

Wellbeing and the lived experience of injured workers following finalisation of a workers' compensation claim

Purpose: Workers' compensation claims can negatively affect the wellbeing of injured workers. For some, these negative effects continue beyond finalisation of the workers' compensation claim. It is unclear what factors influence wellbeing following finalisation of a workers' compensation claim. Therefore, the aim of this study was to explore wellbeing through the lived experience of individuals who have finalised a workers' compensation claim in the state of Western Australia. **Methods:** A qualitative study with individual, in-depth, semi-structured interviews was performed ($n = 20$, 55% female, average claim length 22.9 months, average time since claim end 33.4 months). Claim finalisation modes included full medical recovery, claim settlement with permanent impairment, direct settlement with the insurer and settlement with the insurer facilitated by a lawyer. The interview schedule was informed by a previous scoping review and cross-sectional survey completed by this research team. Qualitative data were analysed utilising a reflexive, interpretative phenomenological analysis approach. **Results:** Five superordinate and their associated subordinate themes were identified; (1) The role of support; (2) Stigma and discrimination; (3) A new normal; (4) The importance of information; and (5) Recommended resources. **Conclusions:** Injured workers experience a range of outcomes related to their wellbeing and employment following the

finalisation of their workers' compensation claim. Based on their experiences, resources to facilitate a transition and adjustment to life following a claim have been suggested by injured workers, including information regarding seeking employment, seeking welfare support, educational materials regarding future expectations, and individualised support care packages.

Weir et al. 2026.

Journal of Occupational Rehabilitation, vol. 36, no. 1.

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Keywords: Claim; compensation; experience; finalisation; qualitative; work.

Evidence Level: 5A

Link: <https://link.springer.com/article/10.1007/s10926-024-10264-1>

Working hours

Exploring the health and well-being benefits of reduced working hours with maintained salary: A scoping review and evidence map

Objectives: The aim of this review was to map the characteristics and the effects of interventions that reduce working hours with full pay maintained on workers' health, well-being and work-life balance and to assess whether a gender perspective was incorporated. **Methods:** A scoping review was conducted following PRISMA-ScR and JBI guidelines. Scientific databases (PubMed, Scopus, Web of Science, PsycINFO, CINAHL, Cochrane, ProQuest, Epistemonikos) and grey literature sources (international, European and national labor and occupational health agencies) were systematically searched for studies published between April 2014 and May 2025 in English or Spanish. Eligible studies comprised employed adults in Scandinavian and Western European countries, the United States, Canada, Australia and New Zealand exposed to interventions reducing working hours with full pay maintained. Screening, data extraction, and quality appraisal were conducted independently. An evidence map was developed to synthesize the findings. **Results:** Ten scientific articles and five grey literature reports were included, seven from Scandinavian, seven from Western European countries, and one that included both regions. Working time reductions ranged from 10-25%. Most studies reported positive effects on work-life balance (100%), mental health (81.8%), and general health and well-being (58.3%). Qualitative data confirmed improvements in recovery, fatigue, and family time. Eleven studies included a gender perspective, with eight providing stratified analyses. Several studies indicated that women increased the time dedicated to caregiving and household, reinforcing traditional roles, while men's involvement rose slightly without shifting responsibility equity. **Conclusions:** Despite heterogeneity of interventions and limited implementation contexts, it seems that reducing working hours to around 30-35 per week without pay loss may improve work-life balance, health, and well-being. Gender differences emerged, with women often facing increased unpaid work. As the evidence is still scarce particularly regarding long-term effects, sector-specific interventions, and gendered effects, further research is needed to inform and evaluate policies that promote equitable and sustainable work-time arrangements.

Utzet et al. 2026.

Scandinavian Journal of Work, Environment and Health, vol. 52, no. 2.

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Keywords: Health; well-being; reduced working hours; salary.

Evidence Level: 1A

Link: <https://www.sjweh.fi/article/4266>

Wellness Programs

Effects of self-compassion and mindfulness interventions on mental health and work-related outcomes among Japanese workers: Randomized controlled trial

Background: Mental health problems among workers are a significant global concern, leading to substantial economic losses, particularly due to presenteeism. While mindfulness and self-compassion practices have shown promise in improving psychological well-being and occupational outcomes, traditional interventions often require a high time commitment. Low-intensity digital interventions remain underexplored, especially in the context of occupational health. **Objective:** This study aimed to develop and evaluate the

effectiveness of a smartphone-based self-care app that enables independent practice of mindfulness and self-compassion without facilitator support. Specifically, it assessed the effects of self-compassion meditation (SCM) and mindfulness meditation (MM) on mental health and work-related outcomes among nonclinical Japanese workers. **Methods:** This open-label, 3-arm randomized controlled trial recruited 300 working adults in Japan, who were randomly assigned to SCM (n=101), MM (n=100), or a waitlist control group (n=99). Participants in the SCM and MM groups engaged in daily guided meditation via a custom-built smartphone app over 4 weeks. Primary outcomes included psychological distress (Kessler Psychological Distress Scale-6) and work performance (World Health Organization Health and Work Performance Questionnaire and the Stanford Presenteeism Scale), while secondary outcomes encompassed cognitive flexibility, self-compassion, perceived stress, work engagement, psychological safety, and self-perceived creativity. Assessments were conducted at baseline, postintervention (4 wk), and 1-month follow-up (8 wk). Recruitment occurred in 2 waves (November 2022-December 2022 and June 2023), with follow-up assessments completed by September 2023. **Results:** A total of 300 participants (mean age of 35.44, SD 9.14 y; n=180, 60% female) were randomized. Adherence was high in both intervention groups (mean completed days: SCM 23.30, SD 5.58; MM 22.95, SD 6.25), with an overall dropout rate of 21.4%. No significant group × time interactions were detected for most outcomes, although significant main effects of time were observed for several measures, including work performance and self-compassion, with small effect sizes. Within-group analyses suggested broader improvements in the SCM group, whereas changes in the MM group were more limited. In sensitivity analyses using linear mixed-effects models, a significant group × time interaction was detected for work performance, with a larger pre-post improvement in SCM. **Conclusions:** This low-intensity, fully self-guided, smartphone-based meditation program demonstrated good feasibility, as reflected by high adherence and relatively low attrition. Between-group effects were limited; therefore, the findings should be interpreted as preliminary and do not support strong causal claims of intervention superiority. Clinical significance remains unclear in this nonclinical sample and should be evaluated in future studies.

Kurosawa et al. 2026.

Journal of Medical Internet Research, vol. 28.

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Keywords: RCT; digital health; mental health; mindfulness; mobile apps; occupational health; randomized controlled trial; self-compassion; work performance.

Evidence Level: 2B

Link: <https://www.jmir.org/2026/1/e79991>

Enhancing workplace outcomes through digital behavioral health programs: Retrospective real-world study

Background: Modern workplaces create increasing demands on employees, often leading to stress, burnout, and reduced functional capacity. These challenges contribute to significant functionality losses, with absenteeism and presenteeism posing economic burdens. Mindfulness-based workplace interventions have been shown to improve mental health, yet their effects on specific work-related performance outcomes such as concentration difficulties, mistakes, and procrastination over time are less explored.

Objective: This study aimed to evaluate self-reported workplace function changes for a 10-week period among users of a digital behavioral health program. **Methods:** This retrospective analysis used real-world data from users of the Dario Health behavioral health app. Participants were required to complete at least 2 workplace functionality assessments, including one at week 1 as a baseline. The assessment comprised 3 items measuring concentration difficulties, mistakes at work, and procrastination, each rated on a 0 ("not at all") to 3 ("a lot") scale. Users who initially scored 2 ("often") or 3 ("a lot") on each respective measure formed the cohorts for analysis. Longitudinal changes were examined using piecewise linear mixed-effects models. Cut points were selected empirically through sensitivity analyses comparing alternative cut points (weeks 2-7) using Akaike and Bayesian information criteria to identify the best-fitting model for each outcome. **Results:** Sensitivity analyses identified optimal cut points at week 6 for concentration difficulties and procrastination and at week 5 for mistakes at work. Among users reporting baseline concentration difficulties (n=1254), significant reductions were observed during weeks 1 to 6 (B=-0.02; P<.001), with larger reductions during weeks 6 to 10 (B=-0.08; P<.001). For mistakes at work (n=167), a significant

decrease occurred during weeks 1 to 5 ($B=-0.05$; $P=.02$), followed by a more pronounced reduction during weeks 5 to 10 ($B=-0.22$; $P<.001$). Among users reporting baseline procrastination ($n=1004$), significant improvements were observed during weeks 1 to 6 ($B=-0.02$; $P<.001$), with greater reductions during weeks 6 to 10 ($B=-0.08$; $P<.001$). **Conclusions:** Use of the digital behavioral health platform was associated with improvements in workplace function, particularly among users with sustained use beyond 4 weeks. The observed outcomes suggest that continued participation in such digital behavioral health programs may be linked to favorable changes in mental health and cognitive functioning over time and may support employee well-being. Long-term engagement appears essential to maximize benefits, warranting further research into sustained impacts and optimization strategies for workplace productivity.

Breuer Asher et al. 2026.

JMIR Formative Research, vol. 10.

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Keywords: Behavioral health; burnout; digital health; evaluation; workplace well-being.

Evidence Level: 4B

Link: <https://formative.jmir.org/2026/1/e88335>

Experts' observations on the requirements for and outcomes of workplace mindfulness programs: A qualitative study

Background: The findings derived from quantitative research indicate that mindfulness possesses a valuable potential for fostering the health and well-being of employees, as well as facilitating organizational change. However, despite the perceived objectivity and comprehensiveness often associated with quantitative studies, quantitative investigations are constrained by i) their ability to only portray predefined changes measured through questionnaires, and ii) their inability to elucidate the contextual factors that facilitate the sustained cultivation of mindfulness within an organization. **Objectives:** We undertook a qualitative study with the aim of uncovering novel facets concerning the prospective influence of mindfulness integration in the workplace, and identifying the determinants contributing to its long-term establishment. **Methods:** We employed a qualitative research approach comprising sixteen expert interviews and a critical friend interview with mindfulness experts working in small to large organizations. Subsequently, we employed a data-driven qualitative content analysis. **Results:** The findings from the expert interviews revealed three key outcomes of mindfulness integration in the workplace: strengthening of individual competencies (e.g., presence), improved understanding of work meaningfulness and positive affect (e.g., joy), and fostering a more positive work atmosphere (e.g., gratitude). Additionally, the requirements for establishing mindfulness in the workplace can be classified into three categories: organizational structure (e.g., designated places), organizational culture (e.g., transparency), and mindfulness program structure (e.g., transferability). **Conclusions:** These findings help to generate new hypotheses about the efficacy of mindfulness at the workplace, can support scholars to advance this line of research and provide guidance for practitioners considering implementing mindfulness (interventions) for employees.

Michaelsen et al. 2026.

Acta Psychologica, vol. 263.

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Keywords: Expert interviews; mindfulness; organizational mindfulness; outcomes; requirements; workplace.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826000247?via%3Dihub>

Organisational Issues

Organizational practices and their outcomes for employees with disabilities: A review and synthesis of quantitative studies

Purpose: This review and synthesis aims to answer the following question: what do existing empirical studies tell us about the relationship between organizational practices and their outcomes in terms of the performance, well-being and sustainable employment of employees with disabilities? **Methods:** This review

builds on a scoping review of empirical studies of organizational practices aimed at the hiring and retention of people with disabilities. It focuses on a specific group of studies identified in the scoping review: studies examining outcomes of organizational practices for employees with disabilities (EWD). Additional selection criteria were: (1) studies focused on the performance, well-being and sustainable employment of EWD; (2) studies used quantitative methods; and (3) studies were published in high-quality journals. This resulted in 27 articles. **Results:** Three clusters of organizational practices received most attention in the articles: workplace relations and organizational culture; accommodations; and leadership. The studies found significant positive and negative relationships between practices in these clusters and the three outcomes mentioned above. These empirical findings were supported by the theoretical perspectives used in the studies. Although diverse, most of these theoretical perspectives share their focus on interactions between individuals and their (work) environment. **Discussion:** We recommend that future research into the outcomes of organizational practices for EWD should be both broader (examining more clusters of practices and their outcomes for people with and without disabilities) and deeper (examining similar practices-outcome combinations in different contexts). This will increase our understanding of what practices work for whom under what circumstances.

van Berkel et al. 2026.

Journal of Occupational Rehabilitation, vol. 36, no. 1.

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Keywords: Organizational practices; people with disabilities; performance; review; sustainable employment; well-being.

Evidence Level: 1A

Link: <https://link.springer.com/article/10.1007/s10926-025-10283-6>

ESG performance, financing constraints, and workplace health investment: Evidence from Chinese biopharmaceutical enterprises

Background: Workplace health promotion (WHP) is critical for occupational health management, yet empirical evidence on determinants of corporate health investment remains limited. This study examines whether ESG performance promotes workplace health investment in Chinese biopharmaceutical enterprises and investigates the mediating role of financing constraints. **Methods:** Using panel data from 55 A-share listed biopharmaceutical companies (2015–2023, 495 firm-year observations), we employed fixed effects models with manually collected health expenditure data. The three-step method tested financing constraints as a mediator. Heterogeneity analyses and multiple endogeneity treatments were conducted. **Results:** ESG performance significantly promotes workplace health investment ($\beta = 0.0024$, $p > 0.01$), with financing constraints mediating 20.8% of the total effect. The Social dimension shows the strongest association. Effects are stronger in non-state-owned enterprises, high R&D intensity firms, and vaccine/blood products companies. Health expenditure reduces R&D personnel turnover and enhances innovation output. **Conclusion:** ESG performance effectively promotes workplace health investment by alleviating financing constraints, providing empirical support for integrating occupational health promotion into corporate sustainability strategies. Theoretically, this study bridges corporate finance and occupational health research by revealing the transmission mechanism of "ESG → financing constraint alleviation → workplace health expenditure." Practically, the findings suggest that ESG improvement can serve as a market-based lever for promoting organizational investment in employee health programs.

Li et al. 2026.

Frontiers in Public Health, vol. 14.

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Keywords: China; ESG performance; biopharmaceutical industry; financing constraints; occupational health; workplace health promotion.

Evidence Level: 4B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2026.1765422/full>

Job Design

Quantifying work patterns of health professionals: A narrative review of studies using the Work Observation Method By Activity Timing (WOMBAT)

Background: The Work Observation Method By Activity Timing (WOMBAT) is a widely adopted technique for direct observational studies of health professionals' work patterns. Over the past 14 years its use has grown substantially, enabling researchers to generate rich quantitative data reflecting the complexity of clinical workflows across diverse healthcare settings. **Objective:** To review and narratively synthesise direct observational studies which used WOMBAT to describe or compare patterns of health professionals' work, or assess the impact of interventions, interruptions, and multitasking on work patterns. **Methods:** A search of Scopus, MEDLINE, Embase, PsycINFO, CINAHL, and Google Scholar (January 2008-July 2025) identified 54 English-language studies using WOMBAT. Studies were categorised as descriptive, comparison, or intervention-focused, and were analysed by aim, setting, and professional groups observed. **Results:** WOMBAT has been used to assess a range of phenomena including task time allocation, compliance with practice standards, and the impact of care delivery changes, and electronic health records. Twenty-four studies compared work patterns across roles, settings, geographical areas, task types, and shifts, e.g. weekdays versus weekends. Fifteen studies evaluated interventions including electronic medication systems, charting tools, decision support systems, and policy reforms. Thirty studies examined interruptions and multitasking, revealing associations with clinical errors and adaptive strategies. Only one study collected data concurrently across two countries. The majority of studies (43/54) were published in the last decade, with 24 in the past five years. **Conclusion:** The application of WOMBAT has enabled a shift from basic time and motion studies to comprehensive, context-rich workflow analyses. Its standardised, yet adaptable, design supports a broad range of study questions about health professionals' work and the effects of health system interventions on workflows.

Westbrook et al. 2026.

International Journal of Medical Informatics, vol. 207.

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Keywords: Electronic health records; interruptions; multitasking; observation; pharmacists; time and motion; workflow.

Evidence Level: 1A

Link: <https://www.sciencedirect.com/science/article/pii/S1386505625004241?via%3Dihub>

Shift Work

Chronotype differences in the risk of cancers, diabetes mellitus, and poor mental health among shift workers: A meta-analysis

Objective: Shift work is associated with various leading causes of premature death, which has been linked with individuals with specific chronotypes. This study synthesized evidence on chronotype's role in associations between ever shift work and health outcomes. **Methods:** Six databases were searched (inception-September 2025) for cohort/case-control studies assessing chronotype-specific shift work impacts on breast/prostate cancer, diabetes mellitus, and mental health. PRISMA guidelines were used for reporting. **Results:** Fourteen studies were included in the review, comprising 2247 breast cancer cases, 3045 prostate cancer cases, 336 218 participants in diabetes studies, and 2128 poor mental health cases. Compared to daytime workers, both night shift workers with morning or evening chronotypes were more susceptible to breast cancer [morning type: pooled odds ratio (OR) 1.54, 95% confidence interval (CI) 1.01-2.37; evening type: pooled OR 1.41, 95% CI 1.04-1.90] and poor mental health (morning type: pooled OR 1.19, 95% CI 1.12-1.27; evening type: pooled OR 1.11, 95% CI 1.05-1.17]. Notably, night shift workers with evening chronotype were 84% more likely to develop prostate cancer than daytime workers. A positive dose-response relationship was identified between cumulative years of night shifts and prostate cancer among night shift workers with evening chronotype, indicating a 2.1% increase in risk for each additional year (P=0.012). **Conclusions:** Chronotype-matched scheduling does not effectively mitigate night shift risks. Nevertheless, evening chronotype night shift workers are particularly susceptible to various chronic non-

communicable diseases, with a notable positive dose-response relationship observed between prostate cancer and evening chronotype night shift workers.

Li et al. 2026.

Scandinavian Journal of Work, Environment and Health, vol. 52, no. 2.

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Keywords: Cancer; diabetes; mental health; shift work.

Evidence Level: 1A

Link: <https://www.sjweh.fi/article/4271>

Work schedule characteristics and sleepiness: A meta-analysis

Objectives: Sleepiness is a specific aspect of fatigue and considered a key factor linking working time to health and safety outcomes, such as occupational injuries. Therefore, this meta-analysis synthesizes evidence on how specific work schedule characteristics relate to sleepiness. Specifically, we examine how sleepiness varies with: (a) shift type (eg, day versus night), (b) shift length, and (c) the number of consecutive shifts. **Methods:** We conducted a systematic literature search across multiple platforms and databases. Only studies that measured sleepiness using the Karolinska Sleepiness Scale were included. Mean effect sizes (Hedges' g) were calculated using random-effects models. **Results:** The analysis included 48 studies (28 on shift type, 30 on shift length, and 13 on shift number). Compared to day shifts, sleepiness was significantly higher during night shifts and lower during afternoon shifts. Sleepiness increased with shift length during night shifts but showed no consistent pattern during day shifts. Furthermore, sleepiness was highest on the first night shift and decreased over subsequent nights, whereas it remained relatively stable across consecutive day shifts. Due to the low number of studies, results on shift length and shift number were limited or unavailable for afternoon shifts. **Conclusions:** Overall, this meta-analysis shows that sleepiness is most pronounced during night shifts, particularly the first in a block. These findings emphasize the importance of circadian and homeostatic factors in shift work. Therefore, shift schedules should be designed to mitigate these heightened risks, for example by allowing sufficient recovery time before and during the first night shift.

Vieten et al. 2026.

Scandinavian Journal of Work, Environment and Health, vol. 52, no. 2.

User License:

Keywords: Work schedule; characteristics; sleepiness.

Evidence Level: 1A

Link: https://www.sjweh.fi/show_abstract.php?abstract_id=4273&fullText=1

Associations between shift work characteristics and work-related accidents and dozing off: Combining objective working-time register and retrospective survey data

Objectives: This study investigated the associations between shift work characteristics and self-reported work-related accidents as well as incidents of dozing off at work and during the work commute. **Methods:** Data from a Norwegian hospital's working-time register encompassed information on quick returns (<11 hours between shifts), day-, evening-, night-, and long (≥ 12 hours) shifts worked during 2020, and were linked to questionnaire data from 1195 healthcare workers collected in January 2021. The questionnaire assessed work-related accidents causing harm to oneself, patients/others, and/or equipment the last year, as well as dozing off at work the last month and/or during commute the last year. Data were analyzed using negative binomial regressions, adjusting for age, sex, children, marital status, shift work experience, monthly working hours, circadian type, and night shifts. **Results:** Number of quick returns the last year was positively associated with causing harm to oneself [incidence rate ratio (IRR) 1.021, 95% confidence interval (CI) 1.009-1.034]. Number of day shifts and evening shifts were negatively associated with causing harm to patients/others (IRR 0.987, 95% CI 0.981-0.992; IRR 0.989, 95% CI 0.982-0.996, respectively). Number of night shifts was positively associated with dozing off at work (IRR 1.005, 95% CI 1.002-1.008) and during commute (IRR 1.007, 95% CI 1.003-1.010), but was not associated with work-related accidents. Number of long shifts was positively associated with healthcare workers causing harm to oneself (IRR 1.198, 95% CI 1.111-1.291), patients/others (IRR 1.209, 95% CI 1.122-1.304), and equipment (IRR 1.174, 95% CI 1.080-

1.275). **Conclusion:** Limiting quick returns and long shifts may be relevant considerations for improving employee and patient safety.

Kysnes et al. 2026.

Scandinavian Journal of Work, Environment and Health, vol. 52, no. 2.

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Keywords: Shift work; work-related accidents; dozing off.

Evidence Level: 4B

Link: <https://www.sjweh.fi/article/4274>

Management and Leadership

Cascading effect of abusive leadership on employee and organizational outcome: A comprehensive meta analysis

Dark personality leaders are known for their detrimental effects in the workplace. Through comprehensive meta-analysis this paper analyzes the impact of abusive leadership on employee and organisational outcomes using 39 independent studies with a total of 32,909 participants. Using a Hunter-Schmidt methodology, we examined the associations between abusive leadership behaviours and outcome variables capturing employee well-being, organisational commitment, and job performance through a random-effects meta-analysis. The results indicate the expected abusive leadership is a negative predictor of employee-related outcomes, as well as job performance indicators and commitment towards the organisation. These findings have important implications for organisational policy, leadership training programs, and intervention tools to reduce the effects of abusive leadership in the workplace.

Singh et al. 2026.

Acta Psychologica, vol. 263.

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Keywords: Abusive leadership; job satisfaction; meta-analysis; organisational commitments; psychological outcomes.

Evidence Level: 1A

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826001113?via%3Dihub>

When and how supervisor's negative gossip influence target's proactive and withdrawal behavior: A perspective of self-regulation at work

The literature presents contradictory evidence regarding the influence of supervisor negative gossip on work behaviors of targeted employees. By regarding supervisor negative gossip as a stressor that triggers targeted employees' self-regulatory processes, this study investigates the roles of targeted employees' cognitive appraisal and regulatory focus in the relationship between supervisor negative gossip and their proactive/withdrawal behavior. Results from a scenario-based experiment and a time-lagged field study showed that: (1) supervisor negative gossip elicits both challenge and hindrance appraisals among targeted employees; (2) supervisor negative gossip has an indirect positive effect on targeted employees' proactive behavior and an indirect negative effect on their withdrawal behavior via challenge appraisal, and this indirect effect is significantly strengthened by promotion focus; (3) supervisor negative gossip also has an indirect negative effect on targeted employees' proactive behavior and an indirect positive effect on their withdrawal behavior via hindrance appraisal, and this indirect effect is significantly weakened by prevention focus. This study highlights that the impact of supervisor negative gossip on targeted employees' proactive/withdrawal behaviors depends on their cognitive appraisal and regulatory focus. It also clarifies the self-regulatory mechanism underlying targets' behavioral responses to supervisor negative gossip.

Geng et al. 2026.

Acta Psychologica, vol. 263.

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Keywords: Cognitive appraisal; proactive behavior; regulatory focus; withdrawal behavior; workplace gossip.

Evidence Level: 3B

Link: <https://www.sciencedirect.com/science/article/pii/S000169182600168X?via%3Dihub>

Civilizing the workplace: Does ethical leadership foster desirable workplace behaviors?

The present research examines the effect of ethical leadership in reducing workplace incivility to foster employee knowledge sharing and employee innovative job performance by underpinning social learning theory. This research employed a quantitative research design and followed the post-positivist philosophy in line with the underlying research questions, and the approach to theory is deductive, as this research intends to examine the causal relationship among study variables. The target population for this research is higher secondary and vocational schools (providing technical and skill-based education), providing tertiary and secondary education under the constituency of the Government of Punjab, Punjab province of Pakistan. We identified 150 unique workgroups with a mean size of 5 employees ($n = 750$), and every workgroup had a dedicated manager/leader/supervisor (Head/Principal). The intended sample was 150 leaders overseeing 750 employees in 150 schools. The findings of the present research noted that when employees are treated fairly, honestly, and with respect, they tend to model similar values, resulting in an ethical work environment that eventually reduces workplace incivility since employees not only observe but also anticipate the implications of their actions. When individuals observe that civility produces favorable results, they tend to engage in desirable outcomes at the workplace, including knowledge sharing and innovative job performance. Implementing training programs for school principals and teachers has the potential to foster healthy connections and, eventually, polite, desirable workplace behavior.

Saleem et al. 2026.

Acta Psychologica, vol. 263.

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Keywords: Ethical leadership; innovative job performance; knowledge sharing; Pakistan; social learning theory; vocational schools; workplace incivility.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826000661?via%3Dihub>

Environmental transformational leadership and employee green behavior through psychological mechanisms

Organizations are increasingly encouraged to embed green business practices into their core operations as a means of enhancing sustainability performance rather than addressing them as isolated initiatives. Yet, their precise contribution to firm-level sustainability outcomes remains understudied, especially in emerging economies. Drawing on Transformational Leadership Theory and Self-Determination Theory, this study examines how Environmental Transformational Leadership (ETL) is associated with employee green behavior through a sequential psychological mechanism. Survey data from 216 public sector employees were analyzed using SmartPLS (v4.1.1.5). Results indicate that ETL has a significant positive total effect on employee green behavior; however, its direct effect on autonomous environmental motivation is statistically insignificant. Instead, ETL is associated with the fulfillment of employees' psychological needs for autonomy, competence, and relatedness; this needs fulfillment is associated with higher levels of autonomous environmental motivation, which in turn is associated with green behavior. The identified sequential pathway clarifies the omitted variable bias noted in earlier work and enriches Self-Determination Theory by positioning need satisfaction as an indispensable precursor to intrinsic environmental motivation. These insights advance environmental leadership research and contribute primarily to United Nations SDG 12 with relevance to SDGs 13 and 15 by illuminating a psychologically grounded pathway through which ETL is linked to sustainable workplace behavior.

Hadi 2026.

Scientific Reports, vol. 16, no. 1.

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Keywords: Autonomous environmental motivation; employee green behavior; employee psychological needs; environmental transformational leadership; UN SDGs.

Evidence Level: 4B

Link: <https://www.nature.com/articles/s41598-026-39812-w>

Work Ability

Workplace productivity losses due to multimorbidity: Findings from an Australian longitudinal population survey, 2009-21

Background: While productivity loss has been studied in various populations, the impact of multimorbidity on workplace productivity at a population level remains understudied. This study estimates the productivity losses attributable to multimorbidity. **Method:** Using data from four waves of the Household, Income and Labour Dynamics in Australia (HILDA) survey, we investigated the relationship between multimorbidity and productivity loss. Negative binomial and logistic regression models were employed to analyze absenteeism, presenteeism, and working hour tension as measures of productivity loss. **Results:** We found a significant association between multimorbidity and increased absenteeism, presenteeism and working hour tension. After controlling for socio-economic, demographic, health, and workplace-related factors, individuals with multimorbidity had a 1.07-fold higher rate of absenteeism (incidence rate ratios: 1.07; 95% CI: 1.02-1.13) compared to those without serious illness. Their odds of experiencing presenteeism were three times higher, and the incidence of working hour tension was 32% higher. On average, the annual cost of absenteeism was AU\$265.20 higher for individuals with multimorbidity than for those without serious illness. **Conclusion:** Our results underscore the need for evidence-based workplace policies to support the productivity and well-being of employees living with multimorbidity.

Ali et al. 2026.

Journal of Public Health, vol. 48, no. 1.

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Keywords: Health services; morbidity and mortality; public health.

Evidence Level: 4A

Link: <https://academic.oup.com/jpubhealth/article/48/1/4/8280475?login=false>

Safe to stay: A longitudinal evaluation of the sequential relationship between psychological safety, work self-efficacy, fatigue, and employment exit intentions of employees with multiple sclerosis

Background: Psychosocial factors are implicated in the decision to prematurely leave employment for people with multiple sclerosis (PwMS), beyond the impact of symptoms. We longitudinally tested the sequential relationship between psychological safety (PS), work self-efficacy (WSE), and the perceived impact of fatigue on work performance predicting employment exit intentions (EI). **Methods:** Participants (n = 372) were surveyed at three time points over a four-year period (86% female; mean age 46 at T1) using latent variable structural equation modelling. **Results:** PS at T1 was positively related to WSE at T2 ($\beta = 0.17$, 95% CI: 0.05 to 0.29). WSE mediated the relationship between PS and EI (Indirect Effect (IE) = -0.03, 95% CI = -0.07 to -0.01). WSE and fatigue sequentially mediated the relationship between PS and EI (IE, -0.02, 95% CI = -0.05 to -0.01). Unexpectedly, PS directly reduced perceptions of fatigue decreasing EI. PS was directly related to EI at T3 independently of WSE and fatigue ($\beta = -0.24$, SE = 0.07, $p < .01$, 95% CI: -0.10 to -0.38). **Conclusion:** Our findings indicate that PS represents a supportive job resource that is critical in dealing with work-related demands, which helps explain why employees leave before medically assessed disability would indicate the need to. Over time, employees who experience a work environment characterised by PS also experience higher levels of WSE and reduced perceptions of work-related fatigue, which in turn reduces the risk of prematurely leaving employment. Interventions targeting these modifiable aspects of the workplace psychosocial climate are required.

Kirk-Brown et al. 2026.

Multiple Sclerosis and Related Disorders, vol. 107.

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Keywords: Employment exit intentions; fatigue; multiple sclerosis; psychological safety; work self-efficacy.

Evidence Level: 4A

Link: [https://www.msard-journal.com/article/S2211-0348\(26\)00051-9/fulltext](https://www.msard-journal.com/article/S2211-0348(26)00051-9/fulltext)

Severe impairments in work ability among patients with axSpA and PsA: Results from the RABBIT-SpA Register

Objectives: To assess the frequency and extent of work ability impairment and explore differences in its degree in relation to sociodemographic, clinical and patient-reported factors in patients with axial spondyloarthritis (axSpA) and psoriatic arthritis (PsA). **Methods:** This cross-sectional analysis used data from the prospective RABBIT-SpA cohort, including patients aged 18-65 years with physician-confirmed axSpA or PsA. Work ability was assessed in both the axSpA and PsA cohorts using the Work Ability Index (WAI; 7-49 points, higher scores=better work ability), categorised as good/excellent (≥ 37) or moderate/poor (≤ 36) according to validated cut-offs. Patients were grouped as employed with good/excellent WAI, employed with moderate/poor WAI or non-employed. Descriptive analyses were conducted. **Results:** 2655 patients were analysed (axSpA: 1366; PsA: 1276). In the axSpA cohort, 80% were employed, with 70% reporting moderate/poor WAI (mean 31.6, SD: 7.6). Among patients with PsA, 69% were employed, of whom 71% reported moderate/poor WAI (mean 31.4, SD: 8.1). For both the axSpA and PsA cohorts, compared with individuals with good/excellent WAI, those who were non-employed or had moderate/poor WAI were more often female, older, obese, smokers and had fewer years of education. Individuals with lower inflammatory markers, fewer comorbidities and lower disease activity were mainly in the good/excellent WAI group, while non-employed individuals showed the poorest clinical and patient-reported factors, followed by those with moderate/poor WAI. **Conclusion:** Around 25% of patients of working age with axSpA and PsA were non-employed and two-thirds of employed patients reported moderate/poor work ability. The results underline the importance of enhanced focus on occupational health in rheumatology to identify at-risk patients early.

Lembke et al. 2026.

RMD Open, vol. 12, no. 1.

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Keywords: Axial Spondyloarthritis; epidemiology; patient reported outcome measures; psoriatic arthritis; spondyloarthritis.

Evidence Level: 4B

Link: <https://rmdopen.bmj.com/content/12/1/e006338>

Examining the characteristics of patients with long-term impaired work ability in primary health care: A cross-sectional study

Objective: To examine characteristics of primary healthcare patients with long-term impaired work ability, and to assess the correlation between sense of coherence and factors related to health, function, and work ability. **Design and setting:** Cross-sectional study including patients from the LEARN-to-COPE cluster-randomized controlled trial, conducted across 40 primary care centers in Region Västra Götaland, Sweden. **Subjects:** Primary healthcare patients with recurrent or long-term sick leave or health-related unemployment (n = 243). **Data collection:** Sick leave data were collected from the Swedish Social Insurance Agency. Demographics and contextual data were patient-reported or retrieved from personal identity numbers. Symptoms, health-related quality of life, health literacy, sense of coherence, perceived work ability, and lifestyle were assessed using validated questionnaires. **Results:** Mean age was 47.4 years. Most were women born in a Nordic country, had at least secondary education, and were gainfully employed. A third was unemployed. Mean number of sick days was 1,215 (SD 1,010), and 67.9% were on full-time sick leave. Perceived work ability was low. Participants reported severe anxiety and exhaustion, moderate depression, and a high risk of long-term sick leave due to pain. Health-related quality of life was extremely low. Half reported inadequate or problematic health literacy, and sense of coherence was low. Smoking and obesity were common, physical activity levels were average, and excessive alcohol consumption was below average. About half participated in any rehabilitation activities. Sense of coherence was significantly correlated with health literacy, health-related quality of life, symptoms of mental illness, perceived work ability, and pain (all $p < 0.001$); but not with sick leave duration or participation in rehabilitation.

Conclusion: Given participants' pronounced suffering, improving health-related quality of life among primary healthcare patients with long-term impaired work ability should be prioritized. Sense of coherence was associated with several determinants of sick leave, but not with its previous duration.

Löfgren et al. 2026.

Scandinavian Journal of Primary Health Care, vol. 44, no. 1.

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Keywords: Sick leave; health care economics and organizations; health literacy; quality of life; sense of coherence.

Evidence Level: 4B

Link: <https://pubmed.ncbi.nlm.nih.gov/41866989/>

Five-year follow-up of work disability after traumatic brain injury: A nationwide Swedish matched cohort study of 98,000 individuals

Background and objectives: Traumatic brain injury (TBI) is a leading cause of long-term disability in working-age populations. Return to work is a key marker of recovery, yet most studies assess it as binary at fixed time points. We aimed to estimate transition probabilities to and from work disability during 5 years after TBI and how injury severity and preinjury sociodemographic and medical factors influence these probabilities. **Methods:** We conducted a nationwide matched cohort study in Sweden using linked registers. Individuals aged 21-60 years with a TBI diagnosis between 2005 and 2016 were compared with up to 10 matched non-TBI individuals. TBI severity was proxied by care characteristics: TBI A (emergency visit or ≤ 2 days), TBI B (≥ 3 days), and TBI C (neurosurgery). Transition probabilities to and from work disability (>14 days sickness absence) were estimated with multistate models. Sociodemographic and medical factors were assessed with Cox regression. **Results:** The cohort included 98,256 individuals with TBI and 981,191 matched non-TBI individuals (median age 39 years; 43% women). Transition probabilities to work disability were higher in all TBI groups: at 30 days, 5.5% (95% CI 5.4-5.7) for TBI A, 29% (28.0-30.7) for TBI B, and 43% (38.2-47.3) for TBI C, vs 0.5% (0.5-0.6) in non-TBI; at 5 years, 7.1% (7.0-7.3), 10.9% (10.2-11.7), and 12.9% (10.7-15.7), vs 4.0% (4.0-4.1). In TBI A and B, higher probability was predicted by older age (TBI A hazard ratio 1.23, 95% CI 1.20-1.26; TBI B 1.34, 1.21-1.48), female sex (TBI A 1.59, 1.56-1.62; TBI B 1.35, 1.26-1.44), and psychiatric disorders (TBI A 1.34, 1.30-1.39; TBI B 1.28, 1.11-1.48), while higher education (TBI A 0.83, 0.81-0.86) and city residence (TBI A 0.92, 0.90-0.95; TBI B 0.88, 0.80-0.95) were protective. In TBI C, only older age remained significant (1.59, 1.17-2.14). **Discussion:** TBI was associated with persistently elevated transition probabilities to work disability across all severity groups, with early peaks in TBI B and C and a delayed increase in TBI A, influenced by sociodemographic and medical factors. However, the lack of standardized severity grading limits comparison with other studies. Still, these results suggest TBI increases long-term risk of work disability, supporting sustained individualized rehabilitation.

Klang et al. 2026.

Neurology, vol. 106, no. 5.

User License:

Keywords: Traumatic brain injury; disability; working population.

Evidence Level: 4B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC12897082/>

Employment status and associated factors in working-age maintenance hemodialysis patients: A multicenter cross-sectional study

Objectives: To investigate the employment status and analyze its associated factors among working-age patients undergoing maintenance hemodialysis (MHD). **Methods:** This multicenter, cross-sectional study enrolled 126 working-age (18-60 years) MHD patients from five dialysis centers in Beijing between January 2023 and January 2024. Baseline characteristics, psychological status (using Beck Depression Inventory and State-Trait Anxiety Inventory), and clinical data were collected via face-to-face questionnaires during dialysis sessions. Participants were categorized into employed and non-employed groups based on current work status. **Results:** Among the 126 patients, 33.3% (n = 42) were employed, 38.1% stopped working due to illness, and 26.2% of non-working patients expressed willingness to return to work if given the opportunity. Occupations among employed patients were primarily company employees (33.3%) and self-

employed/freelancers (40.5%). Multivariate logistic regression identified female sex (OR = 0.166, 95% CI: 0.053-0.515, $p = 0.002$), older age (OR = 0.895, 95% CI: 0.847-0.947, $p < 0.001$), and higher annual household income (OR = 0.328, 95% CI: 0.196-0.549, $p < 0.001$) as independent factors negatively associated with employment, while higher body mass index (BMI) was positively associated with employment (OR = 1.362, 95% CI: 1.025-1.810, $p = 0.033$). **Conclusions:** Approximately, one-third of working-age MHD patients in Beijing remain employed, with flexible work forms (self-employment/freelancing) being common. Female gender, older age, and higher household income are significant negative correlates of employment, whereas higher BMI is positively associated with employment. These findings highlight the importance of nutritional status and suggest the need for targeted vocational rehabilitation strategies to improve workforce participation and social reintegration in this population.

Zhang et al. 2026.

Renal Failure, vol. 48, no. 1.

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Keywords: Maintenance hemodialysis; body mass index; employment status; vocational rehabilitation; workforce participation.

Evidence Level: 4B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC12961702/>

Impact of bariatric surgery on monthly earnings and employment: A national linked data study in England, 2014-2022

Background/objective: There is evidence that living with obesity can affect an individual's pay and employment, but there is little evidence on the impact of weight-management interventions in improving labour market outcomes of individuals. We evaluate the impact of bariatric surgery on monthly earnings and employee status among working-age adults, and examine variations across sociodemographic characteristics. **Methods:** This population-based, retrospective longitudinal cohort study for England included 40,662 individuals who had a bariatric surgery procedure and obesity diagnosis between 1 April 2014 and 31 December 2022, with no bariatric surgery history in the previous 5 years, and were 25 to 64 years old at the date of surgery. 49,921 individuals sampled from the general population who had not had bariatric surgery were also included, matched by age and sex. The main outcome measures were monthly employee pay-for all months and only months where the individual was in paid employment-expressed in 2023 prices and paid employee status. **Results:** Among people living with obesity who had bariatric surgery, there was a sustained increase in monthly employee pay from 6 months after surgery with a mean increase of £84 per month (95% confidence interval [CI]: 63-106) 5 years after surgery compared with the 6 months before surgery. There was a sustained increase in the probability of being a paid employee from 4 months after bariatric surgery, with a mean increase of 4.3 percentage points (95% CI: 3.7-4.9) 5 years after surgery. **Conclusion:** Bariatric surgery is associated with an increased probability of being employed, resulting in increased earnings. This suggests that living with obesity negatively impacts labour market outcomes and that obesity management interventions are likely to generate economic benefits both to individuals and on a macroeconomic level by increasing the likelihood of employment of people living with obesity.

Birmingham et al. 2026.

International Journal of Obesity, vol. 50, no. 3.

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Keywords: Bariatric surgery; employment; monthly earnings.

Evidence Level: 4B

Link: <https://www.nature.com/articles/s41366-025-01995-z>

Employment barriers for people with disabilities in Saudi Arabia

People with disabilities (PWDs) encounter numerous barriers that hinder their access to employment. This study examined perceived barriers related to (a) human resource (HR) practices and legislation, (b) employers' and employees' perceptions, and (c) workplace accommodations in Saudi Arabia. The study also investigated whether perceived barriers differed according to institutional characteristics, including

employment sector, institutional age, public versus private status, current employment of PWDs, and Mowaamah certification status. Data were collected through a survey completed by employers and HR professionals (n = 86) across various regions of Saudi Arabia. The findings indicated that the most significant barriers were limited knowledge regarding how to provide appropriate assistance and resources to PWDs, as well as a shortage of PWDs applying for available positions. Conversely, the least significant barrier was the perception that PWDs cause disruptions in the workplace. Group comparisons revealed that perceived barriers were higher in newer institutions than in older ones, higher in institutions that did not currently employ PWDs, and lower in institutions that had obtained Mowaamah certification. These findings highlight the need for increased awareness of employment barriers facing PWDs. The study also identifies directions for future research, including the use of qualitative and mixed-methods approaches to further understand and address barriers to employing PWDs in Saudi Arabia.

Alasmari et al. 2026.

Research in Developmental Disabilities, vol. 170.

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Keywords: Disabilities; employer perceptions; employment barriers; Saudi Arabia.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0891422226000260?via%3Dihub>

Multidomain predictors of long-term work disability in late survivorship after head and neck cancer

Purpose: To estimate the prevalence of long-term work disability (LTD) among head and neck cancer (HNC) survivors more than five years posttreatment, compare profiles of employed, retired, and LTD groups, and identify independent predictors of LTD versus employment. **Methods:** Late effects were assessed using the EORTC QLQ-C30, EORTC QLQ-H&N35, Chalder Fatigue Questionnaire, and Body Image Scale in a cross-sectional sample of 251 HNC survivors (mean 8.3 years posttreatment). Employment status was categorized as employed, retired, or LTD (> 12 months sick leave). Predictors of LTD were examined among working-age survivors (n = 145) using hierarchical logistic regression. **Results:** LTD prevalence was 19% overall and 33% among working-age survivors. In multivariable models, better physical functioning (OR = 0.13, 95% CI 0.05-0.34) and better cognitive functioning (OR = 0.41, 95% CI 0.18-0.93) were associated with lower odds of LTD, while blue-collar occupation (OR = 6.70, 95% CI 1.18-38.05) and body image distress (OR = 13.34, 95% CI 1.25-142.07) were associated with higher odds. Treatment modality of chemoradiotherapy plus surgery vs radiotherapy was marginally associated with lower LTD odds (OR = 0.06, 95% CI 0.01-0.87), but this finding should be interpreted cautiously due to the small RT subgroup. **Conclusions:** More than five years posttreatment, LTD remains common and is best explained by current physical and cognitive functioning, body image distress, and occupational context rather than historical clinical exposures or any single symptom.

Ivanova et al. 2026.

Supportive Care in Cancer, vol. 34, no. 3.

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Keywords: Body image; head and neck cancer; long-term work disability; occupational status; patient-reported outcomes.

Evidence Level: 4B

Link: <https://link.springer.com/article/10.1007/s00520-026-10524-1>

Workplace accommodations and attrition among physicians with disabilities

Importance: Physicians with disabilities face bias and barriers in the workplace, including stigma, lack of accommodations, and mistreatment, which may contribute to workforce attrition. Given the projected physician shortage and the importance of physicians with disabilities in providing informed and empathetic care, understanding attrition within this group is critical. **Objective:** To examine the associations among disability, workplace accommodations, and physician workforce attrition, including consideration of leaving medical practice and reductions in clinical hours. **Design, setting, and participants:** This survey study used a cross-sectional design to analyze data from the 2022 National Sample Survey of Physicians. Logistic

regression models assessed associations between disability and attrition outcomes, adjusting for demographic and workplace factors. Participants included 5917 active physicians who self-reported personal (eg, disability status) and professional (eg, accommodations) data. Data were collected from May 10 to November 9, 2022, and analyzed from October 1, 2023, to May 1, 2025. **Main outcomes and measures:** The primary outcomes were (1) having considered leaving medical practice within the past 12 months, including reasons why, and (2) having ever reduced clinical hours for 6 months or longer. The core independent variable was accommodation status. **Results:** Among the 5917 physicians surveyed, 154 (2.6%) reported having a disability. A total of 3707 respondents (62.6%) were men or transgender men and 5620 (95.0%) identified as heterosexual; the mean (SD) age was 53.9 (10.8) years. Fifty-six physicians with disabilities (36.4%) considered leaving the practice of medicine, compared with 1316 of 5600 physicians (23.5%) without disabilities. Sixty-seven physicians with disabilities (43.5%) reported transitioning to part time or pausing their practice at some point, compared with 1327 (23.7%) without disabilities. Multivariate regression analysis found physicians with disabilities were more likely than their peers without disabilities to consider leaving medical practice (odds ratio [OR], 2.22; 95% CI, 1.24-3.96; P = .01) and to have reduced clinical hours or paused practice during their careers (OR, 1.94; 95% CI, 1.09-3.43; P = .02). Burnout was the most common reason among both groups, and physicians with disabilities more frequently cited underlying health conditions (self or family) (32 [52.7%] vs 122 [8.5%]). Among physicians with disabilities, those who received accommodations were significantly less likely than those without accommodations to report an intent to leave (42 of 123 [34.3%] and 13 of 24 [54.2%], respectively). **Conclusions and relevance:** In this survey study, physicians with disabilities were significantly more likely to consider leaving the workforce and to reduce clinical hours than their peers without disabilities. Clear, stigma-free disclosure and accommodation processes, along with inclusive workplace cultures, are essential to retaining this vital segment of the physician workforce.

Sheets et al. 2026.

JAMA Network Open, vol. 9, no. 3.

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Keywords: Workplace accommodations; physicians; disabilities.

Evidence Level: 4B

Link: <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2846842>

Employment and productivity losses from cervical spinal cord injury: A 7-year nationwide cohort study in Taiwan, 2012-2018

Objective: To investigate the extent to which employment and productivity losses could be prevented by mitigating cervical spinal cord injury (SCI) and concurrent traumatic brain injury (TBI) in Taiwan. **Design:** Using Taiwan's National Health Insurance Database, we identified individuals with cervical SCI and concurrent TBI, with the 7-year data collection period (2012-2018) and a general population cohort as the reference. Survival and employment status were extrapolated to lifetime and age using rolling extrapolation with restricted cubic spline regression and generalized linear models. **Results:** This study included 2,852 patients with cervical SCI and 367 with concurrent TBI. In cervical SCI, loss-of-life expectancy, loss-of-lifetime employment duration (LED), and loss-of-lifetime insured salary (LIS; a proxy for productivity) were 19.3 years, 7.5 years, and \$122,998, respectively. The relative loss-of-LED of motor-vehicle-related cervical SCI with concurrent TBI was significantly higher than that without TBI (72.7% vs. 64.2%). The relative loss-of-LED in middle-aged cervical SCI was significantly higher than loss-of-LIS (58.2% vs. 63.5%), suggesting that total productivity was more severely affected than working time. **Conclusion:** This 7-year nationwide cohort provides the first lifetime employment and productivity loss estimates for cervical SCI, demonstrating that concurrent TBI and younger age amplify economic burden. The findings shift the policy focus from generic SCI prevention to specific, high-yield interventions: mandatory TBI screening, age-tailored vocational programs, and productivity-targeted workplace accommodations. These evidence-based figures enable precise cost-benefit analyses for preventive measures (e.g. enhanced helmet legislation, road safety) and rehabilitation investments, offering actionable data for Taiwan's health and labor policymakers.

Wang et al. 2026.

Journal of Medical Economics, vol. 29, no. 1.

User License:

Keywords: Cervical spinal cord injury; I30; N35; employment; productivity; real-world data; traumatic brain injury.

Evidence Level: 4B

Link: https://www.tandfonline.com/doi/10.1080/13696998.2026.2637390?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%20pubmed#abstract

Predicting occupational outcomes for individuals with ADHD: The role of hyperactivity/impulsivity and executive functioning

Purpose: The present study adds to the literature by evaluating the differential risk of ADHD symptom dimensions and executive functioning (EF; time management, organization, motivation) to key occupational outcomes. **Methods:** Participants were adults (N = 100; 51% male) with ADHD working full-time between the ages of 19-30 (M = 26.61, SD = 2.28). Participants reported on their ADHD symptoms and EF as well as on five areas of occupational functioning (income, written warnings, boredom at work, satisfaction with coworkers and supervisors). **Results:** Over and above medication status, sex, and age, path analyses revealed hyperactivity/impulsivity and time management were the most consistent predictors of outcomes. Higher levels of each predictor were associated with lower income, more written warnings, greater boredom at work, as well as lower satisfaction with coworkers and supervisors. Executive function difficulties with organization and motivation were risk factors for all evaluated outcomes, except written warnings. Higher levels of inattention symptoms were associated with more written warnings and lower satisfaction with coworkers. **Conclusion:** The present study is one of the first to document the differential risks of ADHD symptoms and EF to a comprehensive set of occupational functioning outcomes. Future research is needed to replicate the present findings and expand this line of work to identify factors that may protect against these ADHD-related risks on workplace success.

Chan et al. 2026.

Journal of Occupational Rehabilitation, vol. 36, no. 1.

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Keywords: Attention deficit/hyperactivity disorder; motivation; occupational functioning; organization; time management; work.

Evidence Level: 5B

Link: <https://link.springer.com/article/10.1007/s10926-024-10259-y>

Understanding work ability in breast cancer survivors: A mediational approach to the roles of perceived emotional intelligence and depression

Background: The increasing prevalence of breast cancer entails multidimensional challenges regarding its impact on patients' physical, psychosocial, and emotional health. Scientific literature shows that breast cancer survivors face significant difficulties in returning to work, which is closely linked to impaired work ability. Moreover, depression -which affects a high percentage of these women- is associated with a reduced perception of their capacity to perform work-related tasks. Emotional intelligence has been identified as a key factor that may mitigate or exacerbate these difficulties. **Objective:** To analyze the processes through which perceived emotional intelligence and depression mediate the relationship between breast cancer survivorship and work ability. **Method:** 821 women participated, divided into two groups: 233 breast cancer survivors and 580 healthy controls. The Work Ability Index, the Hospital Anxiety and Depression Scale, and the Trait Meta-Mood Scale were administered. **Results:** Compared to healthy controls, breast cancer survivors exhibited lower work ability and perceived emotional intelligence, along with higher levels of depression. The overall explanatory power of the mediation model was 37.7%. Work ability was found to be directly impacted by both the experience of breast cancer and the presence of depressive symptoms. Of the six identified indirect effects -both risk and protective- the one with the highest statistical weight predicted improved work ability in breast cancer survivors through the mediated influence of low emotional attention and reduced levels of depression.

Conclusions: Psychological interventions should aim to reduce risk factors and enhance protective pathways to promote successful return to work after hospital treatments.

Guil et al. 2026.

Acta Psychologica, vol. 263.

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Keywords: Breast cancer survivors; depression; mediation model, psychological adjustment; occupational reintegration; perceived emotional intelligence; work ability.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826000478?via%3Dihub>

Impact of visual impairment on work participation from the perspectives of patients and professionals: A concept mapping study

Purpose: Visual impairments (VI) substantially impact work participation, with persistently low employment rates despite re-integration programs and supportive legislation. This study explored factors influencing work participation among persons with VI. **Method:** Using concept mapping and purposive sampling, we gathered insights impacting work participation from patients with VI and professionals. These key stakeholders initially identified items (76 VI patients and 25 professionals), which were subsequently rated for importance and categorized into conceptually common themes (61 VI patients and 47 professionals). **Results:** The final concept map comprised 105 distinct vision-related items, grouped into 9 thematic clusters ranked by importance: personal competences and self-awareness; conditions for workplace adjustments; mobility/commuting and ICT; support and awareness working environment; organizations, regulations and expertise; personal development and social environment/network; professional support for work; physical workplace; task performance. Importance scores ranged from 3.6 to 4.3 on 5-point scale, indicating overall relevance. Differences emerged based on participant type, VI severity, and nationality **Conclusions:** This study provides a consensus-based framework identifying key factors essential for understanding work participation in individuals with VI. Findings highlight the need for multi-level strategies, addressing individual, organizational and societal factors, to enhance sustainable employment through improved interventions, validated assessment tools, policies, and workplace adaptations.

Daniëls et al. 2026.

Disability and Rehabilitation, vol. 48, no. 6.

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Keywords: Blindness; adults; concept mapping; low vision; occupational medicine; rehabilitation; stakeholder perspective; visual impairment; work.

Evidence Level: 5B

Link: <https://pubmed.ncbi.nlm.nih.gov/40778629/>

Adapting to the Future of Work

Aging Workforce

Understanding the determinants of employability over the age of 45: A PRISMA systematic review

Policymakers, researchers and practitioners have recently drawn attention to the issue of employability among workers over 45 in the context of an aging workforce. Consequently, a review of the determinants of employability among these workers is both necessary and timely. This systematic review thus addresses the question, aims to provide an overview of the antecedents of employability of employees over 45 but also to highlight through which conceptualization employability has been studied. A systematic literature review following PRISMA guidelines was conducted using six databases relevant to the fields of work and organizational psychology, covering studies published between 1996 and 2025. In total, 39 studies met the inclusion criteria and were reviewed. Results showed that the determinants of employability of the older workers (+45) can be divided into four subsets of determinants: demographic, psychological, job characteristic and organizational. Our review highlighted the fact that most of the studies focused on demographic determinants and more specifically on age originating mostly from cross-sectional studies.

Hence, many different conceptualizations and instruments used coexist, demonstrating a disparity in how determinants of employability have been studied.

Bazine et al. 2026.

Acta Psychologica, vol. 263.

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Keywords: Employability; mature worker; older worker; systematic literature review.

Evidence Level: 1A

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826000764?via%3Dihub>

Technology

Mental health apps implemented in the workplace: Scoping review of trends and gaps in evaluation research

Background: Technology-based solutions to support the mental health needs of workers are on the rise, as evidenced by the growing body of research related to e-mental health apps implemented with workers or within the context of workplaces. This expanding landscape of evidence related to mental health apps underscores the necessity of summarizing and consolidating the different ways in which studies are evaluating real-world technology-based interventions in a complex setting such as a workplace. **Objective:** The aim of this scoping review is to summarize the growing body of evidence evaluating mental health apps with workers. Specific research questions include "What types of mental health apps are studied?" "With whom are they being evaluated?" and "What outcomes are being tracked with what tools?" **Methods:** The scoping review followed 5 stages: specifying the research question, identifying relevant literature, selecting studies, extracting data, and synthesizing the findings. The search strategy was applied across 6 databases (PsycINFO, Embase, MEDLINE, Cochrane Database, OVID Healthstar, and OVID Emcare) to identify relevant studies from January 2000 to August 2023. **Results:** From the 288 abstracts screened, 54 studies met the inclusion criteria for this review. Over two-thirds of the studies were randomized controlled trials. The studies included 44 different apps, comprising 23 structured self-guided apps, 15 unstructured self-guided apps, and 6 apps designed as adjuncts to other interventions. Evaluation approaches included examining user engagement and utilization, investigating the impact on users, and evaluating the implementation process. Most studies evaluated the impact on individual mental health-related outcomes as well as workplace-related outcomes. **Conclusions:** This scoping review provides a comprehensive overview of the ways in which studies are currently evaluating workplace mental health apps. The review highlights key trends and gaps in the existing research, noting that most studies focus on the effects of mental health apps on individual users, while only a limited number of studies explore how implementing such dynamic interventions within complex real-world settings (eg, workplaces) may influence their overall effectiveness. Future research should explore the implementation process to identify factors that promote and/or hinder the optimal use and impact of mental health apps for workers.

Addanki et al. 2026.

JMIR mHealth and uHealth, vol. 31.

User License:

Keywords: Digital health; eHealth; mHealth; mental health apps; mobile apps; mobile health; scoping review; smartphones; technology-based interventions; user engagement; workers; workplace.

Evidence Level: 1A

Link: <https://mhealth.jmir.org/2026/1/e57046/PDF>

Failure of neutralization: How digital job demands shape cyberslacking and job performance in telework

Organisations across the globe are deliberating on the future of work, whether to call employees back to the office, enable remote working, or offer flexibility through hybrid options. In this context, we studied two job demands-techno-invasion and electronic monitoring-that could influence employee performance. We surveyed knowledge workers (n = 1446) in two waves, separated by 25 days, to explore these dynamics. Using PLS-SEM, we empirically examined the relationships between job demands and job performance, with cyberslacking as the mediating variable and Information Technology (IT) support as the

moderating variable. We further conducted robustness checks using Hayes PROCESS macro in SPSS. This study introduces the concept of 'failure of neutralization' to show how techno-invasion operates as a hindrance stressor and can become intrusive to the extent that employees may be unable to justify or engage in cyberslacking. This specifies a boundary condition for neutralization, where a norm of perpetual availability can suppress even brief digital detachment. Techno-invasion is negatively related to cyberslacking and job performance. Our findings also reveal that cyberslacking positively influences job performance and mediates the relationship between job demands and performance. Additionally, IT support moderates the positive relationship between electronic monitoring and cyberslacking, which intensifies when IT support is low. It also emphasises the importance of sustainable work environments, where interventions such as IT support, clear boundaries for work-related ICT use, and policies promoting responsible internet behaviour can mitigate the adverse effects of job demands.

Kumar et al. 2026.

Acta Psychologica, vol. 264.

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Keywords: Cyberslacking; electronic monitoring; IT support; job performance; SDG 3, sustainable work environments; techno-invasion; telecommuting.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826004105?via%3Dihub>

Human-GenAI-based agent collaboration: How employee perceptions shape knowledge sharing, thriving, and well-being

The growing pace of the introduction of generative artificial intelligence (GenAI) into organizational processes is changing the way workers cooperate with technology. Based on Social Exchange Theory, we propose that the perception of employees regarding the value of GenAI-based agents, their vulnerability and privacy, and their self-concern would determine the collaboration with GenAI agents, which subsequently would predict the knowledge sharing, job thriving, and well-being. The findings show that perceived GenAI-based value has a strong positive impact on human-GenAI-based agent collaboration, but data vulnerability and privacy concerns have no significance. Interestingly, self-concern has a positive effect, which implies that identity-based fears can be used to drive active use of GenAI-based agents. Knowledge sharing, job thriving, and well-being are highly predicted by human-GenAI-based agent collaboration, and organizational exploratory innovation moderates these correlations. These results extrapolate the Social Exchange Theory to human-AI situations, dispel the assumptions of the consistently negative impact of risk perception, and emphasize the relevance of organizational climate to the implementation of the advantages of AI cooperation. The paper provides both theoretical and practical understanding of the way in which employees interact with GenAI-based agents to ensure that organizational learning and psychological outcomes of employees are achieved.

Nguyen et al. 2026.

Acta Psychologica, vol. 263.

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Keywords: Collaboration; exploratory innovation; generative ai; job thriving; knowledge sharing; social exchange theory; well-being.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826000703?via%3Dihub>

Work Environment

Employee workspace preferences in a mandated hybrid work policy: A discrete choice experiment

Objective: Understanding employee workspace preferences is crucial for designing office work environments that meet their needs. This study investigated employee office design preferences within a mandated hybrid work model at a higher education institution. **Methods:** In this discrete-choice experiment (DCE), operational support staff (N=433) at a university participated in evaluating 12 pairs of

hypothetical office design options, each varying across seven workspace attributes from a DCE survey. Preference weights indicating the relative strength of preference for each workspace design attribute level were used to calculate the importance of each attribute, conditional on the range of levels considered and relative to all other attributes included in the survey. The conditional relative importance of each attribute was calculated as the difference in preference weights for the most- and least-preferred level of that attribute. Subgroup analysis was performed on predefined, mutually exclusive subgroups, with results reported only for those exhibiting statistically significant differences in preferences. **Results:** The results showed that having a dedicated desk (ie, no desk sharing) was an important factor influencing preferences, followed by personalization and territoriality, opportunities for teamwork, and social interaction. Employees preferred having access to shared spaces for collaboration while also valuing dedicated desks for personal belongings. Private offices and quiet spaces were not strongly preferred. Preferences varied by demographic and work-related characteristics, including gender, age, commute distance, and home environment. **Conclusions:** This study shows that operational support staff in higher education prefer office designs that provide a dedicated desk, emphasize personalization, and social interaction. The strong preference for control over workspace and social connection highlights the office's role in supporting psychosocial well-being in flexible work arrangements. These findings are crucial for informing occupational health and safety strategies and designing workspaces that balance individual and collective requirements.

Aboagye et al. 2026.

Scandinavian Journal of Work, Environment and Health, vol. 52, no. 2.

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Keywords: Employee; hybrid work; office work; workplace preferences.

Evidence Level: 3B

Link: <https://www.sjweh.fi/article/4264>

Trapped in declining occupations: Barriers to worker mobility in a changing economy

The US has undergone substantial changes in jobs, occupations, and mobility over the past two decades. Using administrative data from the US Occupational Outlook Handbook (2000 to 2020), we examine how immediate and projected occupational restructuring affects workers' mobility. In an update to prior research, we find that workers in both growing and declining occupations experience greater mobility than those in stable occupations. However, the direction of movement varies. Workers in declining occupations often move laterally into other declining occupations, with nearly 60% experiencing downward mobility. In contrast, growing occupations offer better prospects for upward mobility, particularly for workers transitioning from declining to growing occupations, where almost 50% enter higher-paying occupations. However, these moves to emerging jobs are relatively rare, accounting for only 5% of all occupational movements. These results highlight how recent shifts in the occupational structure exacerbate existing disadvantages for workers facing declining job opportunities.

Song et al. 2026.

Science Advances, vol. 12, no. 10.

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Keywords: Declining occupations; worker mobility; economy.

Evidence Level: 4B

Link: <https://www.science.org/doi/10.1126/sciadv.adx3471>