



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 August 2026 only.

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Methodology

Search

Open access, English language article abstracts related to the broad Work, Health and Safety and Rehabilitation/Return To Work themes of Enabling Healthy & Safe Workplaces, Enhancing Employer Capability, Fostering Work Participation, Promoting Mental Health and Adapting to the Future of Work, published in the preceding month are sourced from PubMed®, Emcare®, Ergonomic Abstracts® and Psychinfo® databases at the start of the month. Results are screened, critically reviewed in terms of level of evidence and relevance to an Australian context, and collated.

Description of Evidence Levels Definitions Used in this Review

Articles are arranged from highest to lowest quality based on levels of evidence and relevance, as outlined in table 1 and 2.

- 1. Level of Evidence** –Comcare does not conduct critical evaluations of the articles listed in the Workplace Research Monthly, however, certain study designs are scientifically stronger at answering a question. The scoring hierarchy used 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

Occupational risk factors for suicide: A systematic review and meta-analysis

Background: Suicide is one of the major health problems that imposes a heavy burden on the health system. Currently, there is a notable absence of review and meta-analysis studies capable of exploring a broader spectrum of occupational factors associated with dimensions of suicide. This study was conducted to investigate occupational risk factors related to suicide dimensions by systematic review and meta-analysis. **Methods:** Preferred Reporting Items for Systematic Reviews and Meta-analyses have been used. The databases searched in this study included: PubMed, Web of Science, and Scopus. The defined period included the beginning of the formation of these databases until August 2023, and this search was limited to studies published and available in English. The random effects method was used in a pool of different studies. In this research, the odds ratio with a 95% confidence interval (CI) was used in the report of findings. **Results:** The relationship between job demands and suicide dimensions was equal to the odds ratio of 1.29 with a CI between 1.11 and 1.50. This relationship was equal to the odds ratio 1.15 with a CI between 1.08 and 1.23. Also, other risk factors for suicide were conflict at work, job strain, job insecurity, workplace bullying, job stress, burnout, and work-family conflict. **Conclusion:** This study showed how much the work environment and related risk factors can play a role in different aspects of suicide. Therefore, in the policies related to health at work, it is necessary to pay attention to the field of monitoring and screening of mental health in the work environment.

Amiri et al. 2026.

Medicine, vol. 105, no. 32.

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Keywords: Job; meta-analysis; occupational risk factor; suicidal ideation; suicide; suicide attempt; systematic review.

Evidence Level: 1A

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC13456902/>

Digital health promotion, prevention and health literacy measures among seafarers and crews on cargo and passenger ships: A scoping review

Introduction: The unique occupational conditions of seafaring are associated with increased physical and psychological stress and significantly complicate common approaches to health promotion and prevention. Digital health technologies are therefore considered promising alternatives that can better address barriers to access, infrastructural shortcomings and cultural diversity. **Objective:** The aim is to provide a comprehensive overview of scientific evidence about digital measures used for health promotion and prevention among seafarers and crew members on merchant ships (cargo/passenger). As secondary study aim, digital practical programs established to promote health at sea will also be presented. **Methods:** This scoping review was conducted in accordance with the updated methodological guidelines from the Joanna Briggs Institute (JBI) and the PRISMA-ScR checklist. The protocol was prospectively registered in the Open Science Framework (OSF). The literature search was conducted systematically in Scopus, Web of Science, PubMed, and LIVIVO, and study selection was carried out based on the selection criteria. In addition, a targeted web search for digital practical programs was conducted. **Results:** A total of 1,711 sources were identified, 68 full-text articles were screened, and 9 studies were included in the qualitative analysis. The evidence base is highly heterogeneous, consisting of various study designs ranging from pilot studies to one randomized controlled trial (RCT). Only articles on digital health promotion and prevention were identified. No studies were found that examined digital health literacy. All included studies focused exclusively on seafarers working on cargo ships. Four studies investigated behavioral approaches, while two studies focused on structural approaches and the remaining three studies dealt with blended concepts. Thematic focus varies, addressing topics such as nutrition, mental health, skin cancer prevention, and digital prediction models. In addition, six digital practical programs on topics such as physical activity, mental health, sleep and stress management, and nutrition were identified. **Conclusions:** An overview of the current state of research and practical applications regarding digital health promotion and prevention

among seafarers on merchant ships was provided. The topic has been scarcely addressed in the shipping industry to date. Concurrently, the heterogeneity of the evidence, the restricted number of relevant studies, and the variable quality of the studies indicate a necessity for further research. Academic research should also address the topic of digital health literacy and the demands of crew members on passenger ships. Based on the findings, it is recommended that shipping companies take responsibility for promoting the health of seafarers on board their ships by empowering their crews.

Reck et al. 2026.

PLoS One, vol. 21, no. 8.

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Keywords: Digital health; prevention; health literacy; seafarers.

Evidence Level: 1A

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0356798>

Neurodivergence and well-being: The fulfilment of fundamental psychological needs, work-related stress and life satisfaction

This paper presents two complementary studies on the impact of neurodivergent conditions such as autism, AD(H)D, dyslexia/dyscalculia and giftedness on well-being. In Study 1, survey data from 2157 participants in a true probabilistic sample of Dutch households show that respondents with autism and ADHD report significantly lower life satisfaction and higher levels of stress and maladjustment than neurotypical peers. Other conditions present more nuanced patterns. Study 2 builds on Self-Determination Theory and uses Large Language Models (LLMs) to analyse 2214 Reddit life stories, evaluating the mediating role of autonomy, competence and relatedness need fulfilment in the relationship between neurodivergence and well-being. Our results indicate that giftedness and dyslexia are positively related to psychological needs satisfaction, whereas other neurodivergent conditions are predominantly negatively associated with needs fulfilment. Indirect association analyses show that, except for ADD, the fulfilment of autonomy, competence and relatedness needs accounts for the association between neurodivergence on the one hand and life satisfaction and stress on the other hand. This study provides initial empirical evidence and contributes novel empirical insights by combining multimethod data sources and LLM-based narrative analysis, advancing our understanding of how different forms of neurodivergence affect well-being.

van Rijswijk et al. 2026.

British Journal of Psychology, vol. 117, no. 3.

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Keywords: Autonomy; competence; life satisfaction; neurodiversity; relatedness; self-determination; stress; well-being.

Evidence Level: 4B

Link: <https://bpspsychub.onlinelibrary.wiley.com/doi/10.1111/bjop.70057>

Association between occupation and cancer risk: A large-scale case-control study in Japan

Objective: To examine associations between occupation and overall and site-specific cancer risk in Japan.

Methods: We conducted a multicenter, hospital-based matched case-control study using the Inpatient Clinico-Occupational Survey of the Rosai Hospital Group (2005-2023), including 146,994 cancer cases and 278,244 matched controls. Conditional logistic regression was used to estimate sex-specific adjusted odds ratios by occupation. **Results:** Occupational disparities in cancer risk were observed, with more pronounced associations among men than women. Elevated risks were identified in manual and transport-related occupations, whereas lower risks were observed in selected professional occupations. Site-specific patterns varied by cancer type and sex. **Conclusions:** Occupation is associated with cancer risk in Japan, showing distinct sex-specific and site-specific patterns. These findings underscore the importance of occupational context in cancer epidemiology and provide a hypothesis-generating framework highlighting behavioral and detection-related factors.

Fukai et al. 2026.

Journal of Occupational and Environmental Medicine, vol. 68, no. 8.

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Keywords: Japan; cancer risk; case-control study; detection bias; occupation.

Evidence Level: 4B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC13361954/>

Impact of vasomotor symptoms on women in the workplace: Results from a non-interventional survey in the United States

Objectives: Vasomotor symptoms are experienced by up to 80% of postmenopausal women. Women were surveyed to evaluate the impact of vasomotor symptoms in the workplace, support from employers/colleagues, and perceptions of workplace accommodations. **Study design:** Participants aged 40-65 years were recruited from Dynata panels for an electronic survey. Women were experiencing vasomotor symptoms for ≥ 1 month with ≥ 2 hot flash/night sweat episodes per day in the preceding 2 weeks and were currently employed or had stopped working/retired within the last year. **Main outcome measures:** Demographic characteristics and Work Productivity and Activity Impairment. **Results:** Respondents (N = 1011) were mostly White (72.9%), with a mean (standard deviation) age 49.6 (6.4) years, reporting a mean of 7.5 (11.1) hot flashes or night sweats per day in the preceding 2 weeks. The majority (81.3%) had never received treatment. Activity impairment, absenteeism, and presenteeism were reported by 36%, 6%, and 32%, respectively, and increased with increasing vasomotor symptom severity. Almost 80% of respondents had not discussed vasomotor symptoms with their employer; only 18.1% indicated employer support for vasomotor symptoms. Top coping mechanisms at work were temperature control (71.0%) and wearing layered, breathable clothing (46.0%). Respondents suggested some work accommodations for vasomotor symptoms: changes to benefit packages (27.9%), creating more workplace awareness (25.7%), and more flexible working arrangements (23.2%). **Conclusions:** Despite demonstrable adverse effects of vasomotor symptoms on United States women in the workplace, treatment rates were very low. Enhanced awareness regarding treatment options alongside potential workplace accommodations may improve work productivity, employee satisfaction, and retention.

Kapoor et al. 2026.

Maturitas, vol. 212.

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Keywords: Menopause; vasomotor symptoms; work productivity.

Evidence Level: 4B

Link: [https://www.maturitas.org/article/S0378-5122\(26\)00261-6/fulltext](https://www.maturitas.org/article/S0378-5122(26)00261-6/fulltext)

Risk of cardiovascular disease according to standard industrial sectors: A nationwide longitudinal study

Background: Cardiovascular disease (CVD) is a leading global cause of morbidity and mortality, with occupational factors significantly contributing to risk. However, industry-specific CVD risks in Asia remain understudied. This study evaluates CVD and all-cause mortality risks across industrial sectors in Republic of Korean (South Korea) using a nationally representative dataset. **Methods:** This study examined middle-aged paid workers (aged 40-59 years) using data from the National Health Insurance Service database, which integrates biennial health screening data with insurance claims. We included individuals who underwent health examinations between 2009 and 2010 and followed them to identify CVD events through insurance claims records. Age-standardized incidence ratios were calculated using indirect standardization with the entire population as the control group, and 95% confidence intervals (CIs) were estimated using the Poisson distribution, with results stratified by sex. Population-attributable fractions were calculated to estimate each sector's contribution to the CVD burden. **Results:** Among males, the highest standardized incident ratios for CVD were observed in the "A. Agriculture, Forestry and Fishing" (1.20; 95% CI, 1.10-1.31) and "H. Transportation and Storage" (1.19; 1.17-1.21) sectors. For females, elevated standardized incidence ratios were found in the "D. Electricity, Gas, Steam and Air Conditioning Supply" (1.31; 1.09-1.57) and "H. Transportation and Storage" (1.15; 1.10-1.20) sectors. The "H. Transportation and Storage" sector showed the highest population-attributable fraction for males (3.34%), while the "I. Accommodation and Food Service Activities" sector led for females (1.64%). **Conclusion:** This study provides the first comprehensive

analysis of industry-specific CVD risks in Asia, highlighting elevated risks in transportation possibly due to long working hours, sedentary behavior, and occupational stress. Targeted interventions are needed to address these occupational health disparities.

Park et al. 2026.

Journal of Korean Medical Science, vol. 41, no. 31.

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

Keywords: Cardiovascular diseases; industry; Korea; mortality; occupational groups; transportation.

Evidence Level: 4B

Link: <https://jkms.org/DOIx.php?id=10.3346/jkms.2026.41.e203>

Work Health and Safety

Felt and expressed needs regarding occupational health services from the perspective of micro-, small and medium-sized enterprises: A scoping review

Background: In the context of the changing need for health care and prevention due to climate, digital and demographic change, occupational health services are of enormous relevance, as many people can be reached. Of particular interest are the occupational health services in micro-, small- and medium-sized enterprises (MSMEs), as smaller companies are experiencing an unequal distribution of resources. To optimise the implementation in MSMEs, the aim of this scoping review is to present an overview of the MSMEs' needs regarding occupational health services. **Methods:** The literature search was conducted through Embase, Pub Med, Scopus, and Web of Science. Additionally, a manual search was performed through the references of included sources. A protocol was registered with Open Science Framework. The screening was conducted by two reviewers. Eligible were peer-reviewed articles in English and German, published between 2000 and 2024 on the perspective of MSMEs regarding occupational health services. The articles were narratively synthesised. A critical appraisal was carried out. **Results:** A total of 1,252 sources were found during the search on August 26, 2024. Fifteen were included from the database search and two from the manual search. The studies used qualitative (n = 11), quantitative (n = 3) or mixed-methods (n = 3) approaches. The narrative synthesis identified five categories of felt and expressed needs with fourteen subcategories. MSMEs had a need for collaborative culture including communication, participation, trusting relationships and external support. The need for knowledge and competencies contained information, training and accessibility. Organizational structures subsumed the need for time, financial, technical resources as well as management commitment and simple solutions. Tailored legislation and less bureaucracy were categorized as needs for political and regulatory context. In the included studies, a selection of specific interventions such as flu vaccination, ergonomic solutions and psychosocial risk assessment were discussed. **Conclusions:** To optimise the implementation of occupational health services, this overview shows that political stakeholders and occupational health professionals should improve the organizational structures, political and regulatory context, collaborative culture with and the knowledge and competencies of MSMEs. Further research is recommended with the explicit aim of identifying the needs of MSMEs in each sector on occupational health services, psychosocial risk and assessments.

Suraj et al. 2026.

BMJ Public Health, vol. 26, no. 1.

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Keywords: MSMEs; micro-, small- and medium-sized enterprises; needs; OHS; occupational health services.

Evidence Level: 1A

Link: <https://link.springer.com/article/10.1186/s12889-026-28795-y>

Early effects of the serious accidents' punishment act on occupational health outcomes in Korea: A Nationwide Difference-in-Differences Study (2017-2023)

Background: Work-related injury and occupational disease remain major public health challenges worldwide; South Korea continues to report comparatively high industrial accident rates among OECD countries. To strengthen managerial accountability for worker safety, the Korean government enacted the Serious Accidents Punishment Act (SAPA) in 2021, effective January 2022. The Act institutionalizes

corporate responsibility for occupational safety through compliance-based governance. SAPA was implemented in phases, initially covering enterprises with ≥ 50 employees and construction projects exceeding 5 billion KRW. This selective enforcement created a quasi-experimental setting to evaluate early effects. We assessed differences in short-term patterns of occupational injury, disease, and fatality rates between enterprises covered and not covered by SAPA during its initial enforcement phase. **Methods:** We analyzed nationwide industrial accident statistics for 2017-2023 using a difference-in-differences (DID) design. Injury, disease, and fatality rates were stratified by enterprise size and industry to compare outcomes between enterprises covered and not covered by the law. **Results:** From 2017 to 2023, occupational injuries and diseases increased, whereas fatalities declined slightly. DID estimates showed no statistically significant nationwide reductions in injuries or fatalities after SAPA enforcement began. However, disease rates declined significantly in construction ($\beta = -0.067$; $p < 0.015$), suggesting differentiated effects across industries. **Conclusions:** During the limited enforcement phase (2022-2023), SAPA did not immediately reduce nationwide accidents but showed early improvements in disease prevention in high-risk sectors such as construction. Although immediate effects were limited, continued monitoring and expanded coverage are essential to evaluate long-term impacts on worker health and safety. Findings underscore the need for integrated policies that couple legal accountability with preventive safety capacity-building.

Park et al. 2026.

American Journal of Industrial Medicine, vol. 69, no. 8.

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

Keywords: Serious Accidents Punishment Act (SAPA); construction industry; difference-in-differences; industrial fatality; occupational disease; occupational injury; policy evaluation.

Evidence Level: 3B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/ajim.70099>

Evaluation of the additional occupational risk for workers with orthopedic implants in MRI settings

Objective: To provide quantitative information that can aid the relevant authority in deciding whether workers with metallic nonferromagnetic orthopedic implants can work in proximity to magnetic resonance imaging (MRI) scanners, including when the exam is being performed. **Methods:** Virtual experiments in which the exposure of workers with and without prostheses is evaluated through numerical simulation of realistic human models, with reference to 4 physical effects: radiofrequency (RF)-induced heating, gradient-induced heating, gradient-induced peripheral nerve stimulation, and mechanical actions related to the Lenz effect. **Results:** In the presence of the considered implants, the extent of RF-induced heating and of the electric field responsible for peripheral nerve stimulation is low and comparable to what is observed without the prostheses. The extent of gradient-induced heating and Lenz effect, which occur only in the presence of implants, is minimal. **Conclusion:** As long as the body of the worker with passive non-ferromagnetic orthopedic implants remains outside the MRI scanner, the incremental risk posed by the presence of the implants is negligible. The Lenz effect is weak even if the part of the worker's body with an implant enters the scanner bore.

Zilberti et al. 2026.

Annals of Work Exposures and Health, vol. 70, no. 7.

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Keywords: Electromagnetic fields; magnetic resonance imaging; occupational exposure; orthopedic implants; safety.

Evidence Level: 3B

Link: <https://academic.oup.com/annweh/article/70/7/wxag067/8770979?login=true>

Frequency, severity and ergonomic awareness of work-related musculoskeletal disorders among Australian optometrists: A cross-sectional survey

Purpose: Work-related musculoskeletal disorders (WMSDs) are highly prevalent among healthcare professionals, including optometrists. This study aimed to assess the frequency, severity and contributing

factors of WMSDs among Australian optometrists, as well as evaluate their awareness and implementation of ergonomic practices. **Methods:** A cross-sectional online survey was distributed to optometrists in Victoria and South Australia. The survey collected data on demographics, work characteristics, ergonomic awareness, frequency and severity of musculoskeletal discomfort and contributing factors. Quantitative data were analysed using descriptive statistics and correlation analysis. Free-text responses were examined using inductive thematic analysis. **Results:** Of 119 respondents, 84% reported neck discomfort, 71% shoulder discomfort and 73% lower back discomfort. Pain severity was highest in the neck and shoulders (mean ~6.5/10). Strong Pearson correlations were found between neck, shoulder and upper back discomfort. Repetitive tasks, static postures and awkward positioning were identified as primary contributors to discomfort. Slit lamp-based tasks were most frequently associated with exacerbating pain. Only 20% of respondents were aware of workplace health and safety policies and 97% had not received employer-led training on injury reduction. Thematic analysis revealed significant impacts on professional performance and personal wellbeing. **Conclusions:** WMSDs are highly prevalent among Australian optometrists, particularly affecting the upper body. There is a lack of ergonomics education and workplace support. These findings highlight the need for improved ergonomics training in optometry education, implementation of workplace health and safety protocols and investment in ergonomic equipment. Future interventions should focus on addressing the identified risk factors and promoting a culture of safety in optometric practice.

Appathurai et al. 2026.

Ophthalmic and Physiological Optics, vol. 46, no. 4.

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Keywords: Ergonomics; musculoskeletal injury; occupational hazards; optometrists; workplace safety.

Evidence Level: 4A

Link: <https://link.springer.com/article/10.1007/s44402-026-00118-z>

Risk Assessment

Scenario-based occupational risk assessment for power grid maintenance workers

Background: Safety is the fundamental guarantee of power production. The safety of power operation personnel is closely related to public welfare and the sustained and stable development of the power industry. However, factors endangering the safety of power operation personnel cover multiple dimensions, including personnel operation, equipment status, working environment, and management system, which pose considerable challenges to the comprehensiveness and accuracy of risk identification.

Methods: This study integrates scenario construction theory into power operation practice. Based on the grey relational degree and Bayesian network method, a risk assessment method suitable for power operation personnel is constructed and applied in typical power operation scenarios. **Results:** In this paper, risk assessment methods are used to identify risk factors, calculate their weights, and conduct logical analysis for the operation of live-line connecting branch leads on 10 kV overhead lines. Through scenario construction, the operation is divided into four key stages with distinct dominant risk factors in each stage. The results show that human factors and environmental factors account for relatively high overall weights, which is consistent with the pattern of actual accidents. Among them, the impact of operators' physical and mental health is unexpected and requires special attention. Meanwhile, there is a significant risk transmission effect among procedures, and the quality of preceding procedures directly determines the safety of subsequent operations. **Conclusions:** The calculated results provide direct data support and a reference for decision-making on the precise control of power operation safety, thereby improving the scientific rigor and effectiveness of safety prevention and control measures for power operations.

Wang et al. 2026.

PLoS One, vol. 21, no. 8.

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Keywords: Occupational risk; power grid maintenance.

Evidence Level: 5B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0354455>

Ergonomics

Exercise participation and clinical characteristics of desk-based workers with chronic non-specific neck pain exposed to increased ergonomic risk: A Cross-Sectional Study

Background and Objectives: Chronic non-specific neck pain (CNNP) is common among desk-based workers exposed to increased ergonomic risk and is accompanied by functional impairments. This study examined associations between exercise participation and pain intensity, upper-extremity disability, body awareness, and perceived sagittal trunk appearance in this population. **Materials and Methods:** This cross-sectional study included 250 of 512 screened desk-based workers with CNNP, pain severity $\geq 4/10$, and a Rapid Upper Limb Assessment (RULA) score $\geq 3/7$. Physical activity, upper-extremity disability, body awareness, perceived sagittal trunk appearance, and ergonomic risk were assessed using the IPAQ-SF, QuickDASH, Body Awareness Rating Questionnaire (BARQ), KyphoTAPS, and a video-call-based RULA. **Results:** Participants reporting exercise participation had lower QuickDASH scores ($p = 0.003$, $d = -0.42$) and higher BARQ total scores ($p = 0.023$, $d = 0.33$) than non-exercisers. BARQ function and awareness scores were higher in this group ($p = 0.004$ and $p = 0.033$), while pain severity, perceived sagittal trunk appearance, and ergonomic risk were similar between groups. QuickDASH scores were positively correlated with pain severity ($\rho = 0.636$ – 0.727) and negatively correlated with BARQ total scores ($\rho = -0.477$). RULA scores showed a weak positive correlation with general neck pain ($\rho = 0.288$) (FDR-adjusted $p < 0.002$). Exploratory adjusted analyses showed that participants reporting regular exercise participation had lower QuickDASH and higher BARQ total scores than non-exercisers in all models. Participants reporting low-frequency exercise participation had lower QuickDASH scores than non-exercisers only in Model 4. **Conclusions:** Self-reported exercise participation may be associated with lower QuickDASH scores and higher BARQ total scores in desk-based workers with CNNP and increased ergonomic risk. Because maintaining consistent exercise participation can be challenging in occupational settings, future studies should investigate feasible exercise strategies to address pain-related, functional, and perceptual outcomes among occupational populations exposed to prolonged ergonomic loading.

Acikalin et al. 2026.

Medicina, vol. 62, no. 8.

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Keywords: RULA; body awareness; chronic non-specific neck pain; desk-based workers; ergonomic risk; exercise participation; physical activity; upper-extremity disability.

Evidence Level: 4B

Link: <https://www.mdpi.com/1648-9144/62/8/1602>

Quantifying hydration-related measures and their association with wearable-derived ergonomic risk in warehouse workers

Introduction: Warehouse workers may experience prolonged heat exposure and sweat loss, which can influence fatigue and movement patterns related to ergonomic risk. However, evidence in this occupational group remains limited. Therefore, we aimed to quantify acute (pre- and post-shift) and across-week (Days 1-4) changes in urine specific gravity (USG) and explore the associations between hydration-related measures (Δ urine color, sweat rate, and total fluid intake), wearable-derived ergonomic risk metrics, and self-reported fatigue. **Methods:** A total of 25 employees at a Florida beverage bottling facility completed pre- and post-shift urine sampling over four workdays, recorded total fluid intake, and self-reported fatigue/energy. Sweat volume, sweat rate, sweat sodium concentration, and ergonomic risk metrics were measured on Days 2-4 using wearable devices. Linear mixed-effects models were used to assess USG changes by time point and day. Multiple linear regression was used to examine the associations between predictors (Δ urine color, sweat rate, and total fluid intake) and ergonomic risk outcomes and pre-to-post-shift changes in fatigue/energy. **Results:** USG increased from pre- to post-shift ($p = 0.03$), with no significant effect of day across the workweek ($p = 0.58$). Change in urine color was significantly associated with the injury risk score ($p = 0.03$), total elevated risk movement count ($p < 0.01$), and mild-risk movement count ($p < 0.01$). Sweat rate was a significant predictor of changes in physical fatigue from pre- to post-shift ($p = 0.03$). Night-shift workers demonstrated higher activity scores and sweat sodium loss than morning-shift workers ($p < 0.01$). **Conclusion:** Workers frequently presented with concentrated urine both pre- and post-

shift, and a greater within-shift worsening of urine color was associated with a higher occurrence of certain wearable-derived ergonomic risk movements.

Agostinelli et al. 2026.

Frontiers in Public Health, vol. 14.

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Keywords: Manual labor; manual material handling; occupational stress; physically demanding work; physiological monitoring; wearable sweat sensors.

Evidence Level: 5B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2026.1903472/full>

Chronic Health Issues

How long do people with rheumatic and musculoskeletal diseases stay healthy and in work across Europe? Analysis of data from SHARE and ELSA

Objectives: This study aims to estimate the extent of the reduction in healthy working life expectancy (HWLE), from age 50, for people with rheumatic and musculoskeletal diseases (RMDs) in 19 countries across Europe and highlight the need to target extending working lives through interventions and policy.

Methods: Data were from 2 longitudinal studies (Survey of Health, Ageing and Retirement in Europe [2004-2022], English Longitudinal Study of Ageing [2002-2023]) that collect information in people aged 50 years and over. 'Healthy' and 'working' were defined as no limiting long-standing illness and employment/self-employment, respectively. RMDs were identified from self-report of ever having received a doctor diagnosis of arthritis or rheumatism. Age-adjusted discrete time 3-state models were fitted using IMACh software, a maximum likelihood modelling programme using interpolation of Markov Chains, to estimate HWLE from transition probabilities between each healthy and working state based on RMD status (overall, by sex, education, and physical activity), stratified by 19 countries. **Results:** In 6 countries, HWLE in the population with RMDs was around 50% or less than for the population without RMDs. The lowest HWLE for populations with RMDs was in Austria 2.60 (1.49, 3.71) years which was 42.9% of HWLE for the population without RMDs. HWLE was lower in populations with RMDs with lower than upper secondary education in all countries and in populations with RMDs categorised as physically inactive in 16 countries. **Conclusions:** The differences observed in HWLE demonstrate the substantial societal burden associated with RMDs. However, differences by country, sex, education and physical activity indicate that there are opportunities for interventions and policies to increase HWLE.

Wilkie et al. 2026.

Annals of Rheumatic Diseases, vol. 85, no. 6.

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Keywords: Rheumatic disease; musculoskeletal disease; healthy.

Evidence Level: 4B

Link: [https://ard.eular.org/article/S0003-4967\(26\)00085-3/fulltext](https://ard.eular.org/article/S0003-4967(26)00085-3/fulltext)

Potential of the job demands and accommodation planning tool for individuals working with mild cognitive impairment or dementia

Individuals living with young onset dementia or mild cognitive impairment are typically working when cognitive decline emerges. Inability to maintain job demands can lead to loss of employment, loss of purpose and identity, financial instability, and withdrawal from social networks. The Job Demands and Accommodation Planning Tool was developed to identify workplace supports for individuals with episodic disabilities. The aim of this study was to explore the applicability of the Job Demands and Accommodation Planning Tool for individuals working with young onset dementia or mild cognitive impairment. Semi-structured interviews were conducted with 23 individuals: 11 in Canada, 7 in Finland and 5 in Sweden, where they described job demands and workplace challenges, they faced. A secondary analysis of interview data was conducted using content analysis and a framework approach to code, categorize, and examine overlap with the Job Demands and Accommodations Planning Tool. Results showed that the Job Demands and Accommodation Planning Tool aligns well with the experiences of individuals living with young onset dementia or mild cognitive impairment. The Job Demands and Accommodation Planning Tool could inform

workplace supports for people with young onset dementia or mild cognitive impairment to maintain their presence in the workforce.

Bak et al. 2026.

Dementia, vol. 25, no. 6.

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Keywords: Cognitive decline; job demands; mild cognitive impairment; workforce; workplace adjustments; young onset dementia.

Evidence Level: 5B

Link: <https://pubmed.ncbi.nlm.nih.gov/40875923/>

Occupational Exposure

Occupational exposure to metal welding and cataract: A systematic review and meta-analysis

Background: Metal welding generates ultraviolet radiation (UVR) of cataractogenic wavelengths, and UVR emitted during welding has been associated with cataract formation, but results from prior studies are conflicting. **Methods:** We conducted a systematic review and meta-analysis of epidemiological studies addressing associations between occupational metal welding and cataract. The literature search was conducted on November 15, 2023, across seven literature databases. Studies comparing age-adjusted occurrence of cataract among welders and control groups were included. Two reviewers extracted data, which were combined using random-effects meta-analyses. **Results:** We identified nine studies with a total of 5165 welders and 513 026 controls. There was considerable heterogeneity among studies (I^2 statistics: 39), and possible publication bias in favour of higher risk estimates. Stratified meta-analyses revealed a summary OR of 1.22 ($n = 3$, 95% CI 0.79-1.90; $p = 0.374$) for cataract among welders in high-income countries, whereas the OR was 2.95 ($n = 9$, 95% CI 1.68-5.19; $p = 0.00017$) in lower-middle-income countries. **Conclusion:** An increased risk of cataract among welders was found in studies from lower-middle-income countries, but not in studies from high-income countries. The disparity could reflect differences in occupational safety adherence and study methodology and may also involve effect modification by cumulative solar UVR. Although a causal link between UVR from metal welding and cataract is biologically plausible, epidemiological evidence is still limited. More studies are needed to quantify the exact risk of cataract among welders in various populations.

Bjerager et al. 2026.

Acta Ophthalmologica, vol. 104, no. 5.

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Keywords: Cataract; occupational exposure; prophylaxis; ultraviolet radiation; welding.

Evidence Level: 1A

Link: <https://onlinelibrary.wiley.com/doi/10.1111/aos.70066>

Occupational exposure to pesticides increases the risk of amyotrophic lateral sclerosis: A systematic review and meta-analysis

Objective: To systematically review the evidence on the association between occupational exposure to pesticides and the risk of amyotrophic lateral sclerosis (ALS). **Methods:** A systematic search, conducted in eight bibliographic databases for publications between 1990 and 2025, identified observational studies estimating the risk of ALS after occupational pesticide exposure. Study quality was assessed using the WHO Risk of Bias (RoB) assessment instrument for systematic reviews, with the ROBINS-E (RoB in non-randomised studies of exposure) tool domains of bias. Pooled risk estimates were produced using random-effects models with restricted maximum likelihood, heterogeneity was assessed with I^2 statistics, and meta-regressions and publication bias explored with funnel plots and Egger's test. **Results:** Eight case-control studies (1734 cases) were retained for meta-analysis from 767 initially screened articles. 'Ever' occupational exposure to pesticides was associated with an increased risk of ALS ($n=6$ studies, pooled OR (pOR)=1.6; 95% CI 1.1, 2.2; $I^2=57\%$), for combined sexes. The risk for exposure to herbicides was slightly greater (pOR=1.7, $I^2=0.0\%$) than for exposure to insecticides or fungicides (pORs=1.6, $I^2=0.0\%$). Based on three studies, ever exposure to high levels of pesticides was associated with a higher risk (pOR=2.7; 95% CI=1.4, 5.0) than exposure to low levels (pOR=1.9; 95% CI=1.0, 3.7). Self-reported exposure assessment methods and older

publication dates (<2015) were statistically significant predictors of the effect size. **Conclusion:** Despite the small number of studies and some heterogeneity, our results add to the evidence suggesting that occupational exposure to pesticides may increase the risk of ALS.

Labrèche et al. 2026.

Occupational and Environmental Medicine, vol. 83, no. 5.

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

Keywords: Agriculture; epidemiology; meta-analysis; occupational health; pesticides

Evidence Level: 1A

Link: <https://oem.bmj.com/content/83/5/291.long>

Cancer burden and health inequalities attributable to occupational arsenic exposure: A 32-year global, regional, and national observational study with projections to 2036

Occupational arsenic exposure (OEA), mainly through inhalation in workplace settings, is an established carcinogenic hazard associated with lung, skin, and bladder cancers. However, long-term trends and the global cancer burden attributable to OEA remain insufficiently characterized. Data from the Global Burden of Disease Study 2021 were used to analyze the cancer burden attributable to OEA from 1990 to 2021. Indicators included summary exposure values (SEVs), deaths, years lived with disability (YLDs), and disability-adjusted life years (DALYs) at global, regional, and national levels. Estimates were reported with 95% uncertainty intervals (UIs) generated from 1000 Monte Carlo simulations. Age-standardized indicators, Joinpoint regression, inequality analysis, decomposition analysis, and frontier analysis were used to assess spatiotemporal trends, drivers, and disparities. Seven forecasting models were evaluated to predict trends from 2022 to 2036. Between 1990 and 2021, global OEA SEV increased from 0.408% to 0.496% (average annual percentage change [AAPC] = 0.288). Cancer deaths rose from 5.5 to 10.5 thousand, YLD from 1.5 to 3.3 thousand, and DALYs from 169.6 to 298.7 thousand. In contrast, age-standardized death rate (AAPC = -0.300) and DALYs rate (AAPC = -0.531) declined. Men bore higher overall burdens, but women experienced faster increases (AAPC 0.428 vs 0.171). High-socio-demographic index (SDI) countries showed continuous improvement, whereas middle- and low-SDI regions-particularly East, South, and Southeast Asia-experienced substantial increases. In East Asia, the AAPCs for age-standardized SEVs, age-standardized death rates, age-standardized YLDs rates, and DALYs rates were 0.953, 1.067, 1.849, and 0.809, respectively. Inequality analysis indicated stable absolute gaps but reduced relative disparities, with burdens still concentrated in low-SDI countries. Decomposition suggested that population growth was the main driver of global burden increases, and frontier analysis highlighted limited improvement potential in low-SDI regions. Forecasting models indicated that the absolute burden of occupational arsenic exposure will continue to rise over the next 15 years. The cancer burden attributable to OEA is still increasing globally, with persistent prevention gaps and socioeconomic disparities. Focused interventions in low- and middle-SDI countries and rapidly industrializing regions are needed, including strengthened occupational exposure regulations, improved workplace arsenic monitoring, engineering controls, personal protective equipment, and regular health surveillance for workers in high-risk industries, to reduce inequalities and mitigate public health threats.

Wu et al. 2026.

Medicine, vol. 105, no. 21.

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Keywords: Global Burden of Disease; arsenic; inequality; machine learning; occupational exposure; prediction.

Evidence Level: 4A

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC13433024/>

Exposure to legacy and emerging phthalates and bisphenols in recycling workers: Evidence from the GreenMetalWaste study

The transition toward a circular economy is driving rapid growth in the recycling sector, yet occupational exposure remains poorly characterized, including exposure to phthalates and bisphenols. We conducted a human biomonitoring study among recycling workers handling e-waste, metal waste, and mixed waste in

Sweden. The study included 114 exposed workers, 23 low-exposed workers, and 18 controls. Pre- and post-shift urine samples were analysed for phthalate and bisphenol metabolites using LC-MS/MS. Workers showed significantly higher post-shift urinary concentrations of phthalates (DiBP, DnBP, BBzP, and DnHP) and bisphenols (BPA and BPF) than controls; however, concentrations were generally lower in post-shift than in pre-shift samples across all exposure groups. Higher concentrations were observed among workers handling e-waste and metal waste, and among those performing extraction and, to a lesser extent, sorting and maintenance. Evidence of work-related exposure was observed for restricted legacy compounds (DEHP, DiBP, DnBP, BBzP, BPA) and newer or less-regulated substitutes (DPHP, DnHP, BPF). Correlation analyses indicated simultaneous co-exposure to multiple phthalates and bisphenols, and weak to moderate correlations with workplace dust concentrations (up to $r_s = 0.40$) suggested that inhalation may partly contribute to exposure. Inadequate local exhaust ventilation was associated with higher urinary concentrations of most biomarkers and significantly higher BBzP levels. These findings highlight the complex chemical mixtures present in recycling environments and underscore the need to control emissions at the source and to continue monitoring regulated and emerging phthalates and bisphenols to support prevention strategies for a growing recycling workforce.

Palir et al. 2026.

Environmental Research, vol. 303.

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Keywords: Bisphenols; metal waste; occupational exposure; phthalates; recycling workers; e-waste.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0013935126010960?via%3Dihub>

Occupational noise exposure and cardiovascular disease risk factors in China: Mediating role of hearing loss

Background: The health risks of noise pollution have attracted global attention, especially the potential cardiovascular effects of occupational noise exposure. Our study aimed to investigate the associations of occupational noise with cardiovascular disease risk factors [fasting blood glucose (FBG), systolic blood pressure (SBP), diastolic blood pressure (DBP), and electrocardiogram (ECG) abnormality], and further evaluate the possible mediating role of hearing loss in the associations. **Methods:** This cross-sectional study included 64,382 participants exposed to occupational noise in China. Individual level of noise exposure with an 8-h equivalent A-sound level (LAeq, 8h) was measured by personal noise dosimeter. And the noise exposure level of workers was approximated using the average of measured individual noise values within each enterprise. Generalized linear models and logistic regression models were used to analyze the associations of noise exposure with cardiovascular disease risk factors. Mediation analyses were performed to assess the mediating roles of hearing loss on above associations. **Results:** LAeq, 8h was positively associated with FBG ($\beta = 0.006$, 95% CI: 0.001-0.011), SBP ($\beta = 0.036$, 95% CI: 0.003-0.068), and risk of ECG abnormality (OR = 1.014, 95% CI: 1.009-1.019). We observed positive linear dose-response associations of noise exposure with blood pressure, as well as non-linear relationships with FBG and ECG abnormality risk [LAeq, 8h exceeded around 82 dB(A) as a turning point]. Age, dust exposure, high temperature, and length of service significantly modified above associations (P modification < 0.05), and the effects were more obvious in participants >43 years, workers with dust or high temperature exposure, and workers with length of service >5 years. Hearing loss mediated 3.7%-10.9% of the associations of noise exposure with elevated blood pressure and risk of ECG abnormality. **Conclusions:** Occupational noise exposure was associated with adverse changes in FBG, blood pressure, and risk of ECG abnormality. Older people, workers exposed to dust or high temperature, and those with longer working duration were more susceptible. Hearing loss might play potential role in cardiovascular damage induced by noise exposure. Efficient strategies for reducing occupational noise exposure should be enhanced to control the cardiovascular threat from occupational noise pollution.

Tan et al. 2026.

Frontiers in Public Health, vol. 14.

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Keywords: Blood glucose; blood pressure; electrocardiogram abnormality; hearing loss; occupational noise.

Evidence Level: 4B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2026.1901898/full>

Occupational solar UV-exposure and risk of cutaneous melanoma among Danish workers: A nationwide cohort study

Background: Cutaneous melanoma poses a growing global health concern, with solar ultraviolet radiation (UVR) as its main risk factor. Outdoor workers may be at increased risk due to prolonged occupational solar UVR exposure, but evidence remains limited. **Objective:** To examine the risk of melanoma associated with occupational solar UVR exposure in a nationwide cohort of Danish workers. **Methods:** Using Danish national registers, we established a cohort of all individuals employed between 1977 and 2015 and linked occupational histories to first-time melanoma diagnoses in the Danish Cancer Registry. Cumulative occupational solar UVR exposure was estimated by matching occupational histories to a European job exposure matrix and expressed as cumulative standard erythema dose (SED)-years. Incidence rate ratios (IRRs) for cutaneous melanoma were calculated using discrete-time hazard models, and exposure-response relations were further examined with restricted cubic splines. We adjusted for age, sex, calendar year, smoking, dermatological or immunological disease, organ transplantation, parental history of melanoma and medications. **Results:** Among 2.9 million workers followed for a median of 19 years, 11,344 workers developed cutaneous melanoma. The median cumulative occupational solar UVR exposure was 5.99 SED-years. Melanoma incidence increased with increasing cumulative exposure, reaching a peak IRR of 1.59 (1.43-1.76) at 14.80 SED-years in the spline analysis, and with an adjusted IRR of 1.57 (95% CI: 1.43-1.71) for workers in the highest vs. the lowest exposure quartile. **Conclusion:** Occupational solar UVR exposure was associated with an exposure-response relation increase in melanoma risk. These findings highlight the urgent need for workplace sun-protection policies.

Kristensen et al. 2026.

European Journal of Cancer, vol. 244.

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Keywords: Denmark; occupational exposure; public health; skin neoplasms; sunlight; ultraviolet rays; working conditions.

Evidence Level: 4B

Link: [https://www.ejancer.com/article/S0959-8049\(26\)00665-9/fulltext](https://www.ejancer.com/article/S0959-8049(26)00665-9/fulltext)

DNA damage in the leukocytes of nanocomposite-exposed workers

Human exposure to nanoparticles (NPs) poses potential health risks that are modulated, for example, by the physico-chemical characteristics of NPs, the exposure route and the dose of NPs. Among 21 workers involved for many years in welding on metal surfaces and the machining of nanocomposites, we investigated the role of NPs in the induction of DNA damage. Blood samples of the exposed subjects were collected before and after their working shifts. The controls (21 individuals without occupational exposure to NPs) were sampled in parallel with the exposed ones. NP exposure concentrations were assessed using stationary and personal monitors. DNA damage, including oxidized bases and strand breaks (DNA-SB), in leukocytes was analyzed using Comet assay. The particles monitoring showed that machining was the dominant source of NPs. When compared with the controls, nanocomposite-exposed workers had significantly increased levels of both DNA damage types. In subjects performing machining, post-shift DNA-SB levels were significantly higher than those pre-shift. In welders, such an effect was not observed. Importantly, in both groups, levels of oxidatively damaged DNA were comparable in the post-shift vs. pre-shift samples. The lack of increased DNA oxidation in the post-shift samples suggests the induction of adaptive processes, probably related to long-term occupational exposure to NPs, that protect the organism against this type of DNA damage. However, despite this observation, the potential negative health impacts associated with NP inhalation cannot be ruled out.

Rossner Jnr et al. 2026.

Mutagenesis, vol. 41, no. 5.

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Keywords: DNA damage; comet assay; humans; nanoparticles; occupational exposure.

Evidence Level: 5B

Link: <https://academic.oup.com/mutage/article/41/5/285/8690617?login=true>

Physical Activity

Using the double diamond framework to co-create and evaluate '1TeamActive': A physical activity and well-being intervention for police workers and their families

Police work can be stressful, negatively affecting well-being and familial relationships. But, the influence of family-based interventions on such outcomes is unknown. Using co-creation, we employed the 'Double Diamond' framework in four British police forces to develop, deliver and evaluate '1TeamActive' - a physical activity intervention for police workers and their families. Multiple stakeholders (Team Police UK, Sport England, four UK police forces, police workers and families) participated in four longitudinal research phases. In Phase 1, literature reviews 'Discovered' the stress impacts of policing (workers and families) and explored physical activity as a potential mitigator. In Phase 2, stakeholders 'Defined' an initial intervention plan, which was 'Developed' in Phase 3 to produce context-specific delivery. In Phase 4, a 12-week instructor-led physical activity intervention was 'Delivered' and evaluated. One hundred and two police workers and their families completed the intervention. Repeated Measures Multivariate Analysis of Variance (RM-MANOVA) indicated that physical activity, well-being and work-related variables improved significantly from pre- to post-intervention, Pillai's trace = .65, $F(8, 59) = 13.71$, $p < .001$. Evaluation interviews indicated participants' perceived positive individual and familial benefits from completing '1TeamActive'. Our findings provide novelty and rigour with respect to intervention development, and the feasibility and acceptability findings support the intervention's potential to improve selected outcomes. Controlled trials are needed to determine efficacy.

Thomas et al. 2026.

Applied Psychology: Health and Wellbeing, vol. 18, no. 4.

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Keywords: Family; physical activity; police; psychological well-being; work stress.

Evidence Level: 3B

Link: <https://iaap-journals.onlinelibrary.wiley.com/doi/10.1111/aphw.70197>

Musculoskeletal Health

Change in physical workload and the risk of work disability due to musculoskeletal disorders: A register-based study of 1 703 935 workers in Sweden

Objective: This register-based study examined whether changes over 14 years in occupational physical workload (PWL) affected the risk of registered work disability due to a musculoskeletal disorder (MSD).

Methods: This study included 1 703 935 workers in Sweden in 2005. PWL exposure was measured using job-exposure matrices linked to registered occupations in 1990 and 2005; change in PWL was defined between categories (low, medium, high) in either direction. The outcome was cumulative incidence of 'work disability' (either long-term sickness of at least 2 years or disability pension) due to MSD from 2006 to 2019. Crude and multivariate Cox proportional hazards regression models estimated sex-specific HRs with 95% CIs. Models were adjusted for sociodemographic factors and health and employment history.

Results: A total of 33 369 individuals (1.96%) became work disability cases during follow-up. Compared with workers with consistently high PWL, any reduction in PWL was associated with a decreased risk of work disability due to MSD (women: HR 0.57, 95% CI 0.52 to 0.63, men: HR 0.59, 95% CI 0.52 to 0.66 for change from high to low exposure). Compared with workers with consistently low PWL, any increase was associated with a higher risk of work disability due to MSD (women: HR 1.68, 95% CI 1.53 to 1.86, men: HR 2.19, 95% CI 1.89 to 2.52 for change from low to high). **Conclusion:** In both sexes, decreases in PWL exposure were associated with a lower risk of MSD disability and increases in exposure with a higher risk.

Falkstedt et al. 2026.

Occupational and Environmental Medicine, vol. 83, no. 5.

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Keywords: Musculoskeletal system; physical exertion; sickness absence.

Evidence Level: 4B

Link: <https://oem.bmj.com/content/83/5/261.long>

The knowledge-to-practice gap in safe lifting and biomechanical risks as determinants of musculoskeletal disorders in manual material handling

This study investigated the complex interfaces between knowledge, attitude and practice (KAP); biomechanical risks; and musculoskeletal disorders (MSDs) among heavy manual handling workers. A cross-sectional study surveyed 99 industrial manual lifting workers within manufacturing factories (mean age: 33.4 ± 7.7 years; mean job experience: 7.95 ± 6.5 years) using a validated online questionnaire assessing demographics, occupational conditions, biomechanical risk, lifting KAP, and MSD prevalence via the Extended Nordic Musculoskeletal Questionnaire. Associations with 12-month and active 7-day MSD prevalence were analyzed using multinomial logistic regression. The 12-month prevalence of MSDs was 56.6%, predominantly affecting the lower back (51.0%). The MSD group reported significantly higher biomechanical risks. Chi-square analysis revealed significant differences in safety practices ($p = 0.025$), particularly regarding pre-work stretching, load-weight assessment, and overhead lifting. Higher biomechanical risk was significantly associated with 12-month MSDs without 7-day pain (RRR = 1.54, 95% CI: 1.10 to 2.16, $p = 0.012$). Conversely, greater knowledge demonstrated a significant protective association against 12-month MSDs without 7-day pain (RRR = 0.74, 95% CI: 0.56 to 0.99, $p = 0.045$). Age-related vulnerability significantly increased active 7-day MSDs. MSD prevalence is driven by cumulative biomechanical hazards. Although knowledge is associated with lower long-term risk, a critical knowledge-to-practice gap exists. Interventions must prioritize workplace ergonomic risk reduction with age-tailored adjustments. These should be integrated with active, practice-based training to foster behavioral modification.

Saisombut et al. 2026.

International Journal of Environmental Research and Public Health, vol. 23, no. 8.

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Keywords: Biomechanical risk factors; knowledge attitude and practice; low back pain; manual lifting; work-related musculoskeletal disorders.

Evidence Level: 4B

Link: <https://www.mdpi.com/1660-4601/23/8/1041>

Sensor-based and AI-driven ergonomic seated posture detection for workplace risk prevention

Background: Work-related musculoskeletal disorders (WMSDs) remain one of the most prevalent occupational health problems worldwide. To prevent the development of these WMSDs in an office space, a chair designed for office monitoring capable of accurately identifying ten representative seated postures and measuring environmental factors was developed and validated. **Methods:** To evaluate office working conditions, the chair has three embedded Printed Circuit Boards (PCBs): one directed towards seat pressure management, one directed towards environmental measurements and one PCB to manage the entire system. Machine learning approaches were then applied to establish a model that effectively predicts the seated position. The environmental data were also analyzed. **Results:** The seated position classification presented an accuracy of 80.99% in controlled conditions, while in a real-world context the accuracy was 65.98%. The environmental management showed low errors, except for the PM2.5 and PM10, with relative errors above 30%. **Conclusions:** This work presents an initial promising first step for an ergonomic office management solution.

Teixiera et al. 2026.

Sensors, vol. 26, no. 16.

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Keywords: Human posture recognition; musculoskeletal disorders; office work environment; postural risk; smart office systems.

Evidence Level: 5B

Link: <https://www.mdpi.com/1424-8220/26/16/5120>

Guiding and Supporting Mental Health and Wellbeing

Mental Health

Beyond burnout: occupational risk pathways linking stress, sleep, and multisystem morbidity in correctional officers

Background: Correctional officers work in security-intensive environments characterized by organizational strain, threat exposure, shift work, staffing shortages, and restricted autonomy. Psychological outcomes have been most studied, yet sleep disruption, cardiometabolic risk, musculoskeletal pain, and fatigue are accumulating but often examined separately, obscuring multisystem occupational morbidity and prevention priorities. **Objective:** To synthesize mental and emerging physical health risks among correctional officers using an integrated occupational risk pathways framework linking upstream exposures, bridging mechanisms, downstream outcomes, and intervention levers. **Methods:** A structured narrative review informed by SANRA was conducted. Literature was identified from PubMed, Web of Science, Scopus, PsycINFO, and CNKI through February 2026. Two independent reviewers screened 405 records on title and abstract; 127 records proceeded to full-text review, of which 58 were excluded and 69 sources were retained for narrative synthesis. Evidence domains were classified as established, moderate, emerging, or plausible. **Results:** The synthesis indicates substantial mental health burden (burnout, depression, anxiety, PTSD, moral injury, suicide risk) and emerging physical health evidence (cardiometabolic risk, musculoskeletal pain, fatigue). Sleep disruption, chronic stress, allostatic load, and hypervigilance emerge as central bridging mechanisms. Individual-focused interventions may have limited durability when organizational exposures persist; Total Worker Health-informed strategies integrating staffing, schedule reform, procedural justice, sleep and fatigue management, and surveillance are more consistent with multi-pathway risk. **Conclusion:** Correctional officer health should be treated as a public health and occupational safety issue rather than individual resilience failure. Future research should prioritize longitudinal cohorts, objective sleep and biomarker assessment, and rigorous evaluation of organizational interventions.

Sun et al. 2026.

Frontiers in Public Health, vol. 14.

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Keywords: Burnout; cardiometabolic risk; correctional officers; occupational risk pathways; public health; total worker health®.

Evidence Level: 1A

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2026.1901314/full>

Analysis of the spatial distribution of occupational burnout among mental health professionals at the city, county, and township levels in Guangxi and related influencing factors

Background: This study aims to examine occupational burnout among mental health workers at the municipal, county, and township levels in Guangxi in 2024, as well as its influencing factors, from the perspective of ensuring workforce stability, thereby providing a theoretical basis for the development of targeted intervention measures. **Methods:** This study employed cluster sampling to conduct a cross-sectional survey of 1,520 mental health workers from different regions of Guangxi, China. The Chinese version of the Maslach Burnout Inventory-General Scale (MBI-GS) was used to assess burnout levels. To ensure the stability of the mental health workforce, we conducted univariate and binary logistic regression analyses using SPSS 27.0 (IBM Corp., Armonk, New York, USA) software across three dimensions: demographic information, institutional level, and work recommendations. Additionally, we utilized ArcMap 10.2 (Esri (Environmental Systems Research Institute, Inc.), Redlands, California, USA.) software to visualize occupational burnout levels across cities in Guangxi using hierarchical maps, thereby identifying the key factors influencing occupational burnout among mental health workers in the region. **Results:** The prevalence of occupational burnout among mental health workers in Guangxi was 65.46%. Workers in county-level (OR = 2.977, 95% CI: 1.480-5.988) and township-level (OR = 2.312, 95% CI: 1.210-4.416) mental health institutions were more likely to experience occupational burnout. In contrast, mental health workers in municipal institutions exhibited a lower risk of occupational burnout. Based on the recommendations

made by mental health professionals, those who suggested "reducing the workload" (OR = 3.449, 95% CI: 2.142-5.554), increasing staff (OR = 2.714, 95% CI: 1.527-4.822), and lowering the difficulty of tasks (OR = 2.745, 95% CI: 1.406-5.359) showed a significantly increased risk of occupational burnout. Among the 14 cities in Guangxi, mental health workers in Laibin, Yulin, Hezhou, and Nanning exhibited higher burnout level than those in other cities. **Conclusion:** The prevalence of occupational burnout among mental health workers in Guangxi was relatively high. To ensure the stability of this workforce and reduce staff turnover, the competent authorities overseeing mental health services should prioritize monitoring burnout levels among workers at the county and township levels, and in key urban areas. Additionally, measures such as reducing workloads, increasing staffing, and simplifying tasks can help alleviate and symptoms of occupational burnout.

Huang et al. 2026.

Frontiers in Public Health, vol. 14.

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Keywords: Guangxi; influencing factors; mental health professionals; occupational burnout; spatial distribution.

Evidence Level: 4B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2026.1914734/full>

Discourse, sentiment, and resonance of workplace burnout on Chinese social media: A computational analysis

Background and theoretical context: Occupational burnout has evolved from an individual psychological concern into a systemic challenge to organisational sustainability. Traditional burnout research relies predominantly on structured scales or small-scale interviews, making it difficult to capture the spontaneous, socially interactive emotional expressions that employees generate in authentic contexts. Against the backdrop of a discursive shift in Chinese digital workplace culture from individual attribution to structural attribution, social media has become a critical arena in which employees express burnout, seek resonance, and produce collective critical discourse, thereby offering a new perspective on burnout research that goes beyond the scale-based paradigm. **Research objectives:** This study aims to systematically examine the discourse structure of contemporary Chinese workplace burnout (how employees talk about burnout, and which themes appear frequently and are invested with meaning) as well as its resonance mechanism (which emotional expressions are more likely to elicit collective online engagement), with a view to revealing the dual structure of workplace burnout discourse. **Methods:** Adopting a cross-sectional observational computational social science paradigm with a descriptive and exploratory design, and integrating the theoretical frameworks of emotional labour and affective publics, this study collected texts from five major Chinese social media platforms (Rednote, Bilibili, Weibo, Douyin, and Douban). After data cleaning and line-by-line manual review, 1,276 valid texts were retained. Grounded theory three-layer coding (open coding, axial coding, and selective coding; Fleiss' Kappa = 0.792) was used to identify discourse themes. A dual-model PCA fusion of RoBERTa and SnowNLP scores was employed to extract sentiment scores, supplemented by human annotation (n = 300; ICC(2,1) = 0.870) for cross-validation. OLS log regression and Poisson pseudo-maximum likelihood estimation (with covariates including follower count, platform, and year) were applied to examine the association between sentiment polarity and like-based engagement. **Results:** At the discourse level, grounded coding identified 6 axial themes and 3 core categories. The two highest-frequency themes were Labour Time Deprivation and Intensity Overload (22.7%) and Wage Deprivation and Employment Hardship (21.4%). Workers move beyond individualised narratives of emotional exhaustion, directly naming structural oppression through discourse frames such as Organisational Oppression and Institutional Critique (18.0%) and Passive Resistance and Collective Self-deprecation (16.5%), highlighting a paradigm shift from passive endurance to active critique in contemporary Chinese workplace burnout discourse. At the resonance level, follower count was found to exert a suppression effect on the sentiment-like relationship: after controlling for account exposure, negatively valenced content was significantly associated with higher like counts (PCA: beta = -0.403, p < 0.001), and this direction was fully consistent across three regression model specifications. At the topic level, content pointing to structural oppression (Interpersonal tension: beta = +0.778; Exploitation: beta = +0.656) was significantly more likely to attract online resonance than content

focused on individual psychological experience (Sense of defeat: $\beta = -0.400$). **Conclusions:** This study demonstrates that contemporary Chinese workplace burnout has evolved from a traditional individual psychological state into a social-affective practice jointly driven by discourse construction and emotional resonance.

Yin et al. 2026.

PLoS One, vol. 21, no. 8.

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Keywords: Discourse, sentiment; resonance; workplace burnout.

Evidence Level: 4B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0346396>

Perceived sleep quality as a mediator between occupational stress and depression: The moderating role of work engagement

Background: There is growing interest in the role of sleep-related factors, particularly perceived sleep quality, in the relationship between occupational stress and depression. Work engagement has been proposed as a potential protective factor against depression. This study aimed to examine the relationships among occupational stress, perceived sleep quality, and depression, as well as the role of work engagement in these relationships. **Methods:** A total of 2,425 Korean employees participated in this study. The participants completed a series of questionnaires, including the Korean Occupational Stress Scale, the Center for Epidemiologic Studies Depression Scale, a single-item measure of perceived sleep quality, and the Utrecht Work Engagement Scale-9. The mediating and moderating effects were analysed using the PROCESS macro in the Statistical Package for the Social Sciences. **Results:** Perceived sleep quality mediated the association between occupational stress and depressive symptoms ($b = 0.051$; 95% confidence interval [CI], 0.040-0.062). Work engagement moderated the effects of both occupational stress and perceived sleep quality on depressive symptoms. **Conclusion:** This study highlights the role of perceived sleep quality and work engagement as mediators and moderators of occupational stress and depressive symptoms, respectively. Improving perceived sleep quality and promoting work engagement may help reduce the risk of depression among employees experiencing occupational stress.

Moon et al. 2026.

Journal of Korean Medical Science, vol. 41, no. 30.

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Keywords: Depression; occupational stress; sleep quality; work engagement; workplace.

Evidence Level: 4B

Link: <https://jkms.org/DOIx.php?id=10.3346/jkms.2026.41.e199>

Reciprocal longitudinal associations between job insecurity and depressive symptoms in young working women: The SLOSH study 2010-2020

Objective: To investigate job insecurity and symptoms of depression in different labour market groups, with a specific focus on young women. **Methods:** Data were drawn from six waves of the Swedish Longitudinal Occupational Survey of Health ($n = 14,827$) in 2010-2020. Differences in job insecurity between young (≤ 35) working women and other gender and age (> 35) groups, and between labour market industries with different gender composition, were estimated. Longitudinal multilevel structural equation models were fitted to estimate reciprocal associations between job insecurity and depressive symptoms two years later, while adjusting for demographic and employment factors. **Results:** Younger workers reported significantly higher job insecurity compared with older. For older workers job insecurity was significantly lower in female dominated industries, whereas this pattern was not observed among younger workers. There was a medium strong path between job insecurity and depressive symptoms in young working women (0.106 , $p = 0.001$), and men (0.111 , $p = 0.011$). The reverse associations were not statistically significant. For older women and men, the effect sizes for associations between job insecurity and depression were small (0.044 , $p = 0.000$ and 0.047 , $p = 0.000$, respectively) whereas reverse paths estimates were of medium strength (0.077 , $p = 0.000$ and 0.109 , $p = 0.000$). **Conclusion:** The results indicated a clear age-related pattern. Higher levels of job insecurity and a stronger association between job

insecurity and depressive symptoms were found among younger compared with older workers. No gender differences were observed. The results highlight the importance of addressing job insecurity as a concern in early working life.

Lindberg et al. 2026.

International Archives of Occupational and Environmental Health, vol. 99, no. 7.

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Keywords: Depression; Gender; labour market industry; multilevel structural equation modelling; work environment.

Evidence Level: 4B

Link: <https://link.springer.com/article/10.1007/s00420-026-02230-6>

Bullying, Harassment and Occupational Violence

Exposure to workplace bullying and violence/threats of violence and subsequent working life expectancy among older workers: A Swedish prospective cohort study

Objectives: This study aimed to quantify possible associations between exposure to workplace bullying and violence, or threats thereof, and working life expectancy (WLE) among older workers in Sweden. **Methods:** We conducted a prospective cohort study using data on 12 920 individuals in analyses of workplace bullying and 12 903 individuals in analyses of violence. Participants, aged >50 at baseline, were obtained from the Swedish Longitudinal Occupational Survey of Health, using data from 2008 to 2020. We applied continuous-time multistate Markov models to estimate the average number of years that individuals could be expected to work beyond the age of 50, comparing those exposed to workplace bullying or workplace violence/threats of violence to those unexposed. **Results:** In the unadjusted analysis, exposure to workplace bullying and workplace violence/threats of violence was associated with shorter WLE among older workers [bullying: -0.42 years, 95% confidence interval (CI) -1.23-0.01; violence: -0.42 years, 95% CI -1.06-0.01]. After controlling for sex and occupational level, WLE at age 50 was -0.56 years among those exposed to workplace violence (95% CI -1.02- -0.10) compared with the unexposed. The estimate for workplace bullying was -0.63 years (95% CI -1.39-0.14). **Conclusion:** Exposure to workplace violence or threats of violence was associated with fewer average expected years in work from age 50. This suggests that prevention of workplace violence could contribute to extended working lives. The association between workplace bullying and WLE was of similar magnitude but not statistically significant.

Holmgren et al. 2026.

Scandinavian Journal of Work, Environment and Health, vol. 52, no. 5.

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Keywords: Sweden; labor market participation; occupational health; older worker; prospective cohort study; psychosocial working condition; violence; working life expectancy; workplace bullying; workplace violence.

Evidence Level: 4B

Link: <https://www.sjweh.fi/article/4320>

Effect of workplace offensive behaviors on mental health in 35 countries in Europe

Objectives: This study estimated the prevalence of workplace offensive behaviors and their association with mental health conditions in terms of anxiety, fatigue, and sleep problems across 35 European countries. **Study design:** A multi-country cross-sectional study. **Methods:** This study utilized data from the European Working Conditions survey, comprising 43,850 participants aged 15 years and older, with equal gender distribution. Anxiety and fatigue as mental health conditions were assessed using single items, and sleep problems were evaluated using two items. Workplace offensive behaviors were examined in terms of physical violence, sexual harassment, and bullying/harassment. Poisson regression models with a log link function were fitted to analyze the country-level association between offensive behaviors and mental health conditions, adjusting for covariates. Risk ratios (RRs) and their 95% confidence intervals (CIs) were reported. Country level RRs were pooled to generate regional estimates through a two-stage meta-analysis. **Results:** In the pooled data, the prevalence of workplace offensive behaviors was 4.2% for bullying/harassment, 1.7% for physical violence, and 0.8% for sexual harassment. Women reported a

significantly higher prevalence of sexual harassment and bullying/harassment than men. Western and Nordic countries reported comparatively higher prevalence of these behaviors. In the pooled estimates, the exposure to any offensive behavior was associated with significantly increased risks of all mental health outcomes, with bullying/harassment showing the strongest associations (RR 3.09, 95% CIs 2.64-3.63) with anxiety with substantial heterogeneity between countries and the prediction interval of 1.41-6.79.

Conclusion: Workplace offensive behavior in Europe disproportionately affects women. Its strong association with poor mental health necessitates holistic approaches, for addressing such mistreatments at work from individuals, reducing burdens, and rebuilding safer environments for all workforces.

Ping et al. 2026.

Public Health, vol. 257.

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Keywords: Epidemiology; Europe; Public health; Workplace health; Workplace negative behavior.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0033350626002027?via%3Dihub>

Psychosocial Issues

The influence of age on emotion-regulatory strategies, emotional work demands, and health/work outcomes: A systematic PRISMA literature review with narrative synthesis

Background: An increasing age of the workforce necessitates a better understanding of age-related differences in emotions at work to inform age-inclusive workplace policies and practices. This review critically evaluates how age relates to emotion-regulatory strategies at work (emotional labour and emotion regulation), emotional work demands, and associated health and work outcomes. **Methods:** Following PRISMA guidelines, we systematically reviewed studies examining relationships between age, emotion-regulatory strategies, emotional work demands, and health/work outcomes. A completed PRISMA 2020 checklist is provided in the Supplementary Materials. Twenty-six studies were included and synthesized narratively. **Results:** Across studies, no generalisable pattern of age-related differences emerged. While several studies reported age differences in the associations between emotion-regulatory strategies and health or work outcomes, often indicating comparatively more favourable outcomes among older workers, these findings were not consistently observed across studies, with some studies reporting reversed or null effects. Moreover, studies reporting age differences varied in what aspect these differences reflected, including variation in the frequency or type of strategies used, as well as differences in how these strategies related to outcomes across age. Similarly, associations between emotional work demands and outcomes varied by age in some studies but did not follow a uniform pattern. Overall, the evidence suggests that while age-related differences in these associations are sometimes observed, they are inconsistent, not systematically associated with advantage or disadvantage for any age group, and their underlying mechanisms remain unclear. **Conclusion:** Age did not emerge as a robust determinant of how emotion-regulatory strategies or emotional work demands relate to health and work outcomes. The findings underscore the need for more integrative, theoretically grounded, and methodologically rigorous approaches that better account for how age, emotional work demands, regulation, and outcomes are linked, while addressing key conceptual and design challenges.

Popucza et al. 2026.

BMC Psychology, vol. 14, no. 1.

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Keywords: Age; emotion regulation; emotional labour; emotional work demands; health/work outcomes.

Evidence Level: 1A

Link: <https://link.springer.com/article/10.1186/s40359-026-05277-9>

From work-life balance to decent work: A systematic review of flexible work arrangements linking well-being, retention, and workforce sustainability

Flexible Work Arrangements (FWAs) have become focal points in today's discussion of work-life balance, employee well-being, and sustainable employment. There have been, however, isolated studies on various outcomes or types of flexibility that have not placed FWAs in the context of decent work and workforce

sustainability. This study aims to fill this gap by conducting a systematic literature review of 47 studies that identifies how FWAs operate as multi-level mechanisms linking employee well-being (micro-level), retention-related outcomes (meso-level), and workforce sustainability (macro-level). This review, guided by the PRISMA framework and conducted through a structured search of both research databases (Scopus and Web of Science), combines the findings from a variety of methodological and institutional approaches. The results show that FWAs are positively related to well-being and turnover intention reduction, mainly due to increased autonomy, engagement and organisational commitment. These benefits, however, are contingent and can be compromised by work intensification, role ambiguity, unequal access and uneven implementation. From a macro perspective, FWAs play a supporting role in decent work and Sustainable Development Goal 8, when integrated into coherent organisational practices and supportive labour-governance framework. Overall, the study rethinks FWAs as conditional pathways to sustainable and inclusive employment systems and provides theoretical integration and practical implications for organisations and policymakers.

Wahba et al. 2026.

Acta Psychologica, vol. 268.

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Keywords: Decent work; employee retention; employee well-being; flexible work arrangements; Sustainable HRM.

Evidence Level: 1A

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826011066?via%3Dihub>

Examining the moderating role of psychological hardiness in the relation between job demands and teachers' emotional exhaustion

Background: The teaching profession is inherently characterized by high job demands and chronic stressors, frequently leading to burnout. While literature consistently links excessive workload and classroom challenges to emotional exhaustion, there is a growing need to identify personal resources that may be associated with lower levels of burnout and emotional exhaustion. Psychological hardiness, a personality construct comprising commitment, control, and challenge, has been identified in various high-stress occupations as a key resilience factor, yet its specific moderating role in the educational context requires further empirical evidence. **Method:** This cross-sectional study examined 844 primary and secondary education teachers from Greece and Cyprus. The variables investigated included three types of job stressors (workload/time pressure, student learning problems, and organizational issues), emotional exhaustion, and the three facets of psychological hardiness. Data were collected using the Teachers' Professional Stress Questionnaire, the Maslach Burnout Inventory, and the Hardiness Resilience Gauge. Statistical analysis was performed using Confirmatory Factor Analysis (CFA) and Latent Moderated Structural Equation (LMS) modeling to test interaction effects. **Results:** Findings revealed that hardiness significantly moderates the relationship between job stressors and emotional exhaustion. Notably, the three hardiness facets (3Cs) functioned differentially, with certain attitudes showing stronger moderating associations with specific stressors than others. **Discussion:** These results support the "hardiness mindset" approach, suggesting that hardiness may be relevant in understanding how teachers appraise and respond to job demands and emotional exhaustion. **Practical implications and limitations:** The study highlights the potential for hardiness-based intervention programs to address teacher burnout. However, the cross-sectional design and the use of convenience sampling limit the ability to draw causal inferences and generalize findings to all educational systems.

Spiridon et al. 2026.

Acta Psychologica, vol. 268.

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Keywords: Emotional exhaustion; hardiness; job demands/job stressors; teachers.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826011625?via%3Dihub>

Work life balance and psychological wellbeing as correlates of quiet quitting among physicians

Physicians are exposed to persistent occupational stressors, which place them at increased risk for burnout and occupational disengagement. In the post-pandemic era, "quiet quitting" has emerged as a form of occupational disengagement characterized by psychological withdrawal while maintaining formal job roles. Understanding the mechanisms underlying this phenomenon is critical for sustaining motivation and well-being in healthcare professionals. This study aimed to investigate quiet quitting as an indicator of reduced occupational engagement among physicians and to examine its associations with work-life balance and psychological well-being within the framework of occupational motivation and burnout. A cross-sectional analytical study was conducted with 426 physicians between December 2025 and February 2026. Participants completed the Work-Life Balance Scale, Psychological Well-Being Scale, and Quiet Quitting Scale. Associations were analyzed using Spearman correlation, and hierarchical multiple linear regression was performed to identify independent predictors of quiet quitting. Quiet quitting showed a moderate negative correlation with psychological well-being ($r = -0.379$, $p < 0.001$) and positive work-to-life spillover ($r = -0.424$, $p < 0.001$), and a positive correlation with negative life-to-work spillover ($r = 0.365$, $p < 0.001$). In regression analyses, psychological well-being ($\beta = -0.176$, $p < 0.001$) and positive work-to-life spillover ($\beta = -0.281$, $p < 0.001$) emerged as significant protective factors against quiet quitting. Additionally, medico-legal experiences and consideration of leaving the profession were associated with increased disengagement. Quiet quitting may represent a clinically relevant manifestation of reduced motivation and occupational disengagement among physicians. Our findings highlight the need for integrated interventions targeting both structural work conditions and individual psychological resources to mitigate disengagement and support sustainable workforce well-being in healthcare systems.

Akdag et al. 2026.

Scientific Reports, vol. 16, no. 1.

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Keywords: Motivation; occupational disengagement; physicians; psychological well-being; quiet quitting; work-life balance.

Evidence Level: 4B

Link: <https://www.nature.com/articles/s41598-026-61706-0>

Organisational problems, role stress, and job satisfaction among emergency department workers: A multicenter mixed-effects study

JECP relevance statement: This paper addresses JECP aims in clinical services organisation and health system improvement by evaluating how organisational conditions (staffing, coordination, and management processes) and role clarity in emergency departments are associated with job satisfaction, a workforce outcome linked to service reliability. **Rationale:** Emergency departments are high-demand clinical environments in which perceived organisational problems may undermine role clarity and staff well-being, with potential implications for workforce stability and care delivery. **Aims and objectives:** To examine the interrelationships between perceived organisational problems, role conflict/ambiguity, job performance, and job satisfaction among emergency department workers. **Method:** A quantitative cross-sectional survey was conducted with 408 emergency department employees from 23 hospitals in Trabzon, Turkey (data collected November-December 2023). Measures included the Problems Experienced in Emergency Services (PES) scale, role conflict/ambiguity, self-rated job performance, and job satisfaction. Linear mixed-effects models with random intercepts for hospitals were used to account for clustering. **Results:** Higher perceived organisational problems were associated with lower job satisfaction. Role conflict/ambiguity showed a strong negative association with job satisfaction, and self-rated job performance was positively associated with job satisfaction; hospital-level clustering was modest ($ICC \approx 0.05$). **Conclusion:** Findings suggest that interventions to improve job satisfaction in emergency services should prioritise structural and managerial improvements that reduce organisational problems and strengthen role clarity and coordination, alongside individual-level supports.

Bostan et al. 2026.

Journal of Evaluation in Clinical Practice, vol. 32, no. 5.

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Keywords: Emergency services; job performance; job satisfaction; multilevel analysis; organizational problems; role ambiguity; role conflict.

Evidence Level: 4B

Link: <https://onlinelibrary.wiley.com/doi/10.1111/jep.70515>

All the right resources, still running on empty: A moderated moderation model of workaholism and ego depletion among academic researchers

Academic researchers frequently work under conditions characterized by persistent publication pressure, blurred work-life boundaries, and continuous cognitive engagement. In such environments, workaholism may gradually erode self-regulatory capacity and contribute to ego depletion. Although personal and situational resources are generally assumed to reduce these adverse effects, their combined influence remains insufficiently understood in academic settings. Drawing primarily on Conservation of Resources theory, this study examines whether emotional intelligence and recovery experiences jointly condition the relationship between workaholism and ego depletion. Using cross-sectional survey data from university-based researchers, the findings show that workaholism is positively associated with ego depletion. Emotional intelligence and recovery experiences independently weaken this association, indicating that both personal emotion-regulation capacity and opportunities for psychological recovery can reduce cognitive strain. However, when both resources are simultaneously high, their additional buffering effect becomes smaller, suggesting diminishing marginal returns rather than unlimited protection. The findings indicate that even resourceful academics remain vulnerable to the psychological costs of persistent overwork when excessive striving becomes normalized. The study contributes to the literature on workaholism, self-regulation, and sustainable academic work by showing that resilience depends not merely on possessing resources, but on how effectively those resources are aligned and activated within demanding institutional environments. The findings also carry implications for sustainable human resource management and broader goals related to decent work, well-being, and sustainable academic systems.

Hadi 2026.

Acta Psychologica, vol. 268.

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Keywords: Academic sustainability; ego depletion; emotional intelligence; recovery experiences; workaholism.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826011315?via%3Dihub>

Estimating longitudinal changes in workday happiness from daily report texts among employees: Retrospective Feasibility Study

Background: Workday happiness is associated with workplace performance and burnout, but frequent questionnaire-based assessment is burdensome in real-world workplace settings. Free-text daily reports may provide a lower-burden way to monitor day-to-day changes in workday happiness. **Objective:** This study aimed to examine whether daily diary text can be used to estimate longitudinal within-person changes in workday happiness and explore text-related factors associated with model performance, such as average sentence length and lexical diversity. **Methods:** We collected free-text daily reports and self-reported workday happiness scores from employees in 2 Japanese companies. Company A provided training data from 92 participants over 2 months (1725 reports), and company B provided test data from 11 participants over 6 months (652 reports). We used 2 text-based approaches: a bidirectional encoder representations from transformers (BERT)-based regression model trained on company A data and a locally deployed Japanese large language model (Llama) used in a zero-shot setting. Model performance was evaluated for each participant using the Pearson correlation coefficient between self-reported and estimated workday happiness scores, with $r=0.40$ used as a pragmatic feasibility benchmark. Mean absolute error (MAE) and root mean squared error (RMSE) were also calculated on the original workday happiness scale from 0 to 10. **Results:** A total of 81.8% (9/11) of the participants met or exceeded the feasibility benchmark of $r=0.40$. Positive correlations were observed for 81.8% (9/11) of the participants; for 9.1% (1/11) of the participants, the correlation coefficient could not be calculated because the self-reported score remained constant, and 9.1% (1/11) showed a small negative correlation. Participant-level

correlations ranged from -0.06 to 0.65 for the BERT model and from -0.05 to 0.81 for the local large language model. Error-based metrics also varied across participants: BERT MAE ranged from 1.04 to 2.78, and RMSE ranged from 1.25 to 3.50, whereas Llama MAE ranged from 0.76 to 4.39, and RMSE ranged from 1.06 to 4.64. **Conclusions:** Our study suggests that daily report text supports low-burden, longitudinal estimation of individual-level workday happiness. However, performance varied across participants, and further work is needed to improve generalizability, reduce attrition, address possible measurement bias, and clarify appropriate workplace use.

Hayashi et al. 2026.

JMIR Formative Research, vol. 10.

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Keywords: BERT; bidirectional encoder representations from transformers; diary text; large language models; longitudinal assessment; natural language processing; occupational health; occupational well-being; workday happiness.

Evidence Level: 4B

Link: <https://formative.jmir.org/2026/1/e99992>

Between reluctance and resistance: LGBTQ+ healthcare professionals and their experiences in the workplace

Background: Literature shows that stigma against LGBTQ+ people in healthcare affects professionals as well as patients. Research indicates that discrimination is transversal to all healthcare professions; hierarchies and heteronormativity contribute to difficult visibility both with colleagues and with patients.

Objective: This study aimed to explore the experiences of LGBTQ+ healthcare professionals in the workplace, analyzing their practices of (in)visibility, their experiences of discrimination and their relationships with patients. **Methods:** Data were collected through semi-structured interviews to 17 healthcare professionals working in the public healthcare sector in Portugal and identifying as LGBTQ+. Data were analyzed through thematic analysis. **Results:** Healthcare professionals report challenges in managing visibility in the workplace and the relevance of verbal abuse in interprofessional relationships. They oscillate between reluctance to assume their identity publicly and micro-practices of resistance to discrimination. **Limitations and future directions:** The findings of the study stress the importance of micro-practices in the definition of LGBTQ+-friendly healthcare environment and the need for further research on visibility in the healthcare workplace.

Pieri 2026.

Frontiers in Public Health, vol. 14.

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Keywords: LGBTQ+; coming out; diversity; health professions; healthcare.

Evidence Level: 5B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2026.1903749/full>

Multidimensional workplace stressors differentially impact cognitive trajectories

Introduction: Little research has assessed detailed occupational exposures in relation to the dementia exposome. We characterized patterns of multidimensional workplace stressors in relation to cognitive trajectories and racial disparities. **Methods:** We included 704 participants from the Michigan Cognitive Aging Project (MageT1 = 63.32 ± 2.99). Main lifetime occupations were linked to 26 Occupational Information Network-measured workplace stressors. Latent profile analysis identified stressor profiles. Global cognition was measured with a comprehensive neuropsychological battery. Latent growth curve models assessed how stressor profiles related to cognitive trajectories. We examined racial differences in profile membership and profile-cognition associations. **Results:** Five profiles emerged. Black participants were more likely to show higher-stress profiles; this difference was explained by education. The profile with low job control/limited other stressors had the lowest initial cognition, especially among Black participants. The profile with high emotional labor/job demands had the fastest cognitive decline. **Discussion:** Workplace stress is a relevant, under-recognized aspect of the dementia exposome.

Walters et al. 2026.

Alzheimers and Dementia, vol. 22, no. 8.

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Keywords: O*NET; attention; cognitive aging; episodic memory; exposome; heterogeneity; occupational exposures; racial disparities; socioeconomic status; stressors; verbal fluency; working memory.

Evidence Level: 5B

Link: <https://alz-journals.onlinelibrary.wiley.com/doi/10.1002/alz.71733>

Sources of stress among long-term care workers: Findings from qualitative and survey data

Stress is a major problem in workplaces, with connections to adverse outcomes including injuries, illness, lost-time, burnout, and turnover. Long-term care (LTC) organizations frequently report such outcomes. The purpose of this study is to investigate sources of stress among LTC workers. The research methods include: in-depth, semi-structured interviews, and a survey for quantified description. The findings indicate that time pressures, work situations, and financial situations are the major stressors identified by respondents. Respondents identified personal or family responsibilities, physical or health problems/conditions, and caring for children, as additional stressors. Many respondents established a network of friends, family, superiors, peers, and colleagues to seek social and emotional support, which served as a buffer against stress. Furthermore, respondents adopted additional coping mechanisms to combat stress, such as utilizing prayers or exercising mindfulness.

Syed et al. 2026.

PLoS One, vol. 21, no. 8.

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Keywords: Stress; long-term care workers.

Evidence Level: 5B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0354970>

Forgetting work after work and reviving with full energy at work? A research on the double-edged sword mechanism based on the integrative needs model of crafting

There is currently a divergence in mainstream research regarding the relationship between psychological detachment and work engagement. This study proposes that it is necessary to differentiate psychological detachment behavior (PDB) from psychological detachment state (PDS). This study examines the dual positive and negative associations between PDB and work engagement, as well as the underlying mechanisms, based on the integrative need model of crafting. Additionally, it examines the moderating roles of task characteristics, such as task urgency, difficulty, and importance. Using the experience sampling method, this study analyzed 3634 valid questionnaires collected from 513 employees over 2 weeks, spanning 10 working days. The results suggest the following: First, PDB is positively associated with higher PDS, which is positively associated with work engagement. Second, PDB is positively associated with greater emotional exhaustion, which is negatively associated with work engagement. Third, task urgency, difficulty, and importance negatively moderate the relationship between PDB and PDS, whereas they positively moderate the relationship between PDB and emotional exhaustion. Finally, as task urgency/difficulty/importance increases, the positive relationship between PDB and work engagement mediated by PDS becomes weaker. Conversely, as task urgency/difficulty/importance decreases, the negative relationship between PDB and work engagement mediated by emotional exhaustion gradually weakens and may even disappear. This study explains the dual-edged sword mechanism of PDB on work engagement and its boundary conditions based on the integrative need model of crafting, thereby providing an integrated explanation for the previously contradictory findings, especially revealing the negative mechanism through which PDB related to work engagement. Given these findings, this study devises management strategies to help enhance employees' PDS, reduce emotional exhaustion, and improve their work engagement.

Jin et al. 2026.

Acta Psychologica, vol. 268.

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Keywords: Experience sampling method; integrative need model of crafting; psychological detachment behavior; psychological detachment state; work engagement.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826010991?via%3Dihub>

Fostering Work Participation

Return to Work

Supporting sustainable return to work in large organizations: A cluster randomised feasibility trial of a multi-level intervention

Long-term sickness absence is a growing public health issue, reducing workforce participation and widening health inequalities. Effective interventions must address both health and workplace factors to enable not only return-to-work but sustained employment. This study evaluated the feasibility of a multi-level workplace intervention to support sustainable RTW in large organizations. A two-arm cluster randomised feasibility trial was conducted in nine UK organizations (≥ 600 employees). Participants included senior leaders and HR professionals ($n = 91$), workers on long-term sick leave ($n = 112$), and line managers ($n = 83$). The IGLOO intervention combined e-learning for leaders/HR with structured toolkits for workers and managers to support RTW before and after return. Feasibility outcomes included recruitment, retention, engagement, acceptability, and usability. Secondary outcomes included RTW timing, sustained participation, mental health, and workplace factors. A mixed methods process evaluation explored implementation and context. Retention, acceptability, and usability met targets, but recruitment and engagement were lower than expected. Potential mechanisms included improved confidence, communication, and self-management. Organizational systems and pressures affected delivery. Exploratory analyses suggested different patterns of return-to-work trajectories across trial arms. Overall, the intervention was acceptable to participants who engaged with it, but recruitment barriers and organizational constraints require substantial modification before any future efficacy trial.

Munir et al. 2026.

International Journal of Environmental Research and Public Health, vol. 23, no. 8.

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Keywords: Cluster randomised trial; employer; feasibility; manager; return-to-work; sick leave; worker.

Evidence Level: 2B

Link: <https://www.mdpi.com/1660-4601/23/8/1030>

Real-world participation after spinal cord injury: Longitudinal associations with return to work and long-term social integration

Background: Participation after spinal cord injury (SCI) includes work reintegration and social integration, but their shared and distinct correlates remain unclear. **Aim:** To examine longitudinal associations with return to work and social integration after SCI, and to estimate the relative contribution of predictor blocks. **Design:** Secondary analysis of a registry. **Setting:** Community follow-up within the United States Spinal Cord Injury Model Systems Public Use Database (2021ARPublic). **Population:** Adults with SCI; return-to-work analyses included participants working pre-injury and aged 18–64 years at injury, whereas social integration analyses included adult observations with valid Craig Handicap Assessment and Reporting Technique (CHART) Social Integration scores. **Methods:** Generalized estimating equation models assessed competitive employment and CHART Social Integration. A year-5 Shapley-type block decomposition compared baseline/injury, function/mobility, and symptom-burden, psychosocial, and contextual blocks. **Results:** Primary models included 16,574 observations from 10,195 participants for employment and 26,028 observations from 16,410 participants for social integration. Higher mobility, education, and life satisfaction were positively associated with both outcomes. Non-private residence and Non-Hispanic Black race were associated with less favorable participation in both domains. Pain severity was more clearly associated with lower employment odds, whereas depressive symptoms were more clearly associated with lower social integration. At year 5, function and mobility accounted for the largest share of explained variation for return to work (40.86%) and social integration (47.13%). **Conclusions:** Return to work and social integration overlap but are not interchangeable after SCI. These findings are associative rather than causal. **Clinical**

rehabilitation impact: Mobility, education, psychosocial well-being, and residential context may help guide rehabilitation planning.

Calderone et al. 2026.

European Journal of Physical and Rehabilitation Medicine, vol. 62, no. 4.

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Keywords: Spinal cord injury; return to work; long-term social integration.

Evidence Level: 4B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC13444343/>

Employment outcomes of comprehensive vocational rehabilitation after traumatic brain injury

Purpose: Vocational rehabilitation (VR) is important to maximize return-to-work (RTW) outcomes for individuals with traumatic brain injury (TBI). However, long-term outcomes from early provision of such services are limited, including impact on rates of RTW and whether pre-injury hours and duties are achieved. Furthermore, factors contributing to successful RTW following VR provided early and embedded within the rehabilitation team have not been thoroughly examined. **Materials and methods:** RTW outcome data were extracted from clinical records of patients employed pre-injury who completed a comprehensive VR program. **Results:** There were 99 participants (mean age 38.88 years; 75.8% male), one who completed two separate RTW trials. Of these, 92% returned to their previous employer, but 51% returned to modified duties, 50% needed strategies to compensate for cognitive/physical changes, 45% worked reduced hours, and 25% returned to modified duties, reduced hours and used compensatory strategies. Factors influencing RTW included age, injury severity and time from injury to commencement of RTW program. On average, 14 vocational therapy hours were required per RTW program. **Conclusion:** With specialist RTW support, successful RTW can be achieved, but can be a lengthy process, particularly if physical/spinal cord injuries are also present and modifications to hours/duties are frequently required.

Downing et al. 2026.

Brain Injury, vol. 40, no. 10.

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Keywords: Traumatic brain injury; employment; outcomes; return to work; vocational rehabilitation.

Evidence Level: 5A

Link: <https://pubmed.ncbi.nlm.nih.gov/42201762/>

Facilitating return to work after major traumatic injuries through early vocational rehabilitation: Therapists' activities and perspectives

Introduction: Early vocational rehabilitation has potential to achieve earlier return to work and mental health benefits following major traumatic injuries (spinal cord injury, traumatic brain injury and multitrauma orthopaedic injuries, including amputation), but clinicians seek guidance regarding delivery of early vocational rehabilitation. This study aimed to describe the activities and reflections of therapists within multidisciplinary teams providing early vocational rehabilitation for individuals with major traumatic injuries. **Methods:** The activities and perspectives of therapists implementing early vocational rehabilitation were explored through (1) quantitative analysis of frequency and time engaged in therapy activities using an adapted Case Management Taxonomy, (2) content analysis of free-text therapist reflections of their early vocational rehabilitation sessions, and (3) thematic analysis of therapist interviews. **Consumer and community involvement:** Participatory action research principles were used to engage key stakeholders, including peer support and advocacy groups, in guiding the development of the early vocational rehabilitation service components, associated consumer, and staff materials (e.g., interview questions), and provide ongoing monitoring and advice on the service implementation. **Results:** The therapists responded to patients' employment concerns by providing practical and emotional support, for an average of 12 sessions, commencing on average 47 days post-injury. Core therapist activities included multidisciplinary team and employer liaison to exchange information and foster work connections, coordination, individualised work-related activities, and monitoring to promote injury management and work capacity. Therapists reflected that wide-ranging individual circumstances and injury-related and psychological barriers impacted work capacity, but positive emotional responses facilitated return to work.

Conclusion: Early vocational rehabilitation needs to be tailored to patient presentation and circumstances, injury-related and psychological barriers, fostering hope, purpose, and employer connections.

Ross et al. 2026.

Australian Occupational Therapy Journal, vol. 73, no. 4.

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Keywords: Early vocational rehabilitation; multitrauma orthopaedic injury; return to work; spinal cord injury; traumatic brain injury.

Evidence Level: 5A

Link: <https://onlinelibrary.wiley.com/doi/10.1111/1440-1630.70116>

Presenteeism and Absenteeism

Presenteeism among healthcare professionals in a hospital setting: A scoping review

Objective: To map the prevalence of presenteeism among healthcare professionals in the hospital environment, identify related factors, consequences for patient safety and worker health, as well as the interventions used. **Method:** scoping review based on the recommendations of the JBI Reviewer's Manual, including studies available in full in five databases, with no time or language restrictions. **Results:** 31 selected articles showed a high prevalence of presenteeism among healthcare professionals in the hospital setting, and the main related factors were illnesses (depression and infections), occupational aspects (work overload), and organizational aspects (lack of support from colleagues). The consequences for worker health were worsening health, stress, fatigue/exhaustion, and impairment of work capacity, while for patient safety, there was an increased risk of infections and clinical errors. Few studies have reported interventions, such as occupational wellness centers. The consequences also impacted economic aspects with loss of productivity and higher healthcare costs. **Conclusion:** the prevalence of presenteeism among healthcare professionals in the hospital setting is high and constitutes a multifactorial phenomenon with negative consequences for individuals, organizations, and patients. The study includes a multidimensional analysis of presenteeism and can serve as a reference for establishing hospital organizational health policies and programs. Multidimensional analysis of presenteeism can contribute to the establishment of organizational health policies and programs in hospitals. Given the scarcity of intervention studies, it is necessary to advance knowledge on the subject. The research protocol is available on the Open Science Framework platform.

Sampaio et al. 2026.

Revista Latino-Americana de Enfermagem, vol. 34.

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Keywords: Hospitals; Presenteeism; Occupational Health; Health Management; Health Personnel; Scoping Review.

Evidence Level: 1A

Link: <https://www.scielo.br/j/rlae/a/PzCbNddTCPXQtw3LnkwxTmG/?lang=en>

Prevalence of sick leave before and after pituitary adenoma surgery

Purpose: The aims of this study were to evaluate sickness compensation before and after transsphenoidal surgery (TSS) for pituitary adenoma compared to the general population and to identify factors associated with return to work (RTW) after TSS. **Methods:** This study included working-age patients who had undergone TSS for a pituitary adenoma at Sahlgrenska University Hospital and matched controls (1:5) from the general population in Sweden. Data for sickness compensation from 1 year before TSS (index) to up to 2 years after was obtained from national registers. Demographic factors, cognition, and fatigue were evaluated based on impact on number of days to RTW or by comparing the groups of patients with and without RTW 1-year post-surgery. **Results:** Sixty-six patients and 329 matched controls were included. The proportion of patients with sickness compensation was approximately twice that of controls 1 year prior to TSS. The proportion of patients with sickness compensation continued to increase until TSS and decreased thereafter but did not return to the level observed 1 year prior to TSS. Prior sickness compensation and Cushing's disease, albeit this subgroup was small, were predictive of more days to RTW after TSS. Patients

without RTW 1-year post-surgery reported more fatigue and more often had adrenal insufficiency compared to the group of patients with RTW. **Conclusions:** Sickness compensation for patients with pituitary adenoma is mainly limited to the surgical period and the months thereafter. Sustained higher levels 1-year post-surgery suggest that work disability remains a long-term issue for a subgroup of patients. **Krabbe et al. 2026.**

European Journal of Endocrinology, vol. 195, no. 2.

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Keywords: Pituitary neoplasms; sick leave; sickness compensation; transsphenoidal surgery; work disability.

Evidence Level: 4B

Link: <https://academic.oup.com/ejendo/article/195/2/356/8761141?login=true>

Working hours

Evaluation of a reduced work schedule and housing authority employee wellbeing

Background: Public housing employees work in challenging conditions with many stressors. A Colorado housing authority requested an evaluation of its voluntary reduced work schedule pilot program and its association with employee wellbeing. Previous research has shown promising short-term improvements in employee productivity and morale from reduced schedule programs, but researchers have questioned whether impacts on wellbeing could be sustained. The study aimed to evaluate if program participants and non-participants reported differences in wellbeing measures over 18 months post-implementation.

Methods: A longitudinal survey based on the NIOSH WellBQ over three timepoints and a series of four focus groups were conducted with program participants and non-participants. Linear mixed modeling was used to test for differences between participant and non-participant wellbeing outcomes over time.

Deductive thematic analysis was used to analyze focus group data. **Results:** Program participants reported significantly lower work overload than non-participants; differences in work stress and work-to-non-work conflict were smaller and did not reach statistical significance. There was no evidence that the magnitude of these differences changed across timepoints, although limited statistical power constrains interpretation of this finding. Qualitative findings demonstrated that participants perceived benefits for work-life integration and decreased work stress and work overload, which participants attributed to the program.

Conclusions: Findings suggest that reduced work schedules may be associated with differences in employee wellbeing over the study period, particularly reduced work overload.

Valley et al. 2026.

International Journal of Environmental Research and Public Health, vol. 23, no. 8.

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Keywords: Evaluation; reduced work schedule; work stress; worker wellbeing.

Evidence Level: 4B

Link: <https://www.mdpi.com/1660-4601/23/8/1026>

Sleep quality and physiological stress in emergency physicians during 24-hour shifts: A wearable-based occupational health assessment

Background: Shift-based work schedules may disrupt circadian rhythm and adversely affect sleep and stress regulation among healthcare workers. Emergency physicians are particularly exposed to high-intensity workloads and prolonged 24-hour shifts, which can increase occupational strain. **Methods:** This study was conducted between April and December 2024 in a tertiary emergency department. Participants wore a smartwatch continuously for 30 days to record sleep architecture and heart rate variability-based stress indicators. Physiological parameters obtained during 24-hour shifts and at home were compared. Analyses were performed across four professional-experience groups. **Results:** Sleep duration, deep sleep percentage, deep sleep continuity score, breathing quality score, and overall sleep score were lower during 24-hour shifts, whereas light sleep percentage, nighttime awakenings, and stress levels were higher (all $p < 0.001$). Physicians with greater professional experience had longer sleep duration and lower stress levels during 24-hour shifts compared with early-career residents. Multiple linear regression analysis indicated that professional experience was the only independent predictor of stress levels during shifts. **Conclusions:** Shift work in emergency medicine is associated with impaired sleep quality and increased physiological

stress. Professional experience appears to mitigate stress responses but does not fully restore sleep quality. These findings support the need for targeted occupational strategies, including optimized workload distribution and structured support for early-career physicians, to improve well-being and ensure patient safety in high-intensity clinical environments.

Sağlam Gürmen et al. 2026.

La Medicina del Lavoro, vol. 117, no. 4.

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Keywords: Sleep quality; physiological stress; emergency physicians; wear-able.

Evidence Level: 5B

Link: <https://www.mattioli1885journals.com/index.php/lamedicinadellavoro/article/view/18894>

Wellness Programs

Virtual reality-based mindfulness interventions on employees' well-being within organizational contexts: A scoping review

Background: Mindfulness-based interventions (MBIs) promote well-being by reducing stress and improving emotional regulation. Virtual reality (VR) has been shown to enhance workforce wellness interventions through immersive environments. However, the combined use of VR and MBIs in organizational settings remains underexplored, and further research is needed to clarify their potential to improve well-being.

Methods: This scoping review aimed to identify evidence on how the application of virtual reality to MBIs could improve employees' well-being in organizational contexts. The review also mapped key concepts, research procedures, outcomes, and gaps, as well as the reported effectiveness of these interventions in promoting well-being. Following the Joanna Briggs Institute (JBI) framework, studies were identified through structured searches in four databases: PubMed (1), EBSCO (6), Web of Science (10), and Scopus (78). Additional records were identified through gray literature (2), author contact (1), and independent search (4), resulting in 86 records without duplicates. After full-text screening, 14 studies were included. Backward and forward citation tracking were conducted, although no additional studies were selected. Tools, including Mendeley Reference Manager, Rayyan, and AI-assisted searches, supported the review process. **Results:** The final sample, published between 2017 and 2024, covered seven countries. All studies used head-mounted displays as the primary VR intervention device. Most were experimental and conducted within healthcare settings, implementing multimodal interventions integrating mindfulness with other well-being techniques. **Conclusions:** Research gaps and methodological limitations remain within this field, and a conceptual framework was proposed to guide future investigations and support the development of VR-based mindfulness interventions for employee well-being.

Chanquini et al. 2026.

Acta Psychologica, vol. 268.

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Keywords: Mindfulness; organizations; scoping review; virtual reality; well-being.

Evidence Level: 1A

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826009601?via%3Dihub>

Effectiveness of a brief internet-based workplace training program to support help seeking for mental ill-health: Cluster randomized controlled trial

Background: Depression and anxiety are prevalent in working-aged adults. Although treatment provided by health professionals can improve symptoms and functioning, many people experiencing mental ill-health do not seek help. There have been very few effective interventions to improve help seeking in adults, with none implemented across diverse workplaces through online delivery. **Objective:** The primary aim of this trial was to test the effectiveness of a co-designed program for increasing professional help seeking intentions in Australian employees, relative to an active control condition. **Methods:** A triple-blinded, 2-arm cluster randomized controlled trial (N=487; control workplaces: n=26 and intervention workplaces: n=25) was conducted to assess the relative effectiveness of Helipad, a fully automated co-designed single-session interactive program (intervention condition) with a standard psychoeducation program (active control condition). Eligible workplaces (those with ≥50 employees and an employee assistance program; clusters)

were recruited via advertising or invited directly by researchers. Eligible participants (employees in a participating Australian workplace, aged ≥ 18 y, living in Australia, fluent in reading and understanding English, and had access to a device and a reliable internet connection) completed a pretest, immediate posttest, and 6-month follow-up survey sent via email assessing help seeking intentions (primary outcome); mental illness stigma; mental health literacy; help seeking attitudes and behavior; work and activity functioning; quality of life; and symptoms of depression, anxiety, and general psychological distress.

Results: A significant difference in change over time in professional help seeking intentions was found between the 2 conditions ($F_{2,185.44}=6.89$; $P=.001$), with planned contrasts showing that the Helipad program was effective in increasing professional help seeking intentions compared with the control at the primary end point of immediate posttest ($t_{359.35}=-3.72$; $P<.001$). This difference was not maintained at the 6-month follow-up ($t_{119.76}=-1.05$; $P=.30$). Retention rates were 71.1% at posttest and 24.9% at follow-up. The Helipad program was also associated with improved mental health literacy and help seeking attitudes at posttest. Helipad was not significantly superior to the control in reducing mental illness stigma or improving professional help seeking behavior; functioning; quality of life; or symptoms of depression, anxiety, or general psychological distress (secondary outcomes) at the 6-month follow-up. A total of 15 people (control: $n=9$, 4.5%; intervention: $n=6$, 4.3%) reported adverse events at posttest. **Conclusions:** This study demonstrated that the co-designed online Helipad program was effective in improving the intentions of employees to seek help from a professional compared to an active control. The program also improved mental health literacy and help seeking attitudes, but these changes were not sustained and did not translate into observable differences in help seeking behaviors or mental health symptoms. This was the first trial of a co-designed intervention to improve mental health help seeking in general workplaces, with previous trials focusing primarily on specific high-risk work environments. Workplace programs that can be delivered at scale may lead to more appropriate engagement with professional mental health care to prevent poor mental health outcomes and increase productivity.

Batterham et al. 2026.

Journal of Medical Internet Research, vol. 28.

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Keywords: Employee; help seeking; implementation; internet; mental health; psychiatry; psychology; workplace.

Evidence Level: 2A

Link: <https://www.jmir.org/2026/1/e89215/>

Effectiveness of a scalable, remotely delivered stepped-care intervention for psychological distress among Polish migrant workers in the Netherlands: The RESPOND randomised controlled trial

Background: The COVID-19 pandemic has negatively affected the mental health of international migrant workers (IMWs). IMWs experience multiple barriers to accessing mental health care. Two scalable interventions developed by the World Health Organization (WHO) were adapted to address some of these barriers: Doing What Matters in times of stress (DWM), a guided self-help web application, and Problem Management Plus (PM +), a brief facilitator-led program to enhance coping skills. This study examines whether DWM and PM + remotely delivered as a stepped-care programme (DWM/PM +) is effective and cost-effective in reducing psychological distress, among Polish migrant workers with psychological distress living in the Netherlands. **Methods:** The stepped-care DWM/PM + intervention will be tested in a two-arm, parallel-group, randomized controlled trial (RCT) among adult Polish migrant workers with self-reported psychological distress (Kessler Psychological Distress Scale; $K10 > 15.9$). Participants ($n = 212$) will be randomized into either the intervention group that receives DWM/PM + with psychological first aid (PFA) and care-as-usual (enhanced care-as-usual or eCAU), or into the control group that receives PFA and eCAU-only (1:1 allocation ratio). Baseline, 1-week post-DWM (week 7), 1-week post-PM + (week 13), and follow-up (week 21) self-reported assessments will be conducted. The primary outcome is psychological distress, assessed with the Patient Health Questionnaire Anxiety and Depression Scale (PHQ-ADS). Secondary outcomes are self-reported symptoms of depression, anxiety, posttraumatic stress disorder (PTSD), resilience, quality of life, and cost-effectiveness. In a process evaluation, stakeholders' views on barriers and facilitators to the implementation of DWM/PM + will be evaluated. **Discussion:** To our knowledge, this

is one of the first RCTs that combines two scalable, psychosocial WHO interventions into a stepped-care programme for migrant populations. If proven to be effective, this may bridge the mental health treatment gap IMWs experience.

Roos et al. 2026.

BMC Psychiatry, vol. 23, no. 1.

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Keywords: Common mental health disorders; digital biomarkers; hair steroid hormone concentrations; international migrant workers; non-specialist healthcare workers; randomized controlled trial; scalable interventions; stepped-care.

Evidence Level: 2B

Link: <https://link.springer.com/article/10.1186/s12888-023-05288-5>

An mHealth intervention promoting physical activity to reduce psychological distress among workers: Randomized Controlled Trial

Background: Although mobile health (mHealth) interventions serve as potential solutions for addressing mental health problems, evidence on whether mHealth interventions targeting physical activity can reduce psychological distress among generally healthy workers is limited. **Objective:** This study aimed to investigate the effectiveness of a stand-alone smartphone app, which passively monitors physical activity and psychological distress, in reducing psychological distress among workers. **Methods:** This open-label, 2-arm, parallel-group randomized clinical trial was conducted in Japan over 6 months, with assessments at baseline, 3 months, and 6 months. Eligible participants were workers aged 18 years or older who were able to complete the Japanese questionnaires and owned compatible smartphones. Individuals currently absent from work or with a history of absence due to sickness within the past 12 months were excluded.

Participants were randomized (1:1) to the intervention or control group. Participants in the intervention group used a smartphone app that passively monitored physical activity and mental health for 3 months. The control group received a booklet on job stress. The primary outcome was psychological distress measured using the 6-item Kessler Psychological Distress Scale. Secondary outcomes included self-reported physical activity and digitally recorded activity duration in the intervention group. Analyses followed the intention-to-treat principle. For the main analysis, linear mixed modeling for repeated measures was used to estimate between-group differences in changes in psychological distress across the 3 time points.

Results: A total of 793 workers were randomized (intervention: n=397; control: n=396). Psychological distress decreased significantly in the intervention group at 3 months (mean difference -0.56, 95% CI -1.11 to -0.02; P=.04; Cohen d -0.17), although this effect was not sustained at 6 months. Self-reported physical activity levels declined in both groups without significant between-group differences. In contrast, in the intervention group, digitally recorded activity increased during the intervention period (7.92 min increase, 95% CI 1.36-14.49; P=.02); however, these data were not comparable with those in the control group.

Subgroup analysis showed a larger effect among participants with no or minimal baseline distress (mean difference -0.63, 95% CI -1.16 to -0.11; P=.02; Cohen d -0.19). **Conclusions:** The stand-alone smartphone-based app that enables workers to monitor physical activity and psychological distress modestly reduced psychological distress among workers. However, it remains unclear whether the app reduces psychological distress through biological and psychosocial mechanisms, including increased physical activity. Furthermore, the benefit may be short-lived rather than durable and may have limited clinical and practical significance. Although mHealth interventions may contribute to preventing mental health problems in workplace settings, booster engagement strategies are necessary to sustain benefits over time. Subgroup analyses suggested that the app may be more effective among generally healthy populations.

Wantanbe et al. 2026.

Journal of Medical Internet Research, vol. 28.

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Keywords: Anxiety; behavioral change; depression; eHealth; smartphone; workplace.

Evidence Level: 2B

Link: <https://www.jmir.org/2026/1/e96072>

Shift Work

Vitamin D supplementation and central adiposity in male shift workers: A randomized clinical trial on metabolic health

Background: Vitamin D deficiency is common among individuals with obesity; however, the association between low 25-hydroxyvitamin D [25(OH)D] concentrations and adiposity remains unclear. Shift workers are at increased risk for both vitamin D deficiency and metabolic disorders, making this population particularly relevant for investigating this relationship. **Objectives:** This study aimed to evaluate the effect of cholecalciferol supplementation on central adiposity, assessed by waist circumference (WC) and waist-to-height ratio (WHtR), among male shift workers. **Design and setting:** Randomized, double-blind, placebo-controlled clinical trial involving 198 male shift workers employed by an iron ore extraction company in Minas Gerais, Brazil. **Methods:** Participants with 25(OH)D concentrations <30 ng/mL and at least one metabolic abnormality, including metabolic syndrome, impaired fasting glucose, dyslipidemia, elevated blood pressure, or increased WC, were randomly assigned to receive placebo, cholecalciferol 14,000 IU/week, or cholecalciferol 28,000 IU/week for 4 months. Plasma 25(OH)D concentrations, WC, and WHtR were evaluated at baseline and post-intervention. **Results:** After 4 months, no significant differences in WC or WHtR were observed between the vitamin D supplementation groups (14,000 IU/week and 28,000 IU/week) and the placebo group. Nevertheless, serum 25(OH)D concentrations increased significantly in the supplementation groups: +6.23 ng/mL (p₂₅ = 0.58; p₇₅ = 10.61) in the 14,000 IU/week group and +15.25 ng/mL (p₂₅ = 10.57; p₇₅ = 19.68) in the 28,000 IU/week group. In contrast, the placebo group showed a decrease of -0.50 ng/mL (p₂₅ = -1.03; p₇₅ = 2.71). Despite these increases, supplementation produced no significant effect on central adiposity outcomes (p > 0.05). **Conclusion:** Although vitamin D supplementation effectively increased serum 25(OH)D concentrations, it did not reduce central adiposity among male shift workers. These findings indicate that vitamin D supplementation alone is unlikely to improve obesity-related outcomes in this high-risk occupational population and underscore the need for comprehensive strategies targeting metabolic health in shift workers.

Menezes-Júnior et al. 2026.

Sao Paulo Medical Journal, vol. 144, no. 4.

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Keywords: Vitamin D; supplementation; central adiposity; male; shift workers.

Evidence Level: 2B

Link: <https://www.scielo.br/j/spmj/a/PQsYqF6Nw4psjWzkcgb5vYL/?lang=en>

Dietary pattern and night work: Metabolic syndrome in healthcare workers

Objective: To assess the relationship between night work, metabolic syndrome (MS) prevalence, and dietary patterns in healthcare workers at a large hospital in southern Brazil. **Subjects and methods:** A cross-sectional study was conducted with 156 healthcare workers (90 day-shift and 66 night-shift) from July 2023 to March 2024. Sociodemographic and occupational, sleep, dietary patterns, meal timing, anthropometric data, blood pressure, and lab test data were collected. **Results:** Night-shift workers had higher blood pressure, lower HDL cholesterol, and 135% greater likelihood of developing MS than those who worked during the day. They consumed more fats and less fiber. Chrononutrition analysis showed night workers had later last meals (p < 0.001), longer intervals between first and last meals (p < 0.001), and shorter night fasting (p < 0.001). Ultra-processed food consumption was similar across shifts. A shorter interval between the first and last meal in night workers was linked to a 7% lower risk of MS. Findings suggest an association between night work and higher MS prevalence, with hypertension, abdominal obesity, unfavorable lipid profile, and disrupted eating timing. Circadian rhythm disruption and misaligned eating patterns, particularly prolonged eating windows and reduced nocturnal fasting, may contribute to the increased metabolic risk. **Conclusion:** Interventions targeting diet and chrononutrition are essential. Occupational health programs should address the specific challenges of night work.

Reis et al. 2026.

The Archives of Endocrinology and Metabolism, vol. 70, no. 4.

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Keywords: Night work; chrononutrition; chronotype; dietary pattern; metabolic risk.

Evidence Level: 4B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC13186560/>

Associations of shift work and chronotype with physical activity and eating behaviors in adult women

Background: Shift work and chronotype may influence dietary habits, physical activity, and eating behaviors. However, research examining the combined associations of shift work and chronotype with these behaviors in women is limited. This study examined these associations, together with anthropometric outcomes, among women attending an obesity counseling center. **Methods:** A cross-sectional study included 190 women aged 18-64 years (mean age: 33.31 ± 7.87 years) attending an obesity counseling center in Istanbul. Sociodemographic data, dietary habits, work schedules and behavioral data were collected using structured questionnaires, whereas anthropometric measurements were obtained using standardized procedures. Chronotype, physical activity, and eating behaviors were assessed using the Morningness-Eveningness Questionnaire (MEQ), International Physical Activity Questionnaire (IPAQ), and Dutch Eating Behavior Questionnaire (DEBQ). Statistical analyses included chi-square tests, parametric-nonparametric group comparisons, and multivariable linear and logistic regression models. **Results:** Compared to fixed-schedule workers, shift workers had more frequent meals (77.9% vs. 59.6%; $p = 0.007$, $V = 0.195$) and breakfast (51.2% vs. 16.3%; $p < 0.001$, $V = 0.371$) skipping. Participants with obesity had higher emotional eating, external eating, total DEBQ, and total meal-number values than the other BMI groups. Chronotype scores varied according to age, smoking, alcohol consumption and occupational factors, but were not directly correlated with anthropometric measurements. **Conclusions:** Shift work was associated with irregular eating habits and altered eating behaviors. These findings should be interpreted with caution because the cross-sectional, single-center design limits causal inference and generalizability. To better understand the relationship between chronotype, lifestyle, and obesity-related behaviors, as well as to develop effective interventions, larger prospective studies are needed.

Turan et al. 2026.

Nutrients, vol. 18, no. 5.

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Keywords: Chronotype; dietary habits; emotional eating; obesity; physical activity; shift work; women.

Evidence Level: 4B

Link: <https://www.mdpi.com/2072-6643/18/15/2507>

Role of Life's Essential 8 in the association of night shift work with cardiovascular disease and mortality: A prospective cohort study of UK Biobank participants

Background: Night shift work is linked to higher risks of cardiovascular disease (CVD) and mortality, but mechanisms remain unclear. Lifestyle, captured by the American Heart Association's Life's Essential 8 (LE8), may act as a modifiable mediator. We aimed to examine the associations of night shift work with CVD and mortality and quantify the mediating role of LE8. **Methods:** We analysed 131,844 employed participants without baseline CVD from the UK Biobank (2006-2010). We categorised night shift work as day workers, shift but never/rarely night shifts, some night shifts, and usual/permanent night shifts. LE8 scores included diet, physical activity, nicotine exposure, sleep, body mass index, blood pressure, lipids, and blood glucose. Primary outcomes were incident CVD and all-cause mortality, and secondary outcomes included myocardial infarction (MI), stroke, and atrial fibrillation (AF). We used Cox models to estimate associations and counterfactual mediation analysis to quantify the proportion mediated by LE8. **Results:** Over a median follow-up of 13.78 years (interquartile range = 13.09-14.42), 39,115 (29.7%) developed CVD and 5474 (4.2%) died. Compared with day workers, usual/permanent night shifts had higher risks of CVD (hazard ratio (HR) = 1.24; 95% confidence interval (CI) = 1.18-1.31), all-cause mortality (HR = 1.23; 95% CI = 1.07-1.41), AF (HR = 1.31; 95% CI = 1.13-1.51), and MI (HR = 1.29; 95% CI = 1.09-1.51), but not cardiovascular mortality. LE8 mediated 39.2% of the CVD association, 33.1% of all-cause mortality, and 40.8% of MI. Counterfactual analyses suggested that improving cardiovascular health (CVH) could prevent 35.1% of CVD events and 30.2% of deaths among night shift workers. **Conclusions:** Night shift work is associated with higher risks of CVD, AF, MI, and all-cause mortality. A substantial proportion of this burden may be

preventable through improved CVH. Further studies are needed to evaluate integrated lifestyle interventions in night shift workers.

Huang et al. 2026.

Journal of Global Health, vol. 14.

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Keywords: Life's Essential 8; all-cause mortality; cardiovascular disease; cardiovascular health; mediation analysis; night shift work.

Evidence Level: 4B

Link: <https://jogh.org/2026/jogh-16-04198>

Management and Leadership

Workplace management practices and quiet quitting among primary healthcare workers: A sequential-parallel mediation analysis

Background: The quiet quitting phenomenon, a new emerging and hidden turnover behavior, is prevalent among primary healthcare (PHC) workers. Addressing their quiet quitting requires exploring possible managerial factors of management practice such as goal-setting, organizational centralization, organizational culture and incentives in the workplace, which are rarely jointly considered but offering great value for the construction of healing workplaces amid current medical reform. This study explores the associations between management practices in primary healthcare institutions and quiet quitting among PHC workers. We further construct a sequential-parallel mediation model to test two distinct indirect pathways triggered by goal-setting: the first is a sequential chain mediation pathway via organizational centralization and organizational incentives, and the second is a single mediation pathway via organizational culture. **Methods:** This is a two-wave cross-sectional study surveyed PHC workers on-site from all 11 primary healthcare institutions in a county where the management abilities have been strengthened in the context of health poverty revitalization. Measurements of managerial factors and quiet quitting are based on their classic scale with acceptable reliability and validity. Structural equation modeling (SEM) and mediation analysis were used for statistical analysis. **Results:** The mechanism shows that goal-setting have significant negative association with quiet quitting through two pathways. Firstly, goal-setting has a significantly positively association with organizational centralization ($\beta = 0.774$, $P < 0.05$). Organizational centralization has a positive association with incentives ($\beta = 0.742$, $P < 0.05$) and incentives are negatively associated with quiet quitting ($\beta = -0.229$, $P < 0.05$). Secondly, goal-setting has a positive association with organizational culture ($\beta = 0.787$, $P < 0.05$), organizational culture is negatively associated with ($\beta = -0.649$, $P < 0.05$) quiet quitting. Final mediation effect analysis shows that the association between goal-setting and quiet quitting through organizational culture (indirect effect = -0.511 , $P < 0.01$) is much greater than combined association between organizational centralization and incentive (indirect effect = -0.132 , $P < 0.01$). **Conclusions:** This study offers key insights into quiet quitting among primary healthcare workers, highlighting that reasonable managerial design may help reduce quiet quitting and protect employees' well-being.

Xia et al. 2026.

Frontiers in Public Health, vol. 14.

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Keywords: Hawthorne experiments; management practice; managerial factors; primary healthcare workers; quiet quitting.

Evidence Level: 4B

Link: <https://doi.org/10.3389/fpubh.2026.1903586>

Objectification at work: The impact of algorithmic management on employee work engagement

With the increasing prevalence of digital and intelligent management, the impact of algorithmic management on employees' psychology and behavior has become a focus of scholarly attention. However, existing research predominantly views algorithmic management as a stressor from cognitive or emotional perspectives, leaving its profound impact on employees' self-concept underexplored. Drawing on social identity theory, this paper constructs a model of "algorithmic management-workplace objectification

perception-employee work engagement" from the perspective of identity threat and empirically tests it using two-wave questionnaire data from 383 respondents. The findings reveal that algorithmic management is significantly negatively correlated with work engagement and that workplace objectification perception mediates this relationship. Specifically, algorithmic management is associated with employees' perception of workplace objectification by reinforcing their sense of instrumental value and powerlessness, which may deny their uniqueness and agency as human beings and is associated with diminished work engagement. This study not only enriches theoretical insights into algorithmic management and employee work engagement but also offers a new theoretical lens for understanding the potential side effects of technology-enabled management. Furthermore, it provides empirical references for organizations to optimize algorithmic management practices and balance efficiency enhancement with employee care, offering valuable implications for developing a technology-for-good paradigm in modern organizational management.

Zhang et al. 2026.

Acta Psychologica, vol. 268.

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Keywords: Algorithmic management; instrumental value; powerfulness; work engagement; workplace objectification perception.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826011510?via%3Dihub>

Understanding how managers deal with mental health at the workplace: A qualitative approach

Objective: More and more companies are offering specific training programs aimed at supporting managers in dealing with the mental health of their employees. Nevertheless, little is known about the individual impact factors and their effects in everyday management. **Methods:** Using a qualitative research approach, 20 managers were asked about their experiences with a training program after 1 and 12 months. **Results:** Analysis showed an overall great interest and open attitude among the participants. Still, ambivalences emerged when it came to implementing the training and actually dealing with mental health problems. Typifying the participants showed different stages to describe the managers' individual attitudes concerning mental health at the workplace.

Conclusion: The results could hold great potential for more targeted individualization of manager training courses in the field of mental health. However, further research is needed.

Schwarz et al. 2026.

Journal of Occupational and Environmental Medicine, vol. 68, no. 8.

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Keywords: Common mental disorders; manager training; mental health in the workplace; stress; workplace intervention.

Evidence Level: 5B

Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC13361957/>

Leading with impact: How university deans' leadership styles shape job satisfaction among lecturers in China

This study examines the role of leadership styles and proactive personality in shaping job satisfaction among university lecturers in China. Drawing on full-range leadership theory and proactive personality theory, a research model was developed to investigate the effects of transformational and transactional leadership on lecturer job satisfaction and the moderating role of proactive personality. Data were collected from 460 university lecturers and analyzed using structural equation modeling. The results indicate that both transformational and transactional leadership are positively associated with lecturer job satisfaction. Proactive personality moderates the relationship between transformational leadership and job satisfaction, such that the positive effect of transformational leadership is stronger among lecturers with high levels of proactive personality. This study contributes to the literature by clarifying how different leadership styles influence lecturer job satisfaction in the Chinese higher education context and by highlighting the boundary role of proactive personality. The findings also provide practical insights for

university administrators in aligning leadership approaches with lecturers' personality traits to enhance job satisfaction.

Wang et al. 2026.

Acta Psychologica, vol. 268.

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Keywords: China; Higher education; Job satisfaction; Leadership styles; Proactive personality.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826010577?via%3Dihub>

Green human resource management and employee mental well-being: The roles of ethical leadership and green intrinsic motivation

The study explores the pathway through which Leadership and Personal Motivation influence the relationship between Green Human Resource Management Practices (GHRM) and employees' mental well-being (MW). This study integrates Self-Determination Theory (SDT) and the Job Demands-Resources (JD-R) model to explain why sustainability-oriented HR practices may function simultaneously as motivational resources and psychological demands. Drawing upon a sequential explanatory mixed-methods design, quantitative data from 554 employees were analyzed using regression-based mediation and moderation models implemented through Hayes' PROCESS macro. Further, 18 participants were interviewed, and the qualitative data were analyzed using thematic analysis to capture employees' perceptions. Findings demonstrate a paradoxical impact: While bivariate correlations between GHRM and mental well-being were positive, results of the regression analyses revealed that the direct effect of GHRM on mental well-being was significant and negative after accounting for the mediating role of ethical leadership (EL) and the moderating role of Green Intrinsic Motivation (GIM). To understand this counterintuitive result, follow-up qualitative research was conducted, which indicated that increased green demands can be a source of strain and perceived misalignment with employees' roles and values. Combining Self-Determination Theory with the Job Demands-Resources (JD-R) approach, this paper emphasizes that externalized green practices can be perceived as job demands which may impede autonomy and well-being unless mitigated by supportive ethical leadership and intrinsic motivation. The results highlight the potential of sustainability initiatives and the psychological cost of such initiatives, providing insights into how the Green HRM can be aligned with employees' values and mental wellbeing.

Shankar et al. 2026.

Acta Psychologica, vol. 268.

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Keywords: Ethical Leadership; GHRM; green human resource management; green intrinsic motivation; mental well-being; mixed-methods research; sustainability.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691826011388?via%3Dihub>

Work Ability

Perceived cognitive impairment and occupational functioning in prostate cancer survivors: An exploratory cross-sectional analysis

Purpose: Perceived cancer-related cognitive impairment (CRCI) has been reported in prostate cancer survivors. Little is known about how CRCI impacts occupational functioning in working-aged prostate cancer survivors (PCS). This study aimed to investigate the association between CRCI and occupational functioning in PCS. **Methods:** Data from 51 PCS, who were employed at the time of diagnosis, undergoing hormonal treatments (e.g., androgen deprivation therapy) or 'watchful waiting'/'active surveillance', were analysed. An online survey assessed CRCI using the FACT-Cog Perceived Cognitive Impairments (PCI20) subscale, the EORTC-QLQ-30 two-item cognitive functioning scale, and a single 'Yes/No' CRCI item (i.e., were 'changes in thinking (e.g., memory, attention)' experienced as a treatment side effect). PCS also indicated 'Yes/No' to changes to their ability to work, performance of work duties, and decreased work hours. Logistic regression analyses examined the relationship between CRCI measures and occupational outcomes. **Results:** Of the 51 PCS, 19 (37%) endorsed experiencing cognitive side effects from treatment. The single 'Yes/No' CRCI

question was significantly associated with perceived changes in work ability and ability to perform work duties at the same level. PCI20 and the EORTC-QLQ-30 cognitive functioning scale were not significantly associated with any occupational outcomes. **Conclusion:** Perceived CRCI is associated with adverse changes to occupational functioning and is important to consider when PCS are making plans to return-to-work following treatment. **Implications for cancer survivors:** Prostate cancer survivors may experience cognitive changes, which may impact their work ability.

Pembroke et al. 2026.

Journal of Cancer Survivorship, vol. 20, no. 4.

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Keywords: Cancer-related cognitive impairment; cognitive functions; occupational functioning; prostate cancer; rehabilitation; return to work.

Evidence Level: 4B

Link: <https://link.springer.com/article/10.1007/s11764-025-01743-2>

Association between non-communicable diseases and work productivity and health-related quality of life among Japanese workers: A cross-sectional study using a claims database and survey data

Objectives: To assess the impact of non-communicable diseases (NCDs) by number and pattern on productivity loss costs (PLCs) and health-related quality of life (HRQoL) in a large working-age population in Japan. **Design:** Cross-sectional analysis of linked claims-survey data with sex-stratified multivariable regression. **Setting:** Employment-Based Health Insurance Associations in Japan. Administrative claims using International Classification of Diseases, Tenth Revision codes were linked to an online questionnaire (November 2022). **Participants:** Insured workers and families aged 18-65 years who completed the survey (n=18 236; mean age 48.7 years; 66.2% men). **Primary and secondary outcome measures:** Primary: PLC, estimated from the Work Productivity and Activity Impairment instrument using the Human Capital Method (annual US\$). **Secondary:** HRQoL measured using the EuroQoL 5-Dimension 5-Level index. Exposures were NCD categories, multimorbidity counts and high-impact disease combinations. Models adjusted for sex, age and the number of other conditions. **Results:** Multimorbidity (≥ 2 conditions) was present in 58.4% (56.3% men; 62.5% women); 29.3% had ≥ 5 conditions. Women had higher NCD prevalence (76.9% vs 70.0%), higher median PLC (US\$3683 vs US\$117) and lower median HRQoL (0.89 vs 1.00) than men. In adjusted analyses, neuropsychiatric conditions were associated with higher PLC in both sexes (men: US\$2393 (95% CI 1966 to 2820); women: US\$2097 (US\$1442 to US\$2751)). Musculoskeletal disorders were statistically significant in men but not in women (US\$809 (US\$381 to US\$1236)), whereas genitourinary disorders were statistically significant in women but not in men (US\$701 (US\$121 to US\$1282)). Neuropsychiatric disorders were associated with lower HRQoL in both sexes (men: -0.040 (-0.045 to -0.034); women: -0.044 (-0.053 to -0.035)); musculoskeletal disorders showed similar decrements (men: -0.031 (-0.037 to -0.025); women: -0.040 (-0.049 to -0.031)). Combinations involving sleep and neuropsychiatric disorders produced the highest PLC (eg, depressive episode and sleep disorder: men: US\$5219.9 (US\$3646.4 to US\$6793.4); women: US\$5858.5 (US\$2634.4 to US\$9082.5)). Each additional condition was independently associated with higher PLC and lower HRQoL. **Conclusions:** In this cross-sectional study of Japanese workers, specific combinations of chronic conditions, particularly neuropsychiatric conditions co-occurring with sleep disorders and musculoskeletal disorders, were associated with greater productivity loss and lower HRQoL than predicted by the number of co-occurring diseases alone. These findings suggest that workplace health strategies addressing high-impact disease combinations may warrant further investigation in longitudinal studies.

Itoh et al. 2026.

BMJ Open, vol. 16, no. 8.

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Keywords: Epidemiology; multimorbidity; occupational & industrial medicine; public health.

Evidence Level: 4B

Link: <https://bmjopen.bmj.com/content/16/8/e115665.long>

Adapting to the Future of Work

Aging Workforce

Involuntary retirement and organizational climates: A multilevel study of older workers

Objectives: Maintaining control over the retirement transition is crucial for post-retirement well-being. Yet, studies show that between 10% and 40% of employees experience involuntary retirement. This study investigates 3 separate reasons for involuntary retirement: poor health, organizational pressures, and reaching the quasi-mandatory pension age. Guided by a life-course framework of agency and structure, we analyze how collective and individual perceptions of development, accommodation, and post-retirement work climates shape separate reasons for involuntary retirement, as opposed to voluntary retirement.

Methods: Using multilevel panel data from the Netherlands, we estimate multilevel logistic regression models on 3,735 respondents nested in 501 organizations. We assess how organizational climates, which vary systematically between organizations, and individual-relative perceptions, which vary systematically within organizations, are associated with different involuntary retirement reasons. **Results:** Reaching the quasi-mandatory retirement age was the main reason for involuntary retirement. Across organizations, a supportive organizational climate for development reduced involuntary retirement. At the individual level, employees who perceived more supportive accommodation and post-retirement work climates relative to their colleagues were less likely to experience involuntary retirement. Organizational and individual-relative climates revealed distinct associations with different reasons for involuntary retirement. **Discussion:** Our results suggest that involuntary retirement is a multidimensional phenomenon shaped by micro-, meso-, and macro-level constraints. Supportive organizational policies and practices enhance employees' agency, with some differences depending on the reason for involuntary retirement. Policies encouraging training of older workers may increase both labor force participation and older employees' choices as they near retirement.

Marabini et al. 2026.

The Journals of Gerontology, vol. 81, no. 9.

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Keywords: Age-friendly environments; employment; life course agency; multilevel or hierarchical model; work-related issues.

Evidence Level: 4B

Link: <https://academic.oup.com/psychsocgerontology/article/81/9/gbag128/8723339?login=true>

Disability and perceived social exclusion in later working age in Germany - what role does employment play? A counterfactual mediation analysis

Background: There is strong evidence that persons with disabilities are at greater risk of social exclusion in various areas of life. However, the role of employment for perceived social exclusion (PSE) among persons with disabilities has not yet been sufficiently researched. **Objective:** This study addresses this gap by analyzing the mediating role of employment on the relationship between disabilities and PSE in women and men of later working age (40-64 yrs.). **Methods:** We used a pooled data set from the 2014-2023 survey waves with 11,680 observations from the German Ageing Study (DEAS), a nationally representative longitudinal study of Germans over the age of 40. The Global Activity Limitation Indicator (GALI) was used as a measure of disability. PSE was measured with a scale developed by Bude and Lantermann covering four statements such as "I feel like I do not really belong to society". We performed logistic regression analyses and counterfactual-based causal mediation analyses. **Results:** For men with severe disabilities, employment accounted for almost half of the difference in PSE between individuals with and without severe disabilities. For women with severe disabilities, the effect of employment was less pronounced, accounting for 15.0% of the difference. While employment rates increased between 2014 and 2023 regardless of disability status, the employment-gap between persons with and without disabilities persisted. **Conclusions:** The inclusion of individuals with disabilities into the labor market while promoting self-determined work remains an important social policy goal in Germany.

Sperlich et al. 2026.

Archives of Gerontology and Geriatrics, vol. 147.

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Keywords: Disability models; employment; social participation.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0167494326001056?via%3Dihub>

Association between changes in working status and frailty across different types of employment: A longitudinal study in Korea, the world's most rapidly ageing nation

Objective: Frailty, a critical health indicator of ageing, poses significant public health challenges for individuals and society. This study analysed the longitudinal association between changes in employment status and frailty among middle-aged and older adults in Korea across different employment types. It also examined how employment transitions impact frailty components, particularly weakness, isolation and exhaustion. **Design:** A longitudinal study. **Setting:** A nationwide community-based longitudinal study using data from the Korean Longitudinal Study of Aging from 2006 to 2022. **Participants:** Individuals aged 45 years or older residing in private households across Korea (excluding Jeju Island) enrolled in Wave 1 (2006). For consistency, only participants with at least four observations during the entire study period were retained. Those with fewer than four observations (n=48 228) were excluded, amounting to a final of 6122 participants, of whom 2718 were men and 3404 were women. Furthermore, for the subgroup analysis of employment types, participants not classified as regular, temporary, daily, self-employed or unpaid family workers were excluded. **Primary and secondary outcome measures:** The primary outcome was frailty assessed using the Korean Frailty Instrument. Secondary outcomes were the individual frailty components, including weakness, isolation and exhaustion. **Results:** The study included 6122 participants (2718 men and 3404 women). Frailty was observed in 3.9% of men and 8.5% of women. Returning to or maintaining employment was significantly associated with reduced frailty risk between both genders (male: Unemployed → Working OR 0.61, Working → Working OR 0.59; female: Unemployed → Working OR 0.68, Working → Working OR 0.77). Employment type-based analysis revealed that transitioning to permanent employment has the strongest protective effect on men (Unemployed → Permanent Employment OR 0.25). **Conclusions:** Returning to or maintaining employment was associated with a lower risk of frailty. Promoting stable employment environments and encouraging labour force participation among middle-aged and older adults may contribute to better health outcomes in ageing societies.

Park et al. 2026.

BMJ Open, vol. 16, no. 8.

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Keywords: Frailty; geriatric medicine; job satisfaction; public health.

Evidence Level: 4B

Link: <https://bmjopen.bmj.com/content/16/8/e116676.long>

Technology

The impact of robotization on employees' mental and physical health: A Qualitative Study in the Czech and Slovak Republics

Background: This study aimed to explore the impact of introducing robotic technologies on employees' mental and physical health across three Czech and one Slovak manufacturing company. It sought to understand employees' subjective experiences and perceptions of organizational support during the robotization process. **Methods:** A qualitative study was conducted between 2023 and 2025 in four companies. 27 semi-structured interviews with employees (15 women, 12 men) and 19 unstructured interviews with managers (3 women, 16 men) were conducted on-site during working hours. Data were analyzed using thematic analysis with open and axial coding. **Results:** Nine thematic areas were identified: general perceptions, change, fear, problems, support, social relations and communication, employee characteristics, physical health, and mental health. Employees generally perceived robotization positively, noting reduced physical workload and less monotonous or hazardous work. Initial adaptation was challenging, especially due to technical demands and workflow changes. Technical staff experienced higher stress than operators, related to responsibility, troubleshooting, and learning new skills. Technical malfunctions, elevated noise and vibration, and cognitive demands were reported as stressors. Personifying

robots and informal knowledge sharing facilitated adaptation. No significant sleep disturbances or substance use linked to robotization were reported. Managers faced a high mental workload due to coordination and supervision responsibilities. **Conclusions:** When the implementation process is well designed, robotization does not necessarily negatively affect employees' mental health. The findings highlight the importance of actively addressing organizational and human factors that influence the success of technological change in the workplace. Attention should focus on monitoring cognitive and psychological demands, particularly for technical and managerial staff.

Hubáčová Pirová et al. 2026.

La Medicina del Lavoro, vol. 117, no. 4.

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Keywords: Robotization; employee mental health; employee physical health; Czech Republic; Slovak Republic.

Evidence Level: 5B

Link: <https://www.mattioli1885journals.com/index.php/lamedicinadellavoro/article/view/19054>

Examining the relationships between artificial intelligence literacy, AI-TPACK, job satisfaction, and well-being among teachers through structural equation modeling

This study explores the relationships between teachers' artificial intelligence literacy (AIL), AI-TPACK competencies, job satisfaction, and well-being. Survey data from 350 in-service teachers were analyzed using PLS-SEM to examine how AI-related competencies are associated with professional and psychological outcomes. The findings reveal that AIL strongly predicts AI-specific knowledge, especially AI-TCK, AI-TK, AI-TPCK, and AI-TPK, with a moderate influence on traditional pedagogical knowledge. At the job satisfaction level, AI-TCK and general pedagogical knowledge are positively associated with satisfaction, while AI-TK has a negative relationship. Mediation analyses show that AI competencies influence well-being through job satisfaction. AI-TCK and pedagogical knowledge are positively associated with well-being indirectly through job satisfaction, whereas AI-TK shows a negative indirect association along the same pathway. The study suggests that AI-related competencies are linked to teachers' work-life outcomes, and highlights job satisfaction as the key mediator between AI competence and well-being. Because the design is cross-sectional and self-reported, these relationships are interpreted as associations rather than causal effects. The study advocates for integrating AI in ways that support pedagogical development rather than just technical skills.

Kayali et al. 2026.

Acta Psychologica, vol. 268.

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Keywords: AI-TPACK; Artificial intelligence literacy; structural equation modeling; teacher satisfaction; teacher well-being.

Evidence Level: 5B

Link: <https://www.sciencedirect.com/science/article/pii/S000169182601098X?via%3Dihub>