



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 February 2025 only.

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Description of Evidence Levels Definitions Used in this Review

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

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

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

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

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Enabling Healthy and Safe Workplaces

Health and Wellbeing

Mediating role of reinforcement sensitivity systems in the relationship between psychological courage and well-being at work

Psychological courage (PC) is believed to help individuals in dealing with fear and anxiety, allowing them to confront obstacles and discover purpose in their careers. This study investigated the relationship between PC, job satisfaction, meaning in work, perceived stress, and behavioral systems: the behavioral inhibition system (BIS), the flight-fight-freeze system (FFFS), and the behavioral activation system (BAS). A sample of 805 employees from various industries participated in the study. Results revealed a positive correlation between PC and both job satisfaction and meaning in work, while a negative correlation was found with perceived stress. SEM analysis further indicated that BAS mediates the relationship between PC and positive well-being outcomes. Conversely, the BIS was associated with increased stress and decreased job satisfaction and meaning in work. These findings highlight the importance of PC in promoting positive work experiences. By activating the BAS and inhibiting the BIS, PC can contribute to greater job satisfaction, increased meaning in work, and reduced stress. Organizations can benefit from implementing interventions that foster psychological courage among employees, leading to improved overall well-being and job performance.

Pajestka et al. 2025.

Scientific Reports, vol. 15, no. 1.

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Keywords: Behavioral activation system (BAS); Behavioral inhibition system (BIS); employee well-being; job satisfaction; mediation analysis; psychological courage.

Evidence Level: 5B

Link: <https://www.nature.com/articles/s41598-025-89838-9>

Sociodemographic and work-related determinants of self-rated health trajectories: A collaborative meta-analysis of cohort studies from Europe and the US

Self-rated health is a major indicator of an individual's overall health status, but its development during midlife to old age, as well as influence of sociodemographic and work-related factors on it, are poorly understood. We used longitudinal individual-level data to examine trajectories of self-rated health and their determinants in 38,163 participants (median age 50 (range 36-66) years at baseline) of the English Longitudinal Study of Ageing, the Finnish Longitudinal Study on Aging Municipal Employees, and the French GAZ and ELeCtRiCité study from Europe and the Health and Retirement Study from the US. A group-based latent trajectory analysis showed that self-rated health was constantly good for over half of the participants, constantly suboptimal for about 11-21%, and it was changing, either improving or declining, for the rest. Pooled evidence suggests that being single (summary odds ratio 1.20, 95% confidence interval 1.07-1.35), medium educational attainment (1.26, 1.16-1.37), medium occupational class (1.22, 1.10-1.34), and exposure to high physical job demands (1.18, 1.08-1.29) were associated with declining self-rated health. Suboptimal self-rated health was more prevalent among those in low occupational class (1.81, 1.56-2.10), and those who experienced high physical job demands (1.52, 1.33-1.74). In these European and US populations, 23-40% of people experienced suboptimal or declining health trajectories. In conclusion, large variation in development of self-rated health from midlife to old age was observed and it was partly determined by sociodemographic and work-related factors.

Prakash et al. 2025.

Scientific Reports, vol. 15, no. 1.

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Keywords: Multicohort study; pathways of health; social and work-related determinants.

Evidence Level: 1B

Link: <https://www.nature.com/articles/s41598-025-89947-5>

Intervention effectiveness in reducing the clustering of non-communicable disease risk factors in the workplace: A quasi-experimental study

Understanding the clustering patterns of non-communicable disease risk factors is important to address chronic diseases effectively, thus minimizing their onset and enhancing overall health. This study aimed to assess the feasibility and efficacy of a three-year workplace intervention in decreasing clustering of non-communicable disease risk factors in employees. A quasi-experimental study, including six companies, was conducted in the governorate of Sousse between 2010 and 2014. It involved an intervention group (Sousse-Jawhara and Sousse-Erriadh) and a control group (M'saken). The sample of participants in both groups was representative. Actions promoting physical activity, healthy diet, and smoking cessation in the workplace were included in this intervention. The participants' socio-demographic characteristics and data concerning the risk factors were collected through interviews using a pretested questionnaire. The clustering of tobacco use, physical inactivity, unhealthy diet, obesity, and high blood pressure were examined pre- and post-intervention. In the intervention group, the mean risk factors per employee decreased significantly from 1.99 ± 1.00 to 1.81 ± 1.05 ($p < 10^{-3}$). A minor non-significant increase, from 1.72 ± 0.97 to 1.78 ± 1.11 , was noted in the control group. In the intervention group, the prevalence of two risk factor clusters dropped significantly from 40% to 34.4% pre- and post-intervention ($p = 0.014$). However, a non-significant decline was noted in the control group. Combinations such as obesity/hypertension and unhealthy diet/physical inactivity tended to aggregate in both groups. Overall, the intervention program showed significant protective effects in reducing the co-occurrence of multiple risk factors in the intervention group, with an adjusted OR of 0.81; CI95% [0.68-0.97]. Along with the existing literature, the present study confirmed the feasibility and effectiveness of health promotion programs in reducing non-communicable disease risk factors and their clustering. Integrating this intervention program into a national health policy could potentially generalize its positive impact.

Guesmi et al. 2025.

PLoS One, vol. 20, no. 2.

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Keywords: Non-communicable disease; risk; intervention.

Evidence Level: 3B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0317460>

Cancer mortality and sectors of employment: A cohort study in Italy

Background: Cancer is a multifactorial disease. The large impact of occupational exposure on the burden of cancer continues to be a paramount public health concern that deserves more attention. The study aims to evaluate cancer-specific mortality risk in relation to sectors of employment. **Methods:** We used a cohort from the Rome Longitudinal Study (ROL) and linked it with the National Social Insurance Agency (INPS) database to obtain working histories. We considered the longest duration of employment in a sector as a proxy of exposure, and insurance activities as the reference category. A Cox regression adjusted model was used to examine the associations between cancer-specific causes of death and the sector of employment in men and women. A similar analysis was performed considering the length of employment (≤ 10 years versus ≥ 10 years). **Results:** The study population comprised 910,559 (52% of the total population of the cohort after linkage with INPS) 30 + yr employees (53% men and 47% women) followed for a total period of approximately 7 million years. The outcomes confirmed some well-known associations (e.g. lung and pleura in construction, pleura in paper and printing, and lung in wood and leather) and suggested possible high-risk sectors that have not yet been thoroughly investigated. In men we observed an increased mortality risk for stomach cancer in the printing and paper industry (HR = 1.69, 95% CI:1.11-2.57) as well as for stomach and lung cancer in cleaning activities (HR = 1.98, 95% CI:1.13-3.49 and HR = 1.55, 95% CI:1.22-1.98, respectively). Among women, there was an elevated mortality risk in the cleaning industry for all malignant cancers (HR = 1.15, 95% CI:1.03-1.29), liver cancer (HR = 1.94, 95% CI:1.08-3.48) and cancer of the lympho-hematopoietic tissue (HR = 1.65, 95% CI:1.09-2.50). **Conclusions:** The results showed an increased risk of cancer death in some traditional industrial sectors compared to the reference category of insurance activities such as construction and wood and leather products and limited evidence in sectors like cleaning,

accommodation and food services and hairdressing. The adopted method proved to be effective in monitoring occupational risks and activating proper prevention initiatives and further insights.

Massari et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Administrative data; hazard ratio; occupational epidemiology; routinely collected health data; social security statistics; work-related cancer.

Evidence Level: 4B

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21328-z>

Incidence of type 2 diabetes and metabolic syndrome by Occupation: 10-Year follow-up of the Gutenberg Health Study

Background: In view of demographic change, rising retirement age, and a growing shortage of skilled workers, it is increasingly important to prevent widespread diseases such as type 2 diabetes or its risk factor metabolic syndrome. Since the workplace is an important setting for preventive measures and little is known about incident cases in the working population, the aim of this study was to identify vulnerable occupational groups for whom these interventions are particularly appropriate. Therefore, we investigated the 10-year incidence of type 2 diabetes and metabolic syndrome across occupational groups in Germany.

Methods: Employees of the population-based Gutenberg-Health-Study (GHS) were examined at baseline (2007-2012) and 10 years later. We calculated age- and sex-standardised incidence rates and standardised incidence ratios (SIR) with a 95% confidence interval (CI) for occupations, job complexity levels, and supervisory and managerial positions. 5954 persons at risk for type 2 diabetes and 5103 at risk for metabolic syndrome were observed. **Results:** Between baseline and follow-up, 388 cases of type 2 diabetes and 1104 cases of metabolic syndrome occurred, and standardised incidences were 6.9% and 22.6%, respectively. The highest incidence of type 2 diabetes was observed in the occupational group "food production and processing" (20.7%) with a threefold increased incidence (SIR = 3.0, 95% CI 1.8-4.7) compared to the total working population of the GHS. Employees in "metal production, processing and construction" had the highest incidence of metabolic syndrome and a two times higher SIR (48.5%; SIR = 2.1, 95% CI 1.4-2.9). There was also a high incidence of both type 2 diabetes and metabolic syndrome in "cleaners" (16.5% and 34.8%) and "drivers and mobile plant operators" (14.8% and 41.2%). An increased incidence of type 2 diabetes and metabolic syndrome was observed with decreasing job complexity levels. **Conclusions:** This study shows wide differences in the incidence of type 2 diabetes and metabolic syndrome between occupational groups and highlights the vulnerability of certain occupations. As the workplace is an important platform for interventions, the findings of this study could guide the development of more nuanced and effective workplace health initiatives to promote a healthier workforce for the future.

Bauer et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Cardiometabolic; epidemiology; incidence; longitudinal; metabolic syndrome; occupation; population-based; prevalence; prevention; type 2 diabetes.

Evidence Level: 4B

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21732-5>

Voluntary HIV testing and counselling initiatives in occupational settings: A scoping review

Voluntary HIV testing and counselling (VCT) in the workplace could reach population groups who may be at risk for HIV but may not readily seek out testing from other services. We conducted a scoping review to understand (a) the nature of evidence related to initiatives and interventions for vocationally active adults on VCT in occupational settings, and (b) any facilitators and barriers to the delivery of and/or engagement with VCT initiatives/interventions in the workplace. JBI scoping review methodology was followed. The protocol was pre-registered. Included studies focused on vocationally active adults (population), VCT interventions or initiatives (concept), and workplaces in any sector or country (context). The review included studies published after 2000, in English, and of any research design. Studies relating to mandatory

workplace HIV screening were excluded. MEDLINE, CINAHL, Scopus, PsycINFO, and the Cochrane Central Register of Control Trials were searched. Sources of grey literature included Google Scholar and governmental and organisational websites. One reviewer screened titles and abstracts; a second reviewer independently screened 10%. Data extraction utilised a modified JBI data extraction tool. We identified 17 studies reporting on 12 workplace VCT interventions (20,985 participants, 15-70 years). Studies were conducted in eight countries between 2001 and 2022. Interventions were delivered in organisations of different types, sizes and sectors. Testing included rapid blood tests and oral fluid self-tests. Where reported, the average on-site HIV testing uptake rate was 63%, and the average linkage to care rate was 86.85%. Views of workers, employers and service providers were largely positive. Barriers included being male, masculinity-driven workplace culture, HIV-related stigma, poor knowledge, low risk perceptions, lack of time and low support. Facilitators included on-site testing for convenience and accessibility, rapid and free tests, organisational, managerial and peer support, and embedding HIV tests within general health checks. Evaluation methods varied, although randomised trial designs were uncommon. Despite the limited number of studies, the workplace appears to be a viable route to the delivery of community-based VCT, albeit barriers should be addressed. Reporting quality of interventions and associated evaluations is variable and could be improved with the use of appropriate checklists.

Blake et al. 2025.

International Journal of Environmental Research, vol.22 , no. 2.

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Keywords: HIV testing; human immunodeficiency virus; occupational settings; public health; scoping review; voluntary HIV testing and counselling; workplace.

Evidence Level: 1A

Link: <https://www.mdpi.com/1660-4601/22/2/263>

Sleep-related breathing disorder in a Japanese occupational population and its association with exercise-induced blood pressure elevation

Sleep-related breathing disorder (SRBD) and exercise-induced blood pressure (BP) elevation are known risk factors for hypertension. However, the relation between them remains unknown. This cross-sectional study examined the relationship between SRBD and exercise-induced BP elevation in a Japanese occupational population. Using the 3% oxygen desaturation index (3%ODI) obtained by a portable monitor for overnight saturation of percutaneous oxygen (SpO₂), participants were classified into low ($0 \leq 3\%ODI < 5$), medium ($5 \leq 3\%ODI < 15$), and high ($15 \leq 3\%ODI$) 3%ODI groups. We included employees who had undergone an exercise electrocardiogram test after monitoring for overnight SpO₂. In total, 928 employees were included. The median age of the participants was 50 years, 96% were male, the mean body mass index was 23.9 ± 3.1 kg/m², and the median 3%ODI was 4.9 (interquartile range: 1.6-6.5). Among them, 30% and 5% were categorized into the medium and high 3%ODI groups, respectively. At a median exercise intensity of 10.1 METs, BP changed from $124 \pm 16/76 \pm 12$ mmHg before to $183 \pm 26/85 \pm 14$ mmHg after exercise, with a mean systolic BP change of $+59 \pm 23$ mmHg (-20 to +128 mmHg). When we defined systolic BP change of +60 mmHg or more as exercise-induced BP elevation, the odds ratio for exercise-induced BP elevation increased significantly with higher 3%ODI levels after multivariate adjustment for parameters including current use of antihypertensive medication and maximal exercise intensity (p for trend = 0.01). Higher 3%ODI was significantly associated with higher prevalence of exercise-induced BP elevation, suggesting sympathetic hyperactivity occurs in SRBD patients. Our results suggest the potential presence of SRBD should be considered in individuals with exercise-induced BP elevation.

Inoue et al. 2025.

Hypertension Research, vol. 48, no. 2.

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Keywords: Exercise-induced hypertension; Sleep-related breathing disorder; Sympathetic hyperactivity.

Evidence Level: 4B

Link: <https://www.nature.com/articles/s41440-024-02050-6>

An explanation interface for healthy food recommendations in a real-life workplace deployment: User-centered design study

Background: Despite widespread awareness of healthy eating principles, many individuals struggle to translate this knowledge into consistent, sustainable dietary change. Food recommender systems, increasingly used in various settings, offer the potential for personalized guidance and behavior change support. However, traditional approaches may prioritize user preferences or popularity metrics without sufficiently considering long-term nutritional goals. This can inadvertently reinforce unhealthy eating patterns. Emerging research suggests that incorporating explanations into recommender systems can increase transparency, promote informed decision-making, and potentially influence food choices. Yet, the effectiveness of explanations in promoting healthy choices within complex, real-world food environments remain largely unexplored. **Objective:** This study aims to investigate the design, implementation, and preliminary evaluation of a food recommender system that integrates explanations in a real-world food catering application. We seek to understand how such a system can promote healthy choices while addressing the inherent tensions between user control, meal variety, and the need for nutritionally sound recommendations. Specifically, our objectives are to (1) identify and prioritize key design considerations for food recommenders that balance personalization, nutritional guidance, and user experience; and (2) conduct a proof-of-principle study in a real-life setting to assess the system's effect on user understanding, trust, and potentially on dietary choices. **Methods:** An iterative, user-centered design process guided the development and refinement of the system across 4 phases: (Phase 0) an exploratory qualitative study (N=26) to understand stakeholder needs and initial system impressions, (Phases 1 and 2) rapid prototyping in real-life deployments (N=45 and N=16, respectively) to iteratively improve usability and features, and (Phase 3) a proof-of-principle study with employees (N=136) to evaluate a set of design goals. We collected a mix of data, including usage logs, pre- and post-study questionnaires, in-app feedback, and a pre- and post-Food Frequency Questionnaire to establish nutritional profiles. **Results:** Although we experienced a high drop-out (77% after 7 weeks), motivated and remaining participants valued personalization features, particularly the ability to configure allergies and lifestyle preferences. Explanations increased understanding of recommendations and created a sense of control, even when preferences and healthy options did not fully align. However, a mismatch persisted between individual preferences and nutritionally optimal recommendations. This highlights the design challenge of balancing user control, meal variety, and the promotion of healthy eating. **Conclusions:** Integrating explanations into personalized food recommender systems might be promising for supporting healthier food choices and creating a more informed understanding of dietary patterns. Our findings could highlight the importance of balancing user control with both the practical limitations of food service settings and the need for nutritionally sound recommendations. While fully resolving the tension between immediate preferences and long-term health goals is an ongoing challenge, explanations can play a crucial role in promoting more conscious decision-making.

De Croon et al. 2025.

JMIR mHealth and uHealth, vol. 13.

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Keywords: Food catering; food recommender systems; healthy eating; human-computer interaction; meal recommendations; nutritional profile; personalized nutrition; real-life deployment; transparency.

Evidence Level: 5B

Link: <https://mhealth.jmir.org/2025/1/e51271>

The effect of job stress on fertility, its intention, and infertility treatment among the workers: A systematic review

Introduction: The effect of job stress on childbearing is an important but less known consequence. Three important agents for childbearing include fertility, its intention, and infertility treatment. The adverse effect of job stress on these agents remains controversial. Therefore, this systematic review study aimed to investigate the effect of job stress on them. **Methods:** Four electronic bibliographic databases, including Scopus, PubMed, Web of Science, and Embase were systematically searched up to 25 November 2023. The combinations of three groups of keywords were used. The first group of keywords included "job", "occup*",

work, and indust* and the second group consisted of stress, distress, and strain. The third group of keywords comprised pregnancy rate, fertility, infertility, fecundability, and childlessness. Then, the articles were screened by researchers. In the next step, the researchers extracted the information from the selected papers. To assess their quality, critical appraisal tools of the Joanna Briggs Institute (JBI) were used. **Results:** Sixteen papers were entered into this study. Based on the results, job stress showed significant associations in 5 out of 8 studies on fertility, 3 out of 3 studies on fertility intention, and 6 out of 8 studies on infertility treatment process. Some probable mechanisms include the physiological effects of job stress on fertility, the effect of changed behavioral habits due to job stress on fertility, the psychological effects of job stress on fertility intention, and the effect of job stress on the infertility treatment process. **Conclusions:** The results showed that job stress may affect fertility, its intention, and the infertility treatment process among people. Therefore, it is required that necessary measures are planned and performed to decrease job stress and strain in workplaces.

Dehkordi et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Fertility; fertility intention; infertility treatment; job stress; work.

Evidence Level: 1A

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21790-9>

Fathers' work leave and infant breastfeeding in a stat: Representative sample of fathers in Georgia, United States

Background: Breastfeeding provides multiple maternal and child benefits, but breastfeeding rates are suboptimal. Parental leave access and use have been associated with higher breastfeeding rates, however, there have been a lack of studies examining fathers' use of parental leave. The objective of this study was to measure the associations between fathers' work leave and infant breastfeeding among a representative sample of fathers from Georgia, United States. **Methods:** This cross-sectional study used data from a novel public health surveillance pilot study, the Pregnancy Risk Assessment Monitoring System (PRAMS) for Dads. We tested the association between leave (paid leave [yes/no] and leave length [≥ 2 weeks or < 2 weeks] with 1) breastfeeding initiation and 2) breastfeeding at 8 weeks using multivariable logistic regression adjusting for paternal, maternal, and infant characteristics. **Results:** Among the 240 (92.3%) employed fathers, 172 (73.4%) reported taking leave (paid or unpaid) after their infant's birth. Among fathers who took leave, median leave length was 2 weeks. White fathers had a higher percentage of paid leave use compared to other racial and ethnic groups ($p < .001$). Fathers who took paid leave were more likely to report taking leave ≥ 2 weeks ($p < .001$). In adjusted models, fathers who took ≥ 2 weeks of leave reported higher rates of infant breastfeeding at 8 weeks (79.3% vs. 60.5%; aPR [adjusted prevalence ratio] = 1.31; 95% CI, 1.09-1.57) compared with those who took < 2 weeks of leave. There was no association detected between breastfeeding at 8 weeks and paid leave (aPR = 1.06; 95% CI, 0.85-1.33). **Conclusions:** This study adds to the growing evidence linking fathers' work leave with family benefits, namely improved breastfeeding duration, which has important workplace and health policy considerations for the use and availability of parental leave for fathers.

Parker et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Breastfeeding; family health; fathers; infant health; maternal health; parental leave; paternity leave.

Evidence Level: 4B

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-22013-x>

Work Health and Safety

Working behaviors and the risk of sensorineural hearing loss: A large cohort study

Objectives: This study aimed to investigate the association between working behaviors and sensorineural hearing loss (SNHL). **Methods:** A cross-sectional analysis was conducted (N=90 286) to assess the association between working behaviors (including shift work, night shift work and physically demanding work) and the occurrence (yes/no), laterality (unilateral/bilateral), and severity (mild/severe) of SNHL. A prospective analysis was conducted to explore the association between new-onset SNHL and working behaviors (N=8341). Multivariable logistic regression and Cox regression models were performed. Subgroup analyses were further carried out, stratified by age, sex, and chronotype. Furthermore, a polygenic risk score (PRS) was calculated to assess the influence of genetic susceptibility on the relationship. **Results:** Cross-sectional analysis indicated that shift work, night shift work and physically demanding work were all associated with an increased risk of SNHL (all $P < 0.05$). These working behaviors were also associated with increased severity of SNHL (all $P < 0.05$) and a higher likelihood of bilateral SNHL (all $P < 0.05$). In prospective studies, the trends were generally consistent with the aforementioned results. Furthermore, the relationship between night shift work and SNHL was particularly pronounced among individuals with morning chronotype (P -interaction=0.007), or with ≤ 5 years noisy work environments (P -interaction=0.026). Importantly, regardless of the level of genetic risk of PRS, a positive association remained between night shift work and physically demanding work with SNHL. **Conclusions:** Both cross-sectional and prospective analysis indicated that shift work, night shift work, and physically demanding work were associated with increased risk of occurrence, laterality and severity of SNHL, regardless of PRS for SHNL.

Pang et al. 2025.

Scandinavian Journal of Work, Environment and Health, vol. 51, no. 2.

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Keywords: Sensorineural hearing loss; work; behaviour.

Evidence Level: 4B

Link: <https://www.sjweh.fi/article/4209>

How should we manage fatigue in on-call workers? A review of guidance materials and a systematic review of the evidence-base

A On-call work is known to contribute to disrupted sleep, fatigue, and an increased risk of incident or injury. This review aimed to a) identify current on-call management strategies that are suggested or required by regulatory bodies, and b) determine if there is empirical evidence to support these strategies in managing the fatigue of on-call workers. A grey literature search produced 65 relevant guidance materials. A systematic inductive thematic process identified consistent strategies included in these materials: 1) regularity/predictability of shifts, 2) fatigue management policy, 3) prescriptive rule sets, 4) fitness for work assessment, 5) on-the-day control measures, 6) risk assessment, 7) training and education, and 8) call management. Subsequently, a systematic review identified 17 original studies on the effectiveness of fatigue management strategies in on-call workers. Very little research has been done on fatigue management strategies for on-call workers outside of some prescriptive hours of work limitations. These limitations generally reduced fatigue, but often had the unintended consequence of increasing workload, which may inadvertently increase overall risk. Training, education, and call management (e.g., protected naps during on-call periods) also had some supporting evidence. The current gap in evidence emphasises the critical need for research on tailored on-call fatigue management strategies.

Bumpstead et al. 2025.

Sleep Medicine Reviews, vol. 79,

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Keywords: Fatigue management; on-call work; risk; safety; sleep.

Evidence Level: 1A

Link: <https://www.sciencedirect.com/science/article/pii/S1087079224001163?via%3Dihub>

Exploring the economic occupational health, safety, and fatal accidents in high-risk industries

Despite advancements in occupational health and safety (OHS) management, high-risk industries in China continue to report a significant number of fatal accidents, underscoring systemic challenges in protecting the well-being of workers while supporting economic development. This study analyzed 22 years of historical data on OHS incidents, labor dynamics, and economic growth in China's high-risk industries via multiple regression and network analysis methods. The findings reveal hierarchical influence relationships, with coal mine fatalities emerging as critical upstream factors and transportation fatalities and national labor force dynamics emerging as key downstream factors. Notably, the study reveals a negative correlation between GDP and fatal workplace incidents: for every 0.461 trillion CNY increase in GDP, production safety accident deaths decrease by one. Conversely, each safety accident resulted in 1.052 coal mine fatalities and 0.153 cases of occupational disease. These results offer a novel quantitative perspective on the interplay between economic growth and workplace safety. The study's models provide practical guidance for enhancing the effectiveness of OHS prevention and control efforts, contributing to sustainable economic and public health outcomes.

Cao et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Cytoscape; economic relationship; fatal accidents; high-risk industries; multiple regression; network analysis; Occupational health and safety (OHS).

Evidence Level: 4B

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21583-0>

Evaluating the effectiveness of an occupational health and safety management system certification program on firm work injury rates in Alberta, Canada

Background: Occupational health and safety management systems (OHSMS) certification programs have the potential to improve workplace health and safety. In Canada, the Certificate of Recognition (COR) program is an example of such program and has been introduced in many industries and provinces. This study's objective was to identify whether the implementation of the COR program led to greater reduction in firm work-related injuries in Alberta, Canada. **Methods:** Using firm- and claim-level data from the Workers' Compensation Board of Alberta and COR registration data from Government of Alberta, the effect of becoming COR-certified on firm-level injury rates was assessed using a matched difference-in-differences study design with population-averaged negative binomial regression models. **Results:** A total of 14,377 certified firms were matched with 11,338 non-certified firms during the years 2000 to 2015. Firms that became certified had a greater reduction in the lost-time injury rate (IRR: 0.86, 95% CI 0.83-0.88) and disabling injury rate (IRR 0.97, 95% CI 0.94-1.00) relative to the change in injury rates among similar non-certified firms. The effectiveness of OHSMS certification was strongest in the transportation, manufacturing and trade sectors, in more recent years, and among firms certified using the standard COR program as opposed to the program adapted for small employers. **Conclusions:** The findings suggest that COR can be an effective program, but that the effectiveness of this program is dependent on the context in which it is implemented, such as the industry sector, time period, and type of audit program.

McLeod et al. 2025.

American Journal of Industrial Medicine, vol. 68, no. 2.

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Keywords: Alberta; Canada; certification; intervention; occupational health and safety management systems; work injury.

Evidence Level: 4B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/ajim.23690>

Diagnosing and reporting of occupational diseases: An assessment study of reports from an Italian workplace safety prevention program service

Background: The criteria for diagnosing and compensating for occupational diseases vary significantly between countries. The lists of occupational diseases often include diagnostic and attribution criteria that

are usually not very specific. As a result, the quality of occupational disease reports is frequently subpar. The aims of this study were to assess the quality of diagnosis and reporting, as well as to evaluate the causal link between reported occupational diseases and occupational risk factors. **Methods:** Four occupational physicians assessed the quality of diagnosis by blindly applying Spreeuwers' performance indicators for diagnosis and reporting. Following Violante's criteria, the four evaluators also tested the levels of evidence to evaluate the quality (and associated likelihood) of the diagnosis and the quality of exposure to occupational risk factors in a sample of 104 occupational disease reports, grouped by diagnosis and examined by the local Workplace Safety Prevention Service. Separate scores for each performance indicator and the Total Quality Score (TQS, ranging from 0 to 10), along with the progressive levels of evidence, were then assigned for each occupational disease report. **Results:** The mean TQS was below the threshold of sufficiency (<6) for 28% of the diagnoses, while an almost sufficient score (>6) emerged for 72% of the diagnoses, primarily including musculoskeletal disorders, pulmonary silicosis, and noise-induced occupational hearing loss. When applying Violante's criteria for the level of evidence of the diagnosis, it was insufficient for 13.5% of the reported cases, while the level of evidence for exposure to occupational risk factors was deemed insufficient for 19% of the cases, and no cases demonstrated a level of evidence that was highly probable or nearly certain. **Conclusions:** Despite the overall quality of the reported cases of occupational diseases being reasonably good, improvements in the quality of diagnosis and reporting could be achieved through strict adherence to standardized diagnostic criteria and by training health personnel to collect data regarding occupational and non-occupational risk factors properly.

Lecca et al. 2025.

La Medicina de Lavoro, vol. 116, no. 1.

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Keywords: Occupational disease; reporting; diagnosis.

Evidence Level: 5B

Link: <https://www.mattioli1885journals.com/index.php/lamedicinadellavoro/article/view/16609>

Assessment of computer vision syndrome and associated factors among employees of Ethio-telecom in Addis Ababa, Ethiopia

Background: Computer vision syndrome refers to a range of eye and vision-related problems which may result from extended use of digital devices such as computers. It is a public health problem, affecting more than 70% of all computer users. In developing countries like Ethiopia, there is scarcity of studies on computer vision syndrome, particularly in the telecom industry making evidence-based interventions difficult. Hence, the study aims to identify the determinants and the prevalence of computer vision syndrome among Ethio telecom workers in Addis Ababa, Ethiopia. **Objectives:** This study aimed to determine the prevalence of CVS and identify its factors among Ethio telecom workers in Addis Ababa, Ethiopia. **Methods:** Institution-based cross-sectional study was conducted among Ethio telecom employees in Addis Ababa, Ethiopia from March to June 2023. A total of 497 individuals participated in the study. Data were collected using an interviewer-administered questionnaire through Kobo Toolbox, observational checklist and an illuminance measuring instrument. The data were transferred to Statistical Package for the Social Sciences (SPSS) version 26 for analysis. Multivariable logistic regression was performed to assess the association and control for potential confounders. **Results:** The prevalence of CVS among Ethio telecom workers was 68.8% (95% CI: 64.5-72.9). Significant associations were observed with viewing distance <50 cm (AOR: 2.32, 95% CI: 1.24-4.33), improper task illumination (AOR: 1.78, 95% CI: 1.09-2.91), habit of taking breaks (AOR: 0.439, 95% CI: 0.281-0.686), and adjustment of brightness and contrast (AOR: 0.39, 95% CI: 0.22-0.68). **Conclusion:** More than two-thirds of Ethio telecom workers in Addis Ababa suffer from CVS, with significant influences from viewing distance, task illumination, breaks, and monitor settings. These findings underscore the need for interventions to enhance working conditions and reduce CVS prevalence among computer users.

Gizachew et al. 2025.

Frontiers in Public Health, vol. 13.

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Keywords: Addis Ababa; Ethio telecom workers; Ethiopia; computer vision syndrome; determinants; prevalence; task illumination; viewing distance.

Evidence Level: 4B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2025.1524173/full>

Workplace injury and death: A national overview of changing trends by sex, United States 1998-2022

Women represent a substantial portion of the US workforce. However, injury and fatality rates for female workers have, historically, remained lower than rates for male workers. Fatal occupational data from the Census of Fatal Occupational Injuries (CFOI) and nonfatal injury data from the National Electronic Injury Surveillance System-Occupational Supplement (NEISS-Work) for the years 1998-2022 were examined to produce rate ratios of male to female fatal and nonfatal occupational injury rates for all workers in the United States. Auto-regressive linear models were developed to analyze rate ratios by sex for fatal and nonfatal occupational injuries by age group, injury event, and select industries to determine if female occupational fatal and nonfatal injury rates were following trends comparable to male rates. Over the 25-year study period, male injury and fatality rates were consistently higher than females. Occupational fatality rates for males were more than nine times higher than female rates, and for nonfatal occupational injuries, male rates were 1.4 times higher than female rates. These analyses indicate that the differences in nonfatal injury rates by sex may be attenuating, however, the large gap by sex in workplace fatalities has remained unchanged. Occupational safety and health research with a more specific focus on these sex differences is needed to gain a clearer understanding of how sex differences affect hiring, job training, task assignment and completion, and injury risk, to identify areas where prevention efforts could be most successful.

Hendricks et al. 2025.

American Journal of Industrial Medicine, vol. 68, no. 2.

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Keywords: Occupational fatalities; occupational injury; rate ratios; sex; trends.

Evidence Level: 4B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/ajim.23687>

Chronic Health Issues

Patterns of sick leave and unemployment prior to a diagnosis of young onset Alzheimer's disease

Introduction: Early symptoms in young onset Alzheimer's disease (YOAD) may be misinterpreted, causing delayed diagnosis. This population-based study aimed to map adverse occupational events preceding YOAD diagnosis as potential prodromal signs. **Methods:** In a register-based, incidence density matched nested case-control study, we examined unemployment and long-term sick leave among individuals diagnosed with YOAD in Danish memory clinics between 2016 and 2022 compared to controls over a 13-year period. Conditional logistic regression produced incidence rate ratios (IRRs). **Results:** The study included 2434 cases and 12,170 controls. YOAD patients had higher rates of adverse occupational events, particularly long-term sick leave, starting from 8 years before diagnosis (IRR 1.40, 95% confidence interval [CI] 1.07-1.84) and increasing to an IRR of 29.59 (95% CI 18.97-46.13) in the year before diagnosis. **Discussion:** Adverse occupational events may serve as warning signs of YOAD. Timely diagnosis could facilitate restructuring the remaining working life to accommodate cognitive deficits or in seeking a disability pension. **Highlights:** This is a retrospective, nested case-control study of young onset Alzheimer's disease (YOAD). Unemployment rates rise significantly 5 years before the YOAD diagnosis. Long-term sick leave rates rise significantly 8 years before the YOAD diagnosis. This emphasizes the importance of occupational history in the timely diagnosis of YOAD. Findings suggest the need for earlier YOAD diagnosis for work-life management.

Damsgaard et al. 2025.

Alzheimers and Dementia, vol. 21, no. 2.

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Keywords: Alzheimer's disease; epidemiology; occupation; registry-based; warning signs; young onset dementia.

Evidence Level: 4B

Link: <https://alz-journals.onlinelibrary.wiley.com/doi/10.1002/alz.14607>

Work-related experiences and unmet needs of patients with a malignant glioma and relevant professionals: The BrainWork study

Purpose: Many patients with a malignant (i.e., grade II-IV) glioma are of working age, yet they are rarely included in "cancer and work" studies. Here, we explored (1) the work-related experiences and unmet needs of patients with a malignant glioma and (2) the experiences and needs of relevant healthcare and occupational (health) professionals ("professionals") in providing work-related support to this patient group. **Methods:** Individual semi-structured interviews were held with patients with a malignant glioma who were of working age and had an employment contract at diagnosis, and relevant professionals. Interviews were transcribed verbatim and analysed thematically. **Results:** Patients (n = 22) were on average 46 ± 13 years of age (64% male) and diagnosed with a grade II (n = 12), III (n = 4), or IV glioma (n = 6). Professionals (n = 16) had on average 15 ± 9 years of relevant work experience with the patient group. Four themes emerged from the data: (1) having a malignant glioma: experienced consequences on work ability, (2) communicating about the consequences of a malignant glioma at work, (3) distilling the right approach: generic or tailored work-related support, and (4) accessibility of work-related support. **Conclusions:** Glioma-specific consequences on patients' work ability necessitate better communication between, and tailored guidance for, patients, relevant professionals, and the workplace. Suggestions for improvement, e.g., the periodic use of comprehensive neuropsychological assessments, are provided in the article. **Implications for cancer survivors:** Patients with a malignant glioma would benefit from tailored and proactive outreach about work-related issues by relevant professionals.

Zegers et al. 2025.

Journal of Cancer Survivorship, vol. 19, no. 1.

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Keywords: Cancer; glioma; healthcare professional; patient; qualitative; return to work.

Evidence Level: 5B

Link: <https://link.springer.com/article/10.1007/s11764-023-01469-z>

'Stuck in catch-22': A qualitative study of perceived work ability and decision-making about employment in severe asthma

Background: Severe asthma (SA) is characterised by persistent asthma symptomatology despite adherence to intensive treatment and control of asthma triggers. It is estimated that approximately 50% of individuals with SA have current employment, considerably less than rates in the general population. Poor physical and mental health status have been suggested as a potential explanation for this, but the relationship has not been investigated in depth. We investigated how bio-psycho-social and cultural factors influence work ability and employment in SA patients. **Methods:** Participants were recruited from the Birmingham Regional NHS Severe Asthma Service via opportunity sampling, with the exclusion criteria being individuals who had never been employed, currently in full-time education, or non-English speakers. Subsequently, men and those with minority-ethnic backgrounds were purposefully selected to gain a balanced sample. Interviews were performed either face-to-face, online or via telephone, transcribed using software and edited manually. Data were analysed using Reflexive Thematic Analysis. **Results:** The study included 12 participants (9 females and 3 males). Four major themes were constructed: impact of patients' asthma control on work, psychological burden of living with SA, costs and benefits of being in employment, and adaptations and strategies for remaining in employment. **Conclusions:** Our findings highlight the potential for physical, occupational, psychological, and social support to address the diverse job-related difficulties experienced by people with SA. Additionally, national policy reforms should be considered to improve work capacity and promote employment opportunities.

Mackiewicz et al. 2025.

BMC Pulmonary Medicine, vol. 25, no. 1.

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Keywords: Employment; severe asthma (SA); work ability.

Evidence Level: 5B

Link: <https://bmcpulmed.biomedcentral.com/articles/10.1186/s12890-025-03499-y>

Evaluation and application of the Work-Related Asthma Screening Questionnaire: Long version (WRASQ[L])

Background: The Work-related Asthma (WRA) Screening Questionnaire-Long Version (WRASQ(L)) is a screening questionnaire that could improve the recognition of WRA. **Objective:** To conduct a definitive evaluation of the WRASQ(L) to justify its implementation in clinical settings. **Methods:** Employed adults aged 18 to 75 years with asthma confirmed by objective measures and the ability to take time off work were eligible. Participants completed the WRASQ(L) and then monitored their peak expiratory flow at and away from work or completed a specific inhalation challenge test. Data were classified as WRA or non-WRA by 2 asthma specialists, blinded to WRASQ(L) answers. Sensitivity (SN), specificity (SP), positive and negative predictive values (PPV and NPV, respectively), and Youden's index were calculated for cutoffs of a positive screen. **Results:** Of 106 participants (47.1 ± 7.1 years [mean ± standard deviation]; 60 [57%] female), 14 (17%) were classified as having WRA and were significantly younger in age than non-WRA participants ($P = .043$). The questionnaire has high SN and NPV (90.9% and 93.1%, respectively) but low PPV and SP (32.1% and 26.0%, respectively). **Conclusions:** The WRASQ(L) has high SN and NPV. High SN is of primary interest to ensure that few false-negative screens are missed and those with potential WRA are identified and continue to specialist care. The SN indicates utility of the questionnaire in clinical settings. Further benefits of the tool include its potential to prompt education on the symptom-workplace relationship, workplace exposures, personal protective equipment use, and collect exposure and occupational history.

MacKinnon et al. 2025.

Journal of Allergy and Clinical Immunology, vol. 13, no. 2.

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Keywords: Asthma; occupation; occupational asthma; primary care; screening; work; work-aggravated; work-related.

Evidence Level: 5B

Link: [https://www.jaci-inpractice.org/article/S2213-2198\(24\)01066-3/fulltext](https://www.jaci-inpractice.org/article/S2213-2198(24)01066-3/fulltext)

Occupational Exposure

Asbestos exposure, pleural plaques and digestive cancers

Background: The aim of this study was to analyse the incidence and mortality from various digestive cancer sites and their potential link with pleural plaques, in a French cohort of workers previously occupationally exposed to asbestos. **Methods:** We conducted a 10-year follow-up study in 13,481 male subjects, included in the cohort between October 2003 and December 2005, for whom asbestos exposure was assessed by calculation of a cumulative exposure index (CEI) in equivalent fibres.years/mL for each subject. We conducted an incidence study and a mortality study. Complementary analysis was restricted to men who had performed at least one chest CT-scan ($N = 4,794$). We used a Cox model with age as the time axis variable, adjusted for smoking, time since first exposure (TSFE), CEI to asbestos and the existence of pleural plaques on CT-scan. **Results:** In the incidence study, a significant dose-response relationship was observed between CEI to asbestos and oesophageal cancer (HR 1.03, 95% CI [1.01-1.06]) in the entire cohort after adjustment for TSFE and smoking status. In subjects undergoing CT-scan, a significant association between pleural plaques was observed for oesophageal cancer incidence (HR 2.80, 95% CI [1.09-7.20]) and in the mortality study, multivariate analyses showed a significant dose-effect response between CEI to asbestos and death from oesophageal cancer (HR 1.03, 95% CI [1.00-1.05]) in the entire cohort. **Conclusions:** This large-scale study confirms results concerning a likely relationship between asbestos exposure and oesophageal cancer, and the association between this cancer and pleural plaques after adjustment on CEI to asbestos.

Clin et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Asbestos; cancer; digestive cancer; incidence; mortality; occupational exposure; oesophageal cancer; pleural plaque.

Evidence Level: 4B

Link: <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-025-21969-0>

Occupational exposure to ultrafine particles and lung cancer in a population exposed to asbestos

Background: Ultrafine particles are present in ever greater quantities in the workplace and only one epidemiological study to date has found an association with the occurrence of lung cancer.

Objective: To investigate the effect of occupational exposure to ultrafine particles on the risk of lung cancer. **Methods:** The ARDCO is a surveillance program involving retiree workers who had been exposed to asbestos during their working life. Exposure to ultrafine particles over the complete lifetime occupational history was assessed using the French job exposure matrix MATPUF. Cox proportional hazard models were used to estimate hazard ratios (HRs) and 95% confidence intervals (95% CI). **Results:** There was no association between exposure to ultrafine particles and lung cancer after adjustment for smoking and exposure to asbestos and crystalline silica. **Conclusion:** The findings do not indicate increased risks of lung cancer for UFP after adjustment for level of exposure to asbestos, crystalline silica, and smoking status.

Clinical trial number: Not applicable.

Rostello et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Asbestos; lung cancer; occupational exposures; ultrafine particles.

Evidence Level: 4B

Link: <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-025-22038-2>

In the heat of the moment: The effects of extreme temperatures on the cognitive functioning of firefighters

Exposure to high temperatures can have detrimental effects on cognitive processing and this is concerning for firefighters who routinely work in extreme temperatures. Whilst past research has studied the effects of heat on firefighter cognition, findings are mixed, and no work has measured the time course of cognitive recovery. This study compared working memory, vigilance, and cognitive flexibility of 37 firefighters before and after they engaged in a live-fire training exercise with temperatures exceeding 115 °C. To assess recovery, cognition was measured on exiting the fire, then 20- and 40-minutes post-fire. Results showed impaired vigilance and cognitive flexibility (increased errors, slower responses) immediately after the fire, but recovery at 20-minutes. These findings indicate that a live indoor fire negatively impacts cognitive processing, but this effect is relatively short-lived and return to baseline functioning is seen 20-minutes after exiting the fire. The findings could be used to inform re-entry and cooling decisions.

Thompson et al. 2025.

Ergonomics, vol. 68, no. 2.

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Keywords: Heat stress; cognitive flexibility; firefighters; vigilance.

Evidence Level: 5B

Link: <https://salford-repository.worktribe.com/output/2585377/in-the-heat-of-the-moment-the-effects-of-extreme-temperatures-on-the-cognitive-functioning-of-firefighters>

Occupational diesel exposure and brain tumors: A systematic review and meta-analysis

Diesel exhaust (DE) is recognized as a carcinogen for the lungs, although evidence linking it to adult brain tumors is limited. We aimed to systematically review the evidence regarding the association between occupational DE exposure and adult brain and other central nervous system (CNS) tumors. A systematic literature review was conducted to identify cohort studies on occupational DE exposure and the risk of

adult cancers other than lung cancer. We meta-analyzed relative risks (RRs) and 95% confidence intervals (CIs) for brain or CNS tumors using the DerSimonian and Laird random-effects model. Fourteen studies were included in the meta-analysis. The results showed no increased risk of brain or CNS tumors among workers exposed to DE (RR: 0.99; 95% CI: 0.91, 1.07). Findings were consistent when analyzing studies based on incidence (RR: 0.96; 95% CI: 0.90, 1.03; six studies) and mortality (RR: 1.09; 95% CI: 0.87, 1.37; nine studies) separately, as well as in subgroup analyses based on sex, publication year, geographic region, and study quality score. No evidence of publication bias was found ($p=0.244$). The findings of our meta-analysis suggest that occupational DE exposure is not associated with adult brain or CNS tumors. Given the limitations of the included studies, these results should be interpreted with caution.

Sassano et al. 2025.

La Medicina del Lavoro, vol. 116, no. 1.

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Keywords: Diesel exposure; brain tumours; occupational.

Evidence Level: 1A

Link: <https://mattioli1885journals.com/index.php/lamedicinadellavoro/article/view/16357>

Occupational exposure to radiofrequency electromagnetic fields and brain tumor risk: Application of the INTEROCC job-exposure matrix

Radiofrequency electromagnetic fields (RF-EMF, 100 kHz to 300 GHz) are classified by IARC as possibly carcinogenic to humans (Group 2B). This study evaluates the potential association between occupational RF-EMF exposure and brain tumor risk, utilizing for the first time, a RF-EMF job-exposure matrix (RF-JEM) developed in the multi-country INTEROCC case-control study. Cumulative and time-weighted average (TWA) occupational RF-EMF exposures were estimated for study participants based on lifetime job histories linked to the RF-JEM using three different methods: (1) by considering RF-EMF intensity among all exposed jobs, (2) by considering RF-EMF intensity among jobs with an exposure prevalence \geq the median exposure prevalence of all exposed jobs, and (3) by considering RF-EMF intensity of jobs of participants who reported RF-EMF source use. Stratified conditional logistic regression models were used, considering various lag periods and exposure time windows defined a priori. Generally, no clear associations were found for glioma or meningioma risk. However, some statistically significant positive associations were observed including in the highest exposure categories for glioma for cumulative and TWA exposure in the 1- to 4-year time window for electric fields (E) in the first JEM application method (odds ratios [ORs] = 1.36, 95% confidence interval [95% CI] 1.08, 1.72 and 1.27, 95% CI 1.01, 1.59, respectively), as well as for meningioma for cumulative exposure in the 5- to 9-year time window for electric fields (E) in the third JEM application method (OR = 2.30, 95% CI 1.11, 4.78). We did not identify convincing associations between occupational RF-EMF exposure and risk of glioma or meningioma.

Turuban et al. 2025.

International Journal of Cancer, vol. 156, no. 3.

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Keywords: INTEROCC; brain tumors; job-exposure matrix; occupational exposure; radiofrequency electromagnetic fields.

Evidence Level: 5B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/ijc.35182>

Health-related quality of life in sarcoidosis patients and the effect of occupational exposures: A cross-sectional study

Background: Health-related quality of life (HRQL) in patients with sarcoidosis has been related to treatment, symptoms, organ involvement and disease severity, but little is known about its association with occupation. The aim was to quantify HRQL in occupationally exposed sarcoidosis patients compared to their nonexposed counterparts. **Methods:** A total of 221 sarcoidosis patients (median age 49 years, interquartile range (IQR) 37-60 years) with a histologically confirmed diagnosis were recruited from university hospitals and outpatient centers in Belarus, Kazakhstan, and the Russian Federation. General

(with SF-8) and specific (with K-BILD) HRQL were compared between patients who were ever exposed to 24 occupational factors and nonexposed patients in adjusted multivariable models. **Results:** Work in the office and office equipment (beta - 3.60 (95% confidence interval (CI) -6.91;-0.29)) was significantly associated with a poorer SF-8 physical component score (PCS) independent of sex, whereas exposure to irritant gases was strongly associated with a worse mental component score (MCS), adjusted for sex and smoking beta - 7.11 (95% CI -12.83;-1.39). Irritant gas (beta - 17.2 (95% CI -29.3;-5.1)) and work in the office (beta - 7.9 (95% CI -14.7;-1.0)) were associated with worse K-BILD total scores, while only the latter was associated with breathlessness and activities (BA) scores. Exposure to flour, irritant gas and office work were associated with the psychological (P) domain. Exposure to flour, irritant gas and work in the office could predict chest symptom (CS) scores. **Conclusions:** In patients with sarcoidosis and occupational exposure, patients may exhibit worse HRQL, but further research is needed to ascertain the interplay of individual and occupational factors.

Vinnikov et al. 2025.

BMC Pulmonary Medicine, vol. 25, no. 1.

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Keywords: Epidemiological; exposure; occupational; questionnaire; risk factors.

Evidence Level: 4B

Link: <https://bmcpulmed.biomedcentral.com/articles/10.1186/s12890-025-03552-w>

Asbestos burden in lungs of subjects deceased from mesothelioma who lived in proximity to an asbestos factory: A Topographic Post-Mortem SEM-EDS Study

Background: Asbestos exposure and its pathological consequences, especially malignant mesothelioma (MM) still represent a major public health problem on a global scale. After the ban of asbestos in most western countries, nonoccupational exposure plays an essential role in MM pathogenesis. However, few studies have quantified asbestos lung burden after environmental exposure. The main objective of this work is to understand if asbestos lung content is different between occupationally and environmentally exposed individuals, and if the distance between the subjects' residences and the source of exposure is significantly associated with the asbestos lung burden. **Methods:** In this retrospective, observational study we quantified, with analytical scanning electron microscopy, asbestos content in lungs of individuals deceased from MM between 2005 and 2019, who were exposed to asbestos (occupationally and/or environmentally) in Broni, a small town in northern Italy where an important asbestos-cement plant operated until 1993. **Results:** We analyzed asbestos lung content of 77 subjects. We found that the asbestos lung content in MM patients who lived around the asbestos factory was as high as that seen in occupationally exposed individuals; this holds true in residents up to 10 km radius from the factory. We found no significant associations between the residence duration/distance ratio and asbestos lung burden. **Conclusions:** This study suggests that heavy asbestos pollution involves not only the area adjacent to the factory, but the entire town of Broni and the surroundings. This is alarming if we consider that most asbestos factories still active in some countries are located close to towns and dwellings.

Visonà et al. 2025.

American Journal of Industrial Medicine, vol. 68, no. 2.

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Keywords: Asbestos; asbestos lung burden; environmental asbestos exposure; environmental epidemiology; scanning electron microscopy.

Evidence Level: 4B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/ajim.23680>

The effect of exposure to radiofrequency fields on cancer risk in the general and working population: A systematic review of human observational studies - Part II: Less researched outcomes

Background: In the framework of the World Health Organization assessment of health effects of exposure to radiofrequency electromagnetic fields (RF-EMF), we have conducted a systematic review of human observational studies on the association between exposure to RF-EMF and risk of neoplastic diseases. Due

to the extremely large number of included exposure types/settings and neoplasm combinations, we decided to present the review findings in two separate papers. In the first one we addressed the most investigated exposure-outcome pairs (e.g. glioma, meningioma, acoustic neuroma in relation to mobile phone use, or risk childhood leukemia in relation to environmental exposure from fixed-site transmitters) (Karipidis et al., 2024). Here, we report on less researched neoplasms, which include lymphohematopoietic system tumours, thyroid cancer and oral cavity/pharynx cancer, in relation to wireless phone use, or occupational RF exposure. **Methods:** Eligibility criteria: We included cohort and case-control studies of neoplasia risks in relation to three types of exposure to RF-EMF: 1. exposure from wireless phone use; 2. environmental exposure from fixed-site transmitters; 3. occupational exposures. In the current paper, we focus on less researched neoplasms including leukaemia, non-Hodgkin's lymphoma and thyroid cancer in mobile phone users; lymphohematopoietic system tumours and oral cavity/pharynx cancer in exposed workers. We focussed on investigations of specific neoplasms in relation to specific exposure sources (termed exposure-outcome pair, abbreviated E-O pairs), noting that a single article may address multiple E-O pairs. **Information sources:** Eligible studies were identified by predefined literature searches through Medline, Embase, and EMF-Portal. Risk-of-bias (RoB) assessment: We used a tailored version of the Office of Health Assessment and Translation (OHAT) RoB tool to evaluate each study's internal validity. Then, the studies were classified into three tiers according to their overall potential for bias (low, moderate and high) in selected, predefined and relevant bias domains. **Data synthesis:** We synthesized the study results using random effects restricted maximum likelihood (REML) models. Evidence assessment: Confidence in evidence was assessed according to the Grading of Recommendations, Assessment, Development and Evaluations (GRADE) approach. **Results:** We included 26 articles, which were published between 1988 and 2019, with participants from 10 countries, reporting on 143 different E-O pairs, including 65 different types of neoplasms. Of these, 19 E-O pairs satisfied the criteria for inclusion in quantitative syntheses of the evidence regarding the risks of leukaemia, non-Hodgkin's lymphoma or thyroid cancer in relation to mobile phone use, and the risks of lymphohematopoietic system tumours or oral cavity/pharynx cancer following occupational exposure to RF-EMF. RF-EMF exposure from mobile phones (ever or regular use vs no or non-regular use) was not associated with an increased risk of leukaemia [meta-estimate of the relative risk (mRR) = 0.99, 95 % CI 0.91-1.07, 4 studies), non-Hodgkin's lymphoma (mRR = 0.99, 95 % CI = 0.92-1.06, 5 studies), or thyroid cancer (mRR = 1.05, 95 % CI = 0.88-1.26, 3 studies). Long-term (10 + years) mobile phone use was also not associated with risk of leukaemia (mRR = 1.03, 95 % CI 0.85-1.24, 3 studies), non-Hodgkin lymphoma (mRR = 0.99, 95 % CI 0.86-1.15, 3 studies), or thyroid cancer (no pooled estimate given the small number of studies). There were not sufficient studies of any specific neoplasms to perform dose-response meta-analyses for either cumulative call time or cumulative number of calls; individual studies did not show statistically significant associations between lifetime intensity of mobile phone use and any specific neoplasm. Occupational RF-EMF exposure (exposed vs unexposed) was not associated with an increased risk of lymphohematopoietic system tumours (mRR = 1.03, 95 % CI = 0.87-1.28, 4 studies) or oral cavity/pharynx cancer (mRR = 0.68, 95 % CI 0.42-1.11, 3 studies). There were not sufficient studies of any specific neoplasms to perform meta-analysis on the intensity or duration of occupational RF-EMF exposure; individual studies did not show statistically significant associations with either of those exposure metrics and any specific neoplasms. The small number of studies, and of exposed cases in some instances, hampered the assessment of the statistical heterogeneity in findings across studies in the meta-analyses. Based on the summary risk of bias, most studies included in the quantitative evidence syntheses were classified at moderate risk of bias. The most critical issue was exposure information bias, especially for occupational studies where the exposure characterization was rated at high risk of bias for all included studies. Outcome information bias was an issue in mortality-based occupational cohort studies investigating non-rapidly fatal neoplasms. Further, the healthy subscriber effect, and (at a lesser extent) the healthy worker effect, were identified as plausible explanations of the decreased risks observed in some studies. The association of RF-EMF exposure from wireless phone use, or workplace equipment/devices, with other important neoplasms was reported by only one or two studies per tumour, so no quantitative evidence syntheses were conducted on these outcomes. It is noted that there were generally no statistically significant exposure-outcome associations for any combinations, independently of the exposure metric and level, with a few studies reporting decreased risks (especially for smoking-related cancers). There was only one study which assessed the effect of RF-EMF exposure from fixed-site

transmitters on less researched neoplasms and it reported no statistically significant associations between exposure from base stations and risk of lymphomas overall, lymphoma subtypes, or chronic lymphatic leukaemia in adults. **Conclusions:** For near field RF-EMF exposure to the head from mobile phones, there was low certainty of evidence that it does not increase the risk of leukaemia, non-Hodgkin's lymphoma or thyroid cancer. For occupational RF-EMF exposure, there was very low certainty of evidence that it does not increase the risk of lymphohematopoietic system tumours or oral cavity/pharynx cancer. There was not sufficient evidence to assess the effect of whole-body far-field RF-EMF exposure from fixed-site transmitters (broadcasting antennas or base stations), or the effect of RF-EMF from any source on any other important neoplasms.

Karipidis et al. 2025.

Environment International, vol. 196.

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Keywords: Case-control studies; cohort studies; epidemiology; leukaemia; lymphohematopoietic system tumours; mobile phones; neoplasms; non-hodgkin's lymphoma; occupational exposure; oral cavity/pharynx cancer; radiofrequency electromagnetic fields; systematic review; thyroid cancer.

Evidence Level: 1A

Link: <https://www.sciencedirect.com/science/article/pii/S016041202500025X?via%3Dihub>

Occupational asbestos exposure and gastrointestinal cancers: Systematic review and meta-analyses

Objective: To conduct meta-analyses of occupational asbestos exposure and oesophageal, stomach and colorectal cancer risk, including a critical exposure assessment approach. **Methods:** The search strategy was executed on MEDLINE, Embase, CINAHL, Scopus and Web of Science databases (March 2022, March 2024). Effect estimates (ORs, HRs, standardised incidence ratio and standardised mortality ratio) from eligible cohort and case-control studies were combined in random effects models. Meta-relative risks (mRRs) were calculated by cancer site and exposure characteristics. Investigators with occupational epidemiology and hygiene expertise came to a consensus on the estimates where there was confidence in significant asbestos exposure. **Results:** A total of 82 (oesophageal), 153 (stomach) and 144 (colorectal) papers met the inclusion criteria. Elevated mRRs were observed for any occupational asbestos exposure for oesophageal (1.17 (95% CI 1.07 to 1.29)), stomach (1.14 (95% CI 1.05 to 1.23)) and colorectal cancer (1.16 (95% CI 1.08 to 1.24)). There was consistency of mRR estimates and higher mRRs in meta-analyses where there was increased confidence in the categorisation of highly exposed workers, including among the highest exposed workers in exposure-response studies (oesophageal: 1.63 (95% CI 1.29 to 2.06); stomach: 1.28 (95% CI 1.09 to 1.52); colorectal: 1.29 (95% CI 1.09 to 1.53)), among asbestos insulation workers (oesophageal: 1.68 (95% 1.19 to 2.36); stomach: 1.53 (95% 0.93 to 2.51); colorectal: 1.59 (95% 1.14 to 2.23)) and among workers in cohorts with a twofold or greater risk of asbestos-related lung cancer (oesophageal: 1.40 (95% CI 1.14 to 1.71); stomach: 1.33 (95% CI 1.14 to 1.56); colorectal: 1.47 (95% CI 1.34 to 1.61)). **Conclusion:** The meta-analyses support a causal link between occupational asbestos exposure and the risk of oesophageal, stomach and colorectal cancer.

Koehoorn et al. 2025.

Occupational and Environmental Medicine, vol. 81, no. 12.

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

Keywords: Asbestos; epidemiology; gastroenterology; meta-analysis; occupational health.

Evidence Level: 1A

Link: <https://oem.bmj.com/content/81/12/639.long>

Gender differences in occupational hazard exposures within the same occupation: A nationally representative analysis in South Korea

Objective: Occupational health researchers have often treated gender as a confounder in epidemiologic studies, but gender may influence exposure profiles. This study investigated gender differences in occupational hazard exposures within the same occupation. **Methods:** We analyzed the 6th Korean Working Conditions Survey (2020), a nationally representative dataset from South Korea. After restricting the study

population to 22 511 full-time wage workers, we assessed 18 self-reported occupational exposures (4 physical, 4 chemical, 1 biological, 6 musculoskeletal, 3 psychosocial). To create matched samples, each man was matched with woman in the same occupational and industrial codes using `nearest neighbor matching` based on the propensity scores, considering age, education, employment status, the number of subordinates, and company size. This resulted in a matched study population of 3918 male and 3918 female workers in 403 occupations. Conditional logistic regression was applied to examine gender differences within the same occupation, adjusting for other covariates. **Results:** We found persistent gender differences in occupational hazard exposures, even after matching of men and women within the same occupation and industry based on propensity scores. Men reported a higher prevalence of exposure to physical (eg, loud noise) and chemical factors (eg, chemical products), while women were more likely to be exposed to psychosocial factors (eg, handling angry clients). The findings on musculoskeletal factors were mixed, with men being more exposed to standing and women to repetitive hand movements. **Conclusions:** Gender should be considered when planning interventions to reduce occupational harmful exposures, even within the same occupation.

Lee et al. 2025.

Scandinavian Journal of Work, Environment and Health, vol. 51, no. 2.

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Keywords: Gender differences; occupational hazard exposures; gender; occupation.

Evidence Level: 4B

Link: <https://www.sjweh.fi/article/4204>

Heat-related illness in California Firefighters, 2001-2020

Background: Firefighters have a higher rate of heat-related illness (HRI) compared to other occupations. Given the changing climate, firefighters' risk of occupational HRI merits attention. Therefore, we aimed to identify demographic, temporal, and geographic risk factors associated with occupational HRI in California firefighters between 2001 and 2020. **Methods:** Within the California Workers' Compensation Information Systems (WCIS), we identified firefighters from 2001 to 2020 using industry and class codes and assigned occupation titles using the NIOSH Industry and Occupation Computerized Coding system (NIOCCS). HRI claims among firefighters were identified using International Classification of Diseases (ICD) Ninth or Tenth revision codes, WCIS nature and cause of injury codes, and keywords. We calculated HRI incidence rates adjusted by sex, age, year, and county. Estimates of California firefighter employment were obtained from the American Community Survey. **Results:** We identified 2185 firefighter HRI claims between 2001 and 2020 (305.5 claims/100,000 firefighters, 90% CI: 278.7-740.7). Firefighters aged 18 to 29 years had a statistically significant higher risk of HRI compared to those aged 40 to 49 years (rate ratio = 3.5, 90% CI: 3.1-3.9). The HRI rate increased over time, and the risk from 2016 to 2020 was 1.8 times higher than it was from 2001 to 2005 (90% CI: 1.7-1.9). Northern California counties, including Shasta (2313.9) and Sacramento (1772.1), had the highest HRI rates. **Conclusions:** Firefighters in certain demographic groups and northern California counties were at highest risk of HRI. With rising temperatures and larger wildfires, additional prevention efforts are needed to reduce HRI in California firefighters.

Murray et al. 2025.

American Journal of Industrial Medicine, vol. 68, no. 2.

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Keywords: Firefighters; illness; California; heat-related.

Evidence Level: 4B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/ajim.23691>

Sedentary Practices

Association of sitting time with cardiovascular events among manual and non-manual workers: A prospective cohort study (PURE-China)

Background: Prolonged sitting time is associated with an increased risk of cardiovascular disease (CVD) in the general population. However, it is unclear how these risks differ across occupational groups. This study

aimed to investigate the association between sitting time and CVD in manual and non-manual workers among Chinese adults. **Methods:** This population-based cohort study recruited 47,931 participants aged 35 to 70 years from 115 communities across 12 provinces in China between 2005 and 2009. Daily sitting time was measured using the International Physical Activity Questionnaire (IPAQ). The main outcome was a major CVD event (defined as cardiovascular death, myocardial infarction, stroke, or heart failure). Information on each participant's occupation was collected using standardized questionnaires and categorized into manual and non-manual occupations according to the Italian National Institute of Statistics 2001 (ISTAT-2001) occupational classification standard. Cox frailty models were used to examine the associations. **Results:** Of 43,256 in the final sample (excluding those with CVD at baseline and missing data), 25,252 (58.4%) were women, and the mean (\pm SD, Standard Deviation) age was 50.6 ± 9.5 years. During a median follow-up of 11.9 (IQR, Interquartile Range: 9.5-12.6) years, 3,408 major CVD events (899 myocardial infarctions, 2,400 strokes, 240 incident heart failure, and 764 cardiovascular deaths) were documented. Compared with the reference group (< 4 h per day of sitting), the risk of major CVD events was positively associated with increasing sitting time among manual workers (HR, 1.20; 95% CI, 1.05-1.37 for 6-8 h per day; HR, 1.43; 95% CI, 1.12-1.82 for ≥ 8 h per day), while the risk among non-manual workers was greater for those reporting daily sitting times of more than 8 h (HR, 1.86; 95% CI, 1.18-2.95). Similar trends were observed when CVD mortality and incidence were analysed separately. **Conclusions:** Longer daily sitting time was associated with an increased risk of major CVD in both manual and non-manual occupational groups, and the risk was especially high among non-manual workers. Our findings highlight the importance of including measures to reduce sedentary behaviour within a comprehensive strategy to reduce the burden of cardiovascular disease in China.

Lan et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Cardiovascular events; manual workers; non-manual workers; occupation; sitting time.

Evidence Level: 4B

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21948-5>

The associations between sedentary behavior and neck pain: A systematic review and meta-analysis

Background: This study aimed to systematically evaluate the associations between sedentary behavior (SB) in daily life and the risk of neck pain (NP), and to investigate the dose-response relationships between these variables across different populations, including variations in age, sex, occupation, and lifestyle practices. **Methods:** We conducted a systematic literature search of PubMed, Web of Science, Scopus, and Embase for cross-sectional, cohort and case-control studies examining the association between SB and NP risk. The National Institute of Health (NIH) quality assessment tool was utilized to evaluate study quality. Odds ratios (ORs) and relative risks (RRs) with 95% confidence intervals (CIs) were used to assess the association between SB and NP. Due to significant heterogeneity among the studies, a random-effects model was employed for the meta-analysis to obtain pooled estimates. **Results:** A total of 25 studies with 43,184 participants met the eligibility criteria. Overall, the meta-analysis revealed a significant relationship between SB and NP (OR = 1.46, 95%CI: 1.33, 1.60). Subgroup analyses revealed that the risk of NP was greater in female (OR = 1.43, 95%CI: 1.22, 1.67) than in male (OR = 1.13, 95%CI: 1.01, 1.27) and was greater in employees (OR = 1.97, 95%CI: 1.70, 2.28) than in students (OR = 1.26, 95%CI: 1.15, 1.39). Among screen-based SB, using mobile phones conferred the greatest risk of NP (OR = 1.82, 95%CI: 1.27, 2.61), followed by using computers (OR = 1.23, 95%CI: 1.08, 1.40), whereas watching TV was not a significant risk (OR = 1.20, 95%CI: 0.99, 1.44). Moreover, SB ≥ 4 h per day (h/d) increased the risk of NP (OR = 1.60, 95%CI: 1.38, 1.87), and the risk further increased with SB ≥ 6 h/d (OR = 1.88, 95%CI: 1.42, 2.48). The risk of NP increased with a screen-based SB dose ≥ 1 h/d (OR = 1.28, 95%CI: 1.17, 1.44), ≥ 2 h/d (OR = 1.35, 95%CI: 1.18, 1.55), and ≥ 4 h/d (OR = 1.45, 95%CI: 1.26, 1.67). **Conclusion:** SB is a notable risk factor for NP, with the risk escalating with longer durations of sedentary time. Targeted preventative measures, particularly for high-risk groups like female and employees, are necessary. Public health initiatives should encourage the reduction of sedentary behaviors and the promotion of physical activity to enhance neck health and alleviate the global prevalence of NP.

Meng et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Neck pain; occupation; screen-based sedentary behavior; sedentary behavior; sex.

Evidence Level: 1A

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21685-9>

Musculoskeletal Health

The PREVSAM model, "prevention of sickness absence through early identification and rehabilitation of at-risk patients with musculoskeletal disorders", is seen as beneficial for patients risking persistent musculoskeletal disorders but may be difficult to implement: A focus group study

Purpose: The rehabilitation model "Prevention of sickness absence through early identification and rehabilitation of at-risk patients with musculoskeletal disorders" (PREVSAM) was tested in a randomised controlled trial. This study aimed to explore participating healthcare professionals' experiences of working according to the PREVSAM model, and their perceptions of its clinical benefit and feasibility in primary care rehabilitation. **Methods:** A focus group study including 12 healthcare professionals from five primary care rehabilitation clinics was analysed according to the focus group methodology described by Krueger and Casey. **Results:** Four themes were identified. *A clear framework* describes how PREVSAM facilitates person-centred teamwork. *The value of teamwork* highlights benefits and challenges with teamwork. *Through thick and thin* discusses perceived patient benefits. *In the ideal world* focusses on feasibility of implementing the model. **Conclusions:** The participants experienced that the PREVSAM model may be beneficial for the patients, for their own work situation and workplace, and for society. Identifying psychological risk factors was perceived as helpful, but not enough to capture patients in need of team-based rehabilitation. While considered feasible, barriers for implementing the model were identified. Managers and healthcare policy makers must prioritise and create appropriate conditions for team-based musculoskeletal rehabilitation in primary care.

Ekhammar et al. 2025.

Disability and Rehabilitation, vol. 47, no. 3.

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Keywords: Focus group; musculoskeletal pain; primary care; teamwork.

Evidence Level: 5B

Link: <https://www.tandfonline.com/doi/full/10.1080/09638288.2024.2356011>

Effects of neck-exercise and health promotion on headache outcomes in office workers: Secondary analysis of the NEXpro stepped wedge cluster randomised controlled trial

Background: Headache conditions have a high prevalence worldwide. Office workers with high and demanding workload, but low physical activity levels are considered vulnerable for suffering from headache. This analysis examines whether exercise combined with health promotion at the workplace is effective for headache relief in office workers. **Methods:** This study reports the results of secondary outcomes of a stepped wedge cluster randomized controlled trial. Office workers (n = 120) were randomly assigned to a twelve-week supervised intervention period, consisting of neck and shoulder girdle exercises with health promotion interventions performed at the workplace. Secondary outcomes were analysed and modelled for headache occurrence, frequency, and the Headache Impact Test-6 (HIT-6), accounting for possible effects for the intervention, the period it had been introduced, and interactional and nested effects. **Results:** At baseline, 88 of the 120 participants reported \geq one headache episode in the past four weeks, with a mean headache frequency of 3.58 days for that period. The mean HIT-6 score for the entire cohort amounted to 53.6 points. For headache occurrence and HIT-6, the simplest model with the intervention only, showed the best statistical fit with an odds ratio for headache occurrence of 0.46 (95% confidence interval: 0.25 to 0.84), and - 2.23 (95% confidence interval: -3.35 to -1.12) points on the HIT-6 questionnaire. For headache frequency, the model accounting for interaction effects (intervention x period) had the best statistical fit and showed an incidence rate ratio of 0.57 (95% confidence interval: 0.44 to

0.74) for the first period, but not for later ones. **Conclusions:** Neck exercises and health promotion had a positive impact on headache occurrence, headache frequency and HIT-6, with the latter not reaching clinical importance. Although only statistically significant for headache frequency, larger effects were found during earlier periods or shorter interventional exposure for all outcomes, necessitating refresher sessions at later periods.

Ernst et al. 2025.

The Journal of Headache and Pain, vol. 26, no. 1.

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Keywords: Cluster RCT; headache; neck exercise; office work; stepped wedge design.

Evidence Level: 2A

Link: <https://thejournalofheadacheandpain.biomedcentral.com/articles/10.1186/s10194-025-01963-y>

Guiding and Supporting Mental Health and Wellbeing

Mental Health

Workplace injury and mental health outcomes

Importance: Workplace injury is a widespread problem that impacts mental health and quality of life and places a substantial burden on employers and the health care system. **Objective:** To determine whether mental disorder rates differ following workplace injury compared with injuries outside the workplace.

Design, setting, and participants: This retrospective cohort study assessed individuals hospitalized for an injury requiring surgery between January 1, 2002, and December 31, 2018, with a 2-year follow-up period using population-based administrative data in Manitoba, Canada. Analyses were completed June to July 2021. This study compared 2 cohorts: individuals with a workplace injury matched 1:5 on sex, age, geographical region, and surgical procedure code with individuals with a nonworkplace injury in the general population. **Exposure:** Traumatic physical injury that required surgery with anesthetic. **Main outcomes and measures:** The outcome of interest was a diagnosis of mental disorder (anxiety, depression, substance abuse, suicide attempt, and any mental disorder), measured 2 years prior to and following injury.

Results: In this cohort study, 7556 individuals (mean [SD] age, 44.8 [13.3] years; 5721 [75.7%] male; 4624 individuals [61.2%] with urban residence; 4545 individuals [60.1%] with low income) with a workplace injury were compared with 28 901 matches from the general population. The workplace cohort had lower rates of all mental disorders (anxiety: adjusted rate ratio [ARR], 0.82; 95% CI, 0.77-0.87; depression: ARR, 0.78; 95% CI, 0.72-0.84; substance abuse: ARR, 0.63; 95% CI, 0.55-0.72; suicide attempt: ARR, 0.28; 95% CI, 0.11-0.70; and any mental disorder: ARR, 0.82; 95% CI, 0.78-0.86; all $P < .0006$) before their injury and for depression (ARR, 0.89; 95% CI, 0.82-0.95) and substance abuse (ARR, 0.83; 95% CI, 0.73-0.94) after their injury. The group \times care period interaction term was significant for anxiety ($P < .0001$) and any mental disorder ($P < .0001$), suggesting that individuals with workplace injuries had worse mental disorder outcomes over time than individuals with nonworkplace injuries. **Conclusions and relevance:** This cohort study found that the mental health trajectory from the preinjury to postinjury period was worse for individuals with a workplace injury compared with those injured outside the workplace. These findings suggest that there may be features unique to the workplace and/or injury claims and compensation processes that contribute to this pattern, which warrant further examination.

Wightman et al. 2025.

JAMA Network Open, vol. 8, no. 2.

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Keywords: Workplace injury; mental health.

Evidence Level: 4B

Link: <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2830225>

Occupational stigma perception and public employees' burnout: A moderated moderation model of work-family conflict and social comparison

Background: The prevalence of burnout symptoms has become very high among public employees, with occupational stigma perception as an important predictor of burnout. Combining personal and relational factors can effectively exacerbate burnout symptoms. The study explores how work-family conflict and social comparisons orientation (both upward and downward) influence the relationship between occupational stigma perceptions and burnout among Italian public employees, applying Conservation of Resources Theory. **Methods:** We measured burnout, occupational stigma perception, work-family conflict, and social comparison orientation using cross-sectional, anonymous, self-reported questionnaires filled out by 305 employees. **Results:** The correlation analysis revealed that burnout positively related to upward comparison, work-family conflict, and occupational stigma perception and negatively related to downward comparison. Linear regression analysis indicated that occupational stigma perception was significantly associated with increased burnout symptoms in public employees. The moderation analysis showed that work-family conflict positively moderated the positive relationship between occupational stigma perception and burnout ($\beta = 0.061$, $p < .001$). Moderated moderation analyses only support the role of upward social comparison as a moderator of the role of work-family conflict ($\beta = 0.040$, $p < .01$).

Conclusion: The study theoretically enhances understanding of the links between occupational stigma, work-family conflict, social comparison orientation, and burnout, while highlighting the practically need for organizations to address psychosocial factors to reduce burnout. Organizations that recognize the influence of these factors on employee well-being can implement timely preventive and management strategies to address these challenges.

Bonfanti et al. 2025.

Acta Psychologica, vol. 253.

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Keywords: Burnout; occupational stigma perception; public employees; social comparison; work-family conflict.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691825000824?via%3Dihub>

Sticky interventions for a sticky problem: A systematic review of recent workplace mental health stigma reduction interventions with implications for training transfer

Introduction: Organizations are increasingly turning their attention to managing the stigma associated with mental health conditions. Most interventions tend to be training-based; however, research on mental health stigma reduction has not adopted theories and concepts from health and safety training literature to evaluate how effective these interventions are, and what training design and delivery features result in better training transfer. **Method:** To fill this gap and develop a strategic agenda for future research, we undertook a systematic qualitative literature review of 27 articles (including both published and unpublished studies), as well as some high-quality grey literature. We applied a health and safety training transfer model and used descriptive and thematic analyses to critically appraise the articles reviewed.

Results: Our analysis highlighted how existing studies focus on short-term learning outcomes (i.e., changes in knowledge, skills, and attitudes) without considering the actual experience of the training (i.e., training engagement) and long-term outcomes (i.e., training transfer). Although most reviewed studies considered training design (e.g., trainer credibility) and delivery factors (e.g., online vs. face to face), the consideration of pre-training factors was absent. **Conclusions and practical applications:** Avenues for future research such as exploring ways to boost behavioral change following stigma training, and practical implications to boost transfer of stigma reduction trainings, mapped against the training transfer framework, are also explored.

Casey et al. 2025.

Journal of Safety Research, vol. 92.

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Keywords: Qualitative review; stigma reduction; training; workplace stigma.

Evidence Level: 1A

Link: <https://www.sciencedirect.com/science/article/pii/S0022437525000039?via%3Dihub>

Work-stressors and depression and anxiety: A longitudinal study of the moderating role of self-compassion

Self-compassion has been defined as being open to one's suffering, not avoiding or disconnecting from it, coupled with the kind and caring motivation to alleviate one's suffering. There is increasing evidence that self-compassion might function as a buffer against the negative mental health effects of experiencing work-stressors. However, while this moderating role of self-compassion has been demonstrated when measures of subjective stress are used, different studies that use measures of more objective potential stressors failed to demonstrate a moderating role of self-compassion. Furthermore, while cross-sectional studies offer increasing support for this moderation effect of self-compassion, few studies have examined this in longitudinal designs which may provide more robust insight into the role of self-compassion on the relation between work stress experiences and symptoms of depression and anxiety. The aims of the current study were to examine whether self-compassion moderates the concurrent and prospective association between a measure of potential work-stressors and depressive and anxious symptomatology. The method consisted of a longitudinal survey study in a sample of 246 military personnel with three measurements, half a year apart from each other. Latent moderated structural equation modelling was conducted to test the potential moderating effect of self-compassion. Self-compassion was shown to significantly moderate the association between work-stressors and depressive and anxiety symptomatology, both cross-sectionally and prospectively after 6 and 12 months. Specifically, the experience of work-stressors was positively associated with symptoms of depression and anxiety when self-compassion was low and this association became weaker when self-compassion was at a medium or high level. The results of the current study suggest that higher levels of work-related stress covary more strongly with symptoms of depression and anxiety over time in personnel with lower levels of self-compassion.

de Krijger et al. 2025.

Stress & Health, vol. 41, no. 1.

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[\(https://creativecommons.org/licenses/by-nc/4.0/\)](https://creativecommons.org/licenses/by-nc/4.0/)

Keywords: Anxiety; depression; job stress; positive psychology.

Evidence Level: 4B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/smi.70006>

Predictors of sickness absence among employees with common mental disorders in Sweden: A longitudinal study

Background: The study aimed to explore which sociodemographic, health-related, and work-related factors were associated with the number of sickness absence days during 18 months among employees on sickness absence due to common mental disorders. **Methods:** A longitudinal study with participants from a cluster-randomized controlled trial was conducted. Participants from both intervention and control groups were treated as one cohort. Factors included in the analysis were sociodemographic, health-related, and work-related variables collected through questionnaires at baseline. The outcome was cumulative net sickness absence days for sickness absence spells exceeding 14 days and was collected from a national register. Data was analyzed using generalized estimating equations. **Results:** The sample consisted of 197 employees. Lower-rated work ability in relation to physical demands ([exp (B) 1.19], 95% CI 1.02-1.40) and higher-rated job demands ([exp (B) 1.28], 95% CI 1.01-1.61), were associated with increased number of sickness absence days during the 18 months follow-up. Higher certainty of return to work within three months ([exp (B) 0.63], 95% CI 0.48-0.83) was associated with a decreased number of sickness absence days during the 18 months follow-up. **Conclusions:** Our study suggests that work-related factors, i.e., high job demands and impaired work ability, are associated with an increased number of days on sickness absence. Additionally, the certainty of returning to work within three months is associated with fewer days on sickness absence. The results highlight the importance of addressing specific workplace factors when designing interventions aimed at decreasing sickness absence for employees on sickness absence due to CMDs. The results could

be used to inform a dialogue between healthcare personnel and employees on sickness absence due to CMDs, and to serve as basis for a structured inventory to assist healthcare personnel in addressing workplace factors.

Frantz et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Mental health; occupational health; RTW; return to work; worker.

Evidence Level: 4B

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21563-4>

Association of workforce participation with depression among US older adults: Results from NHANES 2005-2018

Background: The challenges of global aging would boost more workforce participation of older adults, and depression rate was increasing among older adults. This study aimed to explore the associations of workforce participation with depression among US older adults. **Methods:** This cross-sectional study used data from the National Health and Nutrition Examination Survey (NHANES) 2005-2018. Depression was measured with Patient Health Questionnaire-9 items (PHQ-9). Workforce participation was measured with work status, work types, shift work, and hours worked per week. Multivariate generalised linear and logistic regression models, also with restricted cubic spline (RCS) were performed to examine linear or non-linear associations between workforce participation and depression. Analyses of subgroup and sensitivity were conducted: using data from non-multiple imputation, participants aged over 65, and all non-excluded participants aged 60 or above to execute repeated analysis; recruiting propensity score matching (PSM) method that focused on selected SDoH, lifestyle, and health status-related factors to strengthen essential comparability between workers and non-workers; employing two-stage least squares (2SLS) model and setting retirement age (over 65 years or not) as an instrumental variable (IV) to solve the potential reverse causation between work status and depression. **Results:** A total of 10,312 participants aged 60 or above were enrolled with a prevalence of depression of 6.4%. There was a significantly negative association of PHQ-9 score with working (Exp [β] = 0.68; 95%CI: 0.53-0.87), working as private employee (Exp [β] = 0.67; 95%CI: 0.50-0.89), or working on regular daytime (Exp [β] = 0.65; 95%CI: 0.52-0.82). Especially, regular daytime working reduced depression risk by 52% compared with those who not working (OR = 0.48; 95%CI: 0.27-0.87). A significant decreased PHQ-9 score and depression risk as hours worked per week increased until reaching 34.86 and 25.35 in the RCS for generalised linear and logistic regression models, respectively. These effects were consistent across the analyses of subgroup and sensitivity. **Conclusions:** Regular daytime working was positively related to decreased depression risk among US older adults, and the suggested optimal working hours were 25 to 35 per week. Policymakers should appreciate the potential value of moderate workforce participation to mental health among older adults.

Sun et al. 2025.

BMC Geriatrics, vol. 25, no. 1.

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Keywords: Cross-sectional study; depression risk; labor force participation; older adults.

Evidence Level: 4B

Link: <https://bmcgeriatr.biomedcentral.com/articles/10.1186/s12877-025-05712-3>

Bullying, Harassment and Occupational Violence

The effect of age discrimination on employee silence: The role of age similarity with familiar individuals

This study investigates whether one person's experience of perceived discrimination at work can lead to someone they know exhibiting ineffectual silence in their own job. Data were collected using Study Response, an online panel, from focal employees and their paired participants who know them well (N = 296 pairs). Data were analyzed using moderated hierarchical linear analysis in SPSS 26. It was predicted and found that perceived age discrimination reported by someone an employee knows well is positively associated with that employee's silence at work. Moreover, this relationship is stronger the closer the employee is in age to the person who reported the age discrimination. These findings are consistent with

spiral of silence theory, which states that when people feel uncertain about public sentiments and views around them and are unsure of whether they will be supported by others in their own environment, they remain silent. The study shows that silence is contagious across organizations because knowing someone who has experienced age discrimination at work makes the paired person silent in their own job, especially if they are of similar age.

Del Carmen Triana et al. 2025.

Acta Psychologica, vol. 252.

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Keywords: Age discrimination; age dissimilarity; diversity; ineffectual silence; spiral of silence.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0001691824005420?via%3Dihub>

Revealing the confluences of workplace bullying, suicidality, and their association with depression

This cross-sectional study analyzed data from 12,541 employees aged 19-65 across 26 companies and public institutions who underwent workplace mental health screening. Workplace bullying was self-reported and categorized into 'Not bullied,' 'Occasional bullied,' and 'Frequently bullied.' Depression was assessed using the Center for Epidemiological Studies Depression scale, and suicidality was measured via a self-reported questionnaire from the Korea National Health and Nutrition Examination Survey. Overall, 18.7% of women and 10.6% of men reported experiencing workplace bullying. Multivariable logistic regression revealed that both the occasionally and frequently bullied were significantly associated with increased odds of suicidal ideation (OR = 1.47, 95% CI = 1.27-1.69; OR = 1.81, 95% CI = 1.36-2.40) and suicide attempts (OR = 2.27, 95% CI = 1.34-3.85; OR = 4.43, 95% CI = 2.13-9.21). The association between bullying and suicidal ideation was significant for participants with and without depression (OR = 1.47, 95% CI = 1.28-1.69; OR = 1.86, 95% CI = 1.31-2.62). Men exhibited a stronger association (p for interaction < 0.001). Whether an individual later had depressive symptoms or not, higher exposure to workplace bullying was associated with higher suicidality risk. The study highlights the need for companies to screen for bullying and provide mental health resources to prevent workplace-related suicides.

Kim et al. 2025.

Scientific Reports, vol. 15, no. 1.

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Keywords: Depression; mental health; occupational stress; suicidal ideation; suicide, attempted; workplace bullying.

Evidence Level: 4B

Link: <https://www.nature.com/articles/s41598-025-87137-x>

Workplace sexual harassment is associated with poor mental well-being among employees at a large Swedish university

Background: Sexual harassment (SH) is a persistent problem at workplaces around the world, including academia. **Objective:** This study examines the association between SH and mental well-being among employees at Lund University (LU) in Sweden. **Methods:** Data was obtained from a cross-sectional survey targeting all LU employees in 2019. SH exposure was measured using a ten-item scale capturing SH experiences and enabling the differentiation between soliciting and non-soliciting types of SH. Validated instruments were used to measure two aspects of mental well-being; mental health (GHQ-12) and vitality (SF-36 vitality scale). Association between SH exposure and outcome variables was investigated through multivariable logistic regression analysis adjusting for confounders. Modifying effects of gender, age, background and academic position, respectively, on the relation between SH and outcomes were studied. **Results:** Workplace SH was associated with poor mental health (PMH) (OR 1.5 (95% CI 1.1-2.0)) and low vitality (LV) (OR 1.8 (95% CI 1.3-2.5)) among women and with LV (OR 2.0 (95% CI 1.1-3.9)) among men, after adjusting for confounders. Among women, experiences of non-soliciting and soliciting SH combined were associated with PMH and LV. Among men, experiences of non-soliciting SH behaviours exclusively were associated with LV. Indications of synergistic interaction affecting the association between SH and LV were

found related to age, background and academic position, but not gender. **Conclusions:** Workplace SH is a significant risk factor for poor mental well-being, primarily among female, but also among male university employees. These findings can inform local policies for prevention of SH.

Pilgaard et al. 2025.

Global Health Action, vol. 18, no. 1.

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Keywords: Sexual harassment; academia; mental health; mental well-being; vitality.

Evidence Level: 4B

Link: <https://www.tandfonline.com/doi/full/10.1080/16549716.2025.2465050>

Workplace violence is home now for healthcare workers: Spillover theory perspective

In recent years, workplace violence has become an escalating concern, particularly within the healthcare sector. Healthcare workers, who dedicate their lives to caring for others, are increasingly facing violence within their workplaces as evidenced by existing studies. However, literature overlooks complex associations between workplace violence, workplace stress, and domestic violence and stress. This article explores the phenomenon of workplace violence among healthcare workers through the lens of Spillover Theory and investigates impact of workplace violence on domestic stress with single and sequential mediation of workplace stress and domestic violence. Our findings of MEDTHREE analysis of time-lagged data indicate that individuals who experience workplace violence are more likely to exhibit stress, which ultimately becomes a cause of domestic violence. The study highlights how spillover theory can help to explain how workplace violence can trigger violence and stress in the home environment. The research highlights the need for a support system and targeted interventions to address the issue of workplace violence to mitigate its spillover effects into domestic violence. With the help of the findings, the organisational decision makers can develop comprehensive strategies to mitigate the harmful consequences of the workplace violence to provide safe and healthy environment at work and home settings.

Rehman et al. 2025.

Stress and Health, vol. 41, no. 1.

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Keywords: Domestic stress; domestic violence; healthcare; workplace stress; workplace violence.

Evidence Level: 6B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/smi.70008>

Understanding and measuring workplace violence in healthcare: A Canadian systematic framework to address a global healthcare phenomenon

Background: Globally, healthcare institutions have seen a marked rise in workplace violence (WPV), especially since the Covid-19 pandemic began, affecting primarily acute care and emergency departments (EDs). At the University Health Network (UHN) in Toronto, Canada, WPV incidents in EDs jumped 169% from 0.43 to 1.15 events per 1000 visits ($p < 0.0001$). In response, UHN launched a comprehensive, systems-based quality improvement (QI) project to ameliorate WPV. This study details the development of the project's design and key takeaways, with a focus on presenting trauma-informed strategies for addressing WPV in healthcare through the lens of health systems innovation. **Methods:** Our multi-intervention QI initiative was guided by the Systems Engineering Initiative for Patient Safety (SEIPS) 3.0 framework. We utilized the SEIPS 101 tools to aid in crafting each QI intervention. **Results:** Using the SEIPS 3.0 framework and SEIPS 101 tools, we gained a comprehensive understanding of organizational processes, patient experiences, and the needs of HCPs and patient-facing staff at UHN. This information allowed us to identify areas for improvement and develop a large-scale QI initiative comprising 12 distinct subprojects to address WPV at UHN. **Conclusions:** Our QI team successfully developed a comprehensive QI project tailored to our organization's needs. To support healthcare institutions in addressing WPV, we created a 12-step framework designed to assist in developing a systemic QI approach tailored to their unique requirements. This framework offers actionable strategies for addressing WPV in healthcare settings,

derived from the successes and challenges encountered during our QI project. By applying a systems-based approach that incorporates trauma-informed strategies and fosters a culture of mutual respect, institutions can develop strategies to minimize WPV and promote a safer work environment for patients, families, staff, and HCPs.

Schulz-Quach et al. 2025.

BMC Emergency Medicine, vol. 25, no. 1.

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Keywords: Emergency Department; health systems innovation; pandemic recovery; quality improvement; workplace violence in health care.

Evidence Level: 4B

Link: <https://bmcemergmed.biomedcentral.com/articles/10.1186/s12873-024-01144-1>

Psychosocial Issues

Unfolding insights about resilience and its coping strategies by medical academics and healthcare professionals at their workplaces: A thematic qualitative analysis

Background: Health care professionals (HCPs) and medical and health academics (MHAs) strive to maintain and promote population health through evidence-based medical education and practice. At their workplaces, due to the demanding nature of work, HCPs and MHAs face substantial degrees of physiological, psychological, and physical stress, including burnout. Resilience has therefore become a fundamental necessity in the medical field. Our research aimed to acquire an in-depth comprehension of how HCPs and MHAs understand, cultivate, and sustain resilience when confronted with workplace challenges and stressors. **Methods:** We reviewed the existing corpus of literature about resilience, stressors, and coping strategies and followed an iterative deliberations process to develop an interview guide. The guide was validated by content experts and was piloted on a small group of MHAs of the University of Sharjah (UoS) and HCPs from different hospitals of the United Arab Emirates to test its relevance, internal consistency, and inter-observer validity. The validated interview guide was then administered for in-person interviews. Lastly, we adopted the Braun and Clarke 6-stage thematic model for qualitative data analysis. **Results:** Our study recorded insights of 170 participants; 69 MHAs and 101 HCPs. Through an inductive thematic analysis, three overarching themes with sub-themes emerged; cognitive mastery (cognitive appraisal and problem-solving abilities), affective well-being (gratification from professional efficacy and social support), and conative efficiency (proactive approaches and introspection and reflection). Other main findings highlighted stress-related factors, realistic expectations, personal well-being and work-life balance. MHAs were concerned about academic output and research, while HCPs were stressed about patient care, delivery of services, and workload. These factors highlighted a complex interaction between cognitive mastery, emotional well-being, and conative efficiency. **Conclusion:** The findings of our study bestow valuable insights into the dynamic nature of resilience in the medical profession. The synergies and dissimilarities in work-life balance, personal productivity, and job-specific stressors among HCPs and MHAs demand a well-structured resilience program. The themes of cognitive mastery, affective well-being, and conative efficiency are interconnected and can help foster work-life balance and personal well-being of HCPs and MHAs to improve their resilience.

Guraya et al. 2025.

BMC Medical Education, vol. 25, no. 1.

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Keywords: Health care professionals; medical and health academics; resilience; stressors; work-life balance.

Evidence Level: 5B

Link: <https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-06415-w>

Relationship teachers' perception of organizational justice, job burnout and organizational citizenship behaviour

This study aims to examine the relationship between teachers' perception of organizational justice (POJ) and their organizational citizenship behavior (OCB), and to explore the mediating role of teacher burnout

(JB) in the POJ-OCB relationship. Data were collected through a survey with a sample of 1,325 teachers from two cities in China: Chongqing and Chenzhou in Hunan Province. The survey response rate was 92.01%. Descriptive statistical analysis, hierarchical regression analysis, mediation effect testing, and dominance analysis were used to analyze the data. The results indicate that procedural justice positively predicts OCB, while burnout negatively predicts OCB. Furthermore, the study reveals that JB plays a significant mediating role in the relationship between POJ and OCB, particularly in the dimensions of passion burnout and professional self-efficacy burnout.

Ji et al. 2025.

BMC Psychology, vol. 13, no. 1.

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Keywords: Job burnout; mediating effects; organizational citizenship behavior; teachers' perceptions of organizational justice.

Evidence Level: 5B

Link: <https://bmcpyschology.biomedcentral.com/articles/10.1186/s40359-025-02422-8>

Bidirectional work-family conflicts and work engagement: A longitudinal study

Increasing work engagement (WE) for worker health and turnover prevention has gained attention recently. Work-family conflict (WFC), which includes Work Interference with Family (WIF) and Family Interference with Work (FIW), is negatively associated with WE. The effects of WIF/FIW on WE are not fully understood. This study examined the longitudinal associations of WIF/FIW on WE by gender and household composition among employees. We conducted web-based surveys in 2020 and 2021, targeting full-time workers of a single private company (N = 3,437). The analysis included 425 respondents who completed two surveys. Multiple regression analyses stratified by gender and household composition were conducted, with WE at 1 year as the dependent variable and baseline WIF/FIW as independent variables. Higher WIF tend to be associated with lower WE (men in single-person households (SP): B = -0.07 [95% CI: -0.27, 0.14]; men in multi-person households (MP): B = -0.01 [95% CI: -0.12, 0.10]; SP women: B = -0.02 [95% CI: -0.31, 0.27]; MP women: B = -0.06 [95% CI: -0.25, 0.14]). The association between FIW and WE tended to be present only for women; higher FIW tend to be associated with lower WE (SP women: B = -0.03 [95% CI: -0.37, 0.30]; MP women: B = -0.06 [95% CI: -0.34, 0.21]). WIF, such as work-related stress, may reduce the energy available for personal activities among all workers. FIW, such as household tasks, may diminish the energy devoted to paid work, particularly among women living with family.

Kobayashi et al. 2025.

Social Science and Medicine, vol. 367.

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Keywords: Resource conservation theory; work engagement; work-family conflict.

Evidence Level: 5B

Link: [https://linkinghub.elsevier.com/retrieve/pii/S0277-9536\(25\)00036-X](https://linkinghub.elsevier.com/retrieve/pii/S0277-9536(25)00036-X)

Exploring the impact of digital peer support services on meeting unmet needs within an employee assistance program: Retrospective cohort study

Background: The World Health Organization estimates that 1 in 4 people worldwide will experience a mental disorder in their lifetime, highlighting the need for accessible support. **Objective:** This study evaluates the integration of digital peer support (DPS) into an employee assistance program (EAP), testing 3 hypotheses: (1) DPS may be associated with changes in EAP counseling utilization within a 5-session model; (2) DPS users experience reduced sadness, loneliness, and stress; and (3) DPS integration generates a positive social return on investment (SROI). **Methods:** The study analyzed EAP utilization within a 5-session model using pre-post analysis, sentiment changes during DPS chats via natural language processing models, and SROI outcomes. **Results:** Among 587 DPS chats, 432 (73.6%) occurred after business hours, emphasizing the importance of 24/7 availability. A matched cohort analysis (n=72) showed that DPS reduced therapy sessions by 2.07 per participant (P<.001; Cohen d=1.77). Users' messages were evaluated for sentiments of sadness, loneliness, and stress on a 1-10 scale. Significant reductions were observed:

loneliness decreased by 55.04% (6.91 to 3.11), sadness by 57.5% (6.84 to 2.91), and stress by 56.57% (6.78 to 2.95). SROI analysis demonstrated value-to-investment ratios of US \$1.66 (loneliness), US \$2.50 (stress), and US \$2.58 (sadness) per dollar invested. **Conclusions:** Integrating DPS into EAPs provides significant benefits, including increased access, improved emotional outcomes, and a high SROI, reinforcing its value within emotional health support ecosystems.

Nagra et al. 2025.

JMIR Human Factors, vol. 25.

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Keywords: EAPs; SROI; cost-effectiveness; digital peer support; peer support.

Evidence Level: 4B

Link: <https://humanfactors.jmir.org/2025/1/e68221>

Daily within-fluctuations in need frustration and implications for employee recovery and well-being: A mixed-methods study

Introduction: Daily variations in frustration of basic psychological needs (autonomy, competence, and relatedness) have received limited attention. This mixed-methods study examines such daily variations and their relations to recovery from work and employee well-being. **Method:** The study uses multilevel modeling of repeated measures through daily surveys from a period of 8 working days across 2 consecutive weeks, combined with in-depth interviews. A sample of 54 Norwegian health-care workers completed a total of 242 daily surveys, and follow-up interviews were conducted with 10 participants.

Results: Quantitative results showed that need frustration at work fluctuates from day to day, with competence frustration notably impairing recovery (i.e., lower psychological detachment and relaxation) and increasing ill-being (i.e., higher exhaustion and negative work affect). Autonomy frustration was related to increased exhaustion and sleep complaints, while relatedness frustration showed no significant relation to recovery, ill-being, or sleep. Qualitative findings corroborated and expanded on these results, offering deepened insights into how competence and, sometimes, relatedness need frustration hampered the recovery process and sleep. **Conclusion:** The results of the current study add to the scarce body of literature on daily fluctuations in need frustration at work and its adverse consequences.

Olafsen et al. 2025.

Scandinavian Journal of Psychology, vol. 66, no. 1.

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Keywords: Basic psychological need frustration; daily diary; employee well-being; mixed-methods; recovery from work; self-determination theory.

Evidence Level: 5B

Link: <https://onlinelibrary.wiley.com/doi/10.1111/sjop.13067>

Exploring burnout, perfectionism, and moral injury among UK physiotherapists: A qualitative study on professional fulfilment and well-being

Background: Burnout, perfectionism, and moral injury are prevalent issues among healthcare professionals, including physiotherapists. The demanding nature of the profession, compounded by high workloads, emotional and physical exhaustion, and systemic challenges, has significant implications for the well-being and professional satisfaction of physiotherapists. This study aimed to explore these issues, by providing a qualitative exploration of UK physiotherapists' lived experiences. **Objectives:** To explore the lived experiences of UK physiotherapists regarding burnout, perfectionism, and moral injury, and to develop a comprehensive understanding of the personal and professional impacts of these issues to inform the development of effective support systems and interventions. **Methods:** This qualitative exploratory study involved semi-structured interviews with 12 UK physiotherapists. Framework approach was used to identify key themes and patterns in the data, providing a nuanced understanding of the challenges faced by physiotherapists. **Results:** Four primary themes emerged: (1) Physiotherapy Under Pressure: Workload, Burnout, and Perfectionism, (2) Interpersonal Dynamics and Support Systems, (3) Professional Fulfilment and Identity, and (4) Work-Life Balance and Well-being. Physiotherapists reported high levels of burnout and exhaustion due to relentless workloads, exacerbated by and after the COVID-19 pandemic.

Perfectionism further contributed to emotional exhaustion and feelings of inadequacy. Inconsistent management support, bureaucratic challenges, and a lack of career progression opportunities were significant stressors. Effective team dynamics and support systems were crucial in mitigating stress, yet many faced interpersonal challenges such as criticism and bullying. Achieving work-life balance was a persistent struggle, highlighting the need for organisational changes to support flexibility and well-being. **Conclusion:** Burnout, perfectionism, and moral injury significantly impact physiotherapists' well-being and professional satisfaction. Addressing these issues requires systemic changes within healthcare organisations to provide robust support systems, flexible working conditions, and opportunities for professional development.

Skamagki et al. 2025.

PLoS One, vol. 20, no. 2.

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Keywords: Burnout; perfectionism; moral injury; well-being.

Evidence Level: 5B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0313730>

Fostering Work Participation

Return to Work

Web-enhanced return-to-work coordination for employees with common mental disorders: Reduction of sick leave duration and relapse

Background: Common mental disorders (CMDs) are highly prevalent in workplace settings, and have become a significant public health challenge. This study aims to assess the effectiveness of PRATICA^{dr}, a web application facilitated by a Return-to-Work Coordinator (RTW-C), with a focus on reducing sick leave duration and preventing relapse in individuals with CMDs. **Methods:** PRATICA^{dr}, designed to enhance collaboration among Return-to-Work (RTW) stakeholders and provide systematic support throughout the RTW process, was evaluated in a quasi-experimental study. Survival analyses were used to compare sick leave durations and relapses between the experimental group (PRATICA^{dr} with RTW-C), and control groups (RTW-C only). Both conditions had equal distribution of 50% from large public health organizations (n = 35) and 50% from a large private financial organization (n = 35). Mixed linear models were used to observe changes in clinical symptoms over time, especially for the experimental group. **Results:** The experimental group demonstrated significantly shorter sick leave durations and fewer relapses compared to the control group. Notably, the average absence duration was close to 3 months shorter in the experimental group. This difference was found when the RTW-C intervention (rehabilitation care) began 2 months after the onset of sick leave. Relapses occurred only in the control group (13.2%). The absence of relapses in the experimental group is noteworthy, along with the significant decrease in depressive and anxious symptoms over time. **Conclusions:** The findings suggest that incorporating PRATICA^{dr} into RTW-C intervention can lead to substantial cost savings by facilitating coordination among stakeholders and guiding the RTW process with validated tools. Initiation of RTW-C intervention alongside PRATICA^{dr} within the first month of absence is recommended for optimal health and work outcomes.

Corbière et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Clinical symptoms; cost-savings; return-to-work coordinator; stakeholder; web application.

Evidence Level: 5B

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21716-5>

Experiences of workers with long-term disabilities on employer support throughout the RTW process in The Netherlands: A qualitative study

Purpose: The aim of this qualitative study was to explore ways that employer support influenced successful return to work (RTW) in workers with disabilities. **Methods:** We conducted a semi-structured interview

study among 27 workers with disabilities in the Netherlands who received a partial disability benefit two years after sick leave and who continued working in paid (part-time) employment after a period of long-term sickness absence (> 2 years). We analyzed data by means of thematic analysis. **Results:** We identified four types of employer support that were experienced as factors of successful RTW: 1. Supervisor accessibility; 2. Supervisor engagement; 3. Supervisor strategies; and 4. Supervisor-initiated work accommodations. More specifically, during the preparations for RTW phase, the supervisor's active role involved having a positive and open attitude toward facilitating RTW; during the initial RTW phase, the supervisor's role involved being creative in finding solutions for work accommodations; and during the sustained RTW phase, the supervisor's role included helping workers who still needed changes in their work situations. **Conclusion:** The elements of successful employer support reveals that the pressure on the shoulders of the supervisor is high. Future research should further investigate whether supervisors need more phase-specific training from their organization.

Jansen et al. 2025.

Disability and Rehabilitation, vol. 47, no. 3.

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Keywords: Social support; qualitative research; return to work; supervisor; worker with disabilities.

Evidence Level: 4B

Link: <https://www.tandfonline.com/doi/full/10.1080/09638288.2024.2343823>

Reintegration into work after traumatic brachial plexus injuries: A selective literature review of experiences from various global regions

Each year, thousands of individuals, particularly young adults, experience traumatic brachial plexus injuries (TBPIs), leading to significant limitations, permanent disabilities, reduced quality of life, and infrequent return to work. Current treatments and assistive devices have shown limited success, resulting in considerable social and economic challenges for patients. Given the devastating nature of this injury and the lack of literature on return to work rates among young adults, this study aims to determine the percentage of individuals reintegrating into work after a TBPI. Furthermore, it compares outcomes across different health care systems, including those in Germany, Serbia, and the United Kingdom. This dual approach has been selected to investigate the influence of various factors on the outcomes associated with returning to work after TBPI. Preliminary findings indicate that approximately 60% of patients with TBPI return to work, although most require a change in their occupational roles. Despite variations in health care systems and governmental support, the reintegration of patients with TBPI into work and society remains a critical and universal challenge. This comparative analysis highlights disparities in TBPI research and outcomes, providing valuable insights for future improvements in patient care and support mechanisms.

Hofmann et al. 2025.

World Neurosurgery, vol. 194.

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Keywords: BPI; integration; plexus brachialis; reintegration; return to work; TBPI.

Evidence Level: 1B

Link: <https://www.sciencedirect.com/science/article/pii/S1878875024020825?via%3Dihub>

Returning to work after dysvascular lower limb amputation: A novel multivariate approach to examine relative contributions of biopsychosocial predictors

Background: Returning to work is a key outcome of rehabilitation and social re-integration after lower limb amputation. It is important to understand what biopsychosocial factors contribute to returning to work after dysvascular amputation. **Objective:** Examining relative contributions of functional and contextual predictors of returning to work in participants with lower limb amputation due to diabetes and other dysvascular diseases. **Study design:** Cross-sectional. **Methods:** Return-to-work outcome, biopsychosocial characteristics including physical functioning, self-efficacy & perceived ability, and socioeconomical support data were collected from a purposive sample (n = 57) in a multi-state collaborative research network. Grouped Weighted Quantile Sum model analysis was conducted to evaluate relative contributions of

biopsychosocial predictors. **Results:** Less than 30% of the participants returned to work after their amputation. Physical functioning (odds ratio = 10.19; 95% CI 2.46-72.74) was the most important predictor group. Working before amputation, prosthetic mobility, and access to rehabilitation care were also identified as key factors associated with returning to work. **Conclusions:** Fewer than 1 in 3 participants with dysvascular amputation returned to work, despite an average age of only 54 years at the time of amputation. Physical functioning was shown to be the most important predictor, while socioeconomic factors such as a lack of access to care also contribute to not returning to work after dysvascular amputation.

Lee et al. 2025.

Prosthetics and Orthotics International, vol. 49, no. 1.

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Keywords: Amputation; return to work; dysvascular limb.

Evidence Level: 4B

Link:

https://journals.lww.com/poijournal/fulltext/2025/02000/returning_to_work_after_dysvascular_lower_limb.4.aspx

Depression care trajectories and sustainable return to work among long-term sick-listed workers: A register-based study (The Norwegian GP-DEP Study)

Background: Depressive disorders can negatively impact work life sustainability for affected individuals. Little is known about depression care trajectories and their association with sustainable return to work (SRTW) after long-term sick leave. This study aimed to identify depression care trajectories during the first three months of sick leave among long-term sick-listed workers with depression and investigate their associations with SRTW. **Methods:** DESIGN: Nationwide cohort study using linked data from Norwegian health and population registries. **Study population:** All inhabitants of Norway aged 20-64 from 1 January 2009 to 1 April 2011, who were diagnosed with depression in general practice, and had reached three months consecutive sick leave (n = 13 624, 63.7% women). **Exposure:** Depression care trajectories during the first three months of initial sick leave, identified using group-based multi-trajectory modeling. Types of depression care included were general practitioner (GP) consults, GP longer consults and/or talking therapy, antidepressant medication (MED), and specialized mental healthcare. **Outcome:** SRTW, measured by accumulated all-cause sickness absence days during two-year follow-up after initial sick leave, with cutoffs at 0, ≤ 30, and ≤ 90 days. **Analysis:** Gender stratified generalized linear models, used to investigate the associations between depression care trajectories and SRTW, adjusting for sociodemographic factors and sick leave duration. **Results:** Four depression care trajectory groups were identified: "GP 12 weeks" (37.2%), "GP 2 weeks" (18.6%), "GP & MED 12 weeks" (40.0%), and "Specialist, GP & MED 12 weeks" (8.7%). The "GP 12 weeks" group (reference) had the highest proportion attaining SRTW for both genders. Men in the "GP 2 weeks" group had a 12-14% lower likelihood for SRTW compared to the reference. Women in the "Specialist, GP & MED 12 weeks" group had a 19- 23% lower likelihood for SRTW compared to the reference. **Conclusion:** The association between depression care trajectories and SRTW varies by gender. However, trajectories involving follow-up by the GP, including both standard and longer consults and/or talking therapy over 12 weeks, showed the highest likelihood of SRTW for both genders. Enhancing GP resources could improve SRTW outcomes by allowing more frequent and longer consultations or talking therapy.

Melling et al. 2025.

BMC Health Services Research, vol. 25, no. 1.

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Keywords: Depression; drug therapy; general practice; health services research; large database research; mental health; psychotherapy; sick leave; specialized mental healthcare; sustainable return-to-work.

Evidence Level: 4B

Link: <https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-025-12406-4>

Presenteeism and Absenteeism

Evidence-based interventions to prevent sick leave: A scoping review of reviews

Background: Despite the large body of research on interventions aimed at preventing sick leave, the evidence is scattered and a comprehensive overview is lacking. Therefore, this scoping review of reviews aims to provide an overview of evidence-based interventions to prevent sick leave. **Methods:** Embase and PsycInfo were systematically searched for reviews published between January 2000-January 2024. A review was included when at least one of the included original intervention studies fulfilled three criteria: (1) target group was active workers not on sick leave, (2) sick leave was studied as outcome, and (3) the intervention was evaluated using a controlled design. Results were descriptively summarized and grouped based on the cause of sick leave and type of intervention they focused on. Furthermore, the effectiveness in preventing sick leave was reported. **Results:** Twenty-eight reviews were included. Eight reviews focused on preventing sick leave due to physical health problems, ten on mental health problems, and ten on all-cause sick leave. Overall, the reviews identified a lack of effective interventions to prevent sick leave. However, multi-component interventions consisting of both individual and environmental components aimed at workers' lifestyle and aimed at mental health were promising to prevent sick leave in the general working population (e.g. workplace mental health promotion intervention). Furthermore, certain specific interventions targeting workers at risk were effective. Examples are cognitive behavioral therapy programs for workers with anxiety and depression, and consultation with occupational medical staff for workers at high risk for sick leave. Lastly, exercise programs were most effective in preventing sick leave due to physical health problems (e.g. exercise for low back pain prevention). **Conclusions:** This scoping review identified reviews on sick leave prevention across a broad scope of health problems, types of interventions, and target groups. Although a few effective interventions for preventing sick leave were identified, the included reviews indicate a limited availability of effective interventions. Therefore, more randomized controlled trials with long-term follow-up that include sick leave as outcome are needed. To develop more effective interventions, further research is needed on better integrating the workplace environment, and on understanding barriers and facilitators to successful implementation.

Bosma et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Absenteeism; intervention; prevention; review; sick leave; sickness absence; work participation.

Evidence Level: 1A

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21911-4>

The longitudinal association of hand osteoarthritis with paid and unpaid work restrictions and related societal costs: The Hand Osteoarthritis in Secondary Care cohort

Objectives: To investigate the course of restrictions in paid and unpaid work and corresponding societal costs in patients with hand osteoarthritis (OA). **Methods:** Patients with data of at least baseline and one follow-up moment (year one up to year eight) of the Dutch Hand OSTeoArthritis in Secondary care cohort (HOSTAS) were included. The Health and Labour Questionnaire was used to assess over the last two weeks hand OA-related restrictions for paid and unpaid work. Societal costs of productivity loss were estimated with Dutch government data on 2021. **Results:** 351 patients were included (mean age 60 years, 84% women). At baseline, 166/351 (47%) had paid work, decreasing to 54/164 (33%) at year eight. Loss of productive time over the two-week period was reported by 32/166 (19%) patients with paid work at baseline, 17/104 (16%) at year four, among whom 12/104 (11%) patients at both moments. Any restrictions over this two-week period were experienced by 89/166 patients (54%) at baseline and 41/104 (39%) at year four for those with paid work. Regarding unpaid work, 157/351 (45%) reported replacement of tasks by others at baseline and 72/164 (44%) at year eight. 205/351 (59%) reported restrictions at baseline, and 99/164 (60%) at year eight. Mean total societal costs for loss of paid and unpaid work were, per patient, €89/two weeks (95% confidence interval 52;127) at baseline and €47/two weeks (26;69) at year eight. **Conclusions:** The proportion of patients with paid work decreases during follow-up, but restrictions at paid and unpaid work seem mostly stable.

Terpstra et al. 2025.

Osteoarthritis and Cartilage, vol. 33, no. 2.

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Keywords: Absenteeism; hand; labor; longitudinal; osteoarthritis; presenteeism.

Evidence Level: 4B

Link: [https://www.oarsijournal.com/article/S1063-4584\(24\)01444-4/fulltext](https://www.oarsijournal.com/article/S1063-4584(24)01444-4/fulltext)

The effect of interdisciplinary treatment on sickness absence and disability pension among chronic pain patients on partial disability pension

Studies evaluating the effects of interdisciplinary treatment (IDT) on sickness absence and disability pension (SA/DP) have yielded contradictory findings. Evidence indicates that positive treatment effects are restricted to patients with a poor SA/DP prognosis. This study therefore analyzed the effect of IDT in working age patients on partial disability pension, which is a group with a particularly poor prognosis. With data from 479 patients on partial disability pension, this register-based cohort study compared the effects of IDT to those of unspecified interventions. We considered two response variables: total net SA/DP days across the span of three years from the first visit to a Swedish specialist pain clinic, and the risk of having the maximum possible 1096 SA/DP days over the same period. Our results showed that both the total net SA/DP days (mean difference: 11; 95% confidence interval: -30 to 51) and the risk of 1096 SA/DP days (risk ratio: 1.0; 95% confidence interval: 0.6 to 1.4) were similar irrespective of intervention type. Under our theoretical model, we thereby found no support in favor of IDT over less intensive interventions in working age patients with partial DP. This raises questions about the specific criteria under which IDT proves effective.

Constan et al. 2025.

PLoS One, vol. 20, no. 2.

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Keywords: Sickness absence; disability pension; chronic pain.

Evidence Level: 4B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0317797>

Associations of perceived privacy at the workplace with short sickness absences in a cohort of Finnish office workers

Objective: To investigate perceived task privacy in 2022 associated with short (1-3 days) self-certified sickness absence (SA) in 2023. **Methods:** A prospective cohort of 1400 Finnish office workers with survey data in 2022 about, for example, task privacy, telework, and office type were linked with employer-owned register data of SA in 2022-2023. Poisson regression models were used to obtain risk ratios with 95% confidence intervals. **Results:** Each one-unit increase in task privacy was associated with a less likely short SA (risk ratio, 0.83-0.89; 95% confidence interval, 0.74-0.97), also across the amount of telework in 2022. The association was only statistically significant in activity-based offices. **Conclusions:** Each one-unit increase in perceived task privacy at the office was associated with less likely short, self-certified, 1-3 days SA. Task privacy is an important factor to be considered in offices.

Haapakangas et al. 2025.

Journal of Occupational and Environmental Medicine, vol. 67, no. 2.

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Keywords: Privacy; workplace; sickness absences.

Evidence Level: 4B

Link:

https://journals.lww.com/joem/fulltext/2025/02000/associations_of_perceived_privacy_at_the_workplace.15.aspx

Wellness Programs

Why and how do workplaces invest in mental health and wellbeing? A systematic review and process tracing study

In recent years, investment in workplace mental health and wellbeing has grown. However, there is little understanding of how resource allocation decisions are made in such settings. To ensure evaluative research can support resource allocation, a process-based understanding of decision-making would be helpful. In phase one a systematic review of the literature on the implementation of workplace mental health and wellbeing schemes was conducted to draw insights on workplace resource allocation processes. In phase two an in-depth case study of a large company was conducted with interviews with those involved in resource allocation and wellbeing. Interviews were coded and analysed using descriptive and explanatory accounts. The findings from the review and case study were combined and developed into a causal process theory. This study shows that the stages in mental health and wellbeing investment revolve around ensuring organisational buy-in, workforce investment, and continual evaluation. Further work is needed to explore the transferability of the resulting process theory across different types of workplaces. However, it is clear that the features of real world decision-making in workplaces present challenges and opportunities for the research community.

Henstock et al. 2025.

Social Science & Medicine, vol. 366.

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Keywords: Case study; mental health; policy process; priority setting; process tracing; qualitative research; resource allocation; systematic review; wellbeing; workplaces.

Evidence Level: 1A

Link: <https://www.sciencedirect.com/science/article/pii/S0277953624010876?via%3Dihub>

Organisational Issues

Effect of organizational change on employee innovation performance: A dual mediation model

Affected by the COVID-19 pandemic and the international development pattern, the international environment has undergone profound changes. Enterprises, as the main body of activities on the front line of production and operation and the main battlefield of market competition, are facing various risk challenges. In both domestic and international markets, these challenges are becoming increasingly complex for businesses to navigate. For theoretical research, the impact of organizational change on employee innovation performance has become a key issue in organizational behavior and human resource management research. However, the influence mechanism of organizational change on employee innovation performance is still unclear. In this study, we examine whether, how, and when organizational change increases employee innovation performance in accordance with job demands-resource theory, as well as the effect of work pressure and work engagement on employee innovation performance. Data from 289 employees at three time points are examined. The results show that: (1) Organizational change negatively affects employee innovation performance through work pressure, i.e., work pressure mediates the impact of organizational change on employee innovation performance. (2) Organizational change positively affects employee innovation performance through work engagement, i.e., work engagement mediates the impact of organizational change on employee innovation performance. (3) Organizational identity plays a moderating role between organizational change and work pressure and work engagement, respectively, and there is a moderating effect in the process of mediation of work pressure and work engagement. The findings of this study provide important insights into how and when organizational change influences employee innovation performance.

Liu et al. 2025.

PLoS One, vol. 20, no. 2.

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Keywords: Employee; innovation; performance.

Evidence Level: 5B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0313056>

Shift Work

Acute night shift work is associated with increased blood pressure and reduced sleep duration in healthy adults

Shift workers have a 40% higher risk for cardiovascular disease (CVD) compared to people who work day shifts. However, the acute impact of shift work on CVD risk factors in free-living settings remains unclear. We therefore investigated the impact of acute night shift work on factors related to cardiovascular health including blood pressure (BP) and sleep duration. Twenty-four rotating shift workers (19F, 23 ± 4 y, BMI: 23 ± 3 kg/m²; mean ± SD) participated in a quasi-randomized crossover study. Assessments were conducted over the course of 1 day shift and one night shift in a free-living setting. BP was measured every 30 min by an ambulatory monitor. Sleep and wake times were recorded. Mixed effects models were conducted to examine changes in variables between conditions. Acute night shift work was associated with significantly higher 24 h systolic (107 ± 1 vs. 104 ± 1 mmHg; p < 0.0001) and diastolic (67 ± 1 vs. 64 ± 1 mmHg; p < 0.0001) BP, as well as blunted dipping patterns in systolic BP (8 ± 1 vs. 12 ± 1%; p = 0.032), as compared to day shift work. Sleep duration was significantly shorter during the night shift as compared to the day shift (4 h 04 ± 19 min vs. 8 h 22 ± 18 min; p < 0.0001). As little as one night of shift work in a free-living setting is sufficient to induce multiple CVD risk factors including increased BP and reduced sleep duration in healthy adults. It is critical to identify strategies to prevent or attenuate the negative impact of shift work on CVD risk in a large portion of the working population.

Seward et al. 2025.

Physiological Reports, vol. 13, no. 3.

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Keywords: Ambulatory blood pressure; blood pressure dipping; cardiovascular disease; free - living; shift work.

Evidence Level: 3B

Link: <https://physoc.onlinelibrary.wiley.com/doi/10.14814/phy2.70231>

Maternal shift work during pregnancy and cardiovascular health impacts on mother and offspring

Cardiovascular disease (CVD) is the leading cause of death for women worldwide. One of the risk factors for CVD in women is complications during pregnancy. Pregnancy complications include a wide arena of pathologies, including hypertension, preeclampsia, gestational diabetes, preterm delivery and miscarriage. Interestingly, increased evidence in recent years highlights a novel link between maternal shift work during pregnancy and increased risk for pregnancy complications, specifically hypertension and diabetes, while knowledge on other CVDs, such heart failure, atherosclerosis, ischemic heart disease, and stroke in pregnant shift working mothers is still scarce. Notably, shift work during pregnancy results in significant changes to the circadian rhythm of both the mother and fetus, therefore, engaging into shift work during pregnancy may adversely affect the cardiovascular health of both the mother and offspring, and carry into adulthood. Herein, we highlight the novel relationship between maternal shift work during pregnancy and the increased risk for pregnancy complications that may increase risk for CVD later in life. Furthermore, we provide mechanistic insights of the hemodynamic processes that are disrupted in response to maternal shift work and may explain the increased risk for cardiovascular disease. Understanding how shift work during pregnancy influences the prevalence for heart disease is of paramount clinical importance for minimizing the risk for cardiovascular disease for both the mother and offspring.

Flores et al. 2025.

Journal of Molecular and Cellular Cardiology, vol. 199.

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Keywords: Cardiovascular health; fetal health; hypertension; pregnancy; shift work.

Evidence Level: 6A

Link: [https://linkinghub.elsevier.com/retrieve/pii/S0022-2828\(24\)00213-X](https://linkinghub.elsevier.com/retrieve/pii/S0022-2828(24)00213-X)

Management and Leadership

An exploration of changes in the mental models of middle management and their association with activities to implement a dialogue tool to address mental health in the workplace

Background: There is a growing awareness for addressing mental health in the workplace. Although interventions to promote mental health at the organizational-level exist, implementation is a challenge. Middle management can play a crucial role in implementing organisational-level interventions. Also, we know that mental models often need to change first, before enactment of such interventions occur. The aim of this study is therefore to better understand whether and how changes in mental models of middle managers are associated with the implementation activities of an organisational-level intervention to support mental health. Ultimately, this is meant to lead to the enactment of, in this case, a dialogue tool to normalize a conversation between middle manager and employee to enhance mental health.

Methods: Participatory Action Research was used as a method to design our implementation of a dialogue tool primarily focused on middle management to address mental in health in one SME company with 238 employees. In-depth interviews with 11 (middle) managers at the start of the implementation phase were held. After nine months, 9 out of the same 11 (middle) managers were interviewed again to gain understanding whether and how changes occurred during the implementation. Thematic analysis was applied to the interviews, from inductive and deductive perspective. Focus groups with employees and observations during the implementation activities were used for triangulation purposes. **Results:** The mental models of the (middle) managers were analyzed based on readiness for change, perceived challenges and perceived opportunities. These mental models were generally positive towards the project, despite the low trust towards the Top Management and the general lack of experience with addressing mental health at the workplace. Nine months later, mental models changed towards more awareness and engagement in addressing mental health. Also, enactment of the dialogue tool by middle management and employees occurred. An association of these changes with, for example, the frequency and pace of implementation activities in which all employees were involved was reported. **Conclusion:** To implement interventions addressing mental health at the workplace, taking the time and using implementation activities that match the needs of middle management might help to change mental models of (middle) management.

Anzion et al. 2025.

BMC Public Health, vol. 25, no. 1.

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Keywords: Group-level sensemaking; mental models; middle-management; organisational-level mental health intervention; participatory action research.

Evidence Level: 5B

Link: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-21702-x>

Forms of distributed leadership: A case study of six workplaces in eldercare

Background: The concept of distributed leadership has been addressed in previous research, but few studies link their analysis to current and comparative empirical studies on processes and conditions enabling or hindering the development of distributed leadership. This specific study aims to identify and analyze mechanisms that enable or hinder the development of distributed leadership among employees in eldercare. **Methods:** This is a case study based on six specific workplaces in eldercare in Sweden in different ways aiming to work toward an organization that emphasizes trust and distribution of power. A realistic evaluation framework was used to understand the different workplace program theories regarding distributed leadership. Key mechanisms and how they interact with contextual factors in each case were analyzed. Comparative analyses were performed, identifying key processes in terms of realizing distributed leadership. **Results:** Analyzing the program theories in the respective cases showed that they have different orientations influenced by different motives for distributed leadership, which also interact with how distributed leadership was manifested and realized. The results point specifically to the importance of the mechanism formalization processes, participatory approaches to implementation, vertical sense-making, and horizontal sense-making for the development of distributed leadership. **Conclusions:** The result points to that regardless of the path for achieving distributed leadership adopted by the various workplaces

studied, the common denominator for those succeeding in distributing leadership is the development of a relational agency based on shared visions, a shared understanding of roles, and responsibilities, a learning approach and a dialogue-oriented relationship between management and employees. Another critical aspect is having sufficient resources to make taking on more responsibilities attractive.

Eriksson et al. 2025.

BMC Health Services Research, vol. 25, no. 1.

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Keywords: Case study; distributed leadership; eldercare; realistic evaluation.

Evidence Level: 5B

Link: <https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-025-12417-1>

Non-support from the immediate boss is associated with stress and unsafety at work

Background: Work-related complaints are often caused by stress and increased mental strain. Support from your immediate boss and colleagues is crucial to buffer against the negative health effects of the psychosocial working environment. **Aim:** The aim of this study was to investigate if support from the immediate boss and colleagues was associated with biological stress levels, unsafety at work, and other work-related conditions. **Methods:** Data derives from a subsample of the SCAPIS study, a major Swedish prospective population-based study. In this subsample, a total of $N = 5\,058$ middle-aged persons (50–64 years) from the general population participated; of these, 68.4% ($N = 3\,462$ individuals) provided hair samples. Questionnaires included socio-demographic and self-reports of occupation, stress, and health status. The demand and control questionnaires were used. A biomarker of long-term stress, hair cortisol concentrations (HCC), was also applied. **Results:** In this studied cohort, 9.1 % reported a lack of support from their immediate boss, while 90.9% reported that they did get support at work. Significantly more women ($p < 0.001$) reported non-support. Those with support or not did not differ in terms of age, education, civil status, smoking, or ethnicity. Those with non-support reported a higher extent ($p < 0.001$) of lower perceived health. The risk for hypertension and high cholesterol was increased by 28 %, respectively, 13 % being in the non-support group. The main findings were associations between lack of support and feelings of unsafety at work ($p < 0.001$), higher long-term cortisol levels ($p < 0.009$), lack of support from colleagues ($p < 0.001$), and feelings of dejected/sad ($p < 0.001$) and high work pace ($p = 0.03$). **Conclusion:** Individuals who did not have the necessary support from their immediate boss and colleagues reported they felt more insecure at work and had higher biological long-term stress. In workplace health promotion, an awareness of the link between social support at work and health could be an important component.

Iredahl et al. 2025.

Frontiers in Public Health, vol. 13.

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Keywords: Biological stress; job-strain; middle-aged population; perceived stress; support at work; working conditions.

Evidence Level: 4B

Link: <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2025.1416609/full>

Examining the relationship between managers' commitment to safety, leadership style, and employees' perception of managers' commitment

Introduction: Managers' commitment to safety has been recognized as a focal concept that can play an important role as organizations strive to improve safety performance and prevent major accidents. When management is committed to safety, this shows employees that safety is an important value to the organization, which, in turn, affects employees' safety behavior. Although the number of studies that explore the concept of safety commitment has considerably increased in recent years, the main question that remains to be answered is how managers can most effectively demonstrate their commitment to safety to employees and through what mechanisms. In this paper, we examined the relationship between managers' commitment to safety and employees' perceptions of managers' commitment to safety, with a specific focus on the potential mediating effect of managers' leadership style. **Method:** To explore the

proposed relationship, we performed an explanatory quantitative study on a sample of 147 respondents from six safety-critical organizations in the EU. By employing a mediation model, we were able to gain a better understanding of the role that transformational leadership can play when managers demonstrate their safety commitment to employees. **Results:** The results showed a positive and significant relationship between managers' commitment to safety and employees' perceptions of managers' commitment to safety. Furthermore, we found a statistically significant difference between managers' and employees' perceptions. The mediation analysis also confirmed that leadership style mediates the relationship between managers' commitment to safety and employees' perceptions of managers' commitment. **Conclusions:** This paper adds to the understanding of how managers can demonstrate their commitment to safety through their leadership and how managers' leadership style helps to shape employees' perceptions. **Practical application:** The findings highlight the relevance of managers' safety commitment and transformational leadership style for employees' perceptions of managers' safety commitment, which is a known antecedent of safety performance.

Levovnik et al. 2025.

Journal of Safety Research, vol. 92.

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Keywords: Employees' safety commitment perception; managers' commitment to safety; mediation model; safety-critical organizations; transformational leadership.

Evidence Level: 4B

Link: <https://www.sciencedirect.com/science/article/pii/S0022437524002056?via%3Dihub>

Work Ability

Employment, work ability and sick leave in melanoma patients within the first year of diagnosis

Background and objectives: Malignant melanoma affects younger working individuals. This study investigated work ability and sick leave within one year after diagnosis, as well as the impact of rehabilitation and psycho-oncological measures on employment outcomes. **Patients and methods:** In this monocentric, prospective, observational cohort study, 221 patients (62.4% females), aged 19-65, participated. 78.5% had tumor stage IB or lower at baseline. Routine clinical documentation, occupational history, work ability, subjective prognosis of employment, need for and satisfaction with rehabilitation measures were repeatedly assessed. **Results:** 181 patients (82%) were employed at first visit, 172 (78%) at last visit. Approximately 75% of patients initially rated work ability as "moderate", with up to 9 sick leave days. In the following year, sick days increased significantly in patients with stage IB and IIA ($p = 0.044$) and highly significantly in patients with stage II B and above ($p < 0.001$). Psycho-oncologic consultation (24%) and rehabilitation (18%) did not change the significantly worse self-rated work ability of these patients. **Conclusions:** Melanoma affects work ability, even in tumor stages without lymph node involvement or distant metastasis. Controlled clinical trials would be useful to evaluate the success of rehabilitation and psycho-oncological interventions for patients with melanoma.

Dugas-Breit et al. 2025.

Journal der Deutschen Dermatologischen Gesellschaft, vol. 23, no. 2.

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Keywords: Cohort studies; employment; melanoma; rehabilitation; sick leave; work ability.

Evidence Level: 4B

Link: <https://onlinelibrary.wiley.com/doi/10.1111/ddg.15560>

Effectiveness of clinical healthcare interventions for enhancing the work participation of patients with various health conditions: A synthesis of systematic reviews

Objectives: This objectives of this study were to determine the effectiveness of clinical healthcare interventions designed for improving the work participation of patients with various health conditions and identify promising elements within these interventions. **Design:** A systematic literature search was conducted, and a synthesis of systematic reviews (SRs) was performed. **Data sources:** MEDLINE, Embase, Cochrane Library and CINAHL were searched for articles published from January 2012 to December 2023.

Eligibility criteria: SRs of randomised controlled trials evaluating the effectiveness of interventions that aimed at improving work participation initiated within clinical healthcare in patients being treated for various health conditions were included. **Data extraction and synthesis:** Two authors independently used standardised methods to search and select SRs, and extract data. Our primary outcome was work participation, which could include return-to-work rate or sick leave duration. We were interested in both short-, medium-, as well as long-term outcomes. Risk of bias was assessed using the AMSTAR-2 tool. We used Grading of Recommendations Assessment, Development, and Evaluation (GRADE) to evaluate the certainty of the evidence and findings were summarised in GRADE evidence profiles. We used a deductive synthesis to identify promising intervention elements. **Results:** The health conditions included in the selected SRs were cancer, chronic low back and musculoskeletal pain, coronary heart disease, inflammatory arthritis, complaints of the lumbopelvic region during pregnancy, stroke and traumatic brain injury. Across health conditions, many interventions trended towards small, favourable effects. Moderately certain evidence showed that multidisciplinary and physical interventions enhance work participation at 12 months for people with cancer (risk ratio (RR) 1.23, 95% CI 1.09 to 1.33 and RR 1.23, 95% CI 1.08 to 1.39, respectively), and that multidisciplinary interventions reduce the days of return to work compared with usual care for people with coronary heart disease (40.77 days lower than control, 95% CI -67.19 to -14.35). Low-certainty evidence suggested that multidisciplinary interventions may enhance work participation at 12 months for people with coronary heart disease (RR 1.56, 95% CI 1.23 to 1.98) and reduce the number of sick leave days at 12 months for people with chronic low back pain (82, IQR 51 to 164 vs 175, IQR 91 to 365; $p=0.003$). Promising elements included (psycho)education, cognitive-behavioural therapy, psychosocial support, group and vocational counselling and physical training. **Conclusions:** There is considerable overlap in clinical healthcare interventions that aim to enhance work participation for patients across health conditions. Although their effects on work participation vary, some conditions show favourable response to multidisciplinary interventions. More evidence is needed on developing tailored interventions and evaluating their cost-effectiveness.

Kluit et al. 2025.

BMJ Open, vol. 15, no. 2.

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Keywords: Clinical decision-making; delivery of health care, integrated; occupational health services; patient-centred care; systematic review.

Evidence Level: 1A

Link: <https://bmjopen.bmj.com/content/15/2/e094201.long>

Fractional anisotropy of cingulum cingulate mediates the relationship between happiness and work performance in healthy individuals

Introduction: As competition among companies around the world intensifies, the nature of work and the performance required are becoming more complex. In parallel with this, there is growing attention on happiness and well-being as factors related to improving employee performance. However, little is known about the relationship between happiness and the brain and work performance in healthy people.

Methods: Therefore, we analyzed the correlations between the nine categories of work role performance (WRP), the subjective happiness scale (SHS), and four regions of fractional anisotropy (FA), an index reflecting brain microstructure that has been shown to be related to apathy in previous studies.

Results: It was shown that the cingulum cingulate (CCI) and the superior longitudinal fasciculus (SLF) correlated with the WRP and its facets in a manner consistent with their respective functions. In particular, the CCI was found to be extensively correlated with the facets of the WRP and to have a partially mediating effect on the relationship between the SHS and the WRP. **Conclusion:** This study is the first to show that indicators reflecting healthy individuals' happiness and brain microstructure, which are related to a variety of nonwork factors, are positively correlated with the diverse roles and performance that characterize modern work.

Kokubun et al. 2025.

Brain and Behavior, vol. 15, no. 2.

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Keywords: Cingulum cingulate; fractional anisotropy; happiness; performance; superior longitudinal fasciculus; work role.

Evidence Level: 5B

Link: <https://onlinelibrary.wiley.com/doi/10.1002/brb3.70334>

Adapting to the Future of Work

Aging Workforce

The contribution of common mental disorders and alcohol-related morbidity to educational differences in early labour market exit among older workers: A register-based cohort study

Previous studies have identified educational differences in early labour market exits, yet the mechanisms behind these disparities remain unclear. This study aims to examine to what extent common mental disorders (CMD) and alcohol-related morbidity can explain educational differences in early labour market exit. This cohort study included all men born 1951-53 who underwent conscription examination for military service in Sweden at age 18-20 (n = 136 466). The highest level of educational attainment and early labour market exit, using five different exit routes, was obtained from nationwide registers. Mediation analysis was used to examine the contribution of CMD and alcohol-related morbidity to the educational differences in early labour market exit. Factors measured in childhood, late adolescence, and early adulthood were included as confounders. Lower-educated men were at higher risk of leaving the labour market early. CMD contributed marginally to the educational differences in early exit due to disability pension, long-term sickness absence, and long-term unemployment, explaining up to 4%. Alcohol-related morbidity explained up to 12% of the educational differences in disability pension, long-term sickness absence, and long-term unemployment. Neither CMD nor alcohol-related morbidity were associated with early old-age retirement with and without income. Alcohol-related morbidity appears to be of importance when trying to understand educational differences in some but not all early labour market exit routes. Thus, reducing the negative effects of alcohol consumption could reduce educational inequalities in early exits from the labour market and prolong working life for all individuals regardless of socioeconomic position.

Carlsson et al. 2025.

European Journal of Public Health, vol. 35, no. 1.

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Keywords: Mental disorders; alcohol-related morbidity; older workers; early labour; market exit.

Evidence Level: 4B

Link: <https://academic.oup.com/eurpub/article/35/1/65/7951942?login=false>

Memory function and early exit from paid employment through different pathways among ageing European workers

Objectives: Understanding memory function's role in early workforce exit is key in supporting sustainable employment among ageing workers. This study examined the impact of memory function on early exit from paid employment, analyzed changes in memory function before, during and after such transitions, and assessed memory function trajectories in relation to the presence or absence of effort-reward imbalance at work. **Methods:** This study included 16 339 respondents from the Survey of Health, Ageing, and Retirement in Europe (SHARE) between age 50 and the country-specific retirement age. The effects of objective and subjective memory functioning on early exit were assessed using Cox proportional hazards with Fine-Gray sub distribution models. Changes in memory function before and after a transition to non-employment were assessed using generalized linear mixed-effects models. These changes were described and compared based on exposure to job effort-reward imbalance. **Results:** Workers with poor subjective memory were 2.3 times more likely to exit employment prematurely due to disability ([sub-distribution hazard ratio (SHR) 2.30, 95% confidence interval (CI) 1.77-3.00] and 1.3 times more likely to exit through unemployment (SHR 1.29, 95% CI 1.06-1.55). Workers with low objective memory were 1.6 times more likely to exit through unemployment (SHR 1.56, 95% CI 1.30-1.87). Subjective memory generally declined prior to, and during

early exit from paid employment. While subjective memory generally improved post-exit, objective memory function declined after exiting. An accelerated decline in objective memory functioning was noted among early retirees who had been exposed to effort-reward imbalance at work (β -0.45, standard error 0.16). **Conclusion:** Workers with poor memory function are at higher risk of early involuntary exit from paid employment. Promoting memory function and balancing job efforts and rewards may help mitigate the risk of a premature exit.

Ciliacus et al. 2025.

Scandinavian Journal of Work, Environment and Health, vol. 51, no. 2.

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Keywords: Memory function; early exit; employment; ageing workers.

Evidence Level: 4B

Link: <https://www.sjweh.fi/article/4211>

Work Environment

A gender breakdown of unexpected benefits generated by work from home in STEM fields: A qualitative analysis of the WiMPBME Task Group survey

Background: Working from home during the Covid-19 pandemic was perceived differently by men and women working in STEM fields. The aim of this paper is to highlight the unexpected benefits generated by working from home during the pandemic. **Methods:** Qualitative methodology was used to analyze data, collected via survey. The survey designed and conducted by WiMPBME targeted both males and females working in medical-related STEM fields (physics and engineering) and was answered by 921 individuals from 76 countries across all continents. This report analysed the responses to one open-ended question of the survey, namely: "What is the one positive that you have learnt/experienced as a result of working from home during this pandemic?". **Results:** 594 responded to the question of interest. Access to home office was reported by 72.2% of survey participants. Males were more likely than females to report no positives of working from home (62.9%). Females were more likely to cite quality time, physical and mental health as positive factors than males, and to mention children in their responses. The most commonly coded thematic unit for males was remote working, with many males reporting the feasibility of working from home. Increased work productivity, better time management and work organisation were other common themes highlighted by responders irrespective of gender. **Conclusion:** The findings of the survey show the diversity of perceptions about remote working in STEM fields, while highlighting the importance of considering family dynamics, individual circumstances as well as gender when evaluating varied experiences of STEM professionals.

Bezak et al. 2025.

Physica Medica, vol. 130.

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Keywords: COVID-19 impact; gender; qualitative survey analysis; STEM fields; working from home.

Evidence Level: 5B

Link: [https://www.physicamedica.com/article/S1120-1797\(25\)00007-9/fulltext](https://www.physicamedica.com/article/S1120-1797(25)00007-9/fulltext)

"Pet effect" patterns: Dynamics of animal presence and caregiver affect across (tele)work and non-work contexts

Human-animal interactions (HAI) may relate to animal caregivers' affect, also referred to as the "pet effect". However, studies have not explored these associations in work contexts or evaluated longitudinal patterns of HAI with other activities across work and non-work contexts, and their associations with caregiver emotions. We therefore assess momentary associations between HAI during (tele)work and non-work time and positive and negative caregiver affect (PA/NA), identify person-level patterns of longitudinal HAI state trajectories, and analyze cross-level moderating effects of these patterns on momentary associations between HAI and PA/NA. First, we evaluated associations between momentary HAI and caregiver PA/NA including the moderating role of momentary work state (teleworking vs. not working). Second, using a data-driven approach, we applied sequence analysis to determine heterogeneity in state

trajectories amongst caregivers using working activity and animal presence in five possible states (working at work/teleworking with animal/teleworking without animal/not working with animal/not working without animal), which we labelled as animal-work constellations. Similar trajectories of animal-work constellations across caregivers were grouped into clusters with recognizable patterns. Third, we assessed whether such patterns moderated momentary associations between HAI and caregiver PA/NA. Caregivers (Npersons = 324) completed ecological momentary survey data during five days with 10 prompts per day (Nobservations = 16,127) between 2017 and 2024. Results showed that momentary associations between HAI and affect were moderated by momentary work state and person-level animal-work constellation pattern, contextualizing the "pet effect". Our results highlight the importance of microlevel investigations of animal-work constellations and validates the novel use of sequence analysis to explore the role of context and time.

Delanoeije et al. 2025.

PLoS One, vol. 20, no. 2.

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Keywords: Pet effect; animal presence; caregiver affect; tele-work.

Evidence Level: 4B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0319009>

Examining attitudes about the virtual workplace: Associations between zoom fatigue, impression management, and virtual meeting adoption intent

Impression management is a crucial tactic within the workplace milieu. This study establishes a connection between impression management and the negative self-evaluation stemming from heightened self-monitoring during virtual meetings (VM), which manifests in the form of Zoom (VM) fatigue. We conducted a cross-sectional survey, by recruiting 2,448 U.S.-based workers. Our survey results revealed that facial appearance dissatisfaction is associated with VM fatigue, resulting in lower intention to adopt VM technologies due to decreased perceived usefulness of VM technologies. Furthermore, building upon the Uses and Gratification (UG) perspective and the assumptions of the Social Information Processing (SIP) theory and the Hyperpersonal Model, our findings illuminate that VM fatigue prompts the use of impression management behaviors by using VM features closely linked to dissatisfaction with one's facial appearance. The results suggest that utilization of impression management features in VMs is driven by needs related to facial appearance concerns, which is associated with impression management. This study extends the concept of impression management to VM environments in the workplace, underscoring the importance of addressing workers' needs and well-being to foster worker-friendly VM communication environments and promote VM acceptance. This study identifies external factors within the Technology Acceptance Model by integrating the UG perspective, the SIP theory, and the Hyperpersonal Model to understand the mechanisms underlying VM fatigue and adoption in the emerging virtual workplace.

Lim et al. 2025.

PLoS One, vol. 20, no. 2.

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Keywords: Virtual workplace; zoom fatigue; virtual; meetings; attitudes.

Evidence Level: 4B

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0312354>