

ABOUT RESEARCH ALERT

Research Alert is a service provided to you by the Institute for Work & Health (IWH) to help you keep abreast of recent literature in the areas of occupational health and safety, epidemiology, public health and others within the IWH mandate. Please note that these articles have not been reviewed by Institute scientists to assess the quality of the studies. Research Alerts should not be considered an endorsement of the findings. Readers are cautioned not to act on the results of single studies, but rather to seek bodies of evidence. It should also be noted that the Institute for Work & Health cannot provide full-text of articles listed in Research Alerts to individuals outside of the organization, as this violates copyright legislation.

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

Aoki S, Matsukiyo A, and Kondo T. Development of a new self-rating tool for assessing work capability in individuals with mental disorders and/or intellectual disabilities: the revised Mini-ICF-App-S (RMIAS) and its psychometric properties. *Journal of Vocational Rehabilitation*. 2025; 62(3):325-336.

<https://doi.org/10.1177/10522263251326525>

Cau Q, Gandre C, and Lengagne P. Recurrent major depression, employment and transitions to unemployment and disability benefits. *Social Science & Medicine*. 2025; 377:118056.

<https://doi.org/10.1016/j.socscimed.2025.118056> [open access]

Abstract: This study assesses the effects of recurrent major depression on employment and transitions to unemployment and disability benefits. Examining this issue is essential for designing timely interventions aimed to sustain individuals' employment. We rely on register data of a sample of individuals initially employed - a 2% sample of employees representative of French private-sector employees-followed up to eight years before and eight years after the year of diagnosis, aged between 20 and 60 years, over the period 2000-2015. We estimate that recurrent major depression persistently decreases the likelihood of being employed by 35 percentage points and annual earnings by 51%, and leads to increase the probability of long absence by 47 percentage points and the probability of permanent disability benefit reciprocity by 33 percentage points. The effect sizes are similar between men and women. We find differences between age groups. For young and middle-aged individuals, recurrent major depression implies a decrease in employment rates, an increase in unemployment benefit rates and a persistent increase in disability benefit reciprocity rates. Many young ill individuals remain attached to the labor market but experience unemployment and a large decline in annual earnings. For older individuals, recurrent major depression leads to a larger

decrease in employment rates and a greater increase in disability benefit reciprocity rates, compared to younger individuals. We conclude that differentiated policies tailored to age groups might be developed to support the employment of individuals with recurrent major depression

Cremonese C, Awoniyi AM, Dos Santos MS, Silva JDS, Nunes TS, Dias WP, et al. Occupational profile and prevalence of workplace accidents among beach workers. PLoS ONE. 2025; 20(5):e0318288.

<https://doi.org/10.1371/journal.pone.0318288> [open access]

Abstract: Background: Workplace accidents (WAs) are acute, often preventable events that result in injuries or functional impairments, typically arising from occupation-related activities. In 2019, an estimated 395 million workers worldwide suffered non-fatal work-related injuries, with 330,000 fatalities, the majority occurring in low- and middle-income countries (LMICs) like Brazil. The true figures may be considerably higher due to underreporting, as many informal workers lack adequate social protection and may avoid reporting accidents for fear of jeopardizing their livelihood. Objective: To assess the prevalence of WAs and their association with demographic and occupational determinants among beach workers in Salvador, Bahia, Brazil, between 2023 and 2024. Methods: A cross-sectional epidemiological study was conducted with 579 urban beach workers in Salvador from November 2023 to March 2024. Following ethical approval and participants' consent, questionnaires were administered to gather data on sociodemographic and occupational characteristics, workplace environments and processes, workplace-related injuries and illnesses, and history and characteristics of WA. WA prevalence and prevalence ratios were calculated, and associations were analyzed using a Poisson regression model with robust variance. Results: Among the workers, 59.4% were males, 25% were aged ≤ 29 years and 11.4% were ≥ 60 years. Black and brown individuals represented 92.9% of the population. The most performed activities were street vendors (43.6%) and waiters (25%). Informal employment was reported by 72.3% of workers, 70.2% worked ≥ 9 hours per day, and 88% had no occupational training. The overall WA prevalence observed was 40.3%, with workers ≤ 29 years old having a 2.59 times higher likelihood of experiencing WA compared to those ≥ 60 years old. The most common WAs were punctures (42.7%), cuts (28.4%) and burns (12.1%). Conclusions: The high prevalence of WA among beach workers, especially those ≤ 29 years old, may be associated with inadequate working conditions, including long working hours and lack of occupational training. These findings highlight the need for targeted interventions to improve working conditions and reduce WA risks.

Eliassen I, Trouli H, and Steder FB. Prevalence of musculoskeletal pain and associated factors among professional orchestra musicians in Norway. Scandinavian Journal of Public Health. 2025; 53(4):421-428.

<https://doi.org/10.1177/14034948241248496>

Abstract: BACKGROUND: Orchestra musicians have a high risk of experiencing musculoskeletal problems. These problems may lead to sleep and psychological disturbance. OBJECTIVES: This study investigated the occurrence of musculoskeletal pain (MSP) among orchestra musicians and the coherence between pain and predictors such as gender, age and instrument. Further, the impact of pain on sleep and mental health was analysed to assess pain as a predictor threatening musicians' wellbeing. METHODS: Some 358 musicians in eight different professional orchestras in Norway completed a questionnaire. Questions about pain experienced within the last 30 days were based on a national survey. Standardised screening tools like the Hopkins Symptom Checklist-25 (HSCL-25) and

Bergen Insomnia Scale (BIS) were used to assess psychological distress and sleeping problems. Kruskal-Wallis tests were used to analyse the differences in the pain-related variables: experienced pain severity (EPS), number of pain areas, and work being perceived as the source of pain based on age. Mann-Whitney U tests were conducted to evaluate the statistical significance between gender and the pain-related variables. Spearman's rank correlations were used to examine the relationship between EPS and BIS, HSCL-25 and pain area. Additionally, simple linear regression models were employed to determine whether EPS can predict higher scores on the HSCL-25 and BIS scales. RESULTS: The prevalence of MSP experienced in the last 30 days among orchestra musicians in Norway was 85%. Musicians experienced frequent pain regardless of their gender, age or instrument group. Neck, shoulders and upper back represented the most reported pain areas. Further, it was observed that increased EPS was correlated with an increase in the number of pain areas and in work being perceived as the source of pain. EPS significantly predicted sleep- and psychological distress. CONCLUSIONS: Orchestra musicians have a high risk of encountering MSP. Furthermore, their psychological distress and sleeping problems seem to be related to experienced MSP. To deliver optimal health, these problems should be handled simultaneously

Hennekam S, Kulkarni M, and Beatty JE. Neurodivergence and the persistence of neurotypical norms and inequalities in educational and occupational settings. *Work, Employment and Society*. 2025; 39(2):449-469.

<https://doi.org/10.1177/09500170241255050>

Ibrahim B, Le Moual N, Sit G, Goldberg M, Leynaert B, Ribet C, et al. Occupational exposure patterns to disinfectants and cleaning products and its association with asthma among French healthcare workers. *American Journal of Industrial Medicine*. 2025; 68(6):516-530.

<https://doi.org/10.1002/ajim.23725> [open access]

Abstract: Background: Disinfectants and cleaning products (DCPs) are important asthma risk factors among healthcare workers. However, healthcare work involves heterogenous cleaning tasks and co-exposure to many chemicals. These multidimensional aspects have rarely been considered. We aimed to identify patterns of occupational exposure to DCPs and study their associations with asthma. Methods: CONSTANCES is a French population-based cohort of ≈220,000 adults. Current asthma and asthma symptom score were defined by questionnaire at inclusion (2012-2021). Healthcare workers completed a supplementary questionnaire on their current/last held occupation, workplace, and cleaning activities that were used in unsupervised learning algorithms to identify occupational exposure patterns. Logistic and negative binomial regression models, adjusted for potential confounders, were used to assess associations with asthma outcomes. Results: In 5512 healthcare workers, four occupational exposure clusters were identified: Cluster1 (C1, 42%, reference), mainly characterized by low exposed nurses and physicians; C2 (7%), medical laboratory staff moderately exposed to common DCPs (chlorine/bleach, alcohol); C3 (41%), nursing assistants and nurses highly exposed to a few DCPs (mainly quaternary ammonium compounds); and C4 (10%), nurses and nursing assistants highly exposed to multiple DCPs (e.g., glutaraldehyde, hydrogen peroxide, and acids). Among women (n = 3734), C2 (mean score ratio [95% CI]: 1.31 [1.02; 1.68]) and C3 (1.18 [1.03; 1.36]) were associated with higher asthma symptom score, and an association was suggested between C3 and current asthma (odds ratio 1.22 [0.99; 1.51]). Conclusion: In a large population of healthcare workers, four DCP exposure patterns were identified, reflecting the heterogeneity of healthcare jobs.

Two patterns, including one characterized by laboratory workers, were associated with greater asthma symptoms in women.

Ketels M, Cillekens B, Clays E, Huysmans MA, De Bacquer D, Holtermann A, et al. Exploring the 'fit for work' principle: the association between occupational physical activity, cardio-respiratory fitness, and mortality: a meta-analysis of male worker data. *Scandinavian Journal of Work, Environment & Health*. 2025; 51(3):159-169.

<https://doi.org/10.5271/sjweh.4218> [open access]

Abstract: OBJECTIVES: This individual participant data meta-analysis investigates the association between occupational physical activity (OPA) and both cardiovascular mortality and all-cause mortality across different cardio-respiratory fitness (CRF) groups among male workers. METHODS: Data were pooled from five European cohort studies. OPA was categorized into three levels and CRF into low, moderate, and high tertiles. OPA was assessed using self-reports and CRF through objective measurements. Two-stage meta-analyses were conducted. First, we analyzed each cohort using Cox-regression models then we pooled results with random effects model to evaluate the associations between OPA and both cardiovascular and all-cause mortality, stratified by CRF. Models were adjusted for age, body mass index, smoking status, leisure-time physical activity, and educational level. RESULTS: Among 9922 men (mean age 46.8, standard deviation 6.7, years), 55.7% died during an average 25.6-year follow-up, of which 29.3% died from cardiovascular causes. Individuals with low CRF and high levels of OPA showed increased risks of cardiovascular [hazard ratio (HR) 1.27, 95% confidence interval (CI) 1.04-1.55] and all-cause mortality (HR 1.22, 95% CI 1.07-1.40) compared to those with low CRF and low levels of OPA. High CRF mitigated cardiovascular mortality risk (HR 1.08, 95% CI 0.79-1.48) but not all-cause mortality (HR 1.27, 95% CI 0.98-1.83) for those with high OPA. CONCLUSIONS: Our findings for cardiovascular mortality suggest that high CRF levels may protect workers with physically demanding jobs from adverse cardiovascular outcomes, supporting the 'fit for work' principle. However, this protective effect was not observed for all-cause mortality

Kukko K, Viitanen AK, Chekurov S, and Ituarte IF. Is the workforce ready? A look at operational health and safety in additive manufacturing. *Safety Science*. 2025; 187:106842.

<https://doi.org/10.1016/j.ssci.2025.106842> [open access]

Abstract: Purpose AM is a rapidly growing and developing industry. As a novel industry, it has been acknowledged that there is a need for research done in the area of occupational health and safety (OHS). This study considers the perspective of the AM technology users and how they receive and implement safety information and what are the gaps and development needs in the area.

Methodology The study was conducted in two steps. First, a comprehensive survey on general OHS topics among international AM professionals was carried out. Second, a focus group interview was conducted with Finnish survey participants. This longitudinal mixed-methods research allowed the collection of OHS information over five years. Data from the survey and focus group interviews were analyzed qualitatively and quantitatively. **Findings** The results of both survey and focus group interviews indicated that AM technology users have realized they have knowledge gaps in AM safety, especially concerning comprehensive external training. The focus group interviews highlighted a strong culture of self-directed learning and feeling that research on safety of additive manufacturing remains fragmented. Together, this conveys a strong notion that further global research and education on AM-related OHS are necessary to provide better safety guidance to all AM users,

including those in industrial, hobbyist, and office. However, to achieve sustainable and safe growth in the AM field, concerted efforts from manufacturers, industry professionals, and regulatory bodies are essential. Originality To the best of the authors' knowledge, this is pioneering study to gain insight into how AM technology users themselves view OHS issues.

Lin C, Park J, and Lee EJ. Employment outcomes among clients with stroke utilizing public vocational rehabilitation services in the United States. Archives of Physical Medicine & Rehabilitation. 2025; 106(5):723-728.

<https://doi.org/10.1016/j.apmr.2024.12.012> [open access]

Abstract: OBJECTIVE: To examine the correlations between individual characteristics among clients with stroke within public vocational rehabilitation (VR) and the employment outcome, as well as the utilization of VR services and their employment outcomes after VR services. DESIGN: Observational cohort study. SETTING: Nationwide VR data from the Rehabilitation Service Administration Case Service Report for fiscal year 2022. PARTICIPANTS: Individuals with stroke as primary cause of disability. INTERVENTIONS: Not applicable. MAIN OUTCOME MEASURES: Employment status and VR service types. RESULTS: Of those with stroke who received VR services (n=1793), 653 (36.4%) achieved a competitive employment outcome. Black clients were less likely to be competitively employed at closure than White clients, odds ratio (OR, 0.72; 95% CI, 0.56-0.92). Clients whose primary disability was auditory or communicative disabilities were more likely to be competitively employed at closure (OR, 2.25; 95% CI, 1.22-4.17). Regarding VR services, receiving distinct types of VR services significantly was associated with the competitive employment outcome for clients. Clients who received short-term job support services were 6.36 times more likely to be competitively employed at closure than those who did not receive the service (OR, 6.36; 95% CI, 4.28-9.46). CONCLUSIONS: Our results found that race, types of primary disability, level of education, receipt of Supplemental Security Income/Social Security Disability Insurance and the length of the VR services were associated with obtaining or regaining employment among clients with stroke who received public VR services. In terms of VR service patterns, job support services, job placement assistance, rehabilitation technology supports, maintenance services, other services, and VR counseling and guidance were associated with competitive employment outcomes among individuals with stroke

Maric S, Schuessler ES, and Thater L. Neither employment nor self-employment: avenues towards functional platform-mediated work systems. British Journal of Industrial Relations. 2025; 63(2):287-304.

<https://doi.org/10.1111/bjir.12855> [open access]

Abstract: ABSTRACT Digital labour platforms are contested because they create work relationships that neither fall into the category of traditional employment nor fulfil the criteria of freelance work due to platforms? heavy interference in the work process. Although existing research has elucidated different pathways for improving the working conditions of platform workers, we develop an employment relations perspective on platform-mediated work systems building on David Marsden's theory of employment systems. On the basis of an assessment of the psychological, economic and legal contracts underlying platform-mediated work, we discuss the limited functionality of these contracts in their ability to control opportunism among platforms, workers and clients. Our analysis contributes to existing debates by providing a theoretically informed framework for analysing the design of platform-mediated work systems and their consequences for the participating parties. Our

insights add nuance to the platform regulation debate by going beyond the question of worker classification towards understanding the organizational and institutional elements of the work system that need to be redesigned and supported by appropriate institutional safeguards. An employment systems perspective also allows for reflection on the economic, societal, sectoral-and strategic conditions that could drive such changes

Olfson M, Cosgrove CM, Wall MM, and Blanco C. Mortality risks of U.S. healthcare workers. *American Journal of Preventive Medicine*. 2025; 68(6):1080-1090.

<https://doi.org/10.1016/j.amepre.2024.11.005>

Abstract: INTRODUCTION: Physicians and nurses have lower annual mortality rates than the general population. One explanation for the low mortality rates of these healthcare workers emphasizes their specialized medical knowledge and greater access to healthcare while a second emphasizes their generally higher level of education. This study evaluated the extent to which general educational level accounts for the lower all-cause mortality rates of U.S. healthcare than non-healthcare workers. It also compared cause-specific mortality risks of healthcare and non-healthcare workers. METHODS: A nationally representative sample of healthcare workers (n=176,000) and non-healthcare workers (n=1,662,000) from the 2008 American Community Survey (n=3,310,000) was followed through 2019 for mortality. Cox models estimated hazard ratios of all-cause and cause-specific mortality for 6 healthcare worker groups. Analyses were performed in 2024. RESULTS: Age- and sex-standardized all-cause death rates per 100,000 were lower for healthcare (370.7; 95% CI=361.5, 379.9) than non-healthcare (442.2; 95% CI=439.2, 445.2) workers (p<0.001). However, this difference was not evident after additionally adjusting for level of education (aHR=1.00; 0.97, 1.02). In fully adjusted models, hazards of mortality were lower for healthcare than non-healthcare workers for cardiovascular disease (aHR=0.94; 0.89, 0.99) and lung cancer (aHR=0.89; 0.81, 0.98), but higher for pancreatic cancer (aHR=1.21; 1.05, 1.39) and external causes of death (aHR=1.20; 1.10, 1.30). CONCLUSIONS: Higher educational attainment accounted for the longer life expectancy of U.S. healthcare workers than other workers. Nevertheless, healthcare work relative to non-healthcare work was associated with lower hazards of deaths due to cardiovascular diseases and lung cancer, but higher hazards of deaths due to external causes

Pattaro S, Bailey N, and Dibben C. Occupational differences in COVID-19 hospital admission and mortality risks between women and men in Scotland: a population-based study using linked administrative data. *Occupational and Environmental Medicine*. 2025; 82(3):128-137.

<https://doi.org/10.1136/oemed-2024-109562> [open access]

Abstract: Objectives: Occupations vary with respect to workplace factors that influence exposure to COVID-19, such as ventilation, social contacts and protective equipment. Variations between women and men may arise because they have different occupational roles or behavioural responses. We estimated occupational differences in COVID-19 hospital admission and mortality risks by sex. Methods: We combined (1) individual-level data from 2011 Census with (2) health records and (3) household-level information from residential identifiers, using a Scottish cohort of 1.7 million adults aged 40-64 years between 1 March 2020 and 31 January 2021. We estimated age-standardised COVID-19 hospital admission and mortality rates, stratified by sex and occupation. Cox proportional hazards models were adjusted for pre-pandemic health and occupational exposure factors, including interaction effects between occupation and sex. Results: Women had lower age-standardised COVID-

19 hospital admission and mortality rates than men. Among women, adjusted death risks were lowest for health professionals, and those in associate professional and technical occupations (paramedics and medical technicians), with the latter supported by results from the interaction model. Among men, elevated adjusted admission and death risks were observed for large vehicle and taxi drivers. Additionally, admission risks remained high among men in caring personal services (including home and care workers), while elevated risks were observed among women in customer service occupations (call centre operators) and process, plant and machine operative roles (assemblers and sorters). Conclusions: Occupational differences in COVID-19 hospital admission and mortality risks between women and men highlight the need to account for sex differences when developing interventions to reduce infections among vulnerable occupational groups.

Quinn TD, Perera S, Conroy MB, Jakicic JM, Muldoon MF, Huber KA, et al. Impact of sedentary behaviour reduction on desk-worker workplace satisfaction, productivity, mood and health-related quality of life: a randomised trial. Occupational and Environmental Medicine. 2025; 82(2):61-68.
<https://doi.org/10.1136/oemed-2024-109868>

Abstract: OBJECTIVES: Sedentary behaviour (SB) is related to lower worker health-related quality of life (HRQOL), mental health and productivity. However, it is unknown whether reducing SB improves these outcomes. This study assessed whether a 3-month SB reduction intervention improved or was associated with dose-response changes in workplace satisfaction, productivity, mood and HRQOL. METHODS: Inactive desk workers with elevated blood pressure were randomised to a 3-month SB reduction intervention (n=135) or control (n=136). The intervention used a sit-stand desk, wrist-worn activity prompter and bi-monthly individual coaching to primarily replace work SB with standing and stepping. SB measured via a thigh-mounted activPAL3 micro, workplace satisfaction, productivity, mood and HRQOL were assessed at baseline and 3 months. Analyses of covariance compared changes in outcomes between groups with adjustment for baseline values. In both groups, associations between changes in work and non-work SB and outcomes were examined using linear regression. RESULTS: Compared with control, reducing SB did not significantly change workplace satisfaction, productivity or HRQOL. Among mood measures, only vigour improved (1.01 vs 0.1 points, p=0.0302). Among all participants, reductions in non-work SB were associated with improvements in workplace satisfaction (+0.15 and +0.27 points/hour of non-work standing and stepping, respectively) and productivity (+0.47 points/hour of non-work stepping), while changes in SB during work were not related. CONCLUSIONS: Interventions reducing non-work rather than work SB may be more impactful for improving workplace satisfaction and HRQOL outcomes. Future studies should explore workplace-based SB reduction interventions that are longer and target non-work time to improve similar outcomes. TRIAL REGISTRATION NUMBER: NCT03307343

Soler-Buades L. No welfare without workfare? Revisiting varieties of minimum income schemes in Europe (2008-2022). Social Policy & Administration. 2025; 59(3):569-587.
<https://doi.org/10.1111/spol.13077> [open access]

Abstract: Abstract The social policy literature indicates a notable shift towards activation in minimum income schemes (MIS) since the 1990s, which has led to the emergence of new policy varieties. However, previous research has failed to reveal institutional changes over time and across/within varieties. This article measures and interprets varieties of minimum income across six welfare states from 2008 to 2022. It examines the evolution of varieties of MIS over time, and the extent to which

changes have been driven by path dependence dynamics or by convergence towards a workfare model. Theoretically, the article builds on the regulation approach in political economy. Methodologically, it applies a Principal Component Analysis to a new dataset that consists of three OECD-standard indicators alongside two novel indicators formulated for this study. The findings illustrate that varieties of MIS have undergone both quantitative and qualitative changes, moving within and between typologies. These changes are attributed to a lack of investment in income protection, limited enabling opportunities, and the introduction of specific, incremental workfare reforms

Tanjung K, Kc P, Kyronlahti S, Goldberg M, Nygard CH, and Neupane S. Associations of psychosocial and physical work demands with all-cause mortality: a pooled analysis of prospective cohort studies. *International Journal of Epidemiology*. 2025; 54(3):dyaf045.

<https://doi.org/10.1093/ije/dyaf045> [open access]

Abstract: Background: The findings regarding mortality risk attributable to psychosocial and physical work demands are inconsistent. Pooled estimates using participant-level data from multiple cohort studies may provide more conclusive evidence. Methods: Four prospective cohort studies conducted in England, Finland, France, and the USA were used (age 36-62 years; n = 41 760). We studied 34 903 and 36 076 individuals who had baseline (1981-2005) information on self-reported psychosocial and physical work demands, respectively. All-cause mortality until the year 2018 was ascertained through linkage to national registers, National Death Index, and company databases. We investigated the associations of psychosocial and physical demands with all-cause mortality separately for females and males using Cox regression models that were adjusted for socio-demographic and lifestyle factors. Using random-effects meta-analysis, we calculated pooled estimates of all-cause mortality for moderate and high exposure levels. Results: During the mean follow-up of 25 years, 2105 deaths occurred among females and 5048 deaths occurred among males with information on psychosocial demands. The corresponding numbers for those with information on physical demands were 2176 and 5101. Fully adjusted models indicated that psychosocial demands were associated with both lower and higher all-cause mortality risks in both sexes. Physical demands increased the risk of all-cause mortality in both sexes and the association was strongest among males with moderate exposure levels (pooled hazard ratio 1.10, 95% confidence interval 1.02-1.19). Conclusion: The relationship between psychosocial work demands and all-cause mortality remains inconclusive, whereas moderate physical work demands increase the mortality risk among males.

Yi T, Dong Y, and Li J. Leadership in the darkness: unveiling the impact of exploitative tactics on miners' unsafe behaviors. *Safety Science*. 2025; 188:106873.

<https://doi.org/10.1016/j.ssci.2025.106873>

Missed an issue? Catch up on previous Research Alerts available on the IWH website www.iwh.on.ca/journal-articles/research-alerts