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

***Smith PM. Challenges with, and potential solutions for, mediation analyses. Occupational and Environmental Medicine. 2025; [epub ahead of print].**

<https://doi.org/10.1136/oemed-2025-110670>

Baek SU and Yoon JH. Precarious employment typologies and psychotropic medication use and misuse. American Journal of Preventive Medicine. 2025; 69(6):108064.

<https://doi.org/10.1016/j.amepre.2025.108064>

Abstract: INTRODUCTION: Precarious employment has emerged as a significant social determinant of worker health. This cross-sectional study examined the association between precarious employment and psychotropic medication use and misuse using a typological approach. METHODS: A nationally representative sample of 8,993 young workers in Korea was analyzed. Data collection was conducted in 2022, and the analyses for this study were performed in 2025. Eight precarious employment indicators related to employment security, income adequacy, worker rights, and protection were included. Latent class analysis was employed to classify employment typologies. The associations between employment typologies, psychotropic medication use, and misuse were determined using ORs and 95% CIs. RESULTS: Three latent employment typologies were identified: standard employment relationship-like type (n=4,864; 59.7%), instrumental type (n=1,973; 20.3%), and precarious type (n=2,156; 19.9%). Psychotropic medication use was reported by 2.6%, 4.7%, and 6.5% of individuals in the standard employment relationship-like, instrumental, and precarious types, respectively. Psychotropic medication misuse was reported by 0.4%, 1.1%, and 1.4% of individuals in the standard employment relationship-like, instrumental, and precarious types, respectively. After adjusting for the sociodemographic factors, individuals in the precarious type had 6.16 times higher

odds of psychotropic medication use (95% CI=3.10, 12.25) and 10.34 times higher odds of psychotropic medication misuse (95% CI=1.64, 65.39) than those in the standard employment relationship-like type. CONCLUSIONS: Precarious employment experience is closely linked with psychotropic medication use and misuse among young Korean wage workers. Policy interventions are required to improve the employment quality and ensure appropriate psychotropic medication use in this population

Donohue R, Cooper B, Cieri HD, Sheehan C, and Shea T. Role overload and safety incidents: an examination of the individual- and team-level buffering effects of psychological safety. *Safety Science*. 2026; 193:107008.

<https://doi.org/10.1016/j.ssci.2025.107008> [open access]

Abstract: A supportive work environment benefits employees and their organizations, and is particularly important for safety outcomes. In this paper we respond to calls in the literature to examine the moderating effects of individual- and team-level psychological safety on the relationship between role overload and safety incidents. Drawing on conservation of resources theory, we proposed that role overload would be positively related to safety incidents. Second, we proposed a multi-level interaction model where individual- and team-level psychological safety attenuate the positive relationship between role overload and safety incidents. Using data obtained from 841 employees nested in 100 teams, our multi-level analyses revealed that role overload positively relates to safety incidents and that psychological safety is a team-, rather than an individual-, level moderating resource that confers protection for employees by buffering the effects of role overload on safety incidents. We also found a main effect for individual-level psychological safety, with higher levels of psychological safety associated with fewer incidents. Based on our findings, employees should individually and collectively invest resources to create a climate of psychological safety to protect themselves and their colleagues from the negative safety implications of role overload. Leaders are advised to focus on interventions to enhance team-level psychological safety including supportive environments to encourage team cohesion, initiative taking, accountability, and via their leadership development

Fishwick D, Harding AH, Chen Y, Barber CM, Pearce N, and Nicholls G. Respiratory conditions and pesticide exposure in British pesticide applicators. *Occupational Medicine*. 2025; 75(7):403-411.

<https://doi.org/10.1093/occmed/kqaf029>

Abstract: Background: The relationship between pesticide exposure and respiratory ill-health remains under researched. Aims: We set out to define the prevalence of respiratory complaints, excluding asthma, and estimates of exposure in a cohort of pesticide applicators based in Great Britain (GB). Methods: A baseline cross-sectional study (n = 5817), with follow-up at up to 5 years (n = 2578), was conducted in GB pesticide workers. Demographic and personal factors, details of working hours and practices, exposures to specific pesticide types, self-reported respiratory ill-health and doctor-diagnosed health conditions were recorded. Multivariable logistic regression models were used to assess the association between exposures to pesticides and respiratory health. Results: The mean age was 54.1 years; 98% were male. At baseline, 70 (1.2%) had doctor-diagnosed chronic bronchitis, and 60 (1%) had chronic obstructive pulmonary disease (COPD). Twenty-six (0.4%) reported farmer's lung. In contrast, reported respiratory symptoms were common at follow-up; nasal allergies reported by 541 participants (21%), regular cough by 351 (14%), chest tightness ever by 329 (13%) and work-

related chest tightness by 45 (1.8%). Nasal allergies were more common in those not using pesticides in the last 12 months [odds ratio (OR) 1.54 (95% CI 1.14-2.06)], chest tightness was more common in retired workers [OR 1.87 (1.25-2.81)], and work-related chest tightness more common in the current high exposure category [OR 2.68 (1.28-5.60)]. Conclusions: This study has confirmed low levels of self-reported doctor-diagnosed conditions, but high levels of reported respiratory symptoms. This suggests potential under diagnosis of respiratory ill-health in this sector.

Guardiano M, Andel R, Trudel X, and Li J. Longitudinal associations of job demand-control characteristics with objective and subjective cognitive outcomes in older workers: the health and retirement study . American Journal of Industrial Medicine. 2025; 68(12):1115-1130.

<https://doi.org/10.1002/ajim.70031> [open access]

Abstract: Background: The job demand-control (JDC) psychosocial work model has demonstrated effects on objective cognitive performance, but its association with subjective memory is still poorly understood. We examined longitudinal associations of JDC characteristics with objective (general cognitive function/episodic memory) and subjective (perceived memory) cognition. Methods: Using the Health and Retirement Study (HRS) data, 3497 workers aged 50+ were followed from 2006-2008 to 2018. Self-reported job demand and job control were dichotomized and later combined into quadrants reflecting high/low job strain and active/passive jobs. Analyses used covariate-adjusted generalized estimating equations. Results: High job control was significantly positively associated with general cognitive function (regression coefficient: 0.409, $p < 0.001$), episodic memory (0.373, $p < 0.001$), and subjective memory (0.057, $p = 0.034$). "Low demand and high control" (low strain work) exhibited significant, positive associations with all cognitive outcomes. "High demand and high control" (active work) was significantly positively associated with objective cognitive outcomes. Conclusions: Opportunities for enhancing job control may promote objective cognition and subjective memory health in the US aging workforce.

Holm M, Schioler L, Dahlman-Hoglund A, Tinnerberg H, Andersson M, Behndig A, et al. Occupational exposures to inorganic dust are associated with emphysema: the SCAPIS cohort. Occupational and Environmental Medicine. 2025; 82(9):437-443.

<https://doi.org/10.1136/oemed-2025-110140> [open access]

Abstract: OBJECTIVES: There is a lack of knowledge about whether occupational exposures increase the risk of emphysema, especially in never-smokers. Our objective was to determine if occupational exposures are associated with emphysema and impaired diffusing capacity. METHODS: In the Swedish CardioPulmonary bioImage Study (SCAPIS), persons from the general population aged 50-64 answered a questionnaire and underwent CT of the lung as well as assessment of the diffusing capacity of their lungs for carbon monoxide (DL(CO)), presented as DL(CO)<lower limit of normal (LLN). Emphysema was defined as emphysema in any part of the lungs. Occupational exposures were assessed by a job exposure matrix based on longest held job. ORs with 95% CIs were calculated using logistic multivariable models. RESULTS: In this cross-sectional study (27370 persons including 13981 never-smokers), occupational exposure to inorganic dust was associated with emphysema (OR 1.25, 95% CI 1.07 to 1.47), also among never-smokers, (OR 1.46, 95% CI 1.00 to 2.11). There were associations with DL(CO)<LLN for occupational exposure to inorganic dust and vapour and gases. With all exposures in the same model, inorganic dust was associated with emphysema (OR 1.30, 95% CI 1.08 to 1.57), and vapour and gases were associated with DL(CO)<LLN (OR 1.17, 95% CI 1.00 to 1.38).

In those with emphysema and impaired DL(CO), there was an association with inorganic dust (OR 1.65, 95% CI 1.20 to 2.28), also among never-smokers (OR 3.79, 95% CI 1.35 to 10.63). CONCLUSIONS: Occupational exposures to inorganic dust are associated with emphysema. The association is stronger in those with the combination of emphysema and impaired DL(CO) indicating serious exposure effects in the alveoli

Moberg K and Gornitzki C. Combining search filters for randomized controlled trials with the Cochrane RCT Classifier in Covidence: a methodological validation study. Research Synthesis Methods. 2025; 16(6):953-960.

<https://doi.org/10.1017/rsm.2025.10023> [open access]

Abstract: Our objective was to evaluate the recall and number needed to read (NNR) for the Cochrane RCT Classifier compared to and in combination with established search filters developed for Ovid MEDLINE and Embase.com. A gold standard set of 1,103 randomized controlled trials (RCTs) was created to calculate recall for the Cochrane RCT Classifier in Covidence, the Cochrane sensitivity-maximizing RCT filter in Ovid MEDLINE and the Cochrane Embase RCT filter for Embase.com. In addition, the classifier and the filters were validated in three case studies using reports from the Swedish Agency for Health Technology Assessment and Assessment of Social Services to assess impact on search results and NNR. The Cochrane RCT Classifier had the highest recall with 99.64% followed by the Cochrane sensitivity-maximizing RCT filter in Ovid MEDLINE with 98.73% and the Cochrane Embase RCT filter with 98.46%. However, the Cochrane RCT Classifier had a higher NNR than the RCT filters in all case studies. Combining the RCT filters with the Cochrane RCT Classifier reduced NNR compared to using the RCT filters alone while achieving a recall of 98.46% for the Ovid MEDLINE/RCT Classifier combination and 98.28% for the Embase/RCT Classifier combination. In conclusion, we found that the Cochrane RCT Classifier in Covidence has a higher recall than established search filters but also a higher NNR. Thus, using the Cochrane RCT Classifier instead of current state-of-the-art RCT filters would lead to an increased workload in the screening process. A viable option with a lower NNR than RCT filters, at the cost of a slight decrease in recall, is to combine the Cochrane RCT Classifier with RCT filters in database searches

de Oliveira C, Jamieson M, and Bonato S. Mental health as a determinant of work: a scoping review on the impact of mental health on precarious employment. Health Policy. 2025; 161:105395.

<https://doi.org/10.1016/j.healthpol.2025.105395>

Abstract: BACKGROUND: While many studies have examined the impact of precarious employment on mental health, the reverse relationship has received less attention. OBJECTIVES: The objectives of this scoping review were to ascertain the existing literature examining the impact of mental health on precarious employment and to describe, synthesise, and critically appraise it. METHODS: Business Source Premier, EconLit, Embase, MEDLINE, PsycINFO, and Web of Science were searched from 1 January 1980 to 30 August 2024. Additionally, searches were undertaken in Google and specific websites; references of key papers were also examined. Relevant data were extracted from studies, and their quality was assessed, namely whether they accounted for endogeneity. Evidence was synthesised by mental disorder/illness/problem using a narrative synthesis approach. RESULTS: After duplicates were removed, the search yielded 10,048 unique records; ultimately, 19 relevant papers, corresponding to 20 unique studies, were deemed relevant. Few specifically focused on mental health as a determinant of precarious employment and/or recognised the potential presence of

endogeneity. Studies found mixed evidence on the relationship between mental health and precarious employment. While the evidence suggests that psychological distress and mental health complaints likely increase the probability of precarious employment, anxiety and emotional exhaustion likely do not. The evidence on depressive disorders is mixed/inconclusive. **CONCLUSION:** Some of the existing literature suggests that people with poor mental health may be at a higher risk of precarious employment; however, in some instances, the evidence was either mixed/inconclusive or absent. More high-quality studies are needed to inform clear policy recommendations

Orvik CP, Albrechtsen E, Kongsvik T, Holen SM, Bertheussen LE, and Moltubakk ST. What is safety performance? A systematic review of conceptualizations in the construction safety research. *Safety Science*. 2026; 193:107025.

<https://doi.org/10.1016/j.ssci.2025.107025> [open access]

Abstract: Safety performance is a critical concept in safety management and research across the construction industry. Effective safety management relies on an understanding of past, present, and expected performance to inform decision-making. Despite extensive research and practical applications in the construction industry, there is no consensus regarding how to conceptualize and measure safety performance. This study reviews 231 scientific articles to explore different definitions, applications, and measurements of safety performance in construction safety research. The findings reveal four main categories of safety performance concepts: loss-based, safety management-based, behavior-based, and mixed approaches. The lack of clear definitions and the heterogeneity of conceptualizations contribute to ambiguity in safety research, posing challenges for communication and theory development. However, this diversity also offers a broader range of measures for practitioners. Awareness of these variations is crucial for the effective communication and application of safety performance metrics in both research and practice

Stevenson BJ, Kiram-Kathawalla U, Teravainen T, Wilkins S, Mueller L, Falcon A, et al. Does transitional work improve vocational and mental health outcomes? A systematic narrative review of the evidence. *Psychiatric Rehabilitation Journal*. 2025; 48(4):228-243.

<https://doi.org/10.1037/prj0000650>

Abstract: **OBJECTIVE:** To examine and synthesize the available empirical evidence on the impact of transitional work (TW) on vocational (i.e., rates of competitive employment, time to competitive employment, tenure in competitive employment, income earned) and mental health outcomes. **METHODS:** APA PsycArticles, APA PsycInfo, Psychiatry Online, PubMed, and Social Sciences Citation Index were searched using the key terms: "transitional work," "compensated work therapy," "transitional employment," "noncompetitive employment," and "diversified placement approach." A gray literature search was conducted through Google Scholar. **RESULTS:** 28 studies met inclusion criteria for this review. There is some evidence indicating that TW improves vocational outcomes compared with general vocational support or no services at all, but that TW is less effective at improving vocational outcomes compared with job placement services (e.g., individual placement and support). With regard to mental health, there is some evidence that TW improves substance use outcomes when paired with other substance use-related services (e.g., transitional housing, drug screen protocols). **CONCLUSIONS AND IMPLICATIONS FOR PRACTICE:** TW appears to be an effective approach for improving vocational outcomes compared with no treatment, incentive therapy, workshops, or other general vocational supports, and less effective than job placement services that

are designed for individuals with immediate competitive employment goals (e.g., individual placement and support). Recommendations for practice and research are discussed. (PsycInfo Database Record (c) 2025 APA, all rights reserved)

Tement S, Shockley KM, and Horvat M. Home-to-work transitions and psychophysiological unwinding from work: a qualitative episodic approach. *Journal of Occupational Health Psychology*. 2025; 30(5):291-308.

<https://doi.org/10.1037/ocp0000407>

Abstract: Many employees engage in work during their private time either by thinking and talking about it or performing work-related tasks. Such home-to-work transitions (HWT) are generally considered to disturb psychophysiological unwinding after work (i.e., recovery). In this study, we replicate and theoretically extend past research to foster our understanding of both psychological and physiological recovery manifestations. Particularly, we focused on three aspects of HWT—their frequency, type, and appraisal (i.e., positive or negative for work and family domains). We used an experience sampling design with 89 participants across 7 days (i.e., weekday and weekend) during which we measured daily episodes of HWT via a qualitative approach, subjective daily measures of end-of-day fatigue and next-day restfulness, as well as nocturnal heart rate variability as a physiological recovery indicator. As expected, the number of daily HWT was positively associated with end-of-day fatigue. Additionally, we found that the daily relationships between HWT and heart rate variability were also positive, which is contrary to expectations, but consistent with past research. Both the type and appraisal of HWT were also associated with recovery indicators. Work-related activities at home and the positive appraisal of HWT for work were positively associated with heart rate variability. In general, we were able to replicate past work on the associations between HWT and psychological recovery indicators and provide new insights into physiological aspects. The contradictory, yet consistent, association with previous work on physiological recovery is noteworthy and can help revise recovery theories, especially by challenging the universally assumed recovery-preventive role of HWT. (PsycInfo Database Record (c) 2025 APA, all rights reserved)

Thatcher A, Acquah AA, Aublet-Cuvelier A, Becker R, Bentley T, Boatca ME, et al. Ergonomics/human factors and the future of work: a global systems perspective. *Applied Ergonomics*. 2026; 131:104665.

<https://doi.org/10.1016/j.apergo.2025.104665> [open access]

Abstract: In a webinar series hosted by the International Ergonomics Association, the Future of Work Committee of the International Ergonomics Association gathered inputs about the future of work from ergonomics/human factors (E/HF) experts representing different regions around the world. Through these insights, four global megatrends relevant to E/HF driving the future of work were identified: labour-market supply; work informality; technology; and climate change. Next, we applied an E/HF systems approach, using causal loop diagrams, to explore the unfolding interrelationships between these megatrends at a global level and with a national level example to determine what novel insights can be uncovered using systems analysis. We demonstrate the power of E/HF systems thinking that can enable national E/HF societies and regional think-tanks to move beyond a siloed approach to megatrends. We conclude with some high-level suggestions for E/HF to consider in order to meet the future of work challenges

Tomic D, Hoy RF, Berecki-Gisolf J, Wah W, Gwini SM, Sim MR, et al. Counting the costs of silicosis in Victoria, Australia, 2019-2024, with projections to 2031. *American Journal of Industrial Medicine*. 2025; 68(12):1105-1114.

<https://doi.org/10.1002/ajim.70030>

Abstract: BACKGROUND: Silicosis has re-emerged in middle- and high-income countries globally due to high silica exposures from manufacturing and fabrication of artificial stone countertops. No studies have reported the costs of workers' compensation claims for silicosis; we therefore examined cost trends in Victoria, Australia, and projected claim costs to 2031. METHODS: Data from the WorkSafe Victoria Compensation Research Database were used to identify all silicosis compensation claims among males from 2019 to 2024, and claim rates were estimated per year and age group. Using Poisson regression model estimates, claim cost projections were calculated for 2025-2031, separately for statutory (no-fault) and common law (fault-based) payments. RESULTS: From 2019 to 2024, there were 663 silicosis compensation claims made by 356 males aged 15-74 years in Victoria. Cumulative costs totaled AU \$111.78 million. Annual cost projections suggest an increase over time, with a total of AU \$29.88 million per year by 2031. Most claims remained active for over a year, particularly those by workers aged 25-54 years. Within 4-year follow-up, common law (fault-based) payments accounted for approximately 30% of total costs but dominated younger workers' claims. Projected 2031 costs were highest for claims by workers aged 35-44 years. CONCLUSIONS: This study presents the first comprehensive estimate of projected workers' compensation costs for silicosis, highlighting a sustained financial burden driven by ongoing claims among younger workers. As artificial stone continues to be used internationally, these findings underscore the need for regulatory action to prevent a foreseeable health and economic burden

Wenta J, Billaudeau N, Temam S, Kab S, Goldberg M, Vuillermoz C, et al. How is the mental health of teachers faring? A 10-year follow-up study of depressive symptoms and job dissatisfaction in the CONSTANCES cohort. *Occupational and Environmental Medicine*. 2025; 82(9):415-422.

<https://doi.org/10.1136/oemed-2025-110273> [open access]

Abstract: OBJECTIVES: Teachers' mental health, an important asset for society, may be impacted by security or health crises alongside more structural changes. Our primary aim was to assess 2012-2022 trends in depressive symptoms among French teachers compared to similar employees. We further examined concomitant trends in job dissatisfaction. METHODS: Within the ongoing French national CONSTANCES cohort, depressive symptoms were regularly assessed (up to four times between 2012 and 2022) using the Center for Epidemiologic Studies-Depression scale (CES-D, score 0-60). We used mixed models adjusted for sociodemographic factors to estimate mean parameters (95% CI) of CES-D variations between 2012 and 2022 among teachers (n=15 022) compared with other intermediate or managerial/professional occupations (n=21 361). We similarly studied changes in job dissatisfaction (score 1-8) from 2018 (first occurrence in questionnaires) to 2022. RESULTS: In 2012, teachers' CES-D was slightly lower on average compared with that of non-teachers (-0.66 point (-1.19 to -0.12)), but tended to increase more rapidly over the decade, particularly in the years concomitant to the COVID-19 pandemic (+0.14 point/year (0.01 to 0.27)). By 2022, the gap had closed. Job dissatisfaction followed a somewhat different pattern: slightly lower among teachers in 2018, it increased at first more rapidly compared with non-teachers, but then stabilised, in parallel with the waning of the pandemic. CONCLUSIONS: Our study highlights unfavourable long-term trends in the mental well-being of French teachers. Although clinical changes at individual levels would be mostly

imperceptible, our findings concern a large population of key professionals, suggesting their growing needs for mental health support in the long run

Zainal NH, Foo CYS, Teo I, and Sung SC. Longitudinal network analysis of resilience factors and mental health symptoms among healthcare workers during a public health emergency. *Social Science & Medicine*. 2025; 386:118653.

<https://doi.org/10.1016/j.socscimed.2025.118653>

Abstract: Background: Healthcare workers (HCWs) experience various stressors that can adversely weaken mental health and self-perceived resilience, potentially spilling over to compromised patient care. However, the sequela of this phenomenon is not well understood. Therefore, we tested how shifts in resilience factor strength (self-perceived resilience and job dedication) might precede, co-occur, or be a consequence of mental health symptoms among HCWs during a public health emergency. Method: A three-wave survey was conducted across two years, each wave about a year apart. HCWs (N = 634) recruited in Singapore self-reported on anxiety and depression symptoms, perceived stress, job dedication, and resilience during each wave. Prospective network analysis determined within-person, cross-lagged temporal relationships between constructs from time t to $t + 1$, adjusting for autoregressions and other within-person and between-person associations. Results: Increased stress predicted future weakened job dedication (Cohen's $d = -3.93$) and resilience factors ($d = -2.96$). Likewise, increased depression symptoms predicted subsequent weakened job dedication ($d = -0.64$) and resilience factors ($d = -0.44$). Parameter estimates examining resilience factors as a predictor and anxiety symptoms were unstable across the 1,000 network bootstrap iterations. Results remained similar after adjusting for age, sex, chronic illness, social support, being a nurse vs. another HCW, and managerial role status. Discussion: HCWs with higher stress and depression severity may experience weaker long-term job dedication and self-perceived resilience, supporting the scar theory and not the vulnerability model of mental health. Interventions targeting high-stress occupations might benefit from focusing on alleviating mental health problems before building resilience.

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