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

Bosch G and Evans-Borchers M. Revaluation of essential work: the example of elderly care in Germany. *Industrial Relations Journal*. 2026; 57(1):47-58.

<https://doi.org/10.1111/irj.70013> [open access]

Abstract: This article is about how labour in a sector can be upgraded through new labour market institutions by mobilizing political support across political camps, even if collective bargaining power through strong trade unions and employers' associations is insufficient. The article summarizes the results of several empirical research projects by the two authors on elderly care, in which the key players in the sector were interviewed. Institutional erosion in labour relations, with its particularly dynamic 'force field', is a key topic of recent institutional theories. In contrast, the analysis of the revitalization of successful institutional innovations for the upgrading of work plays a subordinate role. The field of elderly care in Germany is an example of the successful upgrading of key workers in this market-oriented sector through a deliberate institutional change in the German industrial relations system.

Chen YH, Angulo JP, Brune JF, and Tsai CS. Uncovering the factors behind rising pneumoconiosis rates: central Appalachian underground coal miners as a case study. *New Solutions*. 2026; 35(4):436-449.

<https://doi.org/10.1177/10482911251400417> [open access]

Abstract: This review examines key factors, both established and lesser known, driving the resurgence of pneumoconiosis in central Appalachia, the region with the highest disease incidence in the United States. It synthesizes findings from peer-reviewed literature and grey sources, including government reports, focusing on underground coal miners in the region. Four key factors are identified: historical

economic trends, geologic conditions, technological changes, and health monitoring participation. The shrinking mining workforce has reduced operational size but increased productivity, raising individual exposure to respirable dust. Extensive mining has depleted accessible coal, forcing operators to mine adjacent rock layers, which increases exposure to toxic silica in dust. To maintain production, risky practices such as slope mining, new cleaning techniques, and powerful mining machines are being adopted, generating higher dust concentrations and smaller particulates, further exacerbating exposure. The presence of quartz-bearing formations also contributes to hazardous conditions. Finally, low participation in health screening programs disrupts disease detection and protective efforts

Esposito G, Bravi F, Santucci C, Zunarelli C, Violante FS, La Vecchia C, et al. Night shift work and breast cancer risk in healthcare workers: a systematic review and meta-analysis. *Occupational Medicine*. 2025; 75(9):596-607.

<https://doi.org/10.1093/occmed/kqaf040> [open access]

Abstract: Background: Healthcare workers (HCWs) are often exposed to night shift work, which may increase cancer risk. Aims: We conducted a systematic review and meta-analysis on night shift work and breast cancer risk in HCWs. Methods: We systematically searched PubMed/Embase, evaluated the risk of bias (RoB) of the included studies, and estimated pooled relative risks (RR) using random-effects models. Results: Twelve studies were included (12 132 breast cancer cases); 60% of these were rated as 'definitely' or 'probably' high RoB in the exposure characterization domain. Compared to never exposure, pooled RRs were 1.05 (95% confidence interval [CI] 0.96-1.14, 12 studies, I² = 39%) for ever, and 1.11 (95% CI 0.96-1.28, 9 studies, I² = 62%) for =10 years, 1.25 (95% CI 1.01-1.55, 7 studies, I² = 59%) for =20 years, and 1.68 (95% CI 0.77-3.65, 3 studies, I² = 79%) for =30 years of night shift work. Pooled RRs were higher in case-control/nested studies and studies assessing lifetime occupational history. The RR for =20 years of exposure lost statistical significance in influence analysis and approached unity after correction for possible publication bias. Conclusions: Long-term night shift work may increase breast cancer risk in HCWs, but the association is far from established. If this association were real, night shift work would be responsible for a substantial number of breast cancers in HCWs.

Gao G, Ng SSM, Man SS, and So BCL. Ergonomic risk assessment methods for work-related musculoskeletal disorders among healthcare workers: a systematic review. *Journal of Safety Research*. 2025; 95:189-196.

<https://doi.org/10.1016/j.jsr.2025.10.001>

Abstract: INTRODUCTION: Work-related musculoskeletal disorders (WMSDs) are prevalent among healthcare professionals due to the physically demanding nature of their work environments. These disorders increase costs associated with workers' compensation claims and healthcare services, reduce productivity, and negatively impact the quality of life for affected workers. Therefore, proper ergonomic risk assessment tools are vital for monitoring and preventing WMSDs among healthcare professionals. METHOD: This study provides a comprehensive overview of ergonomic risk assessment techniques used among healthcare workers. Following an extensive search, 31 studies published in English from 2014 to 2024 were identified. RESULTS: With growing awareness of ergonomic risks in healthcare settings, research has explored various assessment methods to understand and mitigate these risks among healthcare workers across different disciplines. This finding highlights the

significant role of self-reported and observation-based methods, despite potential subjective biases. Despite their challenges and underutilization, direct measurement methods have demonstrated substantial potential for enhancing ergonomic assessments when appropriately adapted to healthcare environments. **CONCLUSIONS AND PRACTICAL APPLICATIONS:** In future research, a longitudinal study design incorporating ergonomic risk assessment tools and hybrid methodologies integrating simulated settings with real-world observations should be employed to facilitate a comprehensive evaluation of ergonomic risks among healthcare professionals. This approach would contribute to the development of effective interventions aimed at mitigating WMSDs

Giliberti C and Salerno S. Work and women's sacral spine acute injuries: an underestimated risk. International Journal of Industrial Ergonomics. 2026; 111:103869.
<https://doi.org/10.1016/j.ergon.2025.103869>

Jeong H, Kim Y, Joo Y, Suh C, Shim Y, Lee H, et al. Association between occupational stress exposure and altered white matter integrity in firefighters. Journal of Affective Disorders. 2026; 396:120792.
<https://doi.org/10.1016/j.jad.2025.120792>

Abstract: Background: Firefighters experience chronic occupational stress due to frequent trauma exposure and shift work, which contributes to stress-related symptoms such as sleep disturbance and somatic complaints. Despite a few neuroimaging studies in this population, white matter (WM) integrity and its clinical implications remain insufficiently understood. We investigated WM microstructural alterations in firefighters and explored their associations with occupational stress and related symptoms. Methods: Ninety-four firefighters and 98 healthy non-firefighter controls underwent diffusion tensor imaging (DTI) and completed standardized clinical assessments. Tract-based spatial statistics (TBSS) was applied to assess voxel-wise group differences in four representative diffusion indices. Associations between altered diffusion characteristics and cumulative emergency duty exposure and stress-related symptoms, including sleep quality and somatic symptoms, were evaluated. Results: Firefighters exhibited a widespread increase in axial diffusivity (AD) across the parietal, frontal, limbic, brainstem, and cerebellar regions, with elevated mean diffusivity (MD) in overlapping but less extensive areas, compared to non-firefighter controls (corrected- $p < 0.05$). Among firefighters, greater cumulative emergency duty exposure was significantly associated with higher AD ($\beta = 0.30$, $p = 0.014$) and MD ($\beta = 0.29$, $p = 0.016$) within regions showing group differences. Furthermore, higher AD was correlated with poorer sleep quality ($\beta = 0.24$, $p = 0.015$) and more severe somatic symptoms ($\beta = 0.19$, $p = 0.040$). Conclusions: Chronic occupational stress in firefighters is associated with widespread WM microstructural alterations, which in turn correlate with poorer sleep quality and increased somatic symptoms. These findings suggest a neurobiological pathway linking occupational stress to clinical outcomes and underscore the need for early detection and targeted interventions in the high-risk occupational group.

Kassa G, Otwombe K, Tekle B, and Fatti G. Effectiveness of behavioral interventions for managing occupational exposure to sharps and body fluids among health care workers. Journal of Occupational & Environmental Medicine. 2026; 68(1):e17-e23.
<https://doi.org/10.1097/JOM.0000000000003512>

Abstract: OBJECTIVE: The aim of the study was to evaluate the impact of behavioral change interventions on health care workers' knowledge, attitudes, and practices related to blood-borne pathogen exposure in Ethiopian hospitals. METHODS: A controlled pre/post cross-sectional study was

conducted in four hospitals using structured questionnaires. Interventions included training and capacity-building, guided by the health belief model and social cognitive theory. RESULTS: Composite scores for knowledge and practices increased significantly. Knowledge rose from 914 to 1226 ($P = 0.03$), with marked improvements in risk perception (31%-80%, $P < 0.001$) and understanding postexposure policy (44%-73%, $P < 0.001$). Safety practices increased from 990 to 1409 ($P = 0.05$). Exposure reporting rose from 22% to 72% ($P < 0.001$), and use of the prevention guide from 55% to 89% ($P < 0.001$). CONCLUSIONS: Behavioral interventions enhanced knowledge and exposure management practices

Kim H. Robot effects on worker's compensation benefits. *Health Economics*. 2026; 35(2):139-144. <https://doi.org/10.1002/hec.70033>

Abstract: This paper examines the effect of robots on workplace injury benefits paid in South Korea. Using the administrative data on worker's compensation, I found that the increase in robot exposure contributes to the significant decline in the average benefit amount per covered worker, mainly driven by the reduction in the number of claims, rather than the size of claims. The effects are stronger, especially for serious cases such as permanent disability

Liedtke L and Bormann KC. Meaningful work over time: the impact of relative meaningful work on organizational citizenship behaviour. *Journal of Occupational and Organizational Psychology*. 2026; 99(1):e70081.

<https://doi.org/10.1111/joop.70081> [open access]

Abstract: Abstract Research on meaningful work (MW) has largely presumed that its effects are determined by absolute levels: when MW is high, outcomes are favourable, and when it is low, outcomes are less so. Yet, this assumption overlooks the fact that employees interpret current experiences against the backdrop of the past. In this study, we apply a temporal lens to MW by examining how directional changes (gains vs. losses) and inconsistency (deviations from prior experiences) shape organizational citizenship behaviour (OCB). Across two experience-sampling studies (daily: 252 participants, 2200 observations; weekly: 387 participants, 2600 observations), we find that relative evaluations of MW explain OCB beyond absolute levels. Increases in MW generally enhance OCB more than decreases, but at the weekly level, inconsistency and even increases can undermine OCB. These findings underscore that MW is inherently dynamic and relative, advancing theory on how temporal comparisons shape work experiences and highlighting practical risks for sustaining employees' discretionary effort

Miller M, Almomani Y, Hopwood P, Haghighi P, Davis A, Littler E, et al. The impact of staffing structures in long-term care homes on the quality of work-life and work outcomes of care-workers: a narrative scoping review. *International Journal of Nursing Studies*. 2026; 174:105304.

<https://doi.org/10.1016/j.ijnurstu.2025.105304> [open access]

Abstract: BACKGROUND: Chronic underfunding of the long-term care sector, coupled with increased complexity of care, has deteriorated working conditions and contributed to severe staffing shortages of healthcare workers globally. While previous reviews have examined the association between long-term care staffing and care outcomes for residents, none have examined specifically how staffing structures affect the care-workers themselves. OBJECTIVE: The aim of this review is to investigate how staffing structures impact the quality of work-life, work-related outcomes of care-workers and the context that affects staffing decisions. METHODS: A narrative scoping review of primary empirical

peer-reviewed literature was conducted to examine how long-term care staffing structures impact quality of work-life and work outcomes of care-workers in OECD countries. PubMed, CINAHL, and Scopus databases were searched for relevant articles published within the past 10 years. Searches yielded 4561 unique articles, which were independently screened by pairs of reviewers, of which 76 articles were included. Data were extracted and synthesized to examine the ways in which staffing structures impact the workforce, what structures existed, and how they came to be. **RESULTS:** Contextual factors shaped staffing decisions in long-term care, including both organizational/regulatory practices and external issues. These included market-based ideologies, increased care complexity, regulatory requirements, COVID-19, and organizational fiscal austerity, which affected the quality of work-life and work outcomes for care-workers. These factors contributed to chronic understaffing, restructuring of skill mix, and greater reliance on agency workers. Consequences for care-workers included work intensification, unpaid labour, and strained team dynamics, particularly where registered nurse oversight was limited. While some homes developed adaptive strategies to buffer these effects, inadequate staffing often eroded job quality, undermined teamwork, and contributed to job dissatisfaction, turnover, presenteeism, and adverse physical and psychological health outcomes. **CONCLUSIONS:** This review shows that staffing structures have consequences for quality of work-life and work outcomes. A reliance on lean staffing eventually destabilizes the workforce, perpetuating recruitment and retention issues. This review suggests that to create and maintain a strong long-term care workforce, sufficient staffing with the right skills and competencies need to be a priority in improvement initiatives. **REGISTRATION:** Not registered

Otto M and Abraham M. Robotisation and workforce dynamics: analysing employment and wage effects within manufacturing establishments. *Work, Employment and Society*. 2025; 39(6):1486-1512.

<https://doi.org/10.1177/09500170251351260> [open access]

Abstract: This article explores the effects of increasing robot adoption on workforce composition, wages and wage inequality in the manufacturing sector. Using longitudinal data from the German Institute for Employment Research (IAB), industrial robot sales data and survey data from the IAB Establishment Panel, we examine the impact of robots on total employment and wage structures at the establishment level from 2008 to 2017. We find that while robotisation contributes to overall employment and wage growth, its effects vary across worker groups. High- and middle-skilled workers benefit more from employment and wage increases, whereas low-skilled and routine-intensive workers experience fewer gains. In contrast to skill-biased and task-biased technological change theories (SBTC and TBTC), robots do not significantly increase wage inequality within establishments. Instead, firms mitigate inequality, suggesting that organisational policies play a key role in shaping distributional outcomes. Works councils also influence wage dynamics, benefiting middle-skilled more than low-skilled workers

Somphot T, Sirithaweesuk T, Dubas L, Tungkijanansin N, Tunvirachaisakul C, Maes M, et al. Metabolomic profiling of sweat VOCs for occupational stress surveillance in firefighters: a GC-MS pilot study. *Journal of Occupational Medicine and Toxicology*. 2025; 20(1):42.

<https://doi.org/10.1186/s12995-025-00486-1> [open access]

Abstract: Background: With limited access to mental health specialists for diagnosis, current stress tracking methods rely on questionnaire results. These self-report questionnaires often obtain

untruthful answers, especially in beneficial situations such as career hiring or promotion. This study aimed to evaluate an alternative method for stress screening based on analysis of sweat volatile organic compounds. Methods: Sweat samples of 44 firefighters were collected using headspace-solid phase microextraction (HS-SPME). Sweat VOCs were analyzed using gas chromatography-mass spectrometry (GC-MS). The compounds were identified by comparing the experimental retention indices (I) and MS spectra with the database from the National Institute of Standards and Technology (NIST) library. Results: The obtained data were correlated with the standardized questionnaire-based Thai version of the perceived stress scores (T-PSS-10) of the volunteers. The significant peaks were then selected based on the individual accuracy and t-test. Six possible volatile features for high stress (PSS score = 32) samples were revealed. Their potential sources could involve human and microbiome metabolism/catabolism. By using partial least square discriminant analysis (PLS-DA), these markers could be combined into a single feature. The feature value thresholds were then varied for construction of receiver operating characteristic (ROC) curves. With the optimum threshold, the combined marker offered the accuracy, sensitivity, selectivity and area under curve (AUC) of 84%, 87%, 81% and 91%, respectively. Conclusions: This pilot study demonstrates the feasibility of using sweat VOC profiling via HS-SPME GC-MS as a rapid and non-invasive method for occupational stress screening. The technique provides objective biochemical markers that could enhance the reliability of conventional questionnaire-based assessments in high-risk occupational groups. Supplementary Information: The online version contains supplementary material available at [10.1186/s12995-025-00486-1](https://doi.org/10.1186/s12995-025-00486-1).

Spiero I, Leeuwenberg AM, Moons KGM, Hooft L, and Damen JAA. Write your abstracts carefully: the impact of abstract reporting quality on findability by semi-automated title-abstract screening tools. *Journal of Clinical Epidemiology*. 2025; 188:111987.

<https://doi.org/10.1016/j.jclinepi.2025.111987> [open access]

Abstract: BACKGROUND AND OBJECTIVE: Evidence synthesis, such as the conduct of a systematic review or clinical guideline development, is time-consuming, laborious, and costly. This is largely due to the vast numbers of titles and abstracts that need to be screened. Semi-automated screening tools can accelerate this by prioritizing the most likely relevant abstracts by using an active learning strategy. The reliability of such tools in prioritizing abstracts is related to the modeling methods that the tool uses (ie, the ability of models to make reliable predictions of study relevance) and to the quality of the data that the modeling methods are applied to (ie, the consistency and completeness of reporting in the titles and abstracts of studies). Here, we aimed to gain insight into the latter by evaluating the association between abstract reporting characteristics and findability by semi-automated screening tools. METHODS: We tested the impact of reporting quality of abstracts on semi-automated screening tools by evaluating whether (I) abstract reporting quality (as scored by Transparent Reporting of a multivariable prediction model for Individual Prognosis Or Diagnosis (TRIPOD)), (II) abstract structure, and (III) abstract terminology usage are associated with findability of relevant studies during semi-automated title-abstract screening. We performed simulations using a publicly available semi-automated screening tool, ASReview, and data from two previously conducted comprehensive systematic reviews of prognostic model studies. RESULTS: We found that better abstract reporting quality was clearly associated with greater findability by the semi-automated screening tool. To a smaller extent, the use of abstract subheadings was also associated with findability. Other abstract structure characteristics and abstract terminology usage were not

associated with findability. **CONCLUSION:** We conclude that better reporting quality of abstracts is associated with better findability by semi-automated title-abstract screening tools. This stresses the importance of adhering to abstract reporting guidelines, not only for consistent and transparent reporting across studies in general but also for enhancing the identification of relevant studies by screening tools during evidence synthesis. **PLAIN LANGUAGE SUMMARY:** Systematic reviews summarize scientific evidence from literature to support clinical decision-making. In the conduct of a systematic review, thousands of papers have to be screened for relevance, making the process costly and laborious. To accelerate this process, several tools have been developed that can assist in identifying relevant scientific literature. Such tools screen through the abstracts of scientific papers and predict which papers are likely relevant for the systematic review. However, the performance of these screening tools may depend on whether information is accurately and completely reported in the abstracts. Here, we aimed to evaluate the impact of abstract reporting quality on the performance of screening tools. We used data from a set of scientific papers of which the abstract reporting quality was scored manually (following an existing reporting checklist called TRIPOD), and we applied an existing screening tool as an example. We simulated the procedure of conducting a scientific review and evaluated whether the relevance predictions by the screening tool were associated with abstract reporting quality. We found that relevant scientific papers with abstracts that had poor reporting quality were more difficult to identify as relevant by the screening tool. This finding highlights the importance of adhering to reporting guidelines, not only for transparency of scientific findings but also for optimal usage of screening tools in the conduct of a systematic review

Vivaldi AA, Claudio D, Velazquez MA, and Punnett L. Workstation ergonomics in the era of multi-monitor technology: a narrative review and survey. *International Journal of Industrial Ergonomics*. 2026; 111:103863.

<https://doi.org/10.1016/j.ergon.2025.103863>

Wright E, Lopez GP, Nuaez L, and Gannon K. Enacting Domestic Worker Bills of Rights: a quasi-experimental analysis of impacts on domestic workers' working hours and earnings. *New Solutions*. 2026; 35(4):392-409.

<https://doi.org/10.1177/10482911251394344> [open access]

Abstract: Since 2010, 12 states and three cities in the United States have enacted Domestic Worker Bills of Rights (DW BoR), codifying minimum wage, overtime, anti-harassment protections, and more for many domestic workers (eg, private household childcare, home health, personal care, and housekeeping workers). We used repeated cross-sectional nationally representative 2006-2019 American Community Survey data and difference-in-differences methods to compare changes in domestic workers' hours and earned income in eight states that enacted DW BoR versus 12 politically similar states that did not. Enacting DW BoR was associated with reductions in overtime and extremely long hours in Years 6-9 post-enactment, without negatively impacting earnings. Agency-employed domestic workers and home health, personal care, and childcare workers experienced larger reductions in hours than informally employed or housekeeping workers, respectively. Results suggest potential benefits and challenges of using legislation to improve domestic working conditions and are highly relevant to policy advocacy and enforcement efforts

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