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

***Biswas A and Prince SA. Does remote work promote exercise and cardiovascular health? Current evidence and future directions. *Canadian Journal of Cardiology*. 2025; 41(3):333-336.**

<https://doi.org/10.1016/j.cjca.2024.09.029>

Aronsson AE, Thern E, Matilla-Santander N, Kwart S, Hernando-Rodriguez JC, Badarin K, et al. Parental precarious employment and the mental health of adolescents: a Swedish registry study. *Scandinavian Journal of Work, Environment & Health*. 2025; 51(2):59-67.

<https://doi.org/10.5271/sjweh.4210> [open access]

Abstract: OBJECTIVE: This study investigates the association between parental precarious employment (PE) and the mental health of their adolescent children, with a particular focus on how the association differs based on whether the mother or father is in PE. METHODS: This register-based study used the Swedish Work, Illness, and Labor-market Participation (SWIP) cohort. A sample of 117 437 children aged 16 years at baseline (2005) were followed up until 2009 (the year they turned 20). A multidimensional construct of PE (SWE-ROPE 2.0) was used to classify parental employment as either precarious, substandard or standard. The outcome, adolescents' mental disorders, was measured as a diagnosis of a mental disorder using ICD-10 codes or by prescribed psychotropic drugs using ATC codes. Crude and adjusted Cox regression models produced hazard ratios (HR) with 95% confidence intervals (CI) to estimate the association between parental PE and adolescents' mental health. RESULTS: Adolescents with parents in PE exhibited a higher risk of developing mental disorders. The

association was more pronounced for paternal PE (HR 1.22, 95% CI 1.10-1.35) compared to maternal PE (HR 1.11, 95% CI 1.00-1.21). These associations largely persisted after adjusting for important confounders, including parental mental health. **CONCLUSION:** This study addresses a significant gap in the literature on parental PE and adolescents' mental health. As PE is growing more common across countries, this study provides relevant insights into the intergenerational role that parental low-quality employment may have in terms of mental health within families

Bennouna A, Boughaba A, Djabou S, and Mouda M. Enhancing workplace well-being: unveiling the dynamics of leader-member exchange and worker safety behavior through psychological safety and job satisfaction . *Safety and Health at Work*. 2025; 16(1):36-45. <https://doi.org/10.1016/j.shaw.2024.11.003> [open access]

Abstract: Background In healthcare, ensuring safety is crucial for quality care and patient outcomes. While research links leader–member exchange (LMX) quality to safety behavior, this remains understudied in healthcare. Our study explores LMX's long-term impact on safety behavior, proposing a model that includes the moderated mediating role of psychological safety and job satisfaction in the relationship between LMX and safety behaviors, regarding compliance (SCB) and participation (SPB). By identifying the mechanisms through which LMX influences safety behavior, this study can provide insights into the development of interventions that promote workplace safety and enhance the well-being of healthcare workers. **Methods** We collected data from 325 Algerian healthcare workers across three public hospitals at three points. Through SmartPLS analysis, we used advanced features of Partial Least Squares Structural Equation Modeling (PLS-SEM) alongside PROCESS analysis to evaluate the relationships within our proposed model. **Results** Our analysis found a significant association between higher LMX and increased job satisfaction that positively correlated with enhanced SCB adherence and mediated the LMX–SCB relationship. This relationship was strengthened with high psychological safety. **Conclusion** Our study emphasizes the crucial role of LMX quality in shaping safety behavior among Algerian healthcare workers, providing insights for cultivating a safety culture in healthcare settings, highlighting the significance of prioritizing LMX, JS, and PS to improve workplace safety and support healthcare worker well-being.

Dodoo JE, Al-Samarraie H, Alzahrani AI, and Tang T. XR and workers' safety in high-risk industries: a comprehensive review. *Safety Science*. 2025; 185:106804. <https://doi.org/10.1016/j.ssci.2025.106804> [open access]

Abstract: The wider application of extended reality (XR) in various industrial settings has created numerous opportunities for enhancing worker safety. Several XR solutions have been applied to address specific safety challenges faced by workers. This study reviewed the current literature (2017–2024) on how XR technologies can potentially enhance worker safety. The PRISMA protocol was used to highlight how XR technologies are utilized in safety training for high-risk industries, their limitations, and recommendations for future

improvements. Findings from a review of 41 studies indicate diverse opportunities (e.g., improved knowledge and productivity, delivery of interactive and sequential instructions) for virtual reality (VR), augmented reality (AR), and mixed reality (MR) in industries such as mining, construction, manufacturing, healthcare, power distribution/thermal plants, aviation, and firefighting. Several challenges (e.g., limited viewing fields, motion sickness, and control issues) were identified in the use of VR, AR, and MR, stemming from both human and socio-technical factors. The overall sentiment towards the use of XR in safety training was predominantly positive (550 instances), reflecting confidence in these technologies to enhance safety training outcomes. Findings from this study offer new insights into the capabilities of XR technologies in improving worker safety in high-risk industries and outline key considerations for policymakers and technology providers when integrating XR technologies to promote worker safety.

Elisabetta C, Paola R, Acquadro Maran D, Filippetti S, Marco P, Pellegrino E, et al. Remote workers' life quality and stress during COVID-19: a systematic review. *European Journal of Public Health*. 2025; 35(1):141-152.

<https://doi.org/10.1093/eurpub/ckae167> [open access]

Abstract: COVID-19 pandemic led to the adoption of a different working approach: "The remote working." Evidence about the association of remote working with stress outcomes and life quality is lacking. This systematic review provides an overview of the effects of COVID-19 pandemic on remote-workers' stress and life quality. We conducted systematic literature searches in databases including Pubmed, Scopus and Web of science, from September 2020 to September 2023. Screening of titles, abstracts, and full texts were performed according to the Preferred Reporting Item for Systematic Review and Meta-analyses. The quality of the included studies was assessed using the Newcastle-Ottawa Scale. The review highlighted possible predictors (work-family conflict or a condition of social isolation) associated with improvement or worsening of quality of life and stress. The results highlighted the association between stress and family difficulties (β : -0.02, P-value <0.05), isolation during the first (β : -0.22, P-value <0.05) and second pandemic waves (β : -0.40, P-value <0.05) or due to the advancing age of workers (β :0.19, P-value <0.05) and (β : -0.05, P-value <0.05), furthermore some job categories presented greater stress such as teachers (16.94 ± 5.46). Conversely, remote working positively affected life quality, enhancing factors such as creativity (Average Variance Extracted, AVE: 0.41, R2: 0.17) and self-efficacy (AVE: 0.60, R2: 0.36). Future research should focus more on the relationship between work and family and on interventions that counteract social isolation.

Hilbert M, Finke M, Kupper K, Binnewies C, Berkemeyer L, and Maunz LA. Look how beautiful! The role of natural environments for employees' recovery and affective well-being. *Journal of Occupational Health Psychology*. 2025; 30(1):47-61.

<https://doi.org/10.1037/ocp0000393>

Abstract: Recovery from work is important for promoting employees' well-being but little is

known about which environments are most conducive for recovery. This article examines the relationship between recovery and experiencing nature and, thus, provides a link between recovery research and environmental psychology. In two studies, we drew on the effort-recovery model and proposed that contact with nature is associated with employees' recovery experiences and affective well-being. In Study 1, we theorized that appraising nature as esthetic is an underlying mechanism in the relationship between being in nature and recovery. Using an experience sampling approach with multisource data from self-reports and smartphone photos (N = 50, measurements = 411), we found that being in nature was indirectly related to recovery experiences (i.e., relaxation, detachment) and affective well-being (i.e., positive activation, serenity, low fatigue) via perceived attractiveness. In Study 2, we theorized that appreciative contact with nature (i.e., nature savoring) is linked to enhanced recovery and well-being. Using a randomized controlled trial (N = 66), we found that a nature-savoring intervention, compared to a waiting-list control group, had beneficial effects on recovery experiences and positive affective states. Overall, our results suggest that contact with nature is a prototypical setting for employees' recovery, and we discuss theoretical and practical implications of this finding for occupational health psychology. (PsycInfo Database Record (c) 2025 APA, all rights reserved)

Jiang Y and Yang F. Overtime work and Chinese workers' physical and mental health: the mediating role of social support and work value awareness. *Work*. 2025; 80(1):141-154. <https://doi.org/10.3233/WOR-240041>

Abstract: Background: China was once called the world's factory. Chinese workers had long weekly working hours. However, the empirical results of the relationship between overtime work and workers' health are mixed and remain inconclusive. Objective: This study aimed to investigate how overtime work influenced workers' physical and mental health and the role of lifestyles, social support, and work value awareness. Methods: Data from the China Labor-force Dynamics Survey 2016 (N = 14,205) was used. The instrumental variable approach was employed to overcome the endogeneity problem between overtime work and workers' health. The bootstrapping method was conducted to elicit the role of lifestyles, social support, and work value awareness. Results: The results indicated that overtime work significantly and negatively influenced Chinese workers' physical and mental health. The results of the bootstrapping suggested that workers' social support and work value awareness partially mediated the relationship between overtime work and their physical and mental health. However, the mediating role of lifestyles was insignificant. Conclusion: Through using big data with national representativeness, this study suggests that overtime work negatively influences Chinese workers' physical and mental health. Our findings provide policy implications for improving workers' health rights and well-being in emerging economies.

Kim J, Lee M, Choi H, Zhou K, and Tansey TN. Why consider trauma in vocational rehabilitation? Insights from cognitive model of PTSD and self-determination theory. *Journal of Vocational Rehabilitation*. 2025; 62(1):49-59.

<https://doi.org/10.1177/10522263241301184> [open access]

Abstract: Background Individuals with disabilities are at an increased risk of trauma exposure. The cognitive model of posttraumatic stress, combined with Self-Determination Theory (SDT), provides a useful conceptual framework for understanding how trauma exposure leads to reduced basic psychological needs satisfaction at the work. Objective This study aims to investigate the structural relationships among trauma exposure, posttraumatic cognition, and basic psychological need satisfaction at workplace, showing how traumatic experiences of employees with chronic illness and disabilities (CID) affects their basic psychological needs fulfillment at work, with posttraumatic beliefs as a mediator. Method An online survey of 183 participants with CID was analyzed using structural equation modeling. Two competing models were compared to determine the model with better fit. The selected model was then examined for structural validity and coefficient estimations. Results The full mediation model was selected with strong measurement structures. Path estimations revealed that increased trauma exposure has a negative indirect effect on basic psychological needs, fully mediated by increased posttraumatic cognitive beliefs. Conclusion Trauma exposure and associated cognitive distortions can create significant barriers to successful work outcomes for individuals with CID. Integrating trauma-informed care into vocational rehabilitation (VR) services may help mitigate these challenges and support successful VR outcomes.

Lee G, Messing K, Lee W, Kim JH, Lee H, and Kim SS. Gender differences in occupational hazard exposures within the same occupation: a nationally representative analysis in South Korea. *Scandinavian Journal of Work, Environment & Health*. 2025; 51(2):111-118.

<https://doi.org/10.5271/sjweh.4204> [open access]

Abstract: 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 6(th) 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

Mehner L, Rothenbusch S, and Kauffeld S. How to maximize the impact of workplace training: a mixed-method analysis of social support, training transfer and knowledge sharing. *European Journal of Work and Organizational Psychology*. 2025; 34(2):201-217. <https://doi.org/10.1080/1359432X.2024.2319082> [open access]

Abstract: Training is crucial for developing employee competences and improving organizational performance. However, to ensure the effectiveness of training, it is essential that the newly acquired knowledge is applied (training transfer) and shared within the organization (knowledge sharing). To explore this further, the first study involved a survey of 541 employees who had undergone workplace training within the past two years. By using a joint model for training transfer and knowledge sharing, it was discovered that both factors had a significant impact on individual organizational results and identified motivation and volition as mediators. Furthermore, we found that both peer and supervisor support functioned as antecedents for training transfer and knowledge sharing. In the second study, the role of social support was further investigated by exploring how knowledge networks change through training and how knowledge is shared and acquired through social connections after training. Qualitative interviews were conducted with 51 participants and recorded their knowledge networks before and after training. Our findings indicate that participants primarily gain new contacts within their own organization, and that transfer of training predicts the change in the number of contacts in the network.

Page L, Meredith P, O'Reilly M, Donohue G, and Stanley M. Understanding employee experiences of developing younger onset dementia within the workplace: a scoping review. *Work*. 2025; 80(1):24-60.

<https://doi.org/10.3233/WOR-230469>

Abstract: BACKGROUND: There is limited information focussing on the perspectives of persons with younger onset dementia (YOD) in employment. This poses challenges for supporting this demographic within the workplace and during their transition to retirement. OBJECTIVE: The aim of this scoping review is to address the identified need to ascertain what is known about the perspectives of employees with YOD. METHODS: Records were included if they: considered working-aged persons who received a diagnosis of YOD whilst employed or soon after ceasing employment; considered the perspective of the person with YOD; and were published in English. Four databases (CINAHL, PubMed, Embase, Cochrane Library) were systematically searched, and grey literature was sought using the Google Scholar search engine. Using PRISMA-ScR guidelines, two reviewers screened the title/abstract then full text

of identified documents. Disagreements were resolved with a third reviewer. Research papers were narratively synthesised, thematically analysed, and critically appraised. RESULTS: Fourteen peer-reviewed research papers, and nineteen grey literature items were included in the review, with research papers found to be of reasonably high methodological quality. Five themes were identified, describing the experiences of employees with YOD: (1) Trying to manage difficulties prior to diagnosis; (2) Disclosure at the point of diagnosis; (3) Reasonable adjustments; (4) Employment cessation; and (5) Regaining meaningful roles following retirement. CONCLUSION: Findings revealed evidence for an emerging understanding of the lived experience of developing YOD within the workplace; however, further research is needed regarding the capabilities and support needs for persons with YOD to influence workplace policies and practices

Quigley DD, Qureshi N, Dworsky M, and Meredith LS. Mental health support for first responders provided outside of California's workers' compensation system. *Journal of Occupational and Environmental Medicine*. 2025; 67(3):203-213.

<https://doi.org/10.1097/JOM.0000000000003293>

Abstract: OBJECTIVE: Concern about psychiatric injuries for first responders has grown. We examine alternatives to workers' compensation (WC). METHOD: We conducted 15 interviews across five California departments contracted with non-WC mental health (MH) providers. We performed content analysis. RESULTS: MH support outside of WC most often was a dedicated contract with outside MH providers for assessment, diagnosis, and treatment. Departments had formal financing mechanisms with union and city support designating funding for MH care. Frustration and past WC experiences drove the desire for WC alternatives. First responders reported high levels of stigma associated with MH care. Compared to WC, these alternatives allowed more comprehensive services to injured workers along with ease of accessing care, expediting the healing process. CONCLUSIONS: Contracting culturally competent MH providers outside of WC for first responders has potential and needs formal evaluation

Sheftel MG, Goldman N, Pebley AR, Pratt B, and Park SS. Life course exposure to work strain and cognitive disparities by race and ethnicity. *SSM - Population Health*. 2025; 29:101765.

<https://doi.org/10.1016/j.ssmph.2025.101765> [open access]

Abstract: There is a well-documented association between exposure to occupational strain and adverse older adult cognition. However, limited research examines differences in this association by race and ethnicity despite considerable disparities in older adult cognition and occupational segregation in the U.S. Using work history data from the U.S. Health and Retirement Study (HRS), we construct comprehensive measures of exposure to occupational strain over working ages and assess differential exposure to cumulative strain, and variation in the association between strain and cognition by race and ethnicity. We find that Black and Latino workers in the U.S. have more exposure to high strain jobs across working ages, and

that this type of work history is associated with lower cognitive functioning at older ages. This analysis suggests that occupational segregation and unequal exposure to psychosocial work characteristics are critical social determinants of cognitive health disparities in older adulthood

Sjostrom M, Lewne M, Alderling M, Selander J, and Gustavsson P. An updated job-exposure matrix for occupational noise: development and validation. *Annals of Work Exposures and Health*. 2024; 68(2):146-154.

<https://doi.org/10.1093/annweh/wxad074> [open access]

Abstract: OBJECTIVES: The aim of this study was to create a quantitative job-exposure matrix (JEM) for noise including a large set of measurements for the Swedish workforce, a detailed exposure-level assessment, spanning over an extensive time period from 1970 to 2014. METHODS: The JEM was developed by 2 teams, each with an experienced occupational hygienist and an occupational safety engineer. Each pair assessed the exposure using measurements performed and reported by occupational hygienists, occupational safety engineers, or similar, from 1970 to 2014. The measurements included either the original LAeq(8h) measurements or an LAeq(8h) levels calculated from partial measurements of the working day, provided that the measurement targeted a regular task usually performed during a full workday. The collection of measurement reports was done in 2008 and 2012 by contacting clinics working in the area of occupational health or occupational safety engineers and their submitted reports were added to our own material. Noise exposure assessments were inserted at the appropriate time period for the relevant job family. The final matrix was developed in a consensus procedure and the validity was investigated by comparison of the 2 team's individual results. RESULTS: The noise JEM contains 321 job families with information regarding occupational noise from 1970 to 2014. The time-period label has a 5-yr scale starting in 1970. The estimated average 8 h (TWA) noise level in decibels [dB(A)] for every job family and 5-yr period was coded as 1: <70 dB(A), 2: 70 to 74 dB(A), 3: 75 to 79 dB(A), 4: 80 to 84 dB(A) or 5: 85(+) dB(A). The validation showed no systematic difference in relative position and very high agreement in the ordering of paired ordinal classifications. The JEM has also successfully been applied in several epidemiological studies. CONCLUSIONS: We present a JEM for occupational noise using Swedish data from 1970 to 2014 with a higher degree of sensitivity in assessed noise exposure compared with the previously existing version. Repeated application of the JEM, in epidemiological studies, has shown consistent results and contributed to yielding important findings

Vermoolen R, Franken R, Krone T, Shandilya N, Goede H, Ben Jeddi H, et al. The Nano Exposure Quantifier: a quantitative model for assessing nanoparticle exposure in the workplace. *Annals of Work Exposures and Health*. 2025; 69(3):323-336.

<https://doi.org/10.1093/annweh/wxae104> [open access]

Abstract: Exposure to manufactured nanomaterials (MNs) is a growing concern for occupational health and safety. Reliable methods for assessing and predicting MN exposure

are essential to mitigate associated risks. This study presents the development of the Nano Exposure Quantifier (NEQ), a mechanistic model designed to assess airborne MN exposure in the workplace. By utilizing a dataset of 128 MN measurements from existing exposure studies, the model demonstrates its effectiveness in estimating MN exposure levels for particles smaller than 10 μm . The NEQ provides estimates in terms of particle number concentration accompanied by a 95% confidence interval (CI), enabling a comprehensive assessment of MN exposure. The NEQ includes 2 quantitative models: a simplified tier 1 model and a more comprehensive tier 2 model. Both tier 1 and tier 2 models exhibit robust performance, with correlation coefficients (r) of 0.57 and 0.62, respectively. The models exhibit a moderate level of error, as indicated by residuals' standard deviation of 4.10 for tier 1 and 3.90 for tier 2. The tier 1 model demonstrates a slightly higher overestimation bias (1.15) compared to the tier 2 model (0.54). Overall, the NEQ offers a practical and reliable approach for estimating MN exposure in occupational settings. Future validation studies will investigate the impact of initial calibration efforts, heteroscedasticity, and further refine the model's accuracy.

Yasar D, Safran EE, and Sevgin O. The effect of combined ergonomic training and exercises on musculoskeletal pain and ergonomic risks in supermarket cashiers: a randomized controlled trial. International Archives of Occupational and Environmental Health. 2025; 98(2):255-265.

<https://doi.org/10.1007/s00420-025-02132-z> [open access]

Abstract: PURPOSE: This study aimed to evaluate the combined effects of a 12-week ergonomic training and exercise program on musculoskeletal pain and ergonomic risks among supermarket cashiers. METHODS: This study cohort comprised 77 cashiers, aged between 18 and 45, who were experiencing musculoskeletal pain. Of these, 60 participants completed the study after random assignment to either the intervention group, which received ergonomic training and exercise, or the control group, which received only ergonomic training. The study lasted 12 weeks, with assessments conducted at baseline (week 0) and 12 weeks post-intervention. The outcomes included the Visual Analogue Scale, the Extended Nordic Musculoskeletal Questionnaire (NMQ-E), and the Rapid Upper Limb Assessment. The clinical trial registration number is NCT06407440. RESULTS: Musculoskeletal pain in the upper back, lower back, and hips/thighs decreased significantly after the intervention, while there were no significant changes in the control group, except for a reduction in upper back pain. A significant improvement in activity limitations was observed in the intervention group, particularly in the upper back and lower back. Consultations with health professionals for upper and lower back pain (NMQ-E) decreased significantly in the intervention group. Symptoms in the past 7 days showed a significant decrease in the intervention group, especially for the upper back, lower back, and hips/thighs, with no significant change in the control group. CONCLUSION: The integrated approach of ergonomic training and exercise programs has the potential to alleviate musculoskeletal discomfort

among supermarket cashiers. These interventions may prove an effective strategy for enhancing the well-being of workers in physically demanding retail environments

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