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

*Quinn TD, Lane A, Pettee Gabriel K, Sternfeld B, Jacobs Jr DR, Smith P, et al. Associations between occupational physical activity and left ventricular structure and function over 25 years in CARDIA. European Journal of Preventive Cardiology. 2024; 31(4):425-433.

https://doi.org/10.1093/eurjpc/zwad349

Abstract: Aims: Leisure time physical activity (LTPA) confers cardiovascular health benefits, while occupational physical activity (OPA) may have paradoxically negative health associations. This study tested the explanatory hypothesis that unfavourable cardiac remodelling may result from chronic OPA-induced cardiovascular strain. Methods and results: Longitudinal associations of OPA and left ventricular (LV) structure and function were examined in 1462 participants {50.0% female, 56.4% White, aged 30.4 ± 3.4 years at baseline [Year 5 exam (1990-91)]} from the Coronary Artery Risk Development in Young Adults study. Left ventricular structure and function were measured as LV mass (LVMi), end-diastolic volume (LVEDVi), end-systolic volume (LVESVi), ejection fraction (LVEF), stroke volume (LVSVi), and e/a-wave ratio (EA ratio) via echocardiography at baseline and 25 years later. Occupational physical activity was reported at seven exams during the study period as months/year with 'vigorous job activities such as lifting, carrying, or digging' for =5 h/week. The 25year OPA patterns were categorized into three trajectories: no OPA (n = 770), medium OPA (n = 410), and high OPA (n = 282). Linear regression estimated associations between OPA trajectories and echocardiogram variables at follow-up after adjusting for baseline values, individual demographic/health characteristics, and LTPA. Twenty-five-year OPA exposure was not significantly associated with LVMi, LVEDVi, LVSVi, or EA ratio (P > 0.05). However, higher LVESVi (ß = 1.84, P < 0.05) and lower LVEF ($\beta = -1.94$, P < 0.05) were observed at follow-up among those in the high- vs. no-OPA trajectories. Conclusion: The paradoxically adverse association of OPA with cardiovascular health was

partially supported by null or adverse associations between high OPA and echocardiogram outcomes. Confirmation is needed using more precise OPA measures

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Aleksic D, Cerne M, and Batistic S. Understanding meaningful work in the context of technostress, COVID-19, frustration, and corporate social responsibility. Human Relations. 2024; 77(3):426-451. https://doi.org/10.1177/00187267221139776 [open access]

Abstract: COVID-19 and digitalization represent important sources of many employees' frustrations. In this article, we address the question of how employees can achieve meaningful work in such a challenging and frustrating context. Specifically, we investigate whether employees' negative experiences related to technology use—that is, techno-invasion—leads to frustration and in turn reduces employee perceptions of meaningful work. In addition, we examine corporate social responsibility as a potential remedy that could mitigate these negative effects. The results of our four-wave longitudinal study of 198 working professionals collected during the first wave of the COVID-19 pandemic did not find support for a proposed negative direct effect of techno-invasion on meaningful work. However, we did find support that perceived corporate social responsibility moderates the indirect relationship between techno-invasion and meaningful work, mediated by frustration: for low levels of corporate social responsibility, techno-invasion results in higher levels of frustration, in turn reducing meaningful work. High levels of corporate social responsibility buffer this negative indirect effect. Implications for research and practice dealing with digitalization, meaningful work, and corporate social responsibility are discussed.

Butler AR, Hartmann-Boyce J, Livingstone-Banks J, Turner T, and Lindson N. Optimizing process and methods for a living systematic review: 30 search updates and three review updates later. Journal of Clinical Epidemiology. 2024; 166:111231.

https://doi.org/10.1016/j.jclinepi.2023.11123

Abstract: OBJECTIVE: To describe the living systematic review (LSR) process and to share experience of planning, searches, screening, extraction, publishing and dissemination to inform and assist authors planning their own LSR. Many LSR do not publish more than one update, we hope this paper helps to increase this. STUDY DESIGN AND SETTING: A Cochrane LSR with an international author team that has been 'living' for two years, with monthly search updates and three full updates published in this time. LSRs are regularly updated systematic reviews that allow new evidence to be incorporated as it becomes available. LSR are ideally suited to policy-relevant topics where there is uncertainty and new evidence will likely impact the interpretation and/or certainty of outcomes. RESULTS: The key features of the process that require consideration are: specifying the frequency of searches and triggers for full updates in the protocol; stakeholder input; publishing and disseminating monthly search findings. A strong team, incorporating methodological and topic expertise, with core members that meet regularly is essential. Regular search updates make it important to have a clear cyclical schedule of activity. To achieve timely updates this process should be streamlined, for example, using automated monthly searches, and systematic reviewing software for screening. LSR provide a unique opportunity to incorporate stakeholder feedback. CONCLUSIONS: We recommend that LSRs should be: justified; carefully planned including the timing of search updates, triggers for publication and termination; published in a timely manner; have a clear dissemination plan; and a strong core team of authors

Corbiere M, Villotti P, Berbiche D, and Lecomte T. Predictors of job tenure for people with a severe mental illness, enrolled in supported employment programs. Psychiatric Rehabilitation Journal. 2024; 47(1):64-72.

https://doi.org/10.1037/prj0000589

Abstract: OBJECTIVE: Different predictors of job tenure for people with a severe mental illness (SMI) have been documented. Conflicting results may be explained by the choice of indicators to measure job tenure. This study aimed to assess the contribution of employment specialist competencies working in supported employment programs, client variables, and work accommodations, in determining job tenure in the regular labor market. METHOD: A longitudinal study was conducted over 6 months, including people with SMI (n = 209) registered in 24 Canadian supported employment programs. Multivariable modeling analyses were performed. RESULTS: Overall, 67% (n = 140) of the sample were employed at the 6-month follow-up. Multilevel analyses showed that shorter duration of unemployment (i.e., the number of weeks worked), employment specialist knowledge, and working alliance were the strongest predictors of job tenure for people with SMI. With respect to the number of hours worked per week, diagnosis, executive functions, social functioning, work accommodations, and employment specialist skills were the strongest predictors of job tenure for people with SMI, with 57% of variance explained. CONCLUSIONS AND IMPLICATIONS FOR PRACTICE: Understanding the various predictors of job tenure can assist employment specialists in providing better interventions for the work integration of people with SMI. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

Czabanowska K, Rodriguez Feria P, Kuhlmann E, Kostoulas P, Middleton J, Magana L, et al. Professionalization of the public health workforce: scoping review and call to action. European Journal of Public Health. 2024; 34(1):52-58.

https://doi.org/10.1093/eurpub/ckad171 [open access]

Abstract: BACKGROUND: The 'WHO-ASPHER Roadmap to Professionalizing the Public Health Workforce in the European Region' provides recommendations for strategic and systematic workforce planning around professionalization levers including: (i) competencies, (ii) training and education, (iii) formal organization, (iv) professional credentialing and (v) code of ethics and professional conduct as well as taxonomy and enumeration. It was based on a literature review till 2016. This scoping review aims to explore how the professionalization was documented in the literature between 2016 and 2022. METHODS: Following the Joanna Briggs Institute guidelines, we searched Medline via PubMed, Web of Science, ERIC via EBSCO and Google Scholar and included studies on professionalization levers. Four critical appraisal tools were used to assess qualitative, quantitative, mixed methods studies and grey literature. The PRISMA Extension for Scoping Reviews (PRISMA-ScR) was used for reporting. RESULTS: Eleven articles included in this review spanned 61 countries, targeting undergraduate, master's, doctoral degrees and continuing professional development. Most of these documents were reviews. About half provided a definition of the public health workforce; more than half covered the taxonomy and included information about competences, but the use of frameworks was sporadic and inconsistent. Formal organization and the necessity of a code of conduct for the public health workforce were acknowledged in only two studies. CONCLUSIONS: In spite of some efforts to professionalize the public health workforce, this process is fragmented and not fully

recognized and supported. There is an urgent need to engage policymakers and stakeholders to prioritize investments in strengthening the public health workforce worldwide

Ibenthal E, Hinricher N, Nienhaus A, and Backhaus C. Hand and wrist complaints in dialysis nurses in Germany: a survey of prevalence, severity, and occupational associations. Annals of Work Exposures and Health. 2024; 68(2):136-145.

https://doi.org/10.1093/annweh/wxad075 [open access]

Abstract: Background and objective: Occupations involving repetitive movements of the wrists, activities that require a lot of force, and hand-arm swinging are particularly likely to contribute to the development of hand and wrist complaints. The daily setup and dismantling of dialysis machines as part of the dialysis treatment process can strain the wrists and fingers of nurses. However, evidence regarding the relationship between the work activities of dialysis nurses and the incidence of hand and wrist complaints is limited. This study aimed to investigate the prevalence and severity of hand and wrist complaints among dialysis nurses in Germany and to relate these to their work activities. Methods: An online survey was created and sent to 836 dialysis centres in Germany. The Nordic Musculoskeletal Questionnaire was used in an online survey to assess the prevalence of musculoskeletal complaints in the hands and wrists. The Boston Carpal Tunnel Questionnaire (BCTQ) was used to assess symptom severity. Dialysis nurses rated the effort required to set up dialysis machines using the BORG-CR10 scale. The analysis was descriptive. Results: A total of 122 dialysis nurses (18 male, 104 female; mean age 45 ± 12 years) participated in the survey, and 59% of them reported developing hands or wrist complaints in the last 12 months. According to BCTQ, the average severity of these complaints is 2.0 ± 0.8 (N = 72). The severity of symptoms increased significantly with the number of setups performed by a dialysis nurse per day (rs = 0.35, P = 0.003, N = 72). The nurses rated the effort required to set up the dialysis machines as 2.8 ± 1.8 on the BORG-CR10 scale (N = 101). Discussion: The results of the online survey showed that dialysis nurses were more likely than the general population to experience hand and wrist complaints. The repetitive activities of the hands and wrists while setting up a dialysis machine are thought to be the cause. Conclusions: Preventive measures are needed to reduce hand and wrist strain in dialysis nurses.

Jalasto J, Luukkonen R, Lindqvist A, Langhammer A, Kankaanranta H, Backman H, et al. Occupational exposure to vapors, gasses, dusts, and fumes in relation to causes of death during 24 years in Helsinki, Finland. International Archives of Occupational & Environmental Health. 2024; 97(2):145-154.

https://doi.org/10.1007/s00420-023-02031-1 [open access]

Abstract: PURPOSE: Environmental particulate matter (PM) exposure has been shown to cause excess all-cause and disease-specific mortality. Our aim was to compare disease-specific mortality by estimated occupational exposure to vapors, gasses, dusts, and fumes (VGDF). METHODS: The data source is the Helsinki part of the population-based FinEsS study on chronic obstructive pulmonary diseases including information on age, education level, main occupation, sex, and tobacco smoking combined with death registry information. We compared estimated VGDF exposure to mortality using adjusted competing-risks regression for disease-specific survival analysis for a 24-year follow-up. RESULTS: Compared to the no-exposure group, the high occupational VGDF exposure group had subhazard ratios (sHR) of 1.7 (95% CI 1.3-2.2) for all cardiovascular-related and sHR 2.1 (1.5-3.9) for just coronary artery-related mortality. It also had sHR 1.7 (1.0-2.8) for Alzheimer's or vascular dementia-



related mortality and sHR 1.7(1.2-2.4) for all respiratory disease-related mortality. CONCLUSION: Long-term occupational exposure to VGDF increased the hazard of mortality- to cardiovascular-, respiratory-, and dementia-related causes. This emphasizes the need for minimizing occupational long-term respiratory exposure to dust, gasses, and fumes

Korshoj M, Moller A, Siersma V, Lund R, Hougaard CO, Mortensen OS, et al. Relationship between cumulative exposure to occupational lifting throughout working life and risk of ischemic heart disease in men and women. The Copenhagen Aging and Midlife Biobank. Annals of Work Exposures and Health. 2024; 68(2):109-121.

https://doi.org/10.1093/annweh/wxad077 [open access]

Abstract: Ischemic heart disease (IHD) causes mortality and morbidity. High levels of occupational physical activity (OPA) increases IHD risk, and occupational lifting (OL) is suggested as a detrimental OPA exposure. This study investigated the association between accumulated OL throughout working life, and risk for IHD, and potential sex and hypertension differences. Data from Copenhagen Ageing and Midlife Biobank linked to register-based information on incident IHD during 9 years follow-up in the Danish National Patient Registry were included. The outcome was the odds of IHD from baseline (2009-2011) to end of follow-up (2018), among participants without IHD at baseline. Accumulated OL was assessed by linking occupational codes to a Job Exposure Matrix, creating a measure in ton-years (lifting 1,000 kg/day/year). Multivariable logistic regression tested associations between level of accumulated OL and IHD, among the 6,606 included individuals (68% men). During follow-up, 7.3% men and 3.6% women were hospitalized with IHD. Among all participants, the odds for IHD were 47% (OR 1.47, 95% CI 1.05-2.06) higher among those with =5 to <10 ton-years, 39% (OR 1.39, 95% CI 1.06-1.83) higher among those with =10 to <30 ton-years, and 62% (OR 1.62, 95% CI 1.18-2.22) higher among those with =30 ton-years, compared to no accumulated OL. However, these increased odds were in the same direction in the fully-adjusted model but statistically insignificant, =5 to <10 tonyears OR 1.28, 95% CI 0.88-1.88; =10 to <30 ton-years OR 1.20, 95% CI 0.85-1.69; and =30 ton-years OR 1.22, 95% CI 0.81-1.84. No statistically significant interactions, nor any associations, between OL and sex, or hypertension were seen.

Lecours A, Coutu MF, and Durand MJ. Fostering stay at work after a period of disability: a scoping review of occupational rehabilitation strategies to support workers in the adoption of preventive behaviours. Journal of Occupational Rehabilitation. 2024; 34(1):56-70.

https://doi.org/10.1007/s10926-023-10122-6

Abstract: Purpose: Based on the theoretical framework of the Model of Preventive Behaviours at Work, the aim of this study was to describe the occupational rehabilitation strategies the literature reports that support workers who have suffered an occupational injury in adopting preventive behaviours. Methods: To conduct this scoping review, we used a systematic methodology in 7 steps: (1) definition of the research question and inclusion/exclusion criteria; (2) scientific and gray literature search; (3) determination of manuscripts' eligibility; (4) extraction and charting of information; (5) quality assessment; (6) interpretation; and (7) knowledge synthesis. Results: We selected 46 manuscripts of various types (e.g. randomized trials, qualitative studies, governmental documents). Manuscripts were mainly of good or high quality according to our quality assessment. The strategies for coaching, engaging, educating and collaborating were mostly reported in the literature to support the development of the six preventive behaviours during occupational rehabilitation. The results also



suggest that heterogeneity exists regarding the specificity of the strategies reported in the literature, which may have hindered our ability to provide rich and detailed descriptions. Literature also mainly describes individually oriented behaviours and reports strategies requiring a low level of worker involvement, which represent issues to address in future research projects. Conclusion: The strategies described in this article represent concrete levers that occupational rehabilitation professionals can use to support workers in the adoption of preventive behaviours at work on return from having suffered an occupational injury.

Mazzotti VL, Morningstar ME, Lombardi A, Kwiatek S, Taconet A, Buddeke K, et al. Policy and practice considerations to support college and career readiness for youth with disabilities: a systematic mixed studies review. Journal of Disability Policy Studies. 2024; 34(4):278-289. https://doi.org/10.1177/10442073221130528 [open access]

Abstract: Youth with disabilities must be college and career ready to be prepared for adult life. U.S. federal policy efforts confirm this prioritization (Every Student Succeeds Act [ESSA], 2015; Individuals with Disabilities Education Improvement Act [IDEIA], 2004). Parallel to the emergence of college and career readiness (CCR), transition planning and service requirements have promoted successful transitions to postschool education, employment, and community living (IDEIA, 2004). However, not all high schools provide a range of CCR supports for these students. We conducted a systematic mixed studies review to investigate the prevalence of five domains of CCR identified in the literature. Findings revealed the five domains had a range of coverage across the literature with academic engagement and process-oriented skills comprising more citations and transition competencies least likely to be included. In addition, across the CCR literature, data for students with disabilities were rarely disaggregated, which confirms that we know even less about the effectiveness of the five domains for these students. Clear gaps were identified and suggests research often does not inform CCR policy and/or practice decisions

Moreira FGP, Pereira de Oliveira C, and Farias CA. Workplace accidents and the probabilities of injuries occurring in the civil construction industry in Brazilian Amazon: a descriptive and inferential analysis. Safety Science. 2024; 173:106449.

https://doi.org/10.1016/j.ssci.2024.106449

Pollock D, Barker TH, Stone JC, Aromataris E, Klugar M, Scott AM, et al. Predatory journals and their practices present a conundrum for systematic reviewers and evidence synthesisers of health research: a qualitative descriptive study. Research Synthesis Methods. 2024; 15(2):257-274. https://doi.org/10.1002/jrsm.1684

Abstract: Predatory journals are a blemish on scholarly publishing and academia and the studies published within them are more likely to contain data that is false. The inclusion of studies from predatory journals in evidence syntheses is potentially problematic due to this propensity for false data to be included. To date, there has been little exploration of the opinions and experiences of evidence synthesisers when dealing with predatory journals in the conduct of their evidence synthesis. In this paper, the thoughts, opinions, and attitudes of evidence synthesisers towards predatory journals and the inclusion of studies published within these journals in evidence syntheses were sought. Focus groups were held with participants who were experienced evidence synthesisers from JBI (previously the Joanna Briggs Institute) collaboration. Utilising qualitative content analysis, two generic categories were identified: predatory journals within evidence synthesis, and predatory



journals within academia. Our findings suggest that evidence synthesisers believe predatory journals are hard to identify and that there is no current consensus on the management of these studies if they have been included in an evidence synthesis. There is a critical need for further research, education, guidance, and development of clear processes to assist evidence synthesisers in the management of studies from predatory journals

Rhead R, Harber-Aschan L, Onwumere J, Polling C, Dorrington S, Ehsan A, et al. Ethnic inequalities among NHS staff in England: workplace experiences during the COVID-19 pandemic. Occupational & Environmental Medicine. 2024; 81(3):113-121.

https://doi.org/10.1136/oemed-2023-108976 [open access]

Abstract: OBJECTIVES: This study aims to determine how workplace experiences of National Health Service (NHS) staff varied by ethnicity during the COVID-19 pandemic and how these experiences are associated with mental and physical health at the time of the study. METHODS: An online Inequalities Survey was conducted by the Tackling Inequalities and Discrimination Experiences in Health Services study in collaboration with NHS CHECK. This Inequalities Survey collected measures relating to workplace experiences (such as personal protective equipment (PPE), risk assessments, redeployments and discrimination) as well as mental health (Patient Health Questionnaire (PHQ-9), Generalised Anxiety Disorder 7 (GAD-7)), and physical health (PHQ-15) from NHS staff working in the 18 trusts participating with the NHS CHECK study between February and October 2021 (N=4622). RESULTS: Regression analysis of this cross-sectional data revealed that staff from black and mixed/other ethnic groups had greater odds of experiencing workplace harassment (adjusted OR (AOR) 2.43 (95% CI 1.56 to 3.78) and 2.38 (95% CI 1.12 to 5.07), respectively) and discrimination (AOR 4.36 (95% CI 2.73 to 6.96) and 3.94 (95% CI 1.67 to 9.33), respectively) compared with white British staff. Staff from black ethnic groups also had greater odds than white British staff of reporting PPE unavailability (AOR 2.16 (95% CI 1.16 to 4.00)). Such workplace experiences were associated with negative physical and mental health outcomes, though this association varied by ethnicity. Conversely, understanding employment rights around redeployment, being informed about and having the ability to inform redeployment decisions were associated with lower odds of poor physical and mental health. CONCLUSIONS: Structural changes to the way staff from ethnically minoritised groups are supported, and how their complaints are addressed by leaders within the NHS are urgently required

Saers JJ, Bryngelsson IL, Sundh J, Janson C, and Andersson L. Occupational dust exposure as a risk factor for developing lung function impairment. Journal of Occupational & Environmental Medicine. 2024; 66(3):e93-e98.

https://doi.org/10.1097/JOM.000000000003036 [open access]

Abstract: Objective: Dust exposure is high in several industries. We investigated associations of exposure in paper mills, wood pellet plants, and iron foundries with lung function impairment. Methods: Respirable silica, inhalable paper dust, or inhalable wood dust were collected as personal samples and spirometry was performed. Multiple linear regression analyzed associations with FEV 1 %pred and FVC%pred. Results: Wood pellet workers with high exposure to inhalable dust had lower FEV 1 %pred (95% CI) (-9.4 [-16 to -2.6]) and FVC%pred (-9.8 [-15 to -4.0]) compared with lowest exposure level. Workers at paper mills and foundries had no dose-dependent association but lower FEV 1 %pred and FVC%pred than in workers at wood pellets plants. Conclusions: Increased exposure



to inhalable wood dust is associated with decreased lung function. Foundry and paper mill workers have generally lower lung function than wood pellet workers. Spirometry should be considered in workers in industries with airborne particulate matter pollution.

Tolera ST, Assefa N, and Gobena T. Global prevalence of musculoskeletal disorders among sanitary workers: a systematic review and meta-analysis. International Journal of Occupational Safety & Ergonomics. 2024; 30(1):238-251.

https://doi.org/10.1080/10803548.2023.2293390

Abstract: Objectives. Sanitary workers are more likely to experience musculoskeletal disorders (MSDs) due to a lack of ergonomics principles and poor job design. Thus, this systematic review and meta-analysis aimed to quantify MSDs among sanitary workers. Methods. The PRISMA and PICOS protocols were used for flow diagrams and review questions, respectively. Articles published between 2000 and 2022 were eligible. The keywords '(Musculoskeletal Disorders) AND (Solid waste collectors *OR Street sweepers *OR Sewage workers *OR health facilities cleaners)' and MeSH terms were utilized. The data were analyzed using STATA version 17 with a 95% confidence interval (CI). Results. A total of 158 papers were qualified, with 26 studies from 17 countries and a total of 6586 sanitary workers. The global prevalence of MSDs among sanitation workers was 40.52% (95% CI [32.47, 48.67]; p < 0.05). It was 43.32% (95% CI [31.98, 54.68]; p < 0.05) in high-income countries and 38.58% (95% CI [26.94, 50.18]; p < 0.05) in low-income countries. By subgroup analysis, it was 45.12% (95% CI [32.57, 57.67]; p < 0.05) for solid waste collectors, which is the highest prevalence among other workers. Conclusion. Current evidence shows that sanitation workers have a higher prevalence of occupationally associated MSDs, which might be lowered by using ergonomic work design principles.

Zinke J, Vahle H, and Hoppe A. A longitudinal study on ICT workload in the extended stressor-detachment model: testing moderated mediation models for extended work availability and workplace telepressure. Work and Stress. 2024; 38(1):73-89.

https://doi.org/10.1080/02678373.2023.2239179 [open access]

Abstract: Information and communication technologies (ICTs) are seen as essential tools for mastering knowledge work in the twenty-first century. However, ICTs do not solely improve workflows, but are experienced by employees as an additional demand described as ICT workload. In this study, we apply the stressor-detachment model in the context of ICT, and investigated relations of ICT workload to psychological detachment and emotional exhaustion. Furthermore, as extended work availability and workplace telepressure are organisational and individual factors associated with ICT use, we extend the stressor-detachment model by testing moderated mediational effects. Specifically, we investigated whether extended work availability and workplace telepressure strengthen the indirect effect of ICT workload on emotional exhaustion via psychological detachment. In a longitudinal study of 228 employees with three measurement points, ICT workload was positively related to emotional exhaustion over time. Additionally, we found tentative support for a mediation via psychological detachment, that is stronger for higher levels of workplace telepressure. In sum, our study shows that employees experiencing high levels of ICT workload have a higher risk of suffering from emotional exhaustion. An impaired ability to psychologically detach and high levels of workplace telepressure play a crucial role in this relationship.

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