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

***Barracough M, Howe A, Soberanis A, Kakvan M, Chattu V, Bani-Fatemi A, Engel L, Vitti M, Nalder E, Goverover Y, Gignac M, et al. The effects of systematic lupus-related cognitive impairments on activities of daily living and life role participation: a qualitative framework study. *ACR Open Rheumatology*. 2023; [epub ahead of print].**

<https://doi.org/10.1002/acr2.11624> [open access]

Abstract: OBJECTIVE: Cognitive impairment (CI) in systemic lupus erythematosus (SLE) negatively impacts health-related quality of life leading to activity limitations. This qualitative study aimed to (1) explore the effect of SLE-related CI on activities of daily living and life role participation and (2) describe factors influencing activity restriction and life role participation. METHODS: Semistructured, in-depth interviews of lived experience of CI in SLE were conducted with 24 participants with SLE. Sociodemographic and clinical data, and objective and subjective cognitive function, were collected to characterize participants. A qualitative thematic content analysis was undertaken guided by a framework analytical approach. RESULTS: Participants reported problems in multiple cognitive domains, with multiple perceived causes. CI was felt to impact work, social, domestic, and family life, health, and independence. Five overarching themes were represented in the data: (1) characterization of SLE-reported CI, (2) perceived cause of CI, (3) perceived impact of CI on activities of daily living and life role participation, (4) adaptations for managing CI, and (5) influence of CI adaptations on activities of daily living and life role participation. CONCLUSION: This study provides a better understanding of the patient experience of CI in SLE, how it impacts their lives, and what coping strategies they employ. It highlights the long-term challenges those

with CI in SLE undergo and provides evidence for the urgent need to implement multidisciplinary treatment options. When managing CI, it may be beneficial to evaluate and understand available psychosocial support resources to help identify and reinforce relevant adaptations to improve health-related quality of life

***Jetha A, Bonaccio S, Shamaee A, Banks CG, Bultmann U, Smith PM, Tompa E, Tucker LB, Norman C, Gignac MAM. Divided in a digital economy: understanding disability employment inequities stemming from the application of advanced workplace technologies. *SSM - Qualitative Research in Health*. 2023; 3:100293.**

<https://doi.org/10.1016/j.ssmqr.2023.100293> [open access]

Abstract: Objectives The digital transformation of the economy is characterized by the rapid advancement and wide-spread workplace application of digital technologies. Our study aimed to unpack how the digital transformation of the economy contributes to challenges and opportunities for the sustainable employment and health of persons living with disabilities. Methods One-on-one semi-structured interviews with policy makers, disability employment service providers and future of work specialists were conducted. Interviewees asked about the implications of digital technology advancements for persons with disabilities. Participants were also asked about the strategies that could be used to support inclusive employment within a digitized working world. An iterative and flexible grounded theory methodological approach was taken to analyze the qualitative data and to develop a conceptual understanding of the digital transformation of the economy for persons living with disabilities. Results Forty participants were interviewed from across Canada. The digital transformation of the economy was seen as disadvantageous to persons living with disabilities and could impact their ability to find and sustain paid work, advance within their career, and remain productive. Labelled as the digital divide, participants frequently referred to sources of inequities faced by persons with disabilities that shaped their ability to fully participate in a digital working world. The digital divide was characterized by three intersecting concepts which included disparities in digital technology access, personal resources, and job skills. Participants highlighted the importance of equity and inclusive design considerations in the development and dissemination of digital technology and more responsive skilling initiatives for a changing work environment. Conclusions Findings provide an important conceptual foundation for scholarship on work and health inequities that can arise from the digital transformation of the economy and bring greater attention to the design of targeted disability employment support programs and policies that are relevant and inclusive for a digital working world.

***Salazar AP, Lecours S, Engel L, Gignac MAM, Rotenberg S, Zarshenas S, et al. Understanding the early impacts of the COVID-19 pandemic on brain injury associations across Canada: a qualitative study. *Inquiry*. 2023; 60.**

<https://doi.org/10.1177/00469580231209161> [open access]

Abstract: The COVID-19 pandemic has increased challenges for people living with brain injury

and community associations to support this vulnerable population. This study aimed to gain an in-depth understanding of the challenges faced by brain injury survivors during the first year of the pandemic and how community brain injury associations adapted their services to respond to these needs. Findings from seven focus-group with 31 representatives of Canadian brain injury associations revealed 4 main themes: (1) Addressing evolving client needs; (2) Keeping clients safe; (3) Challenges and opportunities navigating the digital world; and (4) Sustaining brain injury associations in the face of uncertainties and disruptions. To comply with public health measures, associations reported pivoting their service delivery online, despite recognizing the difficulties this could create for many brain injury survivors in accessing and using technology. Our findings also highlight concrete directions for not-profit organizations providing instrumental help with activities, acting as a liaison and interpreter of public health guidelines, and in connecting with clients using technology while handling potential cognitive and technological challenges. Addressing these issues has the potential to protect people living with brain injury and community associations from external threats, like pandemics, in the future

Abdulla AM, Lin TW, and Rospenda KM. Workplace harassment and health: a long term follow up. *Journal of Occupational & Environmental Medicine*. 2023; 65(11):899-904.

<https://doi.org/10.1097/JOM.0000000000002915>

Abstract: Objective: We examine relationships between workplace harassment (WH) and onset of health conditions over a 23-year period. Methods: Participants were surveyed at seven points between 1997-2006 and again in 2020. Regression analyses (n = 921) assessed effects of chronic WH exposure on onset or recent health conditions by 2020. Results: Growth mixture modeling revealed infrequent and chronic classes of generalized workplace harassment (GWH; 33.39% chronic) and sexual harassment (SH; 32.32% chronic). Prevalence of health conditions ranged from 3.71% for myocardial infarction to 43.06% for hypertension. Analysis via propensity score matching showed chronic WH class membership increased odds of coronary heart disease (GWH, odds ratio [OR] = 3.42, P < 0.05), arthritic/rheumatic conditions (SH, OR = 1.56, P < 0.05), and recent migraine (SH, OR = 1.68, P < 0.05). Conclusions: Workplace harassment is associated with coronary heart disease, arthritic/rheumatic conditions, and migraine. Worker health can be protected through strengthening and enforcing organizational and social antiharassment policies and laws.

Anglemyer A, Wyeth EH, and Derrett S. Long-Term disability outcomes for migrants (and non-migrants) 12 years post-injury: results from the prospective outcomes of injury study in New Zealand. *Journal of Immigrant & Minority Health*. 2023; 25(6):1354-1362.

<https://doi.org/10.1007/s10903-023-01526-w> [open access]

Abstract: To understand, and identify predictors of, long-term post-injury (i.e. 12 years post-injury) disability outcomes for migrants and non-migrants. This 12-year longitudinal study followed participants with entitlement claim injuries registered with New Zealand's universal no-fault injury insurer between 2007 and 2009. Information was collected about migrant

status, other sociodemographic, health and disability characteristics, and injury characteristics. Disability outcome information was collected 12 years later. Of 1543 people interviewed 12 years post-injury, 1497 had disability and migrant status data available; 20% were migrants ($n = 301$). Migrants reporting inadequate pre-injury household income or those who perceived their injury as a threat to life at the time of injury were more likely to experience disability 12 years post-injury (aRR 2.08; 95% CI 1.09-4.03, aRR 2.93; 95%CI 1.17-6.69, respectively). Hospitalised injured migrants were significantly less likely to have long-term disability (aRR 0.18; 95%CI 0.04-0.55) than those not hospitalised. We found sociodemographic and injury-related characteristics were independently associated with long-term disability among migrants. We highlight that some characteristics, ascertained early in the injury pathway, predict risk of long-term disability. Early post-injury interventions focused on improving disability outcomes for migrants may also have long-term impacts.

Bratun U, Svajger A, Domajnko B, Kavcic M, and Asaba E. Return to work among workers recovering from severe COVID-19 in Slovenia: a focus group study. *Disability and Rehabilitation*. 2023; 45(23):3883-3892.

<https://doi.org/10.1080/09638288.2022.2142680>

Abstract: PURPOSE: For working age adults, return to work (RTW) after severe COVID-19 can be an essential component of rehabilitation. We explored the expectations and experiences related to RTW in a group of workers recovering from severe COVID-19 in Slovenia. MATERIALS AND METHODS: Four focus groups were conducted between May 2021 and August 2021. Fifteen men and three women, aged between 39 and 65 years, participated. We analysed data using reflexive thematic analysis. RESULTS: Four main themes were developed in the analysis, pertaining to (1) work identity, (2) challenges to work re-entry, (3) personal strengths and support systems, and (4) possible adaptations at work. The disruption of work triggered sentiments about its role in identity. Workers' personal agency and self-advocacy helped participants cope with various barriers that were beyond their control, such as physical limitations and lack of systematic routines to address RTW. Workers recovering from severe COVID-19 were at risk of developing negative expectations regarding their work re-entry. CONCLUSIONS: RTW after severe COVID-19 involves different personal, organizational and systemic dimensions that need to be considered and carefully aligned. Due to the individuality of the process, the worker should be involved as a key partner in the RTW process. IMPLICATIONS FOR REHABILITATION Lack of clinical pathways can negatively impact return to work (RTW) after severe COVID-19. RTW processes should start early but timely and include individual follow up. Patients expect the interdisciplinary team of experts to work together and involve them in all phases of decision-making regarding their rehabilitation and RTW process. Positive expectations regarding work re-entry are essential for the RTW process

Durand-Moreau Q, Jackson T, Deibert D, Els C, Kung JY, and Straube S. Mindfulness-based practices in workers to address mental health conditions: a systematic review. *Safety and*

Health at Work. 2023; 14(3):250-258.

<https://doi.org/10.1016/j.shaw.2023.07.006> [open access]

Abstract: The effectiveness of mindfulness techniques in addressing mental health conditions in workers is uncertain. However, it could represent a therapeutic tool for workers presenting with such conditions. Our objective was to assess the effects of mindfulness-based practices for workers diagnosed with mental health conditions. We conducted a systematic review of randomized controlled trials. Participants included were workers with a mental health condition. Interventions included any mindfulness technique, compared to any nonmindfulness interventions. Outcomes were scores on validated psychiatric rating scales. A total of 4,407 records were screened; 202 were included for full-text analysis; 2 studies were included. The first study (Finnes et al., 2017) used Acceptance and Commitment Therapy (ACT) associated or not with Workplace Dialogue Intervention (WDI), compared to treatment as usual. At 9 months follow-up, for the ACT group, depression scores improved marginally (standardized mean difference [SMD]: -0.06, $p = 0.021$), but anxiety scores were worse (SMD: 0.15, $p = 0.036$). Changes in mental health outcomes were not statistically significant for the ACT + WDI group. In the second study (Grensman et al., 2018), no statistically significant change in mental health scales has been observed after completion of mindfulness-based cognitive therapy compared to cognitive behavioral therapy. Substantial heterogeneity precluded meta-analysis. This systematic review did not find evidence that mindfulness-based practices provide a durable and substantial improvement of mental health outcomes in workers diagnosed with mental health conditions.

Gerich J. Prepared for home-based telework? The relation between telework experience and successful workplace arrangements for home-based telework during the COVID-19 pandemic. Journal of Occupational & Environmental Medicine. 2023; 65(11):967-975.

<https://doi.org/10.1097/JOM.0000000000002948>

Abstract: OBJECTIVE: This article focuses on the perceived effects of home-based telework during the COVID-19 pandemic with respect to five outcomes (job satisfaction, burnout, work-family conflicts, technostress, and social isolation) and how these are affected by workplace arrangements and telework experience. METHODS: Cross-sectional survey data from employees in the IT, finance, and insurance sector collected during the COVID-19 crisis (N = 808) were used for the study. RESULTS: Outcomes are most negatively affected by feelings of surveillance and most positively affected by suitably equipped offices. Organizational teleworker support is most strongly related to job satisfaction. Experienced teleworkers report better outcomes, because of improved support, less perceived surveillance, and better equipped home stations. CONCLUSIONS: Adaptation of management strategies avoiding surveillance and suitable setups of home offices to reconcile work and private spheres are key to well-being of teleworkers

Griebler U, Dobrescu A, Ledinger D, Klingenstein P, Sommer I, Emprechtlinger R, et al. Evaluation of the interim Cochrane rapid review methods guidance: a mixed-methods study

on the understanding of and adherence to the guidance. *Research Synthesis Methods*. 2023; 14(6):824-846.

<https://doi.org/10.1002/jrsm.1656>

Abstract: The Cochrane Rapid Review Methods Group (RRMG) first released interim guidance in March 2020 to support authors in conducting rapid reviews (RRs). The objective of this mixed-methods study was to assess the adherence and investigate authors' understanding of the RRMG guidance. We identified all documents citing the Interim Cochrane RRMG guidance up to February 17, 2022 and performed an exploratory adherence analysis. We interviewed 20 RR authors to assess the recommendations' comprehensibility and reasons for any deviations. Further, we surveyed nine authors of COVID-19-related Cochrane reviews for their reasons for not conducting a RR. We analyzed 128 RRs (111 non-Cochrane, 17 Cochrane) that cited the RRMG guidance. Several recommendations were not followed by a large proportion of RR authors such as stepwise approach to study design inclusion or peer review of search strategies, whereas others were exceeded, for example, dual independent screening of abstracts/full texts. The most reported reasons for deviating from the guidance were time constraints, unclarities in the recommended approach, or inapplicability to the specific RR. Overall, the guidance was viewed as user-friendly; however, without pre-existing knowledge of systematic review (SR) conduct, the application was perceived as difficult. The main reasons for conducting a full SR over a RR were late availability of the guidance, preset mandate to conduct a SR, uncertainty regarding methodological distinctions between SR and RR, and inapplicability to the evidence base. Clarifications are warranted throughout the Interim Cochrane RRMG guidance to ensure that users with various experience levels can understand and apply its recommendations accordingly

Kang D, Lee ES, Kim TK, Kim YJ, Lee S, Lee W, et al. Association with combined occupational hazards exposure and risk of metabolic syndrome: a workers' health examination cohort 2012-2021. *Safety and Health at Work*. 2023; 14(3):279-286.

<https://doi.org/10.1016/j.shaw.2023.08.006> [open access]

Abstract: Background: This study aimed to evaluate the association between exposure to occupational hazards and the metabolic syndrome. A secondary objective was to analyze the additive and multiplicative effects of exposure to risk factors. Methods: This retrospective cohort was based on 31,615 health examinees at the Pusan National University Yangsan Hospital in Republic of Korea from 2012-2021. Demographic and behavior-related risk factors were treated as confounding factors, whereas three physical factors, 19 organic solvents and aerosols, and 13 metals and dust were considered occupational risk factors. Time-dependent Cox regression analysis was used to calculate hazard ratios. Results: The risk of metabolic syndrome was significantly higher in night shift workers (hazard ratio = 1.45: 95% confidence interval = 1.36-1.54) and workers who were exposed to noise (1.15:1.07-1.24). Exposure to some other risk factors was also significantly associated with a higher risk of metabolic syndrome. They were dimethylformamide, acetonitrile, trichloroethylene, xylene, styrene, toluene, dichloromethane, copper, antimony, lead, copper, iron, welding fume, and

manganese. Among the 28 significant pairs, 19 exhibited both positive additive and multiplicative effects. Conclusions: Exposure to single or combined occupational risk factors may increase the risk of developing metabolic syndrome. Working conditions should be monitored and improved to reduce exposure to occupational hazards and prevent the development of the metabolic syndrome.

Lu Z, Wang S, Ling W, and Guo Y. Gig work and mental health during the COVID-19 pandemic: a gendered examination of comparisons with regular employment and unemployment. *Social Science & Medicine*. 2023; 337:116281.

<https://doi.org/10.1016/j.socscimed.2023.116281>

Abstract: The rise of the platform economy during the Covid-19 pandemic has stimulated extensive discussions about whether gig workers can obtain equivalent mental health benefits of regular paid employment. Drawing on nationally representative data in the UK, this study aims to examine (1) whether transitioning from no paid work to gig work during Covid-19 is associated with better or worse mental health compared with those who remained not employed and those who became employed in regular jobs; (2) what mechanisms can explain the mental health differences; (3) how the patterns may differ by gender. The results show that transition into gig work is associated with better mental health compared with those who remained not employed, but this pattern is only for male (rather than female) gig workers and can be largely explained by their better financial situation and lower level of loneliness. For both men and women, the transition into gig work is associated with worse mental health compared with the transition into regular employment, but the mechanisms vary across genders. For male gig workers, both higher levels of financial precarity and loneliness in gig work can explain their mental health disadvantages compared with regular workers, but for female gig workers, none of them is at work. These findings facilitate a better understanding of the health consequences of the gig economy, revealing important gender-differentiated socio-psychological mechanisms through which gig work shapes mental health

Mason-Mackay AR. Gender, sex and desk-based postural behaviour: a systematic review re-interpreting biomechanical evidence from a social perspective. *Applied Ergonomics*. 2024; 114:104073.

<https://doi.org/10.1016/j.apergo.2023.104073>

Abstract: BACKGROUND: Biomechanical and pain prevalence differences between sex/gender groups are frequently attributed to biological differences between sexes without considering the influence of socially-constructed gender. This may lead to interventions which are insufficient and culturally unresponsive. This review reinterprets the evidence regarding differences in desk-based postural behaviour between sex/gender groups from a gender-based perspective. METHODS: Four prominent databases were searched using terms such as 'desk based', 'posture', and 'position'. Articles were included if they objectively investigated desk-based positional variability, postural variability and/or habitual alignment in healthy

adults. RESULTS: Nine studies were included. Differences were found in postural variability and habitual alignment between sex/gender groups and were not explored from a gender-based perspective. CONCLUSION: Gender-based expectations regarding 'acceptable' posture and movement likely contribute to biomechanical and pain differences between genders. This should be considered by clinicians intending to affect patients' movement and postural patterns and by researchers working in this space

Olaghere A, Wilson DB, and Kimbrell C. Inclusive critical appraisal of qualitative and quantitative findings in evidence synthesis. *Research Synthesis Methods*. 2023; 14(6):847-852.

<https://doi.org/10.1002/jrsm.1659>

Abstract: A diversity of approaches for critically appraising qualitative and quantitative evidence exist and emphasize different aspects. These approaches lack clear processes to facilitate rating the overall quality of the evidence for aggregated findings that combine qualitative and quantitative evidence. We draw on a meta-aggregation of implementation and process evaluations to illustrate a method for critically appraising empirical findings generated from qualitative and quantitative studies. This method includes a rubric for standardizing assessments of the overall quality of evidence in an evidence synthesis or mixed-method systematic review. The method first assesses the credibility of each finding extracted from a study. These individual assessments then feed into an overall score for any synthesized finding generated from the meta-aggregation. We argue that this approach provides a balanced and inclusive method of critical appraisal by first assessing individual findings, rather than studies, using flexible criteria applicable to a range of primary study methods to derive an overall assessment of synthesized findings

van der Put AC, Mandemakers JJ, de Wit JBF, and van der Lippe T. Worksite health promotion and work performance: both awareness and use matter. *Journal of Occupational & Environmental Medicine*. 2023; 65(11):949-957.

<https://doi.org/10.1097/JOM.0000000000002942>

Abstract: OBJECTIVE: This work aimed to study whether being aware of the existence of worksite health promotion (WHP), using it, or both are related to employees' task and contextual performance. METHODS: Multilevel cross-sectional data came from the European Sustainable Workforce Survey, with data from more than 11,000 employees in 259 organizations. Generalized structural equation modeling was used to examine two types of WHP: healthy menus and sports facilities. RESULTS: Awareness of healthy menus and sports facilities was positively associated with task and contextual performance. Healthy menus use was related to both higher task and contextual performance, whereas sports facilities use was only associated with contextual performance. The relation of WHP use was stronger for contextual than for task performance. CONCLUSIONS: Organizations should ensure that

employees are aware of the availability of WHP as well as stimulate employees to make use of it

Scott OFT, Bubna M, Boyko E, Hunt C, Kristman VL, Gargaro J, et al. Characterizing the profiles of patients with acute concussion versus prolonged post-concussion symptoms in Ontario. *Scientific Reports*. 2023; 13(1):17955.

<https://doi.org/10.1038/s41598-023-44095-6> [open access]

Abstract: Identifying vulnerability factors for developing persisting concussion symptoms is imperative for determining which patients may require specialized treatment. Using cross-sectional questionnaire data from an Ontario-wide observational concussion study, we compared patients with acute concussion (≤ 14 days) and prolonged post-concussion symptoms (PPCS) (≥ 90 days) on four factors of interest: sex, history of mental health disorders, history of headaches/migraines, and past concussions. Differences in profile between the two groups were also explored. 110 patients with acute concussion and 96 patients with PPCS were included in our study. The groups did not differ on the four factors of interest. Interestingly, both groups had greater proportions of females (acute concussion: 61.1% F; PPCS: 66.3% F). Patient profiles, however, differed wherein patients with PPCS were significantly older, more symptomatic, more likely to have been injured in a transportation-related incident, and more likely to live outside a Metropolitan city. These novel risk factors for persisting concussion symptoms require replication and highlight the need to re-evaluate previously identified risk factors as more and more concussions occur in non-athletes and different risk factors may be at play.

Seppala P, Olin N, Kalavainen S, Clottes Heikkila H, Kivimaki M, Remes J, et al. Effectiveness of a workshop-based intervention to reduce bullying and violence at work: a 2-year quasi-experimental intervention study. *Social Science & Medicine*. 2023; 338:116318.

<https://doi.org/10.1016/j.socscimed.2023.116318> [open access]

Abstract: Introduction: Bullying and violence at work are associated with reduced wellbeing of the victims, but few evidence-based interventions are available to prevent these offensive behaviours. We developed and examined the effectiveness of an intervention aimed at prevention of bullying and violence at work through modifications in psychosocial work environment. Methods: In accordance with pre-published protocol, employees and supervisors of 12 work units in 3 cities (intervention group A: n = 315; intervention group B: n = 271) received a workshop-based intervention on organizational practices to prevent bullying and violence, including supervisor support, supervisor justice, workplace social capital, and psychological safety and were compared to a reference group (n = 2310) which did not receive the intervention. Latent change score modelling (LCSM) was used to estimate between- and within-individual differences in changes of organizational practices and prevalence of bullying and violence from baseline (2020) to follow-up (2022). Results: No direct or indirect effects of intervention were observed. Of the potential mediator variables, supervisor support (B = 0.04; 95% confidence interval 0.006, 0.07) and supervisor justice

(0.04; 0.01, 0.08) improved in the intervention group B between the measurements and compared to control group, but the result was not replicated in intervention group A. No changes were observed between the measurement points in bullying or violence at work. Conclusions: No intervention effects on bullying and violence at work were observed. It may be worthwhile to develop the intervention further to focus more on supervisor and co-worker relationships and on psychosocial resources of work team.

Tannis C, Schanzer A, Milbank E, Afzal O, and Meyer J. Perceptions of job hazards and requests for accommodation among pregnant women in a large urban hospital system. *Journal of Occupational & Environmental Medicine*. 2023; 65(11):918-923.

<https://doi.org/10.1097/JOM.0000000000002925>

Abstract: BACKGROUND: Many pregnant women remain uninformed about job accommodation options or have not been empowered to ask their employers. METHODS: A cross-sectional survey of a sample base of pregnant women from late first through third trimester was conducted. Associations between job perception variables, work characteristics, race/ethnicity, and income were assessed using binary logistic regression. RESULTS: Workers in service/support occupations were twice as likely as those in management to perceive need for job duty change and to request job accommodation. Perception of needed job change was higher when jobs had high physical demands and low substantive complexity. CONCLUSIONS: We found positive relationships between highly physical work, perception of harm, and need for job change in pregnancy. Further research could explore worker/employer characteristics explaining why these perceptions did not translate into requesting and receiving job accommodation during pregnancy

Wells J, Scheibein F, Pais L, Rebelo Dos Santos N, Dalluege CA, Czakert JP, et al. A Systematic review of the impact of remote working referenced to the concept of work-life flow on physical and psychological health. *Workplace Health & Safety*. 2023; 71(11):507-521.

<https://doi.org/10.1177/21650799231176397> [open access]

Abstract: BACKGROUND: COVID-19 accelerated the adoption of remote working in which employers' obligations for employees' health and well-being extended into the home. This paper reports on a systematic review of the health impacts of remote working within the context of COVID-19 and discusses the implications of these impacts for the future role of the occupational health nurse. METHOD: The review protocol was registered with PROSPERO (CRD42021258517) and followed the PRISMA guidelines. The review covered 2020-2021 to capture empirical studies of remote working during the COVID-19 pandemic, their physical and psychological impacts and mediating factors. RESULTS: Eight hundred and thirty articles were identified. After applying the inclusion criteria, a total of 34 studies were reviewed. Most studies showed low to very low strength of evidence using the GRADE approach. A minority of studies had high strength of evidence. These focused on the reduced risk of infection and negative effects in terms of reduced physical activity, increased sedentary

activity, and increased screen time. **CONCLUSION/APPLICATION TO PRACTICE:** The synergy of work and personal well-being with the accelerated expansion of remote working suggests a more active role in the lives of workers within the home setting on the part of occupational health nurses. That role relates to how employees organize their relationship to work and home life, promoting positive lifestyles while mitigating adverse impacts of remote working on personal well-being

Zhu J, Fletcher A, and Verma N. Fatal injuries associated with rear step riding among municipal solid waste collection workers (United States, 1984-2020). *American Journal of Industrial Medicine*. 2023; 66(12):1069-1078.

<https://doi.org/10.1002/ajim.23537> [open access]

Abstract: **BACKGROUND:** United States solid waste workers suffer a high fatal injury rate due to their frequent exposures to refuse-vehicle-related hazards. The Occupational Safety and Health Administration (OSHA) allows workers to ride on the rear steps of a garbage truck (exterior riding) if employers abide by American National Standard Z245.1 (ANSI Z245.1). The State of California (CA) has banned exterior riding since 1984, and the City of New York (NYC) has implemented its own initiatives to prevent exterior riding deaths. **METHODS:** Fatal exterior riding incidents were identified from two online databases. Variables relating to deceased workers, employers, and injury circumstances were analyzed. **RESULTS:** The study identified 181 exterior riding deaths from 604 refuse-vehicle-related fatal incidents (deaths either directly caused by a refuse vehicle or one in which the victim was performing a refuse-vehicle-related task) in the United States (1984-2020). A total of 50 (27.6%) of the exterior riding deaths had no ANSI Z245.1 violations. Risk factors other than those addressed by ANSI Z245.1 contributed to these worker deaths. **CONCLUSIONS:** Exterior riding deaths identified by this study were all preventable. Temporary workers and workers in the public sector may be at higher risk for exterior riding deaths. Both CA and NYC had taken measures to prohibit the practice of exterior riding, and both had lower numbers of exterior riding deaths. ANSI Z245.1 and current OSHA enforcement policy do not address the inherent dangers of falling off a moving heavy vehicle while standing on a small and elevated platform, and are not effective in preventing fatal exterior riding incidents

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