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

Black NL and St-Onge S. Measuring pandemic home-work conditions to determine ergonomic recommendation relevance. *Work*. 2022; 71(2):299-308.

<https://doi.org/10.3233/WOR-210726>

Abstract: **BACKGROUND:** Computer-intensive office work associations with health challenges may intensify following COVID-19 pandemic-related changes to home-based office work. **OBJECTIVE:** To determine working conditions, perception and physical elements affecting health after pivoting to full time home-work. **METHODS:** An online questionnaire addressed physical, productivity, motivation, and work-practice factors. Photos of the worker in their home-work environment showed side and front-back perspectives. **RESULTS:** Sixteen questionnaires were received, and 12 respondents supplied photos. Home and office workplace differences varied. Ten felt productivity was affected, most often positively. Four noted increased pain or fatigue intensity, particularly in the eyes, neck / head, lower back, and shoulders. Working posture was not optimal; six didn't use traditional chair-sitting for up to half the day. Forward and backward trunk inclination accounted for at least 10% of the workday for 12 respondents; lateral inclination affected ten and eight had unsupported legs. Fifteen used an adjustable chair, but photos revealed ergonomic recommendations were not consistently followed. Fourteen participants communicated regularly by telephone, eight only for moderate duration and ten using adapted telephone equipment. Half of the ROSA scores were high. **CONCLUSIONS:** Workers forced into telework during the pandemic experience

positive and negative impacts. Postures vary more than in offices, potentially increasing health risk

Christopherson RM, Fadyl JK, and Lewis GN. Return-to-work expectations and workplace supports in New Zealand: injured workers' perspectives. Disability and Rehabilitation. 2022; 44(5):702-709.

<https://doi.org/10.1080/09638288.2020.1776775>

Abstract: AIM: Work-disability following musculoskeletal injury causes a significant burden for individuals and healthcare systems. Research into work-disability prevention has investigated the ability of psychosocial factors to predict return-to-work in workers with musculoskeletal injuries. Recent research indicates that both return-to-work expectations and workplace supports influence return-to-work outcome. However, how these mechanisms operate to influence outcome is still largely unknown. **METHODS:** We undertook a qualitative study involving semi-structured interviews with workers from diverse backgrounds who were undergoing vocational rehabilitation in New Zealand following a musculoskeletal injury. Interviews investigated the injured workers' experiences of workplace supports and asked in-depth about what contributed to their expectations of returning to work. Thematic analysis was used to analyse and interpret the data. **FINDINGS:** Analysis identified four key themes. We found that what workplace supports were offered and how they were taken up was related to systemic factors, and trust. We also identified a link between the offer of support from the workplace and return-to-work expectations. Finally, the actions of workers' compensation and healthcare providers during workers' recovery were reported to influence supports, expectations and the confidence injured workers experienced in their return-to-work outcome in both overt and subtle ways. **CONCLUSION:** This study indicated that actions of the workplace, healthcare providers and workers' compensation parties can all influence workplace supports, return-to-work expectations and return-to-work outcome. These findings therefore implicate the actions of these stakeholders in work-disability prevention efforts. **IMPLICATIONS FOR REHABILITATION** Positive return-to-work expectations are increasingly shown by research to be related to positive return-to-work outcomes for injured workers. Trust between the worker and the company can underpin the provision of supports for return-to-work, which in turn can influence worker confidence and expectations of return-to-work. Consideration of workplace culture and relationships when healthcare providers interact with employers can be crucial in fostering trust and enabling appropriate workplace supports. The ways in which workers compensation processes are executed can also affect workplace relationships, and therefore influence the provision of appropriate return-to-work supports

Cook JA, Swarbrick M, Boss KA, Steigman PJ, Nemec P, Jonikas JA, et al. The importance of employment to workers with preexisting behavioral health disorders during the COVID-19 pandemic. *Psychiatric Rehabilitation Journal*. 2022; 45(1):11-17.

<https://doi.org/10.1037/prj0000499>

Abstract: OBJECTIVE: Little is known about the employment experiences of people with preexisting behavioral health conditions during the coronavirus disease of 2019 (COVID-19) pandemic, despite the recognized importance of work for this group. METHOD: Two hundred and seventy two adults with behavioral health conditions, recruited through statewide mental health networks in NJ and NY, completed an online survey in April-May 2020. Multivariable analysis examined the effects of sleep and dietary changes, COVID-19 exposure, anxiety (Generalized Anxiety Disorder-2), and depressive symptoms (Patient Health Questionnaire-2) on employment status and job changes. Respondents' open-ended descriptions of pandemic-related changes in employment were analyzed using the constant comparative method. RESULTS: Two-thirds (65%) were employed, only 4% became unemployed, and 29% reported changes in their jobs as a result of the pandemic. In logistic regression analysis controlling for age, race, education and gender, workers were more likely than nonworkers to report altered eating and sleeping habits, but not greater anxiety or depression. However, those whose jobs changed were more likely to report COVID-19 exposure, altered sleep patterns, clinically significant anxiety symptoms, and both anxiety and depressive symptoms compared to those whose jobs had not changed. Qualitative analysis revealed work's positive impact (pride in job performance, using new skills, feeling safer working from home) and its negative effects (lifestyle disruption, worry about job security, isolation from coworkers). CONCLUSIONS AND IMPLICATIONS FOR PRACTICE: This is the first study to suggest the important role that work played for people with preexisting behavioral health disorders during the pandemic, with both positive and negative influences, and important implications for services and supports. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

Cuello-Garcia CA, Santesso N, Morgan RL, Verbeek J, Thayer K, Ansari MT, et al. GRADE guidance 24 optimizing the integration of randomized and non-randomized studies of interventions in evidence syntheses and health guidelines. *Journal of Clinical Epidemiology*. 2022; 142:200-208.

<https://doi.org/10.1016/j.jclinepi.2021.11.026> [open access]

Abstract: BACKGROUND AND OBJECTIVE: This is the 24th in the ongoing series of articles describing the GRADE approach for assessing the certainty of a body of evidence in systematic reviews and health technology assessments and how to move from evidence to recommendations in guidelines. METHODS: Guideline developers and authors of systematic reviews and other evidence syntheses use randomized controlled studies (RCTs) and non-randomized studies of interventions (NRSI) as sources of evidence for questions about health interventions. RCTs with low risk of bias are the most trustworthy source of evidence for estimating relative effects of interventions because of protection against confounding and

other biases. However, in several instances, NRSI can still provide valuable information as complementary, sequential, or replacement evidence for RCTs. **RESULTS:** In this article we offer guidance on the decision regarding when to search for and include either or both types of studies in systematic reviews to inform health recommendations. **CONCLUSION:** This work aims to help methodologists in review teams, technology assessors, guideline panelists, and anyone conducting evidence syntheses using GRADE

Dorstyn D, Oxlad M, Roberts R, Murphy G, Potter E, Kneebone I, et al. MS JobSeek: a pilot randomized controlled trial of an online peer discussion forum for job-seekers with multiple sclerosis. Journal of Vocational Rehabilitation. 2022; 56(1):81-91.

<https://doi.org/10.3233/JVR-211174>

Gicheva D. Altruism and burnout: long hours in the teaching profession. ILR Review. 2022; 75(2):427-457.

<https://doi.org/10.1177/0019793920981055>

Hartikainen E, Solovieva S, Viikari-Juntura E, and Leinonen T. Associations of employment sector and occupational exposures with full and part-time sickness absence: random and fixed effects analyses on panel data. Scandinavian Journal of Work, Environment & Health. 2022; 48(2):148-157.

<https://doi.org/10.5271/sjweh.4003> [open access]

Abstract: **OBJECTIVE:** We aimed to investigate the influence of unobserved individual characteristics in explaining the effects of work-related factors on full (fSA) and part-time sickness absence (pSA). **METHODS:** We used register-based panel data for the period 2005-2016 on a 70% random sample of the Finnish working-age population. The relationships between employment sector and occupational exposures (% exposed to physically heavy work and job control score based on job exposure matrices) and the annual onset of fSA and pSA were investigated among men and women. First, random effects (RE) models were applied controlling for observed sociodemographic factors and then fixed effects (FE) models that examine within-individual changes over time and thereby further account for unobserved time-invariant individual characteristics. **RESULTS:** In the RE analyses, public employment sector, physically heavy work and lower job control each increased the use of fSA and pSA among both genders. When unobserved individual characteristics were controlled for with the FE models, the effects on fSA attenuated. For pSA, the effects of employment sector and physical heaviness of work among women even reversed. The effect of lower job control on pSA remained especially among women. **CONCLUSIONS:** The role of individuals' unobserved characteristics in explaining the effects of work-related factors on SA should not be neglected. The effects of work-related factors are likely to be overestimated when using traditional approaches that do not account for unobserved confounding, ie, selection of individuals with a high likelihood of SA into particular work environments

Humphreys K, Shover CL, Andrews CM, Bohnert ASB, Brandeau ML, Caulkins JP, et al. Responding to the opioid crisis in North America and beyond: recommendations of the Stanford-Lancet Commission. *Lancet*. 2022; 399(10324):555-604.

[https://doi.org/10.1016/S0140-6736\(21\)02252-2](https://doi.org/10.1016/S0140-6736(21)02252-2)

Kluay-On P and Chaikumarn M. Construct validity, internal consistency and test-retest reliability of ergonomic risk assessment for musculoskeletal disorders in office workers (ERAMO). *Theoretical Issues in Ergonomics Science*. 2022; 23(1):121-130.

<https://doi.org/10.1080/1463922X.2021.1922780>

Krisi M, Eckhaus E, and Nagar R. Developing a multilevel scale to assess retention of workers with disabilities. *Journal of Occupational Rehabilitation*. 2022; 32(1):138-146.

<https://doi.org/10.1007/s10926-021-09984-5>

Abstract: Purpose Persons with disabilities (PwD) face difficulties in employment. Despite extensive research on PwD in the workplace, there is lack of research on the factors behind retaining or terminating the job of a PwD. This study aims to address this gap by developing the Retaining Workers with Disability (RWD) model. Method Predicated on 1032 respondents with employment decision authority, we performed exploratory factor analysis (EFA) followed by confirmatory factor analysis (CFA) for convergent and discriminant validity of the RWD model. Next, we developed the two-rank model RWD-II and employed CFA for validation. Results We presented a dual-facet measurement tool for assessing employer attitudes towards retaining PwD in the workplace. Two dominant factors were measured, direct and indirect work-related items. Indices for both models (one and two-rank) showed a good fit. Conclusion Our study highlighted two major factors influencing managers in the decision-making process of retaining workers with disabilities as follows: direct and indirect work-related concerns. The measure was validated using the RWD scale. By providing the tool to identify attitudes towards PwD work retention, we offer the first step in identifying and changing a negative approach toward this population in the workplace. Practical contributions are discussed

Li L, Rohlin S, and Singleton P. Labor unions and workplace safety. *ILR Review*. 2022; 75(2):402-426.

<https://doi.org/10.1177/0019793920958417>

Quinn TD, Kline CE, Nagle F, Radonovich LJ, and Barone GB. Physical activity in the workplace: does just working meet activity recommendations? *Workplace Health & Safety*. 2022; 70(2):81-89.

<https://doi.org/10.1177/21650799211055174>

Abstract: Background: The physical activity (PA) health paradox hypothesizes that occupational physical activity (OPA) and leisure time PA have differential cardiovascular health effects due to increased cardiovascular load without adequate recovery; however,

research describing worker PA lacks high-quality objective OPA measurement. This study aimed to objectively describe PA profiles of men reporting high OPA and make comparisons to aerobic PA and OPA recommendations. Methods: Male food service, material moving, health care, or maintenance workers wore activity (ActiGraph® and activPAL®) and heart rate monitors for 7 days. Participants recorded work, non-work, and sleep times in a diary. PA was operationalized as time spent in sedentary behavior, upright time, light, moderate, vigorous, and moderate-to-vigorous PA during work and non-work hours. PA profiles were described and compared with Centers for Disease Control and Prevention aerobic PA guidelines (=21.4 minute/day) and OPA recommendations (<30 minute/hour upright and intensity of <30% heart rate reserve). Findings: Nineteen male workers (68% White, age = 46.6±7.9 years) were more active on workdays than non-workdays (sedentary: 492.3 vs. 629.7 minute/day; upright: 462.4 vs. 325.2 minute/day; moderate-to-vigorous PA: 72.4 vs. 41.5 minute/day, respectively; all $p < .05$). Most participants (17/19) achieved aerobic PA guidelines across all days with more achieving on workdays (19/19) than non-workdays (13/19). OPA often exceeded recommended limits with participants accumulating 39.6±12.2 minutes/work hour upright and 30.3±25.9% of working time >30% heart rate reserve. Conclusions/Application to Practice: Male workers reporting high OPA typically met aerobic PA guidelines but exceeded recommended OPA limits. The long-term health implications of such activity profiles should be investigated.

Reul NK, Gray Z, Braid BB, and Leland MA. Tuberculosis screening in silica-exposed workers : developing a tool for health care providers. Public Health Reports. 2022; 137(2):244-254. <https://doi.org/10.1177/00333549211041584>

Abstract: Both the Occupational Safety and Health Administration and Washington State require safety and health protections for workers exposed to respirable crystalline silica, including tuberculosis (TB) screening as part of occupational medical surveillance. We describe the creation of a TB screening tool for silica-exposed workers receiving regulated medical surveillance examinations in Washington State. The tool provides relevant clinical recommendations to assist health care providers and public health practitioners who choose to use the tool when performing such examinations. A cross-disciplinary team at the Washington State Department of Labor and Industries created the TB screening tool to help health care providers identify silica-exposed workers who should receive a comprehensive evaluation for active TB disease and workers who should or must receive testing for latent TB infection. The Washington State Adult Tuberculosis Screening Tool for Workers Exposed to Respirable Crystalline Silica benefits occupational and respiratory clinicians and public health practitioners by aiding both the individual- and population-level delivery of occupational health and TB screening services to silica-exposed workers receiving required medical surveillance examinations

Sejbaek CS, Flachs EM, Caroe TK, Meye HW, Frederiksen M, Frydendall KB, et al. Professional cleaning and risk of asthma: a Danish nationwide register-based study. *Scandinavian Journal of Work, Environment & Health*. 2022; 48(2):127-136.

<https://doi.org/10.5271/sjweh.3997> [open access]

Abstract: OBJECTIVE: This study aimed to investigate the risk of asthma among professional cleaners in a nationwide population-based study. METHODS: Professional cleaners, aged 16-50 years, were identified according to the yearly assigned administrative job and industrial codes in a register-based, matched cohort study with other manual workers as references (1995-2016). Asthma was defined from national registers based on hospitalization and medication. Associations between recent and cumulative cleaning years and risk of asthma were estimated using Poisson regression, first in a full cohort and then in an inception cohort, among workers aged 16-20 years at the start of follow-up. RESULTS: The risk of asthma was not increased for recent cleaning compared to references [adjusted incidence rate ratio (IRRadj) 1.02 [95% confidence interval (CI) 0.99-1.04]. Similar results were seen for the inception cohort, where cumulative years of cleaning were associated with increased risk of asthma, more prominent for the group with the maximum of six years of cleaning IRRadj 2.53 (95% CI 1.38-4.64). Cumulative years of cleaning were associated with decreased risk of asthma, more pronounced for the maximum of ten compared to one year of cleaning [IRRadj 0.74 (95% CI 0.63-0.88)]. CONCLUSIONS: Asthma risk was increased in the inception cohort for cumulative years of cleaning but decreased in the full cohort. We could not confirm that recent work within cleaning was associated with increased risk of asthma. This may be due to healthy worker bias. Thus, we cannot rule out that long-term professional cleaning may be associated with increased risk of asthma

Shaw WS, McLellan RK, Besen E, Namazi S, Nicholas MK, Dugan AG, et al. A worksite self-management program for workers with chronic health conditions improves worker engagement and retention, but not workplace function. *Journal of Occupational Rehabilitation*. 2022; 32(1):77-86.

<https://doi.org/10.1007/s10926-021-09983-6> [open access]

Abstract: Purpose An increasing number of workers in the US have chronic health conditions that limit their ability to work, and few worksite interventions have been tested to improve worker coping and problem solving at work. The purpose of this study was to evaluate a worksite-based health self-management program designed to improve workplace function among workers with chronic health conditions. Methods We conducted a randomized, controlled trial of a worksite self-management program ("Manage at Work") (clinicaltrials.gov #NCT01978392) for workers with chronic health conditions (N = 119; 82% female, ages 20-69). Most workers were recruited from the health care or light manufacturing industry sectors. Workers attended a 5-session, facilitated psychoeducational program using concepts of health self-management, self-efficacy, ergonomics, and communication. Changes on outcomes of work engagement, work limitation, job satisfaction, work fatigue, work self-efficacy, days absent, and turnover intention at 6-month follow-up were compared to wait-

list controls. Results The most prevalent chronic health conditions were musculoskeletal pain, headaches, vision problems, gastrointestinal disorders, respiratory disorders, and mental health disorders. The self-management program showed greater improvement in work engagement and turnover intent at 6-month follow-up, but there was no evidence of a parallel reduction in perceived work limitation. Trends for improved outcomes of work self-efficacy, job satisfaction, and work fatigue in the intervention group did not reach statistical significance in a group x time interaction test. Conclusions Offering a worksite self-management program to workers with chronic health conditions may be a feasible and beneficial strategy to engage and retain skilled workers who are risking disability. Clinical trial registration: Clinicaltrials.gov #NCT01978392.

Vranjes I, Notelaers G, and Salin D. Putting workplace bullying in context: the role of high-involvement work practices in the relationship between job demands, job resources, and bullying exposure. *Journal of Occupational Health Psychology*. 2022; 27(1):136-151.

<https://doi.org/10.1037/ocp0000315>

Abstract: Previous research has demonstrated the crucial association between employee stressors and workplace bullying. In this article, we argue that a nurturing organizational context will protect employees from exposure to workplace bullying and will interact with individual demands and resources known to have effect on exposure to bullying in the workplace. In specific, we look at high-involvement work practices (HIWPs)-which include participation, information-sharing, competence development, and rewards. Multilevel analyses on the data from 28,923 Belgian employees from 144 organizations show that organization-level HIWPs are negatively associated with bullying exposure. Moreover, HIWPs interact with individually experienced job demands and resources, by decreasing the association between employee work pressure and bullying and by somewhat compensating for the lack of experienced social support from colleagues at work. HIWPs did not moderate the relationship between employee job insecurity and bullying and social support from the supervisor and bullying. These findings highlight the important role HIWPs can play in protecting employees from workplace bullying, while also suggesting the difficulty of compensating for certain individual risk factors. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

Williams K, Cherrie JW, Dobbie J, and Agius RM. The development of a COVID-19 control measures risk matrix for occupational hygiene protective measures. *Annals of Work Exposures and Health*. 2022; 66(2):269-275.

<https://doi.org/10.1093/annweh/wxab050> [open access]

Abstract: The British Occupational Hygiene Society (BOHS) COVID-19 Working Group developed a control banding matrix to provide guidance for employers and others to help assess the risks of COVID-19 infection during the pandemic. The matrix was based on occupational hygiene principles and the judgement of the occupational health practitioners involved; since objective data on workers' exposure were unavailable. Users of the matrix

identify one of five exposure categories based on generic job descriptions and example occupations, and these categories are linked to generic guidance on interventions at source, on the exposure pathway and for individual workers. The risk matrix was published on the BOHS website and the guidance has been downloaded more than 2000 times. The matrix has had limited evaluation for reliability, but the data suggest that the highest exposure ranked jobs were associated with higher age-standardized mortality in Britain during the pandemic. However, there was considerable variability in exposure assignments between assessors, which underlines the need for the control guidance to be precautionary. The BOHS calls on academic researchers to undertake further work to validate the reliability of the tool

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