

ABOUT RESEARCH ALERT

Research Alert is a service provided to you by the Institute for Work & Health (IWH) to help you keep abreast of recent literature in the areas of occupational health and safety, epidemiology, public health and others within the IWH mandate. Please note that these articles have not been reviewed by Institute scientists to assess the quality of the studies. Research Alerts should not be considered an endorsement of the findings. Readers are cautioned not to act on the results of single studies, but rather to seek bodies of evidence. It should also be noted that the Institute for Work & Health cannot provide full-text of articles listed in Research Alerts to individuals outside of the organization, as this violates copyright legislation.

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

***Kinitz DJ, Shahidi FV, and Ross LE. Job quality and precarious employment among lesbian, gay, and bisexual workers: a national study. *SSM - Population Health*. 2023; 24:101535.**

<https://doi.org/10.1016/j.ssmph.2023.101535> [open access]

Abstract: Background Employment outcomes among sexual minority (i.e., lesbian, gay, bisexual) workers are poorly understood, and previous research on this topic has focused almost exclusively on inequities in earnings, neglecting other important dimensions of job quality. We address this gap by describing and comparing the job quality of straight and sexual minority workers in Canada. Methods Data are from the 2016 General Social Survey: Canadians at Work and Home, the only national survey providing both a measure of sexual orientation and a multidimensional view of job quality in Canada. We identified 25 unique job quality indicators (e.g., temporary employment; job insecurity; health benefits; low income; job satisfaction; job control; discrimination). Latent class cluster analysis was used to establish a typology of job quality describing standard, flexible, and precarious employment types. We used multivariable regression methods to examine the association between sexual orientation and job quality. Results Sexual minorities reported lower job quality than their straight counterparts along many dimensions, with bisexual people reporting the lowest job quality. While inequities were generally observed among both sexual minority men and women, they sometimes differed in magnitude by gender. The prevalence of precarious employment was nearly three times higher among lesbian, gay, and bisexual workers (PR: 2.94, CI: 1.89–4.58 among all sexual minorities; PR: 3.04, CI: 1.71–5.43 among gay/lesbian workers; and PR: 2.81, CI: 1.45–5.47 among bisexual workers) compared to their straight

counterparts. Conclusion Inequities in job quality among sexual minorities persist despite comprehensive human rights protections in Canada. These inequities are pervasive, extending well beyond conventional indicators such as dollars earned and hours worked. Multi-pronged interventions are needed that move beyond simply ensuring that sexual minority workers are employed. Sexual minority workers deserve access to secure, well-paid work with benefits where they can foster connection and be free from discrimination.

***Quinn TD, Lane A, Pettee Gabriel K, Sternfeld B, Jacobs Jr DR, Smith P, et al. Thirteen-year associations of occupational and leisure-time physical activity with cardiorespiratory fitness in CARDIA. *Medicine and Science in Sports and Exercise*. 2023; 55(11):2025-2034.**

<https://doi.org/10.1249/MSS.0000000000003237>

Abstract: Purpose Differential effects on fitness are hypothesized to contribute to the opposing health effects of leisure-time physical activity (LTPA) and occupational physical activity (OPA). As such, this study examined cross-sectional and longitudinal associations of fitness with LTPA and OPA. Methods This study examined fitness associations with LTPA and OPA across 13 yr in the Coronary Artery Risk Development in Young Adults study (years 7 (baseline), 10, 15, and 20 (follow-up) examinations). Fitness was measured at baseline and follow-up via symptom-limited maximal graded exercise test (GXT) duration (in seconds), whereas LTPA and OPA were self-reported during each examination. Baseline and follow-up cross-sectional associations of LTPA (low, medium, high) and OPA (0, 1 – 6, and ≥ 6 months with OPA) with fitness were examined using linear regression. Longitudinal linear regression examined associations between 13-yr LTPA (low, medium, or high) and OPA (no, decreasing, or increasing) trajectories with fitness at follow-up, adjusted for baseline values. All models adjusted for center, sex, race, age, education, smoking history, alcohol intake, resting blood pressure, diabetes status, and body mass index. Stratified analyses examined associations by sex (female/male), race (Black/White), and LTPA groups. Results Compared with low, medium, and high LTPA were positively associated with fitness in all analyses ($P < 0.001$). Reporting 1 – 6 or ≥ 6 months with OPA was negatively associated with fitness in cross-sectional follow-up models ($\beta = -15.6$ and -15.4 , respectively; $P \leq 0.01$). Longitudinally, those with increasing OPA had lower follow-up fitness compared with no OPA ($\beta = -16.41$, $P < 0.01$). Negative associations of OPA with fitness were not meaningfully different across sex and race groups. Significant LTPA–OPA interactions were observed ($P < 0.001$). Conclusions Physical activity research and public health promotion should consider domain-specific associations on cardiovascular health.

***Robson LS, Landsman V, Smith PM, and Mustard CA. Evaluation of the Ontario mandatory working-at-heights training requirement in construction, 2012 - 2019. *American Journal of Public Health*. 2023; [epub ahead of print].**

<https://doi.org/10.2105/AJPH.2023.307440>

Abstract: The province of Ontario, Canada, implemented mandatory day-long training for construction workers required to use fall-protection equipment. More than 400 000 training

sessions were completed by 2017 when the requirement took full effect. The lost-time workers' compensation claim incidence rate attributable to falls targeted by the training was 19% lower in 2017-2019 than in 2012-2014. Rates for two comparator injuries increased or stayed the same. The decline in targeted fall claim incidence rate of the other Canadian provinces was 6%. (Am J Public Health. Published online ahead of print November 3, 2023:e1-e4. <https://doi.org/10.2105/AJPH.2023.307440>).

Bes I, Shoman Y, Al-Gobari M, Rousson V, and Guseva Canu I. Organizational interventions and occupational burnout: a meta-analysis with focus on exhaustion. International Archives of Occupational & Environmental Health. 2023; 96(9):1211-1223.

<https://doi.org/10.1007/s00420-023-02009-z> [open access]

Abstract: Purpose: To assess whether organizational interventions are effective to prevent or reduce exhaustion, the core dimension of occupational burnout. Methods: We searched in PubMed, EMBASE, PsycINFO, and Cochrane Library databases randomized and non-randomized controlled trials conducted among active workers and reporting the outcome as exhaustion score. We calculated the effect sizes using the pre-test-post-test control group design's estimate. We used the random effects model in meta-analysis and Cochrane collaboration's tool for interventions to assess the risk of bias. Overall quality of evidence was appraised using the GRADE. Results: From the 2425 identified records, we assessed 228 full texts for eligibility and included 11 original articles describing 13 studies, 11 on organizational interventions, and 2 on combined inventions. The interventions were participatory (n = 9), focused on workload (n = 2), or on work schedule (n = 2). The overall effect size was - 0.30 (95% CI = - 0.42; - 0.18), I² = 62.28%, corresponding to a small reduction in exhaustion with a very low quality of evidence. Combined interventions had a larger effect (- 0.54 (95% CI = - 0.76; - 0.32)) than organizational interventions. When split by type of intervention, both participatory interventions and interventions focused on workload had a benefit effect of exhaustion reduction, with an estimated effect size of - 0.34 (95% CI = - 0.47; - 0.20) and - 0.44 (95% CI = - 0.68, - 0.20), respectively. Conclusion: Interventions at combined level in workplaces could be helpful in preventing exhaustion. However, the evidence is still limited, due to a high heterogeneity between studies, bias potential, and small number of eligible studies. This calls for further research, using workload interventions at organizational level, especially in sectors with high risk of job stress and exhaustion.

Burdorf A, Fernandes RCP, and Robroek SJW. Health and inclusive labour force participation. Lancet. 2023; 402(10410):1382-1392.

[https://doi.org/10.1016/S0140-6736\(23\)00868-1](https://doi.org/10.1016/S0140-6736(23)00868-1)

Abstract: The future of work is rapidly changing, with higher flexibility of the labour market and increasing informal employment in many countries worldwide. There is also an increased pressure to extend working careers until older age. We introduce the concept of working life expectancy as a useful metric, capturing the expected number of years in paid employment across the working age individuals, in particular among different groups. We describe factors

that determine working life expectancy. Macro-level factors focus on the socioeconomic and political context that influences labour force participation, primarily policies and legislation in specific countries. At the meso level, employment contracts and working conditions are important. The micro level shows that individual characteristics, such as education, gender, and age, influence working careers. There are three important groups with a disadvantaged position in the labour market-workers with chronic diseases, workers with impairing disabilities, and workers aged 50 years or more. Within each of these disadvantaged groups, macro-level, meso-level, and micro-level factors that influence entering and exiting paid employment are discussed. To assure that paid employment is available for everyone of working age and that work contributes to better health, specific challenges need to be addressed at the macro, meso, and micro levels. To reach inclusive labour force participation, national policies, company practices, and workplace improvements need to be aligned to ensure safe and healthy workplaces that contribute to the health and wellbeing of workers and their communities

Chen C, Okubo R, Hagiwara K, Mizumoto T, Nakagawa S, and Tabuchi T. The association of positive emotions with absenteeism and presenteeism in Japanese workers. *Journal of Affective Disorders*. 2024; 344:319-324.

<https://doi.org/10.1016/j.jad.2023.10.091>

Abstract: Background: Negative emotions such as depression have been associated with increased absenteeism and presenteeism, contributing to substantial economic loss. However, no study has investigated if positive emotions such as happiness influence absenteeism and presenteeism. Methods: Using data from the Japan COVID-19 and Society Internet Survey (JACSIS), a nationwide survey conducted in September-October 2022 (n = 19,214), we investigated if two major, representative positive emotions (happiness and gratitude) are associated with absenteeism and presenteeism. Absenteeism was defined as reporting more than one day of sick leave in the past one month. Presenteeism was measured with the Work Functioning Impairment Scale. Logistic regression was used to estimate odds ratios. Results: 12.4 % and 21.8 % of subjects reported absenteeism and presenteeism, respectively. Logistic regression estimated that after adjusting covariates, happiness was associated with lower odds of absenteeism (OR = 0.792, 95 % CI [0.706, 0.888]) and presenteeism (OR = 0.531, 95 % CI [0.479, 0.588]) while gratitude was associated with lower odds of presenteeism only (OR = 0.705, 95 % CI [0.643, 0.774]). Furthermore, simultaneous presence of both happiness and gratitude was associated with further lower odds of presenteeism (OR = 0.385, 95%CI [0.338, 0.439]), indicating a synergetic relation. Discussion: This study is the first to investigate the association between positive emotions and absenteeism and presenteeism. Given the substantial economic loss due to absenteeism and presenteeism, strategies to enhance positive emotions are necessary.

Cillekens B, van Eeghen E, Oude Hengel KM, and Coenen P. Within-individual changes in physical work demands associated with self-reported health and musculoskeletal symptoms: a cohort study among Dutch workers. *International Archives of Occupational & Environmental Health*. 2023; 96(9):1301-1311.

<https://doi.org/10.1007/s00420-023-02008-0> [open access]

Abstract: PURPOSE: This study aimed to investigate changes in physical work demands in association with self-rated health and musculoskeletal symptoms. METHODS: Data from five waves over the period 2019-2021 of the Netherlands Working Conditions Survey COVID-19 were available for 7191 participants aged 19-64 years who worked (partly) on-site during at least two consecutive waves. Logistic generalized estimated equations (GEE) were used to estimate the odds ratios (OR) with 95% confidence interval (CI) for changes (increase or decrease compared to no change) in physical work demands between two waves and poor self-rated health and musculoskeletal symptoms in the following wave, adjusted for the health outcome at the first wave, age, educational level, working hours and hours worked from home. RESULTS: In females, a statistically significant association was found between an increase in physical work demands compared to no change and musculoskeletal symptoms (OR 1.39, 95% CI 1.17-1.65). A decrease in physical work demands in females was not statistically significantly associated with musculoskeletal symptoms (OR 0.93, 95% CI 0.80-1.08). Similar trends were found for poor self-rated health, although non-statistically significant. For males, comparable but attenuated associations were found. CONCLUSION: While our study showed that increasing physical work demands are associated with adverse health (self-reported and musculoskeletal), it did not appear to benefit worker's health to reduce work demands. Future research with multiple measurements in a shorter period and additionally using devices to measure physical work demands will be needed to confirm our study results

Haddas R, Botros M, D'Agostino CR, Jablonski J, Ramirez G, Vasalos K, et al. The effect of a workplace wellness program on disability, function and pain in healthcare providers workers with low back pain: outcomes of 3040 academic health center employees. *European Spine Journal*. 2023; [epub ahead of print].

<https://doi.org/10.1007/s00586-023-07971-3>

Abstract: PURPOSE: (1) Identification of musculoskeletal risk factors for healthcare providers suffering low back pain (LBP) and the creation of risk profiles for those individuals and (2) analyze the impact of a workplace wellness program on healthcare providers who suffer from low back pain. METHODS: A total of 3040 employees at an academic healthcare center underwent a computer-adaptive survey of health-related quality of life (HRQOL), biometric tests, and a disability and functional movement assessment as part of the workplace wellness program (WWP). Clinical interventions with a rehabilitation specialist were offered to employees identified as at risk for low back pain. Data collected were analyzed using descriptive methods and multivariable regressions to address the study objectives. RESULTS: Of the 3040 healthcare providers enrolled in this study, 77% identified with non-specific LBP

with greater weakness, numbness, reduced flexibility, and physical activity. The major predictive risk factors for LBP were Patient-Reported Outcomes Measurement Information System (PROMIS) pain interference score, PROMIS fatigue, previous work injury, flexibility, numbness, PROMIS social function, level of education, and BMI. Healthcare providers with LBP who completed the WWP improved in most dimensions of HRQOL and disability and functional outcomes. CONCLUSIONS: A high proportion of healthcare providers suffer from LBP as a result of the nature of their work. Disability and functional outcomes measurements and PROMIS results quantitatively assess healthcare providers with LBP. Organizations can develop injury mitigation programs to target employees at high risk of LBP using the risk factors we identify. Completion of the WWP was associated with improvements in disability, HRQOL and functional measures

Karnik H, Wrigley-Field E, Levin Z, Chen YH, Zabel EW, Ramirez M, et al. Examining excess mortality among critical workers in Minnesota during 2020-2021: an occupational analysis. American Journal of Public Health. 2023; 113(11):1219-1222.

<https://doi.org/10.2105/AJPH.2023.307395> [open access]

Abstract: Objectives. To understand the occupational risk associated with COVID-19 among civilian critical workers (aged 16-65 years) in Minnesota. Methods. We estimated excess mortality in 2020 to 2021 for critical occupations in different racial groups and vaccine rollout phases using death certificates and occupational employment rates for 2017 to 2021. Results. Excess mortality during the COVID-19 pandemic was higher for workers in critical occupations than for noncritical workers. Some critical occupations, such as transportation and logistics, construction, and food service, experienced higher excess mortality than did other critical occupations, such as health care, K-12 school staff, and agriculture. In almost all occupations investigated, workers of color experienced higher excess mortality than did White workers. Excess mortality in 2021 was greater than in 2020 across groups: occupations, vaccine eligibility tiers, and race/ethnicity. Conclusions. Although workers in critical occupations experienced greater excess mortality than did others, excess mortality among critical workers varied substantially by occupation and race. Public Health Implications. Analysis of mortality across occupations can be used to identify vulnerable populations, prioritize protective interventions for them, and develop targeted worker safety protocols to promote equitable health outcomes. (Am J Public Health. 2023;113(11):1219-1222. <https://doi.org/10.2105/AJPH.2023.307395>).

Lavigne-Robichaud M, Trudel X, Talbot D, Milot A, Gilbert-Ouimet M, Vezina M, et al. Psychosocial stressors at work and coronary heart disease risk in men and women: 18-year prospective cohort study of combined exposures. Circulation. 2023; 16(10):688-697.

<https://doi.org/10.1161/CIRCOUTCOMES.122.009700> [open access]

Abstract: Background: Psychosocial stressors at work, like job strain and effort-reward imbalance (ERI), can increase coronary heart disease (CHD) risk. ERI indicates an imbalance between the effort and received rewards. Evidence about the adverse effect of combined

exposure to these work stressors on CHD risk is scarce. This study examines the separate and combined effect of job strain and ERI exposure on CHD incidence in a prospective cohort of white-collar workers in Quebec, Canada. Methods: Six thousand four hundred sixty-five white-collar workers without cardiovascular disease (mean age, 45.3±6.7) were followed for 18 years (from 2000 to 2018). Job strain and ERI were measured with validated questionnaires. CHD events were retrieved from medico-administrative databases using validated algorithms. Marginal Cox models were used to calculate hazard ratios (HR) stratified by sex. Multiple imputation and inverse probability weights were applied to minimize potential threats to internal validity. Results: Among 3118 men, 571 had a first CHD event. Exposure to either job strain or ERI was associated with an adjusted 49% CHD risk increase (HR, 1.49 [95% CI, 1.07-2.09]). Combined exposure to job strain and ERI was associated with an adjusted 103% CHD risk increase (HR, 2.03 [95% CI, 1.38-2.97]). Exclusion of early CHD cases and censoring at retirement did not alter these associations. Among 3347 women, 265 had a first CHD event. Findings were inconclusive (passive job HR, 1.24 [95% CI, 0.80-1.91]; active job HR, 1.16 [95% CI, 0.70-1.94]; job strain HR, 1.08 [95% CI, 0.66-1.77]; ERI HR, 1.02 [95% CI, 0.72-1.45]). Conclusions: In this prospective cohort study, men exposed to job strain or ERI, separately and in combination, were at increased risk of CHD. Early interventions on these psychosocial stressors at work in men may be effective prevention strategies to reduce CHD burden. Among women, further investigation is required.

LeGoff DB, Lazarovic J, Kofeldt M, and Peters A. Neurocognitive and symptom validity testing for post-COVID-19 condition in a workers compensation context. *Journal of Occupational & Environmental Medicine*. 2023; 65(10):803-812.

<https://doi.org/10.1097/JOM.0000000000002921> [open access]

Abstract: OBJECTIVE: Efficacy of a neurocognitive screening evaluation (NCSE) in assessing symptoms and disability associated with post-COVID-19 condition (PCC) and facilitating employee recovery and return to work was evaluated. METHODS: An NCSE was administered to 64 employees off work because of neurocognitive complaints attributed to post-COVID-19 condition. Neurocognitive and symptom validity data were analyzed along with recovery and return-to-work timelines. RESULTS: A large percentage of the employees gave invalid responses and noncredible effort on psychological and cognitive tests (48%). The NCSEs with invalid profiles suggested more severe cognitive and psychiatric symptoms than valid profiles. Both valid and invalid groups had significant reductions in illness duration and lost workdays after the NCSE. CONCLUSIONS: Post-COVID-19 condition resulted in reports of mild to moderate cognitive and psychiatric symptoms with extensive mean work leave of 11 months before mental health assessment. Regardless of symptom validity, after the NCSE, the employees were released to work at an average of 3 weeks

Pena-Gralle APB, Talbot D, Trudel X, Milot A, Gilbert-Ouimet M, Lavigne-Robichaud M, et al. Socioeconomic inequalities, psychosocial stressors at work and physician-diagnosed depression: time-to-event mediation analysis in the presence of time-varying confounders. PLoS ONE. 2023; 18(10):e0293388.

<https://doi.org/10.1371/journal.pone.0293388> [open access]

Abstract: Objectives: There is evidence that both low socioeconomic status (SES) and psychosocial stressors at work (PSW) increase risk of depression, but prospective studies on the contribution of PSW to the socioeconomic gradient of depression are still limited. **Methods:** Using a prospective cohort of Quebec white-collar workers (n = 9188 participants, 50% women), we estimated randomized interventional analogues of the natural direct effect of SES indicators at baseline (education level, household income, occupation type and a combined measure) and of their natural indirect effects mediated through PSW (job strain and effort-reward imbalance (ERI) measured at the follow-up in 1999-2001) on incident physician-diagnosed depression. **Results:** During 3 years of follow-up, we identified 469 new cases (women: 33.1 per 1000 person-years; men: 16.8). Mainly in men, low SES was a risk factor for depression [education: hazard ratio 1.72 (1.08-2.73); family income: 1.67 (1.04-2.67); occupational type: 2.13 (1.08-4.19)]. In the entire population, exposure to psychosocial stressors at work was associated with increased risk of depression [job strain: 1.42 (1.14-1.78); effort-reward imbalance (ERI) 1.73 (1.41-2.12)]. The estimated indirect effects of socioeconomic indicators on depression mediated through job strain ranged from 1.01 (0.99-1.03) to 1.04 (0.98-1.10), 4-15% of total effects, and for low reward from 1.02 (1.00-1.03) to 1.06 (1.01-1.11), 10-15% of total effects. **Discussion:** Our study suggests that PSW only slightly mediate the socioeconomic gradient of depression, but that socioeconomic inequalities, especially among men, and PSW both increase the incidence of depression.

Powell JR, Cash RE, Kurth JD, Gage CB, Mercer CB, and Panchal AR. National examination of occupational hazards in emergency medical services. Occupational and Environmental Medicine. 2023; 80(11):644-649.

<https://doi.org/10.1136/oemed-2023-109053> [open access]

Abstract: OBJECTIVE: Emergency medical services (EMS) clinicians operate in environments that predispose them to occupational hazards. Our objective was to evaluate the frequency of occupational hazards and associations with mitigation strategies in a national dataset. **METHODS:** We performed a cross-sectional analysis of currently working, nationally certified civilian EMS clinicians aged 18-85 in the USA. After recertifying their National EMS Certification, respondents were invited to complete a survey with questions regarding demographics, work experience and occupational hazards. Three multivariable logistic regression models (OR, 95% CI) were used to describe associations between these hazards and demographics, work characteristics and mitigation strategies. Models were adjusted for age, sex, minority status, years of experience, EMS agency type, service type and EMS role. **RESULTS:** A total of 13 218 respondents met inclusion criteria (response rate=12%). A high percentage of EMS clinicians reported occupational injuries (27%), exposures (38%) and

violence (64%) in the past 12 months. Odds of injury were lower with the presence of a lifting policy (0.73, 0.67-0.80), lift training (0.74, 0.67-0.81) and always using a powered stretcher (0.87, 0.78-0.97). Odds of exposure decreased with chemical, biological and nuclear exposure protection training (0.75, 0.69-0.80). Training in de-escalation techniques was associated with lower odds of experiencing violence (0.87, 0.79-0.96). CONCLUSIONS: Occupational hazards are commonly experienced among EMS clinicians. Common mitigation efforts are associated with lower odds of reporting these hazards. Mitigation strategies were not widespread and associated with lower odds of occupational hazards. These findings may present actionable items to reduce occupational hazards for EMS clinicians

Tousignant-Laflamme Y, Houle C, Longtin C, Desmarais N, Gerard T, Perreault K, et al. Establishing the prognostic profile of patients with work-related musculoskeletal disorders: development and acceptability of the MAPS questionnaire. *Physiotherapy Research International*. 2023; [epub ahead of print].

<https://doi.org/10.1002/pri.2053>

Abstract: Purpose: Work-related musculoskeletal disorders (WRMD) are the most common causes of disability worldwide and are associated with significant use of healthcare. One way to optimize the clinical outcomes of injured workers receiving rehabilitation is to identify and address individual prognostic factors (PF), which can facilitate the personalization of the treatment plan. As there is no pragmatic and systematic method to collect prognostic-related data, the purpose of the study was to develop and assess the acceptability of a set of questionnaires to establish the "prognostic profile" of workers with WRMD. Methods: We utilized a multistep process to inform the acceptability of the Measures Associated to PrognoStic (MAPS) questionnaire. During STEP-1, a preliminary version of the was developed through a literature search followed by an expert consensus including a patient-advisor. During STEP-2, future users (rehabilitation professionals, healthcare administrators and compensation officers) were consulted through an online survey and were asked to rate the relevance of each content item; items that obtained ≥80% of "totally agree" answers were included. They were also asked to prioritize PF according to their usefulness for clinical decision-making, as well as perceived efficacy to enhance the treatment plan. Results: The questionnaire was developed with three categories: the outcome predicted, the unique PF, and prognostic tools. Personal PF (i.e.: coping strategies, fear-avoidance beliefs), pain related PF (i.e.: pain intensity/severity, duration of pain), and work-related PF (i.e.: work physical demands, work accommodations) were identified to be totally relevant and included in the questionnaire. 84% of the respondents agreed that their patients could complete the MAPS questionnaire in their clinical setting, while 75% totally agreed that the questionnaire is useful to personalize rehabilitation interventions. Conclusion: The MAPS questionnaire was deemed acceptable to establish the "prognostic profile" of injured workers and help the clinicians in the treatment decision-making process.

Wuytack F, Evanoff BA, Dale AM, Gilbert F, Fadel M, Leclerc A, et al. Comparison between musculoskeletal pain and gender-specific, non-gendered job-exposure matrix and self-reported exposures in CONSTANCES. Journal of Occupational Rehabilitation. 2023; [epub ahead of print].

<https://doi.org/10.1007/s10926-023-10148-w>

Abstract: PURPOSE: Musculoskeletal disorders (MSDs) are common worldwide and gender differences exist in terms of prevalence and disability. MSDs are a leading cause of sick leave and physical work exposures. To assess the association between physical exposures assessed by the gender-specific CONSTANCES Job-Exposure Matrix (JEM) and musculoskeletal pain in six areas: neck pain, shoulder pain, elbow/arm pain, hand/wrist pain, low back pain, knee/leg pain; and to compare the results with those obtained using the non-gendered CONSTANCES JEM and with individual self-report exposures. METHODS: We included 48,736 male and 63,326 female workers from the CONSTANCES cohort (France). The association between 27 physical exposures and musculoskeletal self-reported pain in six body areas was assessed using logistic regression. We conducted the analysis with three types of exposures: (1) individual self-reported exposures; (2) gender-specific CONSTANCES JEM; (3) non-gendered CONSTANCES JEM, and adjusted for age and Body Mass Index (BMI). Analyses were stratified by gender. RESULTS: The associations to the gender-specific and non-gendered JEM were similar. The odds ratios using individual self-reported exposures were comparable to the JEM-based associations, with the exceptions of the exposures 'change tasks', 'rest eyes' and 'reach behind'. In some comparisons, there were differences in the direction and/or significance of effects between genders (regardless of whether the JEM used was gender-specific or not). CONCLUSION: The gender-specific and non-gendered JEMs gave similar results, hence, developing physical work exposures JEMs that are gender-specific may not be essential. However, when predicting musculoskeletal pain, it seems relevant to stratify the analysis by gender

Missed an issue? Catch up on previous Research Alerts available on the IWH website www.iwh.on.ca/journal-articles/research-alerts