

IWH Research Alert
December 13, 2019

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Al-Tarawneh IS, Wurzelbacher SJ, and Bertke SJ. Comparative analyses of workers' compensation claims of injury among temporary and permanent employed workers in Ohio. *American Journal of Industrial Medicine*. 2020; 63(1):3-22.

<https://doi.org/10.1002/ajim.23049>

Abstract: BACKGROUND: A small but increasing number of studies have examined the risk of injury among temporary workers compared to that among workers in permanent employer arrangements. The purpose of this study was to conduct a comparative analysis of injury risk among temporary and permanent employer workers using a large dataset of workers' compensation (WC) claims of injury. METHODS: Over 1.3 million accepted WC claims in Ohio during the years 2001 to 2013 were analyzed, including 45046 claims from workers employed by temporary services agencies. General descriptive statistics, injury rates and rate ratios (temporary to permanent workers) were calculated by injury type and event, industry group, and industry manual classes. RESULTS: Injured temporary workers were younger and had less tenure compared to injured permanent workers. Temporary workers had higher injury rates, and lower lost-time and medical costs. Differences in injury rates between temporary and permanent workers varied by injury event, industry, and manual class. CONCLUSION: Temporary workers had higher overall injury

rates than permanent workers, controlling for industry manual class. These differences were pronounced for certain industries and injury events. We were not able to control for age and tenure of the worker, so it is not clear how these factors affected observed results. These findings were mostly similar to those from other studies using WC data from the states of Washington and Illinois. Together, these studies provide insights to improve injury prevention among temporary workers, however, additional research is still needed to improve safety and health programming for this group of workers

Almost J, Caicco Tett L, VanDenKerkhof E, Pare G, Strahlendorf P, Noonan J, et al. Leading indicators in occupational health and safety management systems in healthcare: a quasi-experimental longitudinal study. Journal of Occupational & Environmental Medicine. 2019; 61(12):e486-e496.

<https://doi.org/10.1097/JOM.0000000000001738>

Abstract: OBJECTIVE: To evaluate the feasibility of implementing interventions guided by six leading indicators, and the effectiveness of these interventions on improving employee's perception of their organization's health and safety climate. METHOD: A quasi-experimental longitudinal design was used in two hospitals. Occupational health and safety management systems (OHSMS) were assessed using the Leading Indicator Assessment Tool. To address the gaps identified in the assessment, tailored interventions were developed, pilot tested, and evaluated. Data were collected pre- and post-interventions. RESULTS: Interventions were developed to improve three leading indicators: senior management commitment, employee involvement, and communication. Overall, both sites supported using leading indicators to guide proactive interventions. Employees' perceptions of the health and safety climate improved at one site only. CONCLUSIONS: The results suggest the utilization of leading indicators to assess an organization's current OHSMS, identify areas for improvement, and implement tailored interventions is feasible to support a culture of safety in healthcare

Ashraf J, Ayaz M, and Hopper T. Precariousness, gender, resistance and consent in the face of global production network's 'Reforms' of Pakistan's garment manufacturing

industry. *Work, Employment and Society*. 2019; 33(6):895-912.
<https://doi.org/10.1177/0950017019870735>

Bosman LC, Twisk JWR, Geraedts AS, and Heymans MW.
Development of prediction model for the prognosis of sick leave due to low back pain. *Journal of Occupational & Environmental Medicine*. 2019; 61(12):1065-1071.

<https://doi.org/10.1097/JOM.0000000000001749>

Abstract: **OBJECTIVE:** The aim of this study was to develop a prediction model for the prognosis of sick leave due to low back pain (LBP). **METHODS:** This is a cohort study with 103 employees sick-listed due to non-specific LBP and spinal disc herniation. A prediction model was developed based on questionnaire data and registered sick leave data with follow up of 180 days. **RESULTS:** At follow up 31 (30.1%) employees were still sick-listed due to LBP. Forward selection procedure resulted in a model with: catastrophizing, musculoskeletal work load, and disability. The explained variance was 27.3%, calibration was adequate and discrimination was fair with area under the ROC-curve (AUC)=0.761 (interquartile range [IQR]: 0.755-0.770). **CONCLUSION:** The prediction model of this study can adequately predict LBP sick leave after 180 days and could be used for employees sick listed due LBP

Bowen S, Botting I, Graham ID, MacLeod M, Moissac Dd, Harlos K, et al. Experience of health leadership in partnering with university-based researchers in Canada: a call to "re-imagine" research. *International Journal of Health Policy and Management*. 2019; 8(12):684-699.

<https://doi.org/10.15171/ijhpm.2019.66> [open access]

Abstract: **BACKGROUND:** Emerging evidence that meaningful relationships with knowledge users are a key predictor of research use has led to promotion of partnership approaches to health research. However, little is known about health system experiences of collaborations with university-based researchers, particularly with research partnerships in the area of health system design and health service organization. The purpose of the study was to explore the experience and perspectives of senior health managers in health service organizations, with health organization-university research partnerships. **METHODS:** In-depth, semi-structured interviews (n =

25) were conducted with senior health personnel across Canada to explore their perspectives on health system research; experiences with health organization-university research partnerships; challenges to partnership research; and suggested actions for improving engagement with knowledge users and promoting research utilization. Participants, recruited from organizations with regional responsibilities, were responsible for system-wide planning and support functions. RESULTS: Research is often experienced as unhelpful or irrelevant to decision-making by many within the system. Research, quality improvement (QI) and evaluation are often viewed as separate activities and coordinated by different responsibility areas. Perspectives of senior managers on barriers to partnership differed from those identified in the literature: organizational stress and restructuring, and limitations in readiness of researchers to work in the fast-paced healthcare environment, were identified as major barriers. Although the need for strong executive leadership was emphasized, "multi-system action" is needed for effective partnerships. CONCLUSION: Common approaches to research and knowledge translation are often not appropriate for addressing issues of health service design and health services organization. Nor is the research community providing expertise to many important activities that the healthcare system is taking to improve health services. A radical rethinking of how we prepare health service researchers; position research within the health system; and fund research activities and infrastructure is needed if the potential benefits of research are to be achieved. Lack of response to health system needs may contribute to research and 'evidence-informed' practice being further marginalized from healthcare operations. Interventions to address barriers must respond to the perspectives and experience of health leadership

Carlsson L, Lytsy P, Anderzen I, Hallqvist J, Wallman T, and Gustavsson C. Motivation for return to work and actual return to work among people on long-term sick leave due to pain syndrome or mental health conditions. Disability and Rehabilitation. 2018; 41(25):3061-3070.

<https://doi.org/10.1080/09638288.2018.1490462>

Abstract: Purpose: The purpose of this study was to investigate associations between motivation for return to work and actual return

to work, or increased employability among people on long-term sick leave. Materials and methods: Data by responses to questionnaires was collected from 227 people on long-term sick leave (mean 7.9 years) due to pain syndrome or mild to moderate mental health conditions who had participated in a vocational rehabilitation intervention. The participants' motivation for return to work was measured at baseline. At 12-month follow-up, change in the type of reimbursement between baseline and at present was assessed and used to categorise outcomes as: "decreased work and employability", "unchanged", "increased employability", and "increased work". Associations between baseline motivation and return to work outcome were analysed using logistic and multinomial regression models. Results: Motivation for return to work at baseline was associated with return to work or increased employability at 12-month follow-up in the logistic regression model adjusting for potential confounders (OR 2.44, 95% CI 1.25–4.78). Conclusions: The results suggest that motivation for return to work at baseline was associated with actual chances of return to work or increased employability in people on long-term sick leave due to pain syndrome or mild to moderate mental health conditions.

Davin S, Lapin B, Mijatovic D, Fox R, Benzel E, Stilphen M, et al. Comparative effectiveness of an interdisciplinary pain program for chronic low back pain, compared to physical therapy alone. Spine. 2019; 44(24):1715-1722.

<https://doi.org/10.1097/BRS.0000000000003161>

Abstract: study design: This is an observational cohort study.

Objective: The aim of this study was to compare the effectiveness of PT to an interdisciplinary treatment approach in patients with chronic low back pain (CLBP). Summary of background data: CLBP is a costly and potentially disabling condition. Physical therapy (PT), cognitive behavioral therapy, and interdisciplinary pain programs (IPPs) are superior to usual care. Empirical evidence is lacking to clearly support one treatment approach over another in patients with CLBP. Methods: One hundred seventeen adult patients who completed an IPP for individuals with ≥ 3 months of back pain were compared to 214 adult patients with similar characteristics who completed PT. The Modified Low Back Pain Disability Questionnaire was the primary outcome measure. Additional measures included:

PROMIS physical function, global health, social role satisfaction, pain interference, anxiety, fatigue, sleep disturbance, and Patient Health Questionnaire. Patients who completed the IPP were matched by propensity score to a historical control group of patients who completed a course of PT. Change in functional disability was compared between IPP patients and matched controls. Patient-reported outcome measures were assessed pre to post participation in the IPP using paired t test and by calculating the proportion with clinically meaningful improvement. Results: Propensity score matching generated 81 IPP and 81 PT patients. Patients enrolled in the IPP had significantly greater improvement in MDQ scores upon completion compared to patients in PT (15.8 vs. 7.1, $P < 0.001$). The majority of IPP patients reached the threshold for clinically meaningful change of ≥ 10 point reduction (60.5%) compared to 34.6% of PT patients, $P < 0.01$. Patients in the IPP also showed statistically and clinically significant improvement in social role satisfaction, fatigue, and sleep disturbance. Conclusion: CLBP patients in an IPP demonstrated greater functional improvements compared to similar patients participating in PT. Level of evidence: 3.

Desai RJ and Franklin JM. Alternative approaches for confounding adjustment in observational studies using weighting based on the propensity score: a primer for practitioners. British Medical Journal. 2019; 367:I5657.
<https://doi.org/10.1136/bmj.I5657>

Dumas O, Boggs KM, Quinot C, Varraso R, Zock JP, Henneberger PK, et al. Occupational exposure to disinfectants and asthma incidence in U.S. nurses: a prospective cohort study. American Journal of Industrial Medicine. 2020; 63(1):44-50.

<https://doi.org/10.1002/ajim.23067>

Abstract: BACKGROUND: Exposure to disinfectants among healthcare workers has been associated with respiratory health effects, in particular, asthma. However, most studies are cross-sectional and the role of disinfectant exposures in asthma development requires longitudinal studies. We investigated the association between occupational exposure to disinfectants and incident asthma in a large cohort of U.S. female nurses. METHODS:

The Nurses' Health Study II is a prospective cohort of 116429 female nurses enrolled in 1989. Analyses included 61539 participants who were still in a nursing job and with no history of asthma in 2009 (baseline; mean age: 55 years). During 277744 person-years of follow-up (2009-2015), 370 nurses reported incident physician-diagnosed asthma. Occupational exposure was evaluated by questionnaire and a Job-Task-Exposure Matrix (JTEM). We examined the association between disinfectant exposure and subsequent asthma development, adjusted for age, race, ethnicity, smoking status, and body mass index. RESULTS: Weekly use of disinfectants to clean surfaces only (23% exposed) or to clean medical instruments (19% exposed) was not associated with incident asthma (adjusted hazard ratio [95% confidence interval] for surfaces, 1.12 [0.87-1.43]; for instruments, 1.13 [0.87-1.48]). No association was observed between high-level exposure to specific disinfectants/cleaning products evaluated by the JTEM (formaldehyde, glutaraldehyde, bleach, hydrogen peroxide, alcohol quats, or enzymatic cleaners) and asthma incidence. CONCLUSIONS: In a population of late career nurses, we observed no significant association between exposure to disinfectants and asthma incidence. A potential role of disinfectant exposures in asthma development warrants further study among healthcare workers at earlier career stage to limit the healthy worker effect

Gomez MAL, Sparer-Fine E, Sorensen G, and Wagner G. Literature review of policy implications from findings of the center for work, health, and well-being. Journal of Occupational & Environmental Medicine. 2019; 61(11):868-876.

<https://doi.org/10.1097/JOM.0000000000001686>

Abstract: OBJECTIVE: To review the publications of a Total Worker Health Center of Excellence, the Harvard T.H. Chan School of Public Health Center for Work, Health, and Well-being, in order to identify research findings relevant to either organizational or public policies. METHODS: Two researchers independently reviewed 57 publications from 2011 to 2019 to identify cross-cutting themes that focus on working conditions or related health outcomes and their organizational and public policy implications. RESULTS: Twelve cross-cutting themes were identified with their respective organizational and public policy implications. Several policy

implications cut across work-related themes. **CONCLUSIONS:** Policy implications of TWH research will aid in setting priorities to translate this from research into practice in future studies and help identify gaps that we and others can use to plan future TWH research

Hauke A, Flaspoler E, and Reinert D. Proactive prevention in occupational safety and health: how to identify tomorrow's prevention priorities and preventive measures. International Journal of Occupational Safety & Ergonomics. 2020; 26(1):181-193.

<https://doi.org/10.1080/10803548.2018.1465677>

Abstract: Introduction. Global trends such as digitalization, globalization and demographic change are changing workplaces, and accordingly occupational safety and health (OSH) needs. To better prepare for the future and to foster proactive prevention, the German Social Accident Insurance (DGUV) established an OSH risk observatory (RO OSH). **Methods.** The RO OSH relies on an online survey and calls upon the expertise of labour inspectors. In total, 398 labour inspectors participated in the first RO OSH enquiry. They rated developments with regard to their sector-specific relevance for OSH in the near future. The RO OSH also provides ideas for preventive measures that can be implemented by the German Social Accident Insurance Institutions. **Results.** Work intensity, demographic aspects and digitalization play a major role for most or all sectors. However, familiar OSH issues such as musculoskeletal strain and noise also continue to be of major importance and require further consideration and specific solutions in prevention. **Outlook.** For the DGUV, training and consulting have great potential for proactive prevention in these priority areas, e.g., by fostering a prevention culture and supporting companies in (psychosocial) risk assessment (also for mobile work). For instance, concepts for increasing physical activity at sedentary workplaces and data security require continued research

Kudesia RS, Lang T, and Reb J. How institutions enhance mindfulness: interactions between external regulators and front-line operators around safety rules. Safety Science. 2020; 122:104511.

<https://doi.org/10.1016/j.ssci.2019.104511>

Lefrancois M and Probst I. "They say we have a choice, but we don't": a gendered reflection on work-family strategies and planning systems of atypical schedules within male-dominated occupations in Canada and Switzerland. Applied Ergonomics. 2020; 83:103000.

<https://doi.org/10.1016/j.apergo.2019.103000>

Abstract: For parents working in the transportation industry, atypical schedules are often a daily puzzle. Schedule planning systems allowing workers to choose shifts may affect job strenuousness and work-family balance (WFB) for both female and male workers. How could ergonomic interventions related to the implementation of those systems better consider gender dynamics regarding WFB strategies, and minimize inequities among workers? This article presents a joint analysis of two independent case studies related to ergonomic interventions in transport companies in Canada and Switzerland. Direct observation and semi-structured interviews shed light on the characteristics of schedule planning systems and their interaction with men's and women's WFB strategies. Issues related to each step of the planning process (shift construction, schedule choice, day-to-day schedule management) are discussed to inform interventions aimed at facilitating WFB, and ultimately gender equity, in atypical schedule contexts

Lin JH and Bao S. The effect of sit-stand schedules on office work productivity: a pilot study. Work. 2019; 64(3):563-568.

<https://doi.org/10.3233/WOR-193017>

Abstract: BACKGROUND: Sit-stand workstations have been introduced in the workplaces to address the adverse sedentary effect inherent to typical office jobs. Existing field or laboratory studies showed that standing interventions are not a detriment to work productivity or performance. The effect of gradient standing proportion on these measures is still unknown. OBJECTIVE: The current naturalistic pilot study aimed to examine the controlled sit-stand ratio effect on office performances. METHODS: Eleven musculoskeletal symptom free office employees from a large government agency volunteered in this study. They were all equipped with electronic sit-stand desks. Computer usage (N=11) and productivity (N=3) were collected using software and organizational metrics, respectively, for four typical workdays of four different sit-

stand ratios (7 : 1, 3 : 1, 2 : 1, and 1 : 1). RESULTS: There were no statistically significant schedule effects on any computer usage measures. While not significant, time using computer, keystrokes, word count, and keyboard errors were all less as standing time increased. Sit-stand ratio and job productivity did not observe a clear cause and effect relationship. CONCLUSIONS: The amount of time spent standing in typical office jobs might not affect computer usage and productivity. Further study with a larger sample is needed for a stronger evidence

Lusa S, Punakallio A, Manttari S, Korhakangas E, Oksa J, Oksanen T, et al. Interventions to promote work ability by increasing sedentary workers' physical activity at workplaces: a scoping review. Applied Ergonomics. 2020; 82:102962.

<https://doi.org/10.1016/j.apergo.2019.102962>

Abstract: Although worksite interventions increase physical activity, little is known about their effects on work ability. The objective of this scoping review was to examine the extent, range and nature of interventions to promote work ability by increasing the physical activity or decreasing the sedentary time of sedentary workers in order to identify implications for health promotion at workplaces. We searched Medline, Cochrane Central, and Scopus and identified 29 intervention studies. Using an iterative method, we provided an overview of the study elements and extracted details on study sample, design, intervention content, outcomes, and beneficial effects. Most of the studies (N=25) were RCTs. Thirteen studies reported beneficial effects on work ability. Tailored and group-based interventions and interventions including environmental actions were often beneficial (9/13). We identified features of feasible and effective interventions for promoting work ability by increasing the physical activity or decreasing the sedentary time of sedentary workers. However, more studies are needed on the sustainability of these effects, and versatile interventions tailored to workers and work demands

Meenan RT, Walkosz BJ, Buller DB, Eye R, Buller MK, Wallis AD, et al. Economic evaluation of an intervention promoting adoption of occupational sun protection policies. Journal of Occupational & Environmental Medicine. 2019; 61(12):978-983.

<https://doi.org/10.1097/JOM.0000000000001707>

Abstract: Objective: Economic evaluation of an intervention promoting adoption of occupational sun protection actions by Colorado public sector employers. Methods: Randomized controlled trial with 2-year follow-up conducted during 2010 to 2013. Thirty-three intervention and 30 attention-control worksites in final economic sample. Twenty-four-month intervention of personal contacts, training, and materials. Intervention delivery micro-costed. Costs of implemented actions from employer self-report. Results: Twenty-four-month intervention costs: \$121,789, 51.8% incurred by project staff (per-worksites mean=\$1,732). Worksites costs: \$58,631 (mean = \$1,777). Per-employee costs: \$118 project staff, \$56 worksites. Materials cost: \$5990 (mean = \$181). Intervention worksites implemented 72 nontraining sun protection actions post-Sun Safe Workplaces (SSW) (mean = 2.18). Control worksites implemented 39 actions (mean = 1.30). Total costs to intervention worksites of implementing the 72 post-SSW actions: \$90,645 (mean = \$2,747). Control worksite costs: \$66,467 (mean = \$2,216). Per-employee implementation costs are comparable to other worksite health interventions. Conclusion: SSW expanded adoption of sun protection actions at a reasonable per-employee cost.

Park S and Jang MK. Associations between workplace exercise interventions and job stress reduction: a systematic review. Workplace Health & Safety. 2019; 67(12):592-601.

<https://doi.org/10.1177/2165079919864979>

Abstract: Background: High job stress is positively associated with reduced quality of life in workers, detrimental effects on worker health, and increased worker absenteeism and lower productivity. Exercise is a proven approach for coping with psychological stress in general. However, relatively few research studies have examined the effects of workplace exercise interventions on job stress reduction. The purpose of this systematic review was to identify associations between workplace exercise interventions and job stress reduction among employees. Methods: A literature search was performed using five databases (i.e., CINAHL, Medline via PubMed, Scopus, PsycINFO, and Embase), and eligible studies were written in English, and were published between January 1990 and October 2018. Studies were included if worker participants were subjected to a

workplace exercise intervention, and their job stress was measured before and after the intervention. To assess the quality of these studies, van Tulder's risk of bias assessment tool was applied. Findings: Eight studies were identified, and six of those (75%) were found to be of relatively good quality. In only two of the studies (25%) was the workplace exercise program associated with a statistically significant reduction in job stress. The study findings suggest that relationships between workplace exercise interventions and job stress reduction have not been sufficiently evaluated in the literature. Conclusion and Application to Practice: Based on the limited data available, future intervention research should focus on randomized controlled trials of interventions incorporating both exercise and multidimensional strategies to reduce job stress

Roy M, Simard R, Anais F, and Genereux M. Health promotion in the workplaces: fostering resilience in times of organizational change. Canadian Journal of Public Health. 2019; 110(6):792-800. <https://doi.org/10.17269/s41997-019-00229-w>

Abstract: OBJECTIVES: In 2015, a healthcare reform was undertaken in the province of Quebec (Canada). This amended system resources and structures, resulting in increased work-related stress, retirements, and sick leaves. In this study, we examined associations between stress, psychological distress, and resilience in this context. METHODS: A subsample of healthcare workers (n = 1008) from the 2014-2015 Eastern Townships population-based survey was used to examine resilience, its distribution among various occupational categories, and whether it moderated associations between stress and psychological distress. Chi-square analyses were used to look for differences between variables. Logistic regressions served to assess the moderating effect of resilience in the associations between stress and psychological distress. RESULTS: Healthcare workers' resilience was high. Employees with higher resilience are more likely to be older, male, educated, and affluent. One third of workers reported their work as quite or extremely stressful, 56.2% rated it as their main source of stress, and 25.7% reported psychological distress. Despite higher stress, administrators had higher resilience and lower psychological distress. Support staff had higher psychological distress and lower resilience. Occupation involving social staff, technicians, and professionals had higher

psychological distress despite lower stress. A positive gradient in the distribution of resilience was observed in the healthcare system hierarchy with higher resilience and lower psychological distress among higher positions (despite equal stress). Higher resilience moderates the negative association between stress and psychological distress. CONCLUSION: These results support workplace health promotion to foster employee health, particularly in the lower spectrum of the healthcare system hierarchy

Sartore-Baldwin ML, Baker J, Schwab L, Mahar MT, and Das B. Shelter dogs, university employees, and lunchtime walks: a pilot study. Work. 2019; 64(3):487-493.

<https://doi.org/10.3233/WOR-193010>

Abstract: BACKGROUND: Workplace walking interventions can lead to positive physical and psychological outcomes for employees. For optimal success, however, innovative approaches that appeal to employees are needed. OBJECTIVE: The purpose of this study was to assess the physical activity levels and experiences of university staff members who walked shelter dogs during their lunch breaks. METHOD: Participants walked with a dog and a partner for 30 minutes during their lunch break one day a week for four weeks. Accelerometer data was collected during participant walks and interviews conducted post-intervention. RESULTS: Quantitative results indicated that participants averaged 24.9 ± 7.4 minutes of moderate-to-vigorous physical activity (range 12- 37 min) during the walk. Qualitative findings suggested that the incorporation of shelter dogs into a walking intervention encouraged participants to take part in the study and continue each week. CONCLUSIONS: Both the quantitative and qualitative data from this pilot study support the notion that including shelter dogs into a university-based walking program encouraged physical activity engagement and adherence

Swuste P, van Gulijk C, Groeneweg J, Guldenmund F, Zwaard W, and Lemkowitz S. Occupational safety and safety management between 1988 and 2010: review of safety literature in English and Dutch language scientific literature. Safety Science. 2020; 121:303-318.

<https://doi.org/10.1016/j.ssci.2019.08.032>

Thiene DD, Mittendorfer-Rutz E, Rahman S, Wang M, Alexanderson K, Tiihonen J, et al. Trajectories of sickness absence, disability pension and unemployment in young immigrants with common mental disorders. *European Journal of Public Health*. 2019; 29(6):1055-1062.

<https://doi.org/10.1093/eurpub/ckz046>

Abstract: Background: The aims were to elucidate if trajectories of labour market marginalization (LMM), measured as sickness absence (SA)/disability pension (DP) or unemployment, differed between young immigrants and natives before and after an incident diagnosis of a common mental disorder (CMD), and to investigate if educational level, psychiatric comorbidity and duration of residence in Sweden (in immigrants) had different associations with subsequent LMM in natives compared with immigrants. Methods: A total of 28 971 young adults (19-30 years), with an incident CMD (inpatient or specialized outpatient healthcare due to CMDs or dispensed prescribed antidepressants during 2007) were included. Group-based trajectory models were utilized to identify trajectories of annual months of LMM 3 years before and 6 years after the diagnosis. The associations of risk factors with different trajectories were investigated by multinomial logistic regression, X²-test and Nagelkerke R² to measure the associations' strength. Immigrants were categorized into Western and non-Western immigrants. Results: Young natives and immigrants showed similar trajectories of SA/DP. A higher proportion of non-Western immigrants (20.5%) followed trajectories of high levels of unemployment (>2 annual months) compared with Western immigrants (15%) and natives (16.5%). Educational level and duration of residence in Sweden (in immigrants) discriminated trajectories of both SA/DP and unemployment, whereas psychiatric comorbidity only discriminated trajectories of SA/DP. Conclusions: Differences in trajectories of unemployment between young natives and immigrants with an incident CMD were found. Educational level and psychiatric comorbidity provided information on differences between natives and immigrants and duration of residence gave information for subgroups of immigrants. © The Author(s) 2019. Published by Oxford University Press on behalf of the European Public Health Association. All rights reserved.

Yung M, Dale AM, Buckner-Petty S, Roquelaure Y, Descatha A, and Evanoff BA. Musculoskeletal symptoms associated with workplace physical exposures estimated by a job exposure matrix and by self-report. American Journal of Industrial Medicine. 2020; 63(1):51-59.

<https://doi.org/10.1002/ajim.23064>

Abstract: Background: A job-exposure matrix (JEM) is an efficient method to assign physical workplace exposures based on job titles. JEMs offer the possibility of linking work exposures to outcome data from national health registers that contain job titles. The French CONSTANCES JEM was constructed from self-reported physical work exposures of asymptomatic workers participating in a large general population study. We validated this general population JEM by testing its ability to demonstrate exposure-outcome associations for musculoskeletal disorders (MSD) symptoms. Methods: The CONSTANCES JEM was evaluated by assigning exposure estimates to a validation sample of new participants in the CONSTANCES study (final n = 38 730). We used weighted Kappas to compare the level of agreement between JEM-assigned and self-reported exposures across job codes for each of the 27 physical exposure variables. We computed prevalence ratios and 95% confidence intervals using Poisson regression models adjusted for age and sex for pain at six body locations associated with work exposures estimated via individual self-report and by the JEM. Results: Agreement between individual self-reported and JEM-assigned exposures ranged from $k = 0.16$ to 0.71 ; generally, the level of agreement was fair to good. We observed consistent and significant associations between pain and both self-reported and JEM-assigned exposures at all body locations. Conclusions: The CONSTANCES JEM replicated known associations between physical risk factors and prevalent MSD symptoms. Physical exposure JEMs can reduce some types of information bias, and open new avenues of research in the prevention of MSDs and other health conditions related to workplace physical activities.