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March 6, 2020

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***Biswas A, Dobson KG, Gignac MAM, de Oliveira C, and Smith PM. Changes in work factors and concurrent changes in leisure time physical activity: a 12-year longitudinal analysis. Occupational and Environmental Medicine. 2020; [epub ahead of print].**

<https://doi.org/10.1136/oemed-2019-106158>

Abstract: OBJECTIVES: There is a paucity of longitudinal population-based studies examining whether changes in work factors are associated with concurrent changes in leisure time physical activity (LTPA). This study examines this issue using 12 years of longitudinal survey data. METHODS: Data were drawn from the Canadian National Population Health Survey. The initial analytical sample in 1994 of 6407 working individuals was followed every 2 years from 2000 to 2010. Seven work factors were measured as independent variables: skill discretion, decision authority, psychological demands, physical exertion, number of jobs, hours at work and shift schedule. LTPA was categorised as inactive, moderately active or active based on metabolic equivalent task values. Fixed-effects multinomial logistic models were used to examine associations between work factors and LTPA controlling for time-invariant effects and adjusted for covariates. RESULTS: Workers with lower skill discretion (OR=0.96; 95% CI 0.92

to 0.99), higher psychological demands (OR=0.95; 95% CI 0.92 to 0.99), higher physical exertion (OR=0.93; 95% CI 0.88 to 0.99) and longer work hours (OR=0.97; 95% CI 0.95 to 0.98) were associated with a lower odds of transitioning from inactive to active and moderately active. There was no evidence of effect modification by age or sex. **CONCLUSION:** Results suggest that as participants' skill discretion decreased, and their physical and psychological demands, and work hours increased, their likelihood of becoming more active and moderately active also decreased, supporting the value of targeting improvements in these work factors for physical activity interventions

***Samosh D. The three-legged stool: synthesizing and extending our understanding of the career advancement facilitators of persons with disabilities in leadership positions. Business & Society. 2020; [epub ahead of print].**

<https://doi.org/10.1177/0007650320907134>

***Tomba E, Samosh D, and Boucher N. Skills gaps, underemployment, and equity of labour-market opportunities for persons with disabilities in Canada. The Public Policy Forum; The Future Skills Centre; The Diversity Institute; 2020.**

<https://ppforum.ca/wp-content/uploads/2020/01/SkillsGap-Disabilities-PPF-JAN2020-Feb6.pdf>

Bejan A, Xi M, and Parker DL. Outcomes of a safety and health educational intervention in auto body and machine tool technologies vocational college programs: the technical education curricula for health and safety (TECHS) study. Annals of Work Exposures and Health. 2020; 64(2):185-201.

<https://doi.org/10.1093/annweh/wxz092>

Abstract: Technical Education Curricula for Health and Safety (TECHS) is a research collaboration between safety and health professionals and vocational instructors in three Minnesota colleges. Curriculum materials, including full and refresher modules with of classroom presentations, lab activities, homework, and quizzes, were developed for auto body collision technology (ABCT) and machine tool technology (MTT) programs. Curricula were implemented during the 2015-2018 academic years. Graduates' safety-related knowledge,

skills, work practices, and workplace safety climate were assessed 1 year postgraduation using an electronic survey. Responses were received from 71 ABCT and 115 MTT graduates. Classroom presentations were used consistently throughout the study. Instructors cited a lack of time as the main barrier to using other materials (lab activities, homework, and quizzes). Graduates with TECHS instruction had significantly greater safety-related knowledge overall (both trades) as well as in two topic areas: eye and respiratory protection (ABCT) and hearing protection and machine guarding (MTT). Our data confirm that nearly all graduates consistently engage in practices such as use of safety glasses, hearing protection, and respirators, use of machine guards, material handling strategies. At 1 year postgraduation, MTT graduates' work practices related to machine guarding improved significantly. Graduates with TECHS instruction had improved in about half of the work practices, but statistical significance was not achieved. Graduates' self-reported work practices were not significantly correlated with their knowledge or skills. Work practices variability was best explained by graduates' attitudes toward safety rules and their rating of the workplace safety climate. TECHS findings confirm that classroom instruction alone has little impact on graduates' work practices. We propose institutions formalize their commitment to safety and health education by earmarking teaching time for this subject and providing assistance to instructors to facilitate curricula integration. Instructors would benefit from learning more about trade-specific safety and health, and adult education teaching methods. Additional research is needed to understand how students' attitudes toward safety change during vocational college attendance and the first year of employment in the trade, explore implementation supports and barriers at institutional and instructor levels, and assess educational effectiveness beyond the end of the academic program. The entire curricula are available on the study website www.votechsafety.net

Berkovic D, Ayton D, Briggs AM, and Ackerman IN. "I would be more of a liability than an asset": navigating the workplace as a younger person with arthritis. *Journal of Occupational Rehabilitation*. 2020; 30(1):125-134.

<https://doi.org/10.1007/s10926-019-09853-2>

Abstract: Purpose Over half the population in Australia with arthritis

and other musculoskeletal conditions is aged 25-64 years. This reflects the peak income-earning years for most, yet little research has examined the influence of arthritis on work issues specific to younger people. The aim of this research was to examine the work-related experiences of younger people (defined as those aged 18-50 years). Methods A qualitative exploratory design was used. Participants with inflammatory arthritis or osteoarthritis were recruited from the community, including urban and rural settings. An interview guide was based on the World Health Organization's International Classification of Functioning, Disability and Health. Deductive and inductive coding techniques were used to identify emerging work-related themes from the data. Results Semi-structured interviews were conducted with 21 younger people (90% female) with a mix of arthritis conditions, vocational backgrounds and career stages. Three themes were identified: (1) the perceived impacts of arthritis on career trajectories, (2) the impacts of arthritis on participants' workplace environment, employers, and colleagues, and (3) the personal toll of working with arthritis. The personal toll of working with arthritis relates to the arthritis-attributable impacts of physical and psychological symptoms on productivity and presenteeism in the workplace. Conclusion Younger people with arthritis experience numerous challenges at key stages of their careers, from career planning through to productive working. This can be used to inform workplace accommodations for people with arthritis and increase awareness of likely barriers to work productivity among colleagues, employers and clinicians

Evanoff BA, Rohlman DS, Strickland JR, and Dale AM. Influence of work organization and work environment on missed work, productivity, and use of pain medications among construction apprentices. American Journal of Industrial Medicine. 2020; 63(3):269-276.

<https://doi.org/10.1002/ajim.23078>

Abstract: BACKGROUND: Construction is among the most dangerous industries. In addition to traditional hazards for workplace injury and illness, other threats to health and well-being may occur from work organization and work environment factors, including irregular employment, long commutes, long work hours, and employer policies regarding health and safety. These nontraditional

hazards may affect work and health outcomes directly, or through effects on health behaviors. The cumulative impacts of both traditional and nontraditional hazards on health-related outcomes among construction workers are largely unknown. **METHODS:** We conducted a survey among apprentice construction workers to identify relationships between work organization and environmental factors with five outcomes of economic relevance to employers: missed work due to work-related injury, missed work due to any pain or injury, self-reported workability, health-related productivity, and use of prescription medications for pain. **RESULTS:** A total of 963 surveys were completed (response rate 90%) in this young (mean age 28) working cohort. Multivariate Poisson regression models found associations between the outcomes of interest and multiple work factors, including job strain, safety behaviors of coworkers, and mandatory overtime. Univariate analysis showed additional associations, including precarious work, and supervisor support for safety. **CONCLUSIONS:** Findings from this cross-sectional study suggest that work organization and environment factors influence health and work outcomes among young construction trade workers. Future work with longitudinal data will examine the hypothesized paths between work factors, health behaviors, health outcomes, and work outcomes

GBD 2016 Occupational Risk Factors Collaborators. Global and regional burden of disease and injury in 2016 arising from occupational exposures: a systematic analysis for the Global Burden of Disease Study 2016. Occupational and Environmental Medicine. 2020; 77(3):133-141.

<https://doi.org/10.1136/oemed-2019-106008> [open access]

Abstract: **OBJECTIVES:** This study provides an overview of the influence of occupational risk factors on the global burden of disease as estimated by the occupational component of the Global Burden of Disease (GBD) 2016 study. **METHODS:** The GBD 2016 study estimated the burden in terms of deaths and disability-adjusted life years (DALYs) arising from the effects of occupational risk factors (carcinogens; asthmagens; particulate matter, gases and fumes (PMGF); secondhand smoke (SHS); noise; ergonomic risk factors for low back pain; risk factors for injury). A population attributable fraction (PAF) approach was used for most risk factors. **RESULTS:** In 2016,

globally, an estimated 1.53 (95% uncertainty interval 1.39-1.68) million deaths and 76.1 (66.3-86.3) million DALYs were attributable to the included occupational risk factors, accounting for 2.8% of deaths and 3.2% of DALYs from all causes. Most deaths were attributable to PMGF, carcinogens (particularly asbestos), injury risk factors and SHS. Most DALYs were attributable to injury risk factors and ergonomic exposures. Men and persons 55 years or older were most affected. PAFs ranged from 26.8% for low back pain from ergonomic risk factors and 19.6% for hearing loss from noise to 3.4% for carcinogens. DALYs per capita were highest in Oceania, Southeast Asia and Central sub-Saharan Africa. On a per capita basis, between 1990 and 2016 there was an overall decrease of about 31% in deaths and 25% in DALYs. CONCLUSIONS: Occupational exposures continue to cause an important health burden worldwide, justifying the need for ongoing prevention and control initiatives

Related Articles

GBD 2016 Occupational Carcinogens Collaborators. Global and regional burden of cancer in 2016 arising from occupational exposure to selected carcinogens: a systematic analysis for the Global Burden of Disease Study 2016. Occupational and Environmental Medicine. 2020; 77(3):151-159.

<https://doi.org/10.1136/oemed-2019-106012> [open access]

Abstract: OBJECTIVES: This study provides a detailed analysis of the global and regional burden of cancer due to occupational carcinogens from the Global Burden of Disease 2016 study. METHODS: The burden of cancer due to 14 International Agency for Research on Cancer Group 1 occupational carcinogens was estimated using the population attributable fraction, based on past population exposure prevalence and relative risks from the literature. The results were used to calculate attributable deaths and disability-adjusted life years (DALYs). RESULTS: There were an estimated 349 000 (95% Uncertainty Interval 269 000 to 427 000) deaths and 7.2 (5.8 to 8.6) million DALYs in 2016 due to exposure to the included occupational carcinogens-3.9% (3.2% to 4.6%) of all cancer



deaths and 3.4% (2.7% to 4.0%) of all cancer DALYs; 79% of deaths were of males and 88% were of people aged 55 -79 years. Lung cancer accounted for 86% of the deaths, mesothelioma for 7.9% and laryngeal cancer for 2.1%. Asbestos was responsible for the largest number of deaths due to occupational carcinogens (63%); other important risk factors were secondhand smoke (14%), silica (14%) and diesel engine exhaust (5%). The highest mortality rates were in high-income regions, largely due to asbestos-related cancers, whereas in other regions cancer deaths from secondhand smoke, silica and diesel engine exhaust were more prominent. From 1990 to 2016, there was a decrease in the rate for deaths (-10%) and DALYs (-15%) due to exposure to occupational carcinogens. CONCLUSIONS: Work-related carcinogens are responsible for considerable disease burden worldwide. The results provide guidance for prevention and control initiatives

GBD 2016 Occupational Chronic Respiratory Risk Factors Collaborators. Global and regional burden of chronic respiratory disease in 2016 arising from non-infectious airborne occupational exposures: a systematic analysis for the Global Burden of Disease Study 2016. Occupational and Environmental Medicine. 2020; 77(3):142-150.

<https://doi.org/10.1136/oemed-2019-106013> [open access]

Abstract: OBJECTIVES: This paper presents detailed analysis of the global and regional burden of chronic respiratory disease arising from occupational airborne exposures, as estimated in the Global Burden of Disease 2016 study. METHODS: The burden of chronic obstructive pulmonary disease (COPD) due to occupational exposure to particulate matter, gases and fumes, and secondhand smoke, and the burden of asthma resulting from occupational exposure to asthmagens, was estimated using the population attributable fraction (PAF), calculated using exposure prevalence and relative risks from the literature. PAFs were applied to the number of deaths and disability-adjusted life years (DALYs) for COPD and asthma. Pneumoconioses were estimated directly from cause of death data. Age-standardised rates were based only on persons aged



15 years and above. RESULTS: The estimated PAFs (based on DALYs) were 17% (95% uncertainty interval (UI) 14%-20%) for COPD and 10% (95% UI 9%-11%) for asthma. There were estimated to be 519 000 (95% UI 441,000-609,000) deaths from chronic respiratory disease in 2016 due to occupational airborne risk factors (COPD: 460,100 [95% UI 382,000-551,000]; asthma: 37,600 [95% UI 28,400-47,900]; pneumoconioses: 21,500 [95% UI 17,900-25,400]). The equivalent overall burden estimate was 13.6 million (95% UI 11.9-15.5 million); DALYs (COPD: 10.7 [95% UI 9.0-12.5] million; asthma: 2.3 [95% UI 1.9-2.9] million; pneumoconioses: 0.58 [95% UI 0.46-0.67] million). Rates were highest in males; older persons and mainly in Oceania, Asia and sub-Saharan Africa; and decreased from 1990 to 2016. CONCLUSIONS: Workplace exposures resulting in COPD, asthma and pneumoconiosis continue to be important contributors to the burden of disease in all regions of the world. This should be reducible through improved prevention and control of relevant exposures

Haslam C, Kazi A, and Duncan M. Process evaluation of a tailored workplace intervention designed to promote sustainable working in a rapidly changing world. *Ergonomics*. 2020; 63(3):253-262.

<https://doi.org/10.1080/00140139.2019.1614212>

Abstract: Increasing numbers of people are employed in sedentary occupations, spending large amounts of time sitting at work which is detrimental to health and wellbeing. Evidence-based guidance is required to intervene to reduce sedentary behaviour, encourage physical activity and promote sustainable working. This article presents a process evaluation of a successful workplace intervention Walking Works Wonders, shown to be effective in improving health, job satisfaction and motivation (Haslam et al. 2018). In this qualitative process evaluation employees reported an increased awareness of their sedentary time and they particularly valued the monitoring of activity using pedometers. They described changes to their working and leisure time activity to accumulate more steps. Participants reported improved physiological and psychological health outcomes, improved working relations with colleagues, changes in dietary

behaviour and involving their families in physical activity. The results highlight elements of the intervention that encouraged healthy and more sustainable working practices. Practitioner summary: This study provides the employees' perspective on the effective elements of a workplace intervention which encouraged physical activity and reduced sitting time. The results offer valuable insights for practitioners aiming to develop interventions to improve health and facilitate more sustainable working practices in a rapidly changing world of work. Abbreviations: BMI: body mass index; PDF: portable document format

Hesketh M, Wuellner S, Robinson A, Adams D, Smith C, and Bonauto D. Heat related illness among workers in Washington State: a descriptive study using workers' compensation claims, 2006-2017. American Journal of Industrial Medicine. 2020; 63(4):300-311.

<https://doi.org/10.1002/ajim.23092>

Abstract: BACKGROUND: Heat related illness (HRI) places a significant burden on the health and safety of working populations and its impacts will likely increase with climate change. The aim of this study was to characterize the demographic and occupational characteristics of Washington workers who suffered from HRI from 2006 to 2017 using workers' compensation claims data. METHODS: We used Washington workers' compensation data linked to weather station data to identify cases of work-related HRI. We utilized Occupational Injury and Illness Classification System codes, International Classification of Diseases 9/10 codes, and medical review to identify accepted and rejected Washington State (WA) workers' compensation claims for HRI from 2006 to 2017. We estimated rates of HRI by industry and evaluated patterns by ambient temperature. RESULTS: We detected 918 confirmed Washington workers' compensation HRI claims from 2006 to 2017, 654 were accepted and 264 were rejected. Public Administration had the highest third quarter rate (131.3 per 100 000 full time employees [FTE]), followed by Agriculture, Forestry, Fishing, and Hunting (102.6 per 100 000 FTE). The median maximum daytime temperature was below the Washington heat rule threshold for 45% of the accepted HRI claims. Latinos were estimated to be overrepresented in HRI cases. CONCLUSION: The WA heat rule threshold may not be

adequately protecting workers and racial disparities are present in occupational HRI. Employers should take additional precautions to prevent HRI depending on the intensity of heat exposure. States without heat rules and with large industry sectors disproportionately affected by HRI should consider regulations to protect outdoor workers in the face of more frequent and extreme heat waves

Ibrahim N, Thompson D, Nixdorf R, Kalha J, Mpango R, Moran G, et al. A systematic review of influences on implementation of peer support work for adults with mental health problems. *Social Psychiatry and Psychiatric Epidemiology*. 2020; 55(3):285-293.

<https://doi.org/10.1007/s00127-019-01739-1> [open access]

Abstract: PURPOSE: The evidence base for peer support work in mental health is established, yet implementation remains a challenge. The aim of this systematic review was to identify influences which facilitate or are barriers to implementation of mental health peer support work. METHODS: Data sources comprised online databases (n = 11), journal table of contents (n = 2), conference proceedings (n = 18), peer support websites (n = 2), expert consultation (n = 38) and forward and backward citation tracking. Publications were included if they reported on implementation facilitators or barriers for formal face-to-face peer support work with adults with a mental health problem, and were available in English, French, German, Hebrew, Luganda, Spanish or Swahili. Data were analysed using narrative synthesis. A six-site international survey [Germany (2 sites), India, Israel, Tanzania, Uganda] using a measure based on the strongest influences was conducted. The review protocol was pre-registered (Prospero: CRD42018094838). RESULTS: The search strategy identified 5813 publications, of which 53 were included. Fourteen implementation influences were identified, notably organisational culture (reported by 53% of papers), training (42%) and role definition (40%). Ratings on a measure using these influences demonstrated preliminary evidence for the convergent and discriminant validity of the identified influences. CONCLUSION: The identified influences provide a guide to implementation of peer support. For services developing a peer support service, organisational culture including role support (training, role clarity, resourcing and access to a peer network) and staff attitudes need to be considered. The identified

influences provide a theory base to prepare research sites for implementing peer support worker interventions

Latimer E, Bordeleau F, Methot C, Barrie T, Ferkranus A, Lurie S, et al. Implementation of supported employment in the context of a national Canadian program: facilitators, barriers and strategies. *Psychiatric Rehabilitation Journal*. 2020; 43(1):2-8. <https://doi.org/10.1037/prj0000355>

Abstract: OBJECTIVE: To describe facilitators, barriers, and strategies to implementation of the Canadian national At Work/Au travail program. This program funded supported employment services, following some of the principles of the Individual Placement and Support (IPS) model, in 12 sites across Canada. METHOD: We conducted on-site individual interviews (12) and focus groups (15) with 35 employment support workers, 12 team supervisors or managers, and 10 directors or CEOs. Interview summaries were created and coded using thematic analysis techniques. Codes were then distilled into themes grouping prominent barriers and facilitators to implementation. RESULTS: Four themes emerged: (i) national program structure: Flexible eligibility criteria and flexibility in use of subsidy funds were perceived as generally helpful, although there were difficulties associated with communication around noneligibility decisions and outcome targets; (ii) training and reinforcement: The support provided to sites was generally thought to be an important facilitator, especially when more intensive. Several participants viewed the online IPS training as a facilitator; (iii) external factors: Rules concerning impacts of employment earnings on benefits could be viewed as a barrier; and (iv) internal factors: Facilitators included strong leadership, positive staff attitudes, and larger program size. Several participants reported staff resistance as a barrier. CONCLUSIONS AND IMPLICATIONS FOR PRACTICE: Several features of the national program structure and leadership emerged that could be maintained if the program were extended elsewhere. The flexibility allowed for spending of wage subsidy funds, as well as the provision of more intensive training, were both perceived as potential enhancements to an eventual expansion of the program. (PsycINFO Database Record (c) 2020 APA, all rights reserved)

Moreira-Silva I, Azevedo J, Rodrigues S, Seixas A, and Jorge M. Predicting musculoskeletal symptoms in workers of a manufacturing company. International Journal of Occupational Safety & Ergonomics. 2020; [epub ahead of print].

<https://doi.org/10.1080/10803548.2019.1693112>

Abstract: Background. Musculoskeletal symptoms are the leading factor responsible for sickness absence. Factors associated with the development of musculoskeletal symptoms must be identified and addressed. Objective. To investigate the 7-day prevalence of musculoskeletal symptoms by body regions, and assess the contribution of individual, lifestyle and occupational risk factors to the development of musculoskeletal disorders. Methods. The sample comprised 202 white-collar and blue-collar workers. Musculoskeletal symptoms were assessed with the Nordic questionnaire, and physical activity level and sitting time with the international physical activity questionnaire. Statistical analyses were conducted to assess the associations between individual, lifestyle and occupational category factors and musculoskeletal symptoms. Results. The 7-day prevalence of work-related musculoskeletal symptoms was 41.6% (n = 84). The highest prevalence of symptoms was reported in the lower back (18.8%), followed by the wrists/hands (17.3%), neck (15.8%), shoulder (15.3%) and ankles/feet (11.4%). A significant association was found between reporting musculoskeletal symptoms and work category. In addition, musculoskeletal symptoms were reported more often by older workers. Work category was a significant predictor of pain in the lower back and shoulder regions, and gender was a significant predictor for neck pain. Conclusions. Our results emphasize the need for worksite interventions to prevent musculoskeletal symptoms in this population

Nicholas MK, Asghari A, Sharpe L, Beeston L, Brooker C, Glare P, et al. Reducing the use of opioids by patients with chronic pain: an effectiveness study with long-term follow-up. Pain. 2020; 161(3):509-519.

<https://doi.org/10.1097/j.pain.0000000000001763>

Abstract: This study addresses the problem of long-term opioid use by chronic pain patients. The study involved a secondary analysis of unanalyzed data from a published study of 2 versions of cognitive-behavioural therapy-based interdisciplinary treatment for chronic

pain. In this study, we examined whether the use of opioids by 140 chronic pain patients could be ceased sustainably over 12 months after participation in the comprehensive interdisciplinary pain management program aimed at enhancing pain self-management. On admission to the treatment, there were no significant differences between those patients taking or not taking opioids on usual pain, pain interference in daily activities, pain-related disability, depression severity, as well as in pain cognitions. After the treatment, the use of opioids was significantly reduced, both in numbers taking any and in mean doses, and these gains were maintained over the 12-month follow-up. Finally, cessation of opioids during treatment was associated with more substantial and consistent improvements in usual pain, depression severity, pain interference, pain-related disability, and pain cognitions, relative to those who reduced their opioids but did not cease them. These findings support the idea of using training in pain self-management strategies as a viable alternative to long-term opioid use by patients with chronic pain

Osca A and Lopez-Araujo B. Work stress, personality and occupational accidents: should we expect differences between men and women? Safety Science. 2020; 124:104582.

<https://doi.org/10.1016/j.ssci.2019.104582>

Payne N and Kinman G. Job demands, resources and work-related well-being in UK firefighters. Occupational Medicine. 2019; 69(8-9):604-609.

<https://doi.org/10.1093/occmed/kqz167> [open access]

Abstract: BACKGROUND: There is evidence that firefighters are at risk of work-related stress and mental health problems, but little is known about the organizational hazards they experience. Insight is needed into the work-related factors that are most likely to threaten or protect their work-related well-being. AIMS: To identify levels of job demands and resources (including demands relating to workload, work patterns and the working environment, relationship conflicts, control, support, role clarity and change management) among firefighters, and to use a job demands-resources framework to examine their impacts on work-related well-being. The role played by recovery strategies in predicting work-related well-being was also considered. METHODS: Job demands and resources were assessed

by the Health & Safety Executive (HSE) Management Standards Indicator Tool. Validated scales measured recovery strategies (detachment, affective rumination and problem-solving pondering) and work-related well-being (anxiety-contentment and depression-enthusiasm). The impact of job demands, resources and recovery strategies was tested by multiple linear regression. RESULTS: The sample comprised 909 firefighters across seven Fire and Rescue Services in the UK (85% male). Levels of job demands and resources did not meet HSE benchmarks. The main risk factors for poor work-related well-being were relationship conflicts and affective rumination, but resources such as role clarity and job control and the use of problem-solving pondering and detachment were beneficial. CONCLUSIONS: Interventions that aim to reduce relationship conflicts at work and promote problem-solving rather than affective rumination, and detachment from work when off-duty, are likely to improve work-related well-being. Attention to enhancing job resources may also be beneficial

Rydz E, Arrandale VH, and Peters CE. Population-level estimates of workplace exposure to secondhand smoke in Canada. Canadian Journal of Public Health. 2020; 111(1):125-133. <https://doi.org/10.17269/s41997-019-00252-x>

Abstract: OBJECTIVES: Secondhand smoke (SHS) is a known lung carcinogen that is also associated with cardiovascular disease and premature death. An important source of exposure to SHS is the workplace. In the past, efforts have been made to reduce workplace SHS exposure across Canada, with corresponding benefits to public health. This study estimated the number of workers exposed to SHS in Canada in 2006 and 2016 and their level of exposure. METHODS: The proportion of workers exposed to SHS and the proportion of workers reporting specific workplace smoking restrictions by occupation and province, acquired from the 2007-2009 and 2010-2012 Canadian Tobacco Use Monitoring Surveys, were applied to 2006 and 2016 Canadian census data to estimate population-level exposure. Workers were assigned to exposure levels (possible, moderate, high) using workplace smoking restrictions. Only moderately and highly exposed workers were considered exposed. RESULTS: The number of exposed workers decreased by 20% from 520,000 in 2006 to 418,000 in 2016. Workers were equally split

between moderate and high exposure groups. Trades, transport and equipment operators, and workers in primary industry had the highest rates of overall exposure. The proportion of workers exposed varied by province, with the lowest rates in Ontario (approximately 2% in both years), and the highest in Saskatchewan in 2006 (6%) and Newfoundland in 2016 (4%). **CONCLUSION:** Workplace SHS exposure persists. The findings can help prioritize high-risk groups for interventions and inform studies of the burden of occupational disease. Further characterization of exposure is needed to better inform enforcement and prevention

Sheehan LR, Lane TJ, and Collie A. The impact of income sources on financial stress in workers' compensation claimants. Journal of Occupational Rehabilitation. 2020; [epub ahead of print].

<https://doi.org/10.1007/s10926-020-09883-1>

Abstract: **PURPOSE:** Workers' compensation schemes usually recompense workers below their regular wage. This may cause financial stress, which has previously been associated with poorer health and work outcomes after injury. We sought to determine the level of financial stress experienced by injured workers and the influence of post-injury income source on financial stress.

METHODS: Analysis of a cross-sectional national survey of 4532 adults who had been injured at work and had at least one day of workers' compensation paid. Financial stress at time of survey was measured on a scale of 1-10 and subsequently dichotomised at the top quartile for further analysis. The effect of current main income source on financial stress, adjusted for demographic and psychosocial confounders, was assessed using logistic regression.

RESULTS: Sixty-nine percent of workers whose main income was social assistance or insurance and 54% whose main income was workers' compensation were experiencing financial stress. Relative to wages or salaries, workers with a main income from social assistance or insurance (odds ratio: 3.33, 95% CI 2.22-5.00) and workers' compensation (1.71, 1.31-2.24) had higher odds of financial stress. Workers with a main income of an aged pension or superannuation had lower odds of financial stress (0.52, 0.28-0.97). **CONCLUSION:** Injured workers receiving workers' compensation or social assistance benefits are vulnerable to increased financial stress. Given the

potential negative consequences of financial stress on health, particularly mental health, this study suggests the need for careful consideration of income replacement benefits in the design of workers' compensation schemes

Siler K. Demarcating spectrums of predatory publishing: economic and institutional sources of academic legitimacy. *Journal of the Association for Information Science and Technology*. 2020; [epub ahead of print].

<https://doi.org/10.1002/asi.24339> [open access]

Takada MM, Rocha CH, Neves-Lobo IF, Moreira RR, and Samelli AG. Training in the proper use of earplugs: an objective evaluation. *Work*. 2020; 65(2):401-407.

<https://doi.org/10.3233/WOR-203092>

Abstract: BACKGROUND: Discrepancies between attenuation obtained in the laboratory and the field are caused by several factors associated with hearing protection devices (HPDs). The effects of some factors can be minimized with proper training provided to HPD users. OBJECTIVE: To evaluate the effectiveness of an educational intervention for improving the correct use of earplugs as HPDs in workers exposed to occupational noise by using the F-MIRE method and by comparing pre- and post-training attenuation values and pass/fail rates. METHODOLOGY: The personal attenuation ratings (PARs) of two types of earplugs were obtained (140 individuals) using E-A-Rfit equipment. Each HPD was evaluated under two scenarios: first after the user only read the packaging instructions, and then after the user read guidelines and participated in a training program. The results obtained were automatically classified by the software as "Approved" or "Failed". RESULTS: There was a significant post-training increase in the binaural PAR values for both HPDs. The percentages of passes pre- and post-training showed that training users in the proper fit of the HPD was effective; both types had statistically significant differences. CONCLUSION: This study found a statistically significant increase in PARs and the number of workers passing evaluations after HPD fit training, demonstrating the effectiveness of this educational intervention

Waghorn G, Killackey E, Dickson P, Brock L, and Skate C. Evidence-based supported employment for people with psychiatric disabilities in Australia: progress in the past 15 years. *Psychiatric Rehabilitation Journal*. 2020; 43(1):32-39. <https://doi.org/10.1037/prj0000370>

Abstract: OBJECTIVE: This report summarizes the major developments in Australia since the first introduction of Individual Placement and Support (IPS) in 2005 in order to outline the current situation and discuss future challenges and opportunities. METHOD: Using an informal snowball sampling method, all those known to be involved in IPS implementations in Australia in the last 5 years were contacted. RESULTS: The program has expanded from 2 full-time employment specialists in 2005 to 87.6 in 2018. The expansion has been most promising in youth mental health where an initial national 14-site trial of IPS was recently expanded to 24 sites. If the trial is successful, IPS may become a core component of a national youth mental health initiative. Expansion in the adult community mental health sector has been constrained by several factors including the low priority for rehabilitation in the public mental health system. On the positive side, the availability of independent technical support from Western Australia means that all new IPS sites can receive expert technical support for program implementation, continuing high-fidelity delivery, external fidelity assessment, outcome evaluation, and cohort-based outcome reporting. CONCLUSION AND IMPLICATIONS FOR PRACTICE: The expansion of IPS in the public funded adult mental health sector has not kept pace with progress in the youth mental health sector. There is an urgent need for adult mental health services to cease excluding vocational rehabilitation from treatment, care, and recovery plans. Disability Employment Service contract managers could increase disincentives for providers to adopt high caseloads and low intensity services, at the expense of more intensive evidence-based practices. (PsycINFO Database Record (c) 2020 APA, all rights reserved)

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