

IWH Research Alert
January 15, 2021

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***Dobson KG, Vigod SN, Mustard C, and Smith PM. Trends in the prevalence of depression and anxiety disorders among working-age Canadian adults between 2000 and 2016. *Health Reports*. 2020; 31(12):12-23.**

<https://doi.org/10.25318/82-003-x202001200002-eng>

Abstract: Background: Understanding the prevalence of major depressive episodes (MDEs) and anxiety disorders at the population level among different labour force segments is critical to assessing and planning equitable mental health policies for Canadians adults. This study quantified prevalence trends of annually reported MDEs, anxiety disorders, and comorbid MDEs and anxiety disorders among working-age Canadians by labour force status, between 2000 and 2016. Data and methods: This study used multiple cycles of the Canadian Community Health Survey. MDE prevalence was assessed using variants of the Composite International Diagnostic Interview and the Patient Health Questionnaire-9. Anxiety disorder prevalence captured the presence of an anxiety disorder diagnosed by a healthcare professional. Prevalence estimates were calculated in each survey cycle for three labour force groups: employed, unemployed and not participating in the labour force. A meta-analytic



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framework stratified by labour force status estimated prevalence trends. Results: Between 2000 and 2016, MDE prevalence remained statistically stable over time at 5.4% (95% confidence interval [CI]: 4.7% to 6.0%), 11.7% (95% CI: 10.4% to 13.0%) and 9.8% (95% CI: 8.5% to 11.2%) among participants who were employed, unemployed, and not participating in the labour force, respectively. Anxiety prevalence ranged from 4.6% to 10.8%, and increased over time (employed: $\beta=0.26\%/year$, 95% CI: 0.08% to 0.45%; unemployed: $\beta=0.34\%/year$, 95% CI: -0.10% to 0.78%; not participating in the labour force: $\beta=0.55\%/year$, 95% CI: 0.15% to 0.95%). Stable comorbid MDE and anxiety prevalence ranged from 1.2% to 4.1% between 2003 and 2016. Interpretation: Trends suggest that MDE prevalence has remained stable among all labour force groups since 2000, while anxiety disorder prevalence has modestly increased since 2003. Disorder prevalence increased as labour force attachment decreased across all outcomes studied. Statistics Canada: Catalogue no. 82-003-X

***Fan JK, Gignac MAM, Harris MA, and Smith PM. Age differences in return-to-work following injury: understanding the role of age dimensions across longitudinal follow-up. Journal of Occupational & Environmental Medicine. 2020; 62(12):e680-e687. <https://doi.org/10.1097/JOM.0000000000002029>**

Abstract: OBJECTIVES: To examine the overall association between chronological age and return-to-work (RTW), and understand if existing data could be used to better understand the role of age-related dimensions (functional, psychosocial, organizational, life-stage) in explaining these associations. METHODS: We used survey data from a prospective cohort of injured workers in Victoria, Australia. Path models examined the relationship between chronological age and RTW, and the proportion mediated via age dimensions. RESULTS: Older chronological age was associated with non-RTW, although the pattern was not observed consistently across follow-up surveys. A proportion of the overall relationship between chronological age and non-RTW was explained by functional and life-stage age and RTW status at previous time points. CONCLUSIONS: Findings underscore the importance of moving beyond age measured only in chronological years, towards more complex conceptual and analytical models that recognize age as a multidimensional construct



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***LaMontagne AD, Martin AJ, Page KM, Papas A, Reavley NJ, Noblet AJ, et al. A cluster RCT to improve workplace mental health in a policing context: findings of a mixed-methods implementation evaluation. American Journal of Industrial Medicine. 2020; [epub ahead of print].**

<https://doi.org/10.1002/ajim.23217>

Abstract: **BACKGROUND:** We conducted a cluster randomized trial of a workplace mental health intervention in an Australian police department. The intervention was co-designed and co-implemented with the police department. Intervention elements included tailored mental health literacy training for all members of participating police stations, and a leadership development and coaching program for station leaders. This study presents the results of a mixed-methods implementation evaluation of the trial. **METHODS:** Descriptive quantitative analyses characterized the extent of participation in intervention activities, complemented by a qualitative descriptive analysis of transcripts of 60 semistructured interviews with 53 persons and research team field notes. **RESULTS:** Participation rates in the multicomponent leadership development activities were highly variable, ranging from <10% to approximately 60% across stations. Approximately 50% of leaders and <50% of troops completed the mental health literacy training component of the intervention. Barriers to implementation included rostering challenges, high staff turnover and changes, competing work commitments, staff shortages, limited internal personnel resources to deliver the mental health literacy training, organizational cynicism, confidentiality concerns, and limited communication about the intervention by station command or station champions. Facilitators of participation were also identified, including perceived need for and benefits of the intervention, engagement at various levels, the research team's ability to create buy-in and manage stakeholder relationships, and the use of external, credible leadership development coaches. **CONCLUSIONS:** Implementation fell far short of expectations. The identified barriers and facilitators should be considered in the design and implementation of similar workplace mental health interventions

***Mu J, Furlan AD, Lam WY, Hsu MY, Ning Z, and Lao L. Acupuncture for chronic nonspecific low back pain. Cochrane Database of Systematic Reviews. 2020; 12:CD013814.**



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<https://doi.org/10.1002/14651858.CD013814>

Abstract: **BACKGROUND:** Chronic nonspecific low back pain (LBP) is very common; it is defined as pain without a recognizable etiology that lasts for more than three months. Some clinical practice guidelines suggest that acupuncture can offer an effective alternative therapy. This review is a split from an earlier Cochrane review and it focuses on chronic LBP. **OBJECTIVES:** To assess the effects of acupuncture compared to sham intervention, no treatment, or usual care for chronic nonspecific LBP. **SEARCH METHODS:** We searched CENTRAL, MEDLINE, Embase, CINAHL, two Chinese databases, and two trial registers to 29 August 2019 without restrictions on language or publication status. We also screened reference lists and LBP guidelines to identify potentially relevant studies. **SELECTION CRITERIA:** We included only randomized controlled trials (RCTs) of acupuncture for chronic nonspecific LBP in adults. We excluded RCTs that investigated LBP with a specific etiology. We included trials comparing acupuncture with sham intervention, no treatment, and usual care. The primary outcomes were pain, back-specific functional status, and quality of life; the secondary outcomes were pain-related disability, global assessment, or adverse events. **DATA COLLECTION AND ANALYSIS:** Two review authors independently screened the studies, assessed the risk of bias and extracted the data. We meta-analyzed data that were clinically homogeneous using a random-effects model in Review Manager 5.3. Otherwise, we reported the data qualitatively. We used the GRADE approach to assess the certainty of the evidence. **MAIN RESULTS:** We included 33 studies (37 articles) with 8270 participants. The majority of studies were carried out in Europe, Asia, North and South America. Seven studies (5572 participants) conducted in Germany accounted for 67% of the participants. Sixteen trials compared acupuncture with sham intervention, usual care, or no treatment. Most studies had high risk of performance bias due to lack of blinding of the acupuncturist. A few studies were found to have high risk of detection, attrition, reporting or selection bias. We found low-certainty evidence (seven trials, 1403 participants) that acupuncture may relieve pain in the immediate term (up to seven days) compared to sham intervention (mean difference (MD) -9.22, 95% confidence interval (CI) -13.82 to -4.61, visual analogue scale (VAS) 0-100). The difference did not meet the clinically important threshold of 15 points or 30% relative change.



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Very low-certainty evidence from five trials (1481 participants) showed that acupuncture was not more effective than sham in improving back-specific function in the immediate term (standardized mean difference (SMD) -0.16, 95% CI -0.38 to 0.06; corresponding to the Hannover Function Ability Questionnaire (HFAQ, 0 to 100, higher values better) change (MD 3.33 points; 95% CI -1.25 to 7.90)). Three trials (1068 participants) yielded low-certainty evidence that acupuncture seemed not to be more effective clinically in the short term for quality of life (SMD 0.24, 95% CI 0.03 to 0.45; corresponding to the physical 12-item Short Form Health Survey (SF-12, 0-100, higher values better) change (MD 2.33 points; 95% CI 0.29 to 4.37)). The reasons for downgrading the certainty of the evidence to either low to very low were risk of bias, inconsistency, and imprecision. We found moderate-certainty evidence that acupuncture produced greater and clinically important pain relief (MD -20.32, 95% CI -24.50 to -16.14; four trials, 366 participants; (VAS, 0 to 100), and improved back function (SMD -0.53, 95% CI -0.73 to -0.34; five trials, 2960 participants; corresponding to the HFAQ change (MD 11.50 points; 95% CI 7.38 to 15.84)) in the immediate term compared to no treatment. The evidence was downgraded to moderate certainty due to risk of bias. No studies reported on quality of life in the short term or adverse events. Low-certainty evidence (five trials, 1054 participants) suggested that acupuncture may reduce pain (MD -10.26, 95% CI -17.11 to -3.40; not clinically important on 0 to 100 VAS), and improve back-specific function immediately after treatment (SMD: -0.47; 95% CI: -0.77 to -0.17; five trials, 1381 participants; corresponding to the HFAQ change (MD 9.78 points, 95% CI 3.54 to 16.02)) compared to usual care. Moderate-certainty evidence from one trial (731 participants) found that acupuncture was more effective in improving physical quality of life (MD 4.20, 95% CI 2.82 to 5.58) but not mental quality of life in the short term (MD 1.90, 95% CI 0.25 to 3.55). The certainty of evidence was downgraded to moderate to low because of risk of bias, inconsistency, and imprecision. Low-certainty evidence suggested a similar incidence of adverse events immediately after treatment in the acupuncture and sham intervention groups (four trials, 465 participants) (RR 0.68 95% CI 0.46 to 1.01), and the acupuncture and usual care groups (one trial, 74 participants) (RR 3.34, 95% CI 0.36 to 30.68). The certainty of the evidence was downgraded due to risk of bias and imprecision. No trial reported



adverse events for acupuncture when compared to no treatment. The most commonly reported adverse events in the acupuncture groups were insertion point pain, bruising, hematoma, bleeding, worsening of LBP, and pain other than LBP (pain in leg and shoulder). AUTHORS' CONCLUSIONS: We found that acupuncture may not play a more clinically meaningful role than sham in relieving pain immediately after treatment or in improving quality of life in the short term, and acupuncture possibly did not improve back function compared to sham in the immediate term. However, acupuncture was more effective than no treatment in improving pain and function in the immediate term. Trials with usual care as the control showed acupuncture may not reduce pain clinically, but the therapy may improve function immediately after sessions as well as physical but not mental quality of life in the short term. The evidence was downgraded to moderate to very low-certainty considering most of studies had high risk of bias, inconsistency, and small sample size introducing imprecision. The decision to use acupuncture to treat chronic low back pain might depend on the availability, cost and patient's preferences

***Smith PM, Oudyk J, Potter G, and Mustard C. Labour market attachment, workplace infection control procedures and mental health: a cross-sectional survey of Canadian non-healthcare workers during the COVID-19 pandemic. Annals of Work Exposures and Health. 2020; [epub ahead of print].**

<https://doi.org/10.1093/annweh/wxaa119>

Abstract: BACKGROUND: The COVID-19 pandemic has led to large proportions of the labour market moving to remote work, while others have become unemployed. Those still at their physical workplace likely face increased risk of infection, compared to other workers. The objective of this paper is to understand the relationship between working arrangements, infection control programs (ICP), and symptoms of anxiety and depression among Canadian workers, not specifically working in healthcare. METHODS: A convenience-based internet survey of Canadian non-healthcare workers was facilitated through various labour organizations between April 26 and June 6, 2020. A total of 5180 respondents started the survey, of which 3779 were assessed as employed in a full-time or part-time capacity on 2 March 2020 (prior to large-scale COVID-19 pandemic responses in



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Canada). Of this sample, 3305 (87.5%) had complete information on main exposures and outcomes. Anxiety symptoms were measured using the Generalised Anxiety Disorder screener (GAD-2), and depressive symptoms using the Patient Health Questionnaire screener (PHQ-2). For workers at their physical workplace (site-based workers) we asked questions about the adequacy and implementation of 11 different types of ICP, and the adequacy and supply of eight different types of personal protective equipment (PPE). Respondents were classified as either: working remotely; site-based workers with 100% of their ICP/PPE needs met; site-based workers with 50-99% of ICP/PPE needs met; site-based workers with 1-49% of ICP/PPE needs met; site-based workers with none of ICP/PPE needs met; or no longer employed. Regression analyses examined the association between working arrangements and ICP/PPE adequacy and having GAD-2 and PHQ-2 scores of three and higher (a common screening point in both scales). Models were adjusted for a range of demographic, occupation, workplace, and COVID-19-specific factors. RESULTS: A total of 42.3% (95% CI: 40.6-44.0%) of the sample had GAD-2 scores of 3 and higher, and 34.6% (95% CI: 32.-36.2%) had PHQ-2 scores of 3 and higher. In initial analyses, symptoms of anxiety and depression were lowest among those working remotely (35.4 and 27.5%), compared to site-based workers (43.5 and 34.7%) and those who had lost their jobs (44.1 and 35.9%). When adequacy of ICP and PPE was taken into account, the lowest prevalence of anxiety and depressive symptoms was observed among site-based workers with all of their ICP needs being met (29.8% prevalence for GAD-2 scores of 3 and higher, and 23.0% prevalence for PHQ-2 scores of 3 and higher), while the highest prevalence was observed among site-based workers with none of their ICP needs being met (52.3% for GAD-2 scores of 3 and higher, and 45.8% for PHQ-2 scores of 3 and higher). CONCLUSION: Our results suggest that the adequate design and implementation of employer-based ICP have implications for the mental health of site-based workers. As economies re-open the ongoing assessment of ICP and associated mental health outcomes among the workforce is warranted

Avila J, Rapp R, Dunbar S, and Jackson AT. Burnout and worklife in disaster restoration: Maslach Burnout Inventory and



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areas of worklife survey. *Journal of Construction Engineering and Management*. 2021; 147(2):04020171.

[https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0001986](https://doi.org/10.1061/(ASCE)CO.1943-7862.0001986)

Choi B. Developing a job exposure matrix of work organization hazards in the United States: a review on methodological issues and research protocol. *Safety and Health at Work*. 2020; 11(4):397-404.

<https://doi.org/10.1016/j.shaw.2020.05.007> [open access]

Abstract: BACKGROUND: Most job exposure matrices (JEMs) have been developed for chemical and physical hazards in the United States (US). In addition, the overall validity of most JEMs of work organization hazards using self-reported data in the literature remains to be further tested due to several methodological weaknesses.

METHODS: This paper aims to review important methodological issues with regard to a JEM of work organization hazards using self-report data and to present a research protocol for developing a four-axis (job titles, hazards, sex, and time) JEM of major work organization hazards using the US General Social Survey-Quality of Work-Life (GSS-QWL) data (2002-2018; N = 7,100 workers).

RESULTS: Five methodological weaknesses in existing JEMs of work organization hazards using self-report data were identified: having only two axes (hazard and occupation), using psychometrically weak items and scales, including scales having little interoccupational variability, unresolved optimal minimum numbers of subjects per occupation, and low accessibility. The methodological weaknesses were successfully addressed in the proposed research protocol.

CONCLUSION: The work organization JEM to be developed will significantly facilitate and strengthen occupational epidemiological studies on work organization hazards and major health outcomes, improve national and occupational surveillance of work organization hazards, and promote interventions for a healthy work environment in the US

Dale AM, Buckner-Petty S, Evanoff BA, and Gage BF. Predictors of long-term opioid use and opioid use disorder among construction workers: analysis of claims data. *American Journal of Industrial Medicine*. 2021; 64(1):48-57.

<https://doi.org/10.1002/ajim.23202>



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Abstract: **BACKGROUND:** Construction workers have high rates of work-related musculoskeletal disorders, which lead to frequent opioid use and opioid use disorder (OUD). This paper quantified the incidence of opioid use and OUD among construction workers with and without musculoskeletal disorders. **METHODS:** We conducted a retrospective study using union health claims from January 2015 to June 2018 from 19,909 construction workers. Claims for diagnoses of chronic musculoskeletal disorders, acute musculoskeletal injuries, musculoskeletal surgery, and other conditions were linked to new opioid prescriptions. We examined the effects of high doses (≥ 50 morphine mg equivalents per day), large supply (more than 7 days per fill), long-term opioid use (60 or more days supplied within a calendar quarter), and musculoskeletal disorders, on the odds of a future OUD. **RESULTS:** There were high rates (42.8% per year) of chronic musculoskeletal disorders among workers, of whom 24.1% received new opioid prescriptions and 6.3% received long-term opioid prescriptions per year. Workers receiving opioids for chronic musculoskeletal disorders had the highest odds of future OUD: 4.71 (95% confidence interval 3.09-7.37); workers prescribed long-term opioids in any calendar quarter had a nearly 10-fold odds of developing an OUD. **CONCLUSIONS:** Among construction workers, opioids initiated for musculoskeletal pain were strongly associated with incident long-term opioid use and OUD. Musculoskeletal pain from physically demanding work is likely one driver of the opioid epidemic in occupations like construction. Prevention of work injuries and alternative pain management are needed for workers at risk for musculoskeletal injuries

Dehghani F, Omid F, Yousefinejad S, and Taheri E. The hierarchy of preventive measures to protect workers against the COVID-19 pandemic: a review. Work. 2020; 67(4):771-777.

<https://doi.org/10.3233/WOR-203330>

Abstract: **BACKGROUND:** The high spread rate of coronaviruses, specifically severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has raised concerns about the spread of the disease in crowded occupational environments. The risk of occupational exposure to coronavirus depends on the type of industry and the nature of work. Currently, most countries are working for reactivating their economies and need to improve working conditions for a safe



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situation during the COVID-19 pandemic. OBJECTIVE: The present work aimed to investigate the current engineering and administrative control measures, which are necessary to protect workers against COVID-19 in workplaces. METHODS: The current strategies, including engineering control, administrative control, personal protective equipment, and their efficiencies, were reviewed and discussed. RESULTS: Reviewing the literature indicated that a collection of control approaches should be implemented for an effective control of the virus. Control measures could be selected based on the risk of exposure to COVID-19. The results also revealed that relying solely on a specific control measure could not effectively control the outbreak. CONCLUSION: In conclusion, employers and health professionals must continually monitor international and local guidelines to identify changes in recommendations to make their workplaces safer. Establishment of an expert team in any workplace for the implementation of more effective control measures is warranted, as well

Fetherman DL, McGrane TG, and Cebrick-Grossman J. Health promotion for small workplaces: a community-based participatory research partnership. Workplace Health & Safety. 2021; 69(1):7-14.

<https://doi.org/10.1177/2165079920938298>

Abstract: BACKGROUND: The majority of U.S. worksites are smaller worksites that often employ low-wage workers. Low-wage workers have limited access to, and participation in, workplace health promotion programs. Community-based participatory research (CBPR) has been identified as a key method to directly engage employers in identifying the health promotion needs of smaller workplaces. This article describes a four-phased process where CBPR was used to tailor a workplace health promotion program to meet the needs of a smaller workplace that employees low-wage workers. Outcomes of this program were measured and reported over time. METHODS: The CBPR approach was based on the Social Ecological Model along with two additional health promotion models. Publicly available evidence-based tools were also used for this four-phased process which included the following: (a) initial program assessment, (b) program planning, (c) program implementation, and (d) program evaluation. Key strategies for developing a



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comprehensive workplace health promotion program guided the process. FINDINGS: The workplace's capacity for promoting health among its employees was improved. There were sustainable improvements in the health interventions and organizational supports in place. CONCLUSION/APPLICATION TO PRACTICE: A CBPR approach may be a way to build the capacity of smaller workplaces with low-wage employees to address the health promotion needs of their workforces. The use of publicly available strategies and tools which incorporate the social ecological determinants of health is of equal importance

Gorucu S, Weichelt B, Redmond E, and Murphy D. Coding agricultural injury: factors affecting coder agreement. Journal of Safety Research. 2020; 75:111-118.

<https://doi.org/10.1016/j.jsr.2020.08.006>

Abstract: OBJECTIVES: To determine coders' agreement level for the Occupational Injury and Illness Classification System (OIICS) source of injury and injury event codes, and the Farm and Agricultural Injury Classification (FAIC) code in the AgInjuryNews.org and to determine the effects of supplemental information and follow-up discussion in final code assignments. METHODS: Two independent researchers initially coded 1304 injury cases from AgInjurynews.org using the OIICS and the FAIC coding schemes. Code agreement levels for injury source, event, and FAIC and the effect of supplemental information and follow-up discussions on final coding was assessed. RESULTS: Coders' agreement levels were almost perfect for OIICS source and event categories at the 3-digit level, with lower agreement at the 4-digit level. By using supplemental information and follow-up discussion, coders improved the coding accuracy by an average 20% for FAIC. Supplemental information and follow-up discussions had helped finalize the disagreed codes 55% of the time for OIICS source coding assignments and 40% of time for OIICS event coding assignments for most detailed 4-digit levels. Five key themes emerged regarding accurate and consistent coding of the agricultural injuries: inclusion/exclusion based on industry classification system; inconsistent/discrepant reports; incomplete/nonspecific reports; effects of supplemental information on coding; and differing interpretations of code selection rules. Practical applications: Quantifying the level of agreement for



agricultural injuries will lead to a better understanding of coding discrepancies and may uncover areas for improvement to coding scheme itself. High level of initial and final agreement with FAIC and OIICS codes suggest that these coding schemes are user-friendly and amenable to widespread use

Hahn MH, McVicar D, and Wooden M. Is casual employment in Australia bad for workers' health? Occupational & Environmental Medicine. 2021; 78(1):15-21.

<https://doi.org/10.1136/oemed-2020-106568>

Abstract: OBJECTIVES: This paper assessed the impact of working in casual employment, compared with permanent employment, on eight health attributes that make up the 36-Item Short Form (SF-36) Health Survey, separately by sex. The mental health impacts of casual jobs with irregular hours over which the worker reports limited control were also investigated. METHODS: Longitudinal data from the Household, Income and Labour Dynamics in Australia Survey, over the period 2001-2018, were used to investigate the relationship between the eight SF-36 subscales and workers' employment contract type. Individual, household and job characteristic confounders were included in dynamic panel data regression models with correlated random effects. RESULTS: For both men and women, health outcomes for casual workers were no worse than for permanent workers for any of the eight SF-36 health attributes. For some health attributes, scores for casual workers were higher (ie, better) than for permanent workers (role physical: men: $\beta=1.15$, 95% CI 0.09 to 2.20, women: $\beta=1.79$, 95% CI 0.79 to 2.80; bodily pain: women: $\beta=0.90$, 95% CI 0.25 to 1.54; vitality: women: $\beta=0.65$, 95% CI 0.13 to 1.18; social functioning: men: $\beta=1.00$, 95% CI 0.28 to 1.73); role emotional: men: $\beta=1.81$, 95% CI 0.73 to 2.89, women: $\beta=1.24$, 95% CI 0.24 to 2.24). Among women (but not men), mental health and role emotional scores were lower for irregular casual workers than for regular permanent workers but not statistically significantly so. CONCLUSIONS: This study found no evidence that casual employment in Australia is detrimental to self-assessed worker health

Karolaakso T, Autio R, Nappila T, Nurmela K, and Pirkola S. Socioeconomic factors in disability retirement due to mental



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disorders in Finland. European Journal of Public Health. 2020; 30(6):1218-1224.

<https://doi.org/10.1093/eurpub/ckaa132> [open access]

Abstract: BACKGROUND: Previous research has identified low socioeconomic status (SES) as an epidemiological risk factor for early retirement and disability pension (DP) due to mental disorders. This study aims to examine these associations in greater detail, with separate consideration of the risk factors for mood disorders (F30-39) and non-affective psychotic disorder (F20-29) DP. METHODS: In this case-control setting the subjects (N=36 879) were all those granted DP due to a mental disorder for the first time between 2010 and 2015 in Finland. All the subjects were matched with three controls for their gender, age and hospital district (N=94 388). Three measures of dimensions of SES were used: education, income and occupational status, as well as family type as a control factor. Differences between DP recipients and controls, and between diagnostic groups, were studied using calculated characteristics and conditional logistic regression models. RESULTS: DP recipients often lived alone and had low educational and income levels. These characteristics were more prominent in non-affective psychotic disorder than in mood disorder DP. In white-collar occupational groups, the risk of DP was greater compared with blue-collar workers. Students were associated with the highest level of risk for all mental and mood disorder DPs. CONCLUSIONS: We found evidence of SES factors associating with mental disorder-related severe loss of working and studying ability in a disorder-specific way. Notably, white-collar workers had an increased risk of mental disorder DP. This could be related to the psychosocially demanding contemporary working life in non-manual work

Kraut A and Shafer LA. Determining the influence of the Workers Compensation Board of Manitoba's opioid policy on prescription opioid use amongst WCB recipients. American Journal of Industrial Medicine. 2020; [epub ahead of print].

<https://doi.org/10.1002/ajim.23216>

Abstract: BACKGROUND: Opioid medications are commonly used by Workers Compensation Board (WCB) claimants following workplace injuries. The purpose of this study is to describe the impact of an opioid management policy on opioid prescriptions amongst a WCB-



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covered population compared to changes in the use of these medications in the general population of a Canadian province. METHODS: We linked WCB claims data from 2006 to 2016 (13,155 claims, 11,905 individuals) to Manitoba provincial health records and compared opioid use amongst this group to 478,606 individuals aged 18-65. Linear regression was performed to examine the change over time in number of individuals being prescribed opioids for various durations and dosages of 50 or more, and 120 or more morphine equivalents (ME)/day for both the WCB and Manitoba population. RESULTS: WCB claimants totaled 2.5% of Manitoba residents aged 18-65 who were prescribed opioids for non-cancer pain. After the introduction of the opioid use policy for the WCB population in November 2011, the number of people prescribed opioids declined 49.4% in the WCB group, while increasing 10.8% in the province as a whole. The number of individuals using 50 ME/day or more declined 43.1% in the WCB group and increased 5.8% in the province. CONCLUSIONS: Opioid management programs organized by a compensation board can lead to a substantial reduction in the prescription of opioid medications to a WCB client population, including individuals who were prescribed higher doses of these medications when compared with general trends in the community

Lissaker CT, Gustavsson P, Albin M, Ljungman P, Bodin T, Sjostrom M, et al. Occupational exposure to noise in relation to pregnancy-related hypertensive disorders and diabetes. Scandinavian Journal of Work, Environment & Health. 2021; 47(1):33-41.

<https://doi.org/10.5271/sjweh.3913> [open access]

Abstract: Objectives Exposure to environmental noise has been associated with an increased risk of cardiovascular diseases and diabetes, but evidence for occupational noise is limited and conflicting, especially related to pregnancy outcomes. This study aimed to evaluate the association of occupational noise exposure with hypertensive disorders of pregnancy (HDP) and gestational diabetes. Methods Our population-based cohort study utilized data on 1 109 516 singletons born to working mothers in Sweden between 1994-2014 from the Medical Birth Register and the Longitudinal Integration Database for Health Insurance and Labor Market Studies. Noise exposure came from a job exposure matrix (JEM) in five



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categories <70, 70-74, 75-80, 80-85, >85 dB(A). Relative risks (RR), adjusted for confounders and other job exposures, were calculated by modified Poisson regressions for the full sample and a subsample of first-time mothers reporting full-time work. Results Exposure to 80-85 dB(A) of noise was associated with an increased risk of all HDP [RR 1.12, 95% confidence interval (CI) 1.05-1.18] and preeclampsia alone (RR 1.14, 95% CI 1.07-1.22) in the full sample. Results were similar for first-pregnancy, full-time workers. Exposure to >85 dB(A) of noise was also associated with an increased risk of gestational diabetes (RR 1.57, 95% CI 1.10-2.24) in the analysis restricted to first-time mothers working full-time. Conclusion In this study, exposure to noise was associated with an increased risk for HDP and gestational diabetes, particularly in first-time mothers who work full-time. Further research is needed to confirm findings and identify the role of hearing protection on this association so prevention policies can be implemented

Mykhalovskiy E, Kazatchkine C, Foreman-Mackey A, McClelland A, Peck R, Hastings C, et al. Human rights, public health and COVID-19 in Canada. Canadian Journal of Public Health. 2020; 111(6):975-979.

<https://doi.org/10.17269/s41997-020-00408-0> [open access]

Abstract: Faced with the extraordinary global public health crisis of COVID-19, governments across Canada must decide, often with limited and imperfect evidence, how to implement measures to reduce its spread. Drawing on a health and human rights framework, this commentary explores several features of the Canadian response to date that raise human rights concerns. Our discussion focuses on criminal law, fines, data collection, and so-called snitch lines. We argue that the approach of governmental and public health authorities must be grounded in the best available scientific evidence and align with human rights standards. Our aim is to encourage dialogue within the public health community in Canada about the importance of human rights-based responses to COVID-19

Nykanen M, Puro V, Tiikkaja M, Kannisto H, Lantto E, Simpura F, et al. Implementing and evaluating novel safety training methods for construction sector workers: results of a randomized controlled trial. Journal of Safety Research. 2020; 75:205-221.



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<https://doi.org/10.1016/j.jsr.2020.09.015>

Abstract: INTRODUCTION: The construction industry is regarded as one of the most unsafe occupational fields worldwide. Despite general agreement that safety training is an important factor in preventing accidents in the construction sector, more studies are needed to identify effective training methods. To address the current research gap, this study evaluated the impact of novel, participatory safety training methods on construction workers' safety competencies. Specifically, we assessed the efficacy of an immersive virtual reality (VR)-based safety training program and a participatory human factors safety training program (HFST) in construction industry workplaces. METHOD: In 2019, 119 construction sector workers from eight workplaces participated in a randomized controlled trial conducted in Finland. All the study participants were assessed using questionnaires at baseline, immediately after the intervention and at one-month follow-up. We applied generalized linear mixed modeling for statistical analysis. RESULTS: Compared to lecture-based safety training, VR-based safety training showed a stronger impact on safety motivation, self-efficacy and safety-related outcome expectancies. In addition, the construction sector workers who participated in the VR-based safety training showed a greater increase in self-reported safety performance at one-month follow-up. Contrary to our study hypotheses, we found no significant differences between the study outcomes in terms of study participants in the HFST training condition and the comparison condition without HFST training. CONCLUSION: Our study indicates that VR technology as a safety training tool has potential to increase safety competencies and foster motivational change in terms of the safety performance of construction sector workers. In the future, the efficacy of participatory human factors safety training should be studied further using a version that targets both managerial and employee levels and is implemented in a longer format. PRACTICAL IMPLICATIONS: Safety training in virtual reality provides a promising alternative to passive learning methods. Its motivating effect complements other safety training activities

Soltaninejad M, Yarmohammadi H, Madrese E, Khaleghi S, Poursadeqiyani M, Aminizadeh M, et al. The prevalence of metabolic syndrome in drivers: a meta-analysis and systematic



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review. Work. 2020; 67(4):829-835.

<https://doi.org/10.3233/WOR-203335>

Abstract: **BACKGROUND:** Metabolic syndrome is an increasing disorder, especially in night workers. Drivers are considered to work during 24 hours a day. Because of job characteristics such as stress, low mobility and long working hours, they are at risk of a metabolic syndrome disorder. **OBJECTIVES:** The purpose of this study is a meta-analysis and systematic review of the prevalence of metabolic syndrome in drivers. **METHODS:** In this systematic review, articles were extracted from national and international databases: Scientific Information Database (SID), Iran Medex, Mag Iran, Google Scholar, Science Direct, PubMed, ProQuest, and Scopus. Data analysis was performed using meta-analysis and systematic review (random effect model). The calculation of heterogeneity was carried out using the I² index and Cochran's Q test. All statistical analyses were performed using STATA software version 11. **RESULTS:** A total of nine articles related to the prevalence of metabolic syndrome in drivers in different regions of the world from 2008 to 2016 were obtained. The total sample size studied was 26156 with an average of 2906 samples per study. The prevalence of metabolic syndrome in drivers was 34% (95% CI: 30-37) **CONCLUSIONS:** According to the results of this study, the prevalence of metabolic syndrome in drivers is high. Occupational stress, unhealthy diet and physical inactivity cannot be cited as causes of metabolic syndrome prevalence in drivers. Therefore, to maintain and to improve the health of this group, the implementation of preventive, therapeutic and rehabilitation measures for these people as well as training should be considered

Teo STT, Nguyen D, Trevelyan F, Lamm F, and Boocock M. Workplace bullying, psychological hardiness, and accidents and injuries in nursing: a moderated mediation model. PLoS ONE. 2021; 16(1):e0244426.

<https://doi.org/10.1371/journal.pone.0244426> [open access]

Abstract: Workplace bullying are prevalent among the nursing workforce. Consequences of workplace bullying include psychological stress and workplace accidents and injuries. Psychological hardiness is proposed as a buffer for workplace bullying and psychological stress on workplace accidents and injuries. This study adopted the Affective Events Theory and Conservation of Resources Theory to



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develop and test a moderated mediated model in two field studies. Study 1 (N = 286, Australian nurses) found support for the direct negative effect of workplace bullying on workplace accidents and injuries with psychological stress acting as the mediator. The mediation findings from Study 1 were replicated in Study 2 (N = 201, New Zealand nurses). In addition, Study 2 supplemented Study 1 by providing empirical support for using psychological hardiness as the buffer for the association between psychological stress and workplace accidents and injuries. This study offers theoretical and empirical insights into the research and practice on psychological hardiness for improving the psychological well-being of employees who faced workplace mistreatments

Thompson AH, Waye A, Jacobs P, and Dewa CS. Self-report measures of presenteeism are not strongly correlated with health workers' logged activity. Journal of Occupational & Environmental Medicine. 2020; 62(12):1011-1018.

<https://doi.org/10.1097/JOM.0000000000002021>

Abstract: OBJECTIVE: Low productivity while at work (presenteeism) has been reported to produce significant cost excesses for organizations and economies. However, many of these reports have been based on estimates drawn from self-report instruments that are not supported by evidence showing their efficacy. Thus, the aim of this study was to assess associations between responses to leading self-report tests of presenteeism and self-recorded on-the-job productivity. METHODS: Health care worker self-ratings of productivity were taken from a questionnaire that contained the key item from each presenteeism instrument. Productivity levels were drawn from employee reported daily work activity logs. RESULTS: Test-based productivity estimates did not show strong associations with daily recordings of work activity. CONCLUSIONS: Associations were too low to recommend any test as a proxy measure for reported productivity. It is suggested that objective measures of work output be explored

Vrablik MC, Lawrence M, Ray JM, Moore M, and Wong AH. Addressing workplace safety in the emergency department: a multi-institutional qualitative investigation of health worker assault experiences. Journal of Occupational & Environmental



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Medicine. 2020; 62(12):1019-1028.

<https://doi.org/10.1097/JOM.0000000000002031>

Abstract: OBJECTIVE: This study aims to identify interventions to address workplace violence in the emergency department based on direct evidence from experiences of patient assault. METHODS: We performed de novo coding and thematic analysis of datasets from two geographically distinct institutions and five different sites that contained interviews with 80 health workers. RESULTS: We identified concepts that corresponded to the micro (workers and patients), meso (organizations and clinical units), and macro (society at large, worldviews, and values) levels of the healthcare system. Within each level, potential interventions fell into the prevention, response, and recovery phases of emergency preparedness. CONCLUSION: Efforts to address workplace violence should consider interconnected influences from individual workers, organizations, and society at large. Comprehensive approaches at multiple phases of preparedness are needed to have sustained impact on safety

Wanberg CR, Csillag B, Douglass RP, Zhou L, and Pollard MS. Socioeconomic status and well-being during COVID-19: a resource-based examination. Journal of Applied Psychology. 2020; 105(12):1382-1396.

<https://doi.org/10.1037/apl0000831>

Abstract: The authors assess levels and within-person changes in psychological well-being (i.e., depressive symptoms and life satisfaction) from before to during the COVID-19 pandemic for individuals in the United States, in general and by socioeconomic status (SES). The data is from 2 surveys of 1,143 adults from RAND Corporation's nationally representative American Life Panel, the first administered between April-June, 2019 and the second during the initial peak of the pandemic in the United States in April, 2020. Depressive symptoms during the pandemic were higher than population norms before the pandemic. Depressive symptoms increased from before to during COVID-19 and life satisfaction decreased. Individuals with higher education experienced a greater increase in depressive symptoms and a greater decrease in life satisfaction from before to during COVID-19 in comparison to those with lower education. Supplemental analysis illustrates that income had a curvilinear relationship with changes in well-being, such that



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individuals at the highest levels of income experienced a greater decrease in life satisfaction from before to during COVID-19 than individuals with lower levels of income. We draw on conservation of resources theory and the theory of fundamental social causes to examine four key mechanisms (perceived financial resources, perceived control, interpersonal resources, and COVID-19-related knowledge/news consumption) underlying the relationship between SES and well-being during COVID-19. These resources explained changes in well-being for the sample as a whole but did not provide insight into why individuals of higher education experienced a greater decline in well-being from before to during COVID-19. (PsycInfo Database Record (c) 2020 APA, all rights reserved)

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