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**August 27, 2021**

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**\*Blair A, Parnia A, Shahidi FV, and Siddiqi A. Social inequalities in protective behaviour uptake at the start of the COVID-19 pandemic: results from a national survey. Canadian Journal of Public Health. 2021; [epub ahead of print].**

<https://doi.org/10.17269/s41997-021-00553-0> [open access]

**Abstract:** OBJECTIVES: We aimed to assess social patterns of handwashing, social distancing, and working from home at the start of the COVID-19 pandemic in Canada, and determine what proportions of the overall prevalence and social inequalities in handwashing and social distancing are related to inequalities in the opportunity to work from home, to guide pandemic preparedness and response. METHODS: Using cross-sectional data from the Canadian Perspectives Survey Series, collected between March 29 and April 3, 2020, among Canadian adults (N=4455), we assessed prevalence of not working from home, social distancing in public, or practicing frequent handwashing, according to age, sex, marital status, immigration, education, chronic disease presence, and source of COVID-19 information. Multivariate regression, population attributable fraction estimation, and generalized product mediation analysis were applied. RESULTS: Absence of frequent handwashing and distancing was more common among those working outside than within the



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home (prevalence differences of 7% (95% CI: 4, 10) and 7% (95% CI: 3, 10), respectively). Inequalities in handwashing and distancing were observed across education and immigration status. Over 40% of the prevalence of non-uptake of handwashing and distancing was attributable to populations not being able to work from home. If all worked from home, over 40% (95% CI: 8, 70) of education-based inequalities in handwashing and distancing could be eliminated, but differences by immigration status would likely remain. **CONCLUSION:** For pandemic response, both workplace safety initiatives and mechanisms to address the inequitable distribution of health risks across socio-economic groups are needed to reduce broader inequalities in transmission risk

**\*Brandt M, Wilstrup NM, Jakobsen MD, Van Eerd D, Andersen LL, and Ajslev JZN. Engaging occupational safety and health professionals in bridging research and practice: evaluation of a participatory workshop program in the Danish construction industry. International Journal of Environmental Research and Public Health. 2021; 18(16):8498.**

<https://doi.org/10.3390/ijerph18168498>

Abstract: Engaging occupational safety and health (OSH) professionals has scarcely been evaluated as a means for transferring knowledge to practice about physical workload in the construction industry. The aim of this work was to examine how participants used and incorporate research-based knowledge from a three-day training course into practice. Twenty OSH professionals from the Danish construction industry participated in a workshop-training course. Researchers presented new knowledge and results about physically demanding work. The participants selected which themes they wanted to work with and developed an action plan. Evaluation was done using surveys and phone interviews. Analysis was based on how the OSH-professionals describe themselves, organizations, and the construction industry. Participant's average scores on the level of implementation of their chosen action plans were 3 (on a response scale from 1-5, where 1 is 'to a very low degree' and 5 is 'to a very high degree') immediately after the workshop program and 2.5 at follow-up. Qualitative evaluations showed that actions had been initiated, and some progress had been made. The participants were satisfied with the workshop course and



the possibility to increase their knowledge through inputs from researchers and colleges and strongly believe that they would succeed with implementing their action plans in the future

**Amiri S and Behnezhad S. Depression symptoms and risk of sick leave: a systematic review and meta-analysis. International Archives of Occupational & Environmental Health. 2021; 94(7):1495-1512.**

<https://doi.org/10.1007/s00420-021-01703-0>

Abstract: OBJECTIVES: Depression symptoms are one of the most common psychiatric disorders and affect all aspects of life. The impact of depression symptoms on sick leave in the working population is a major issue that requires a more comprehensive examination. METHODS: This systematic review used the PRISMA method to identify eligible studies (n=15). Subsequently, the association between depression symptoms and sick leave was examined and several important subgroup analyses were performed. RESULTS: Depression symptoms were associated with sick leave, with an overall risk ratio (RR) of 1.52 [95% confidence interval (95% CI) 1.34-1.73]. In men, the result displayed RR 2.19 (95% CI 1.17-4.09) and in women, the result showed RR 1.54 (95% CI 1.35-1.76). Additional subgroup analyses that account for methodological differences across studies based on the method of assessing depression symptoms and sick leave showed that this association was consistent. CONCLUSION: Depression symptoms are associated with sick leave. Given that sick leave can have an economic and social burden, more attention to depression symptoms is necessary

**Apaydin EA, Rose DE, Yano EM, Shekelle PG, McGowan MG, Antonini TL, et al. Burnout among primary care healthcare workers during the COVID-19 pandemic. Journal of Occupational & Environmental Medicine. 2021; 63(8):642-645.**

<https://doi.org/10.1097/JOM.0000000000002263> [open access]

Abstract: OBJECTIVE: To measure the prevalence of burnout among healthcare workers (HCWs) in primary care during the COVID-19 pandemic and to understand the association between burnout, job-person fit, and perceptions of the pandemic. METHODS: We surveyed 147 HCWs (73% response rate) in two clinics in the



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summer of 2020 on their burnout, job-person fit, perceptions of the pandemic, and demographic/job characteristics. Logistic regression analyses were conducted to explore relationships between these variables. RESULTS: Forty-three percent of HCWs reported burnout. Lower HCW burnout was associated with better job-person fit in the areas of recognition or appreciation at work (odds ratio [OR] 0.26, 95% confidence interval [CI] 0.10 to 0.67) and congruent worker-organization goals and values (OR 0.30, 95% CI 0.11 to 0.76). CONCLUSIONS: Working environments with better job-person fit may be key to reducing HCW burnout even after the current crisis

**Comper MLC, da Silva PR, de Negreiros AW, Villas Boas CC, and Padula RS. Influence of adherence to autonomous job rotation on musculoskeletal symptoms, occupational exposure, and work ability. International Journal of Industrial Ergonomics. 2021; 84:103165.**

<https://doi.org/10.1016/j.ergon.2021.103165>

**Fu C, Wang G, Shi X, Ren Y, and Cao F. The association between fear of future workplace violence and burnout among nurses in China: a cross-sectional study. Journal of Affective Disorders. 2021; 293:29-35.**

<https://doi.org/10.1016/j.jad.2021.06.013>

Abstract: BACKGROUND: Fear of future workplace violence has adverse effects on nurses' health outcomes. However, the association between fear of future workplace violence and burnout among nurses in China remains unknown. METHODS: Enrolled in the study were 1897 nurses from 12 tertiary hospitals of Shandong Province, China. Fear of future workplace violence was measured using the Fear of Future Violence at Work scale. Burnout was measured using the 15-item Maslach Burnout Service Inventory. Ordinal logistic regression analysis was used to examine the association between fear of future workplace violence and burnout. RESULTS: The prevalence of high emotional exhaustion, high cynicism, and low personal accomplishment was 26.7%, 38.1%, and 35.6%, respectively, while 72.9% of participants had high levels of fear of future workplace violence. Among nurses, compared with high levels of fear of future workplace violence, low levels of fear were associated with a lower degree of emotional exhaustion, cynicism,



and personal accomplishment; and medium levels of fear were associated with a lower degree of emotional exhaustion, cynicism, and a higher degree of personal accomplishment. LIMITATIONS: This was a cross-sectional study, which could not establish the causal relationship between fear of future workplace violence and burnout. CONCLUSION: There was a significant association between fear of future workplace violence and burnout among nurses. Fear of future workplace violence should be regarded as important issue for hospital administrators and healthcare policy makers when taking measures to ameliorate nurses' burnout

**Giron-Perez DA, Ruiz-Manzano RA, Benitez-Trinidad AB, Ventura-Ramon GH, Covantes-Rosales CE, Ojeda-Duran AJ, et al. Saliva pooling strategy for the large-scale detection of SARS-CoV-2, through working-groups testing of asymptomatic subjects for potential applications in different workplaces. Journal of Occupational & Environmental Medicine. 2021; 63(7):541-547.**

<https://doi.org/10.1097/JOM.0000000000002176> [open access]

Abstract: OBJECTIVE: To perform an improved large-scale SARS-CoV-2 detection on pooled tests of asymptomatic workers. METHODS: qRT-PCR validation of the SARS-CoV-2 detection in salivae samples and saliva pools and working-group saliva pooling and testing for SARS-CoV-2. RESULTS: We found a high Cycle threshold correlation ( $r=0.9099$ ) between swabs and saliva samples. Then, through the pooling strategy, we detected that 18/360 (5%) of individual saliva samples were SARS-CoV-2 positive. Saliva-pooling efficiency (360 of test sample/30 individual PCR) was higher (5.45) than the reported for swabbing group-testing and we spared 82% of the PCR reagents as well as sampling and personal protection equipment. CONCLUSION: Through this simplified and less expensive procedure, we detected in a short time asymptomatic-infected SARS-CoV-2-carriers that were isolated from their co-workers, thus, this methodology can be implemented in different workplaces to ensure consumers that employees are not infectious

**Hegy JK, Abegglen S, Schade V, Hoffmann-Richter U, and Znoj H. Effects of a tailored multidisciplinary counselling intervention to support the adjustment process after a traumatic injury: a**



**randomized controlled trial. Disability and Rehabilitation. 2021; [epub ahead of print].**

<https://doi.org/10.1080/09638288.2021.1960442>

**Abstract:** Purpose: To investigate the efficacy of a tailored counselling intervention for injured workers regarding different aspects of subjective well-being. Materials and methods: Prospective randomized controlled trial with 192 mildly-to-moderately injured workers who were on sick leave for at least 18 weeks and showed a high-risk profile for a complicated rehabilitation process in a screening. Patients were assessed at baseline, 12 and 18 months post-injury. The outcome variables concerned five aspects of subjective well-being (negative feelings, life and job satisfaction, satisfaction related to family and health). Both the control and the experimental group received conventional case management. Participants in the intervention group additionally received tailored workplace interventions and/or mental health counselling sessions. Results: Participants in the intervention group received an average of 2.23 (SD = 6.94) counselling sessions. Both groups showed a significant reduction (mean (95% CI) of negative feelings control group 2.6 (2.3-3.4), intervention group 2.4 (1.6-3.4)), with a significant difference in negative feelings between the groups ( $p = 0.01$ ). Conclusions: Our results suggest that a tailored counselling intervention has a modest long-term effect ( $d = 0.74$ ) on negative feelings for mildly-to-moderately injured workers. However, future studies should evaluate the feasibility of this study's treatment approach. Implications for rehabilitation Accidents and the resulting injuries often cause a wide range of burdens including psychosocial and emotional distress as well as long-time sick leaves. Tailored counselling led to significant reductions of negative feelings in mildly-to-moderately injured workers over time. By showing that even conventional case management can have a beneficial effect on subjective wellbeing, the results of this study reaffirm the holistic biopsychosocial nature of injury rehabilitation.

**Iwanaga K, Wehman P, Brooke V, Avellone L, and Taylor J. Evaluating the effect of work incentives benefits counseling on employment outcomes of transition-age and young adult supplemental security income recipients with intellectual disabilities: a case control study. Journal of Occupational**



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**Rehabilitation. 2021; 31(3):581-591.**

<https://doi.org/10.1007/s10926-020-09950-7>

Abstract: Purpose Work incentives benefits counseling (WIBC) can be a strong facilitator contributing to improved employment outcomes for individuals with intellectual disabilities (ID) by providing information about how income may affect disability benefits eligibility. The purpose of this study is to evaluate the effect of WIBC as a VR intervention to improve on employment outcomes and earnings of transition-age youth and young adults with ID who are Supplemental Security Income benefits recipients using a propensity score matching analysis approach. Propensity score matching using logistic regression analysis and the nearest neighbour method was conducted to equalize the treatment (received WIBC) and control groups (not received WIBC) on the six prominent demographic covariates. The treatment group had higher rates of employment, higher hourly wages than the control group, while the treatment group worked less hours per week than the control group. Methods Propensity score matching using logistic regression analysis and the nearest neighbour method was conducted to equalize the treatment (received WIBC) and control groups (not received WIBC) on the six prominent demographic covariates. Results The treatment group had higher rates of employment, higher hourly wages than the control group, while the treatment group worked less hours per week than the control group. Conclusions Findings of the present study can be used by policy makers, transition specialists, rehabilitation counselors, and other disability service providers to increase employment outcomes and earnings for individuals with ID through WIBC services. Future research and practice implications are provided

**Jonsdottir IJ, Rafnsdottir GL, and Olafsdottir T. Job strain, gender and well-being at work: a case study of public sector line managers. International Journal of Workplace Health Management. 2020; 13(4):445-460.**

<https://doi.org/10.1108/IJWHM-10-2019-0134>

**Landsbergis P, Johanning E, Stillo M, Jain R, and Davis M. Upper extremity musculoskeletal disorders and work exposures among railroad maintenance-of-way workers. American Journal**



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**of Industrial Medicine. 2021; 64(9):744-757.**

<https://doi.org/10.1002/ajim.23259>

**Abstract:** Background: Our objective was to examine occupational risk factors for musculoskeletal disorders of the shoulders, elbows, wrists, and hands among railroad maintenance-of-way (MOW) workers. Little systematic research on musculoskeletal disorders has been conducted in this occupational group. Methods: In total, 3995 active members of the Brotherhood of Maintenance of Way Employees Division (BMWED) completed a standardized survey focusing on disorders caused by hand-transmitted vibration. We computed adjusted prevalence ratios (aPRs) using Poisson regression for shoulder, elbow, carpal tunnel syndrome, and vibration white finger musculoskeletal symptoms by work exposures, adjusted for age, region, race/ethnicity, smoking, potential second job, and spare time vehicle vibration exposure, and other work exposures. Results: Among active male BMWED members, we found associations between >5.2 years (vs. 0.0-0.7 years) duration of full-time equivalent power tool use and shoulder pain (aPR = 2.01; 95% confidence interval [CI], 1.43-2.85), elbow pain (aPR = 2.88; 95% CI, 1.86-4.46), vibration white finger symptoms (aPR = 2.49; 95% CI, 1.06-5.85), hand/wrist pain (aPR = 2.40; 95% CI, 1.74-3.32), finger numbness or tingling (aPR = 1.86; 95% CI, 1.38-2.50) and self-reported carpal tunnel syndrome diagnosis (aPR = 2.16; 95% CI, 1.24-3.77). Associations were not consistent across outcomes for the duration of non-powered hand tool use and "repeated lifting, pushing, pulling, or bending." Positive gradients were observed for most outcomes. Conclusions: Hand-arm vibration and some other biomechanical exposures were associated with shoulder, elbow, wrist, hand, and finger symptoms. Prevention programs should address occupational risk factors for upper extremity musculoskeletal disorders among MOW workers.

**Lu J, Yu Y, Zhao Y, and Jenkin M. The correlation between workers' working pressure and physical and mental health analyzed by the job demand-resource stress model. Work. 2021; 69(2):573-583.**

<https://doi.org/10.3233/WOR-213500>

**Abstract:** BACKGROUND: Under the background of the information society, teachers' pressure from work and life is increasing.



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Meanwhile, the working pressure has a potential inevitable connection with the physical and mental health of teachers. **OBJECTIVE:** To analyze the correlation between working pressure of workers and mental health status, expand the application of the job demand-resource stress (JD-RS) model in the adjustment of working characteristic pressure, and achieve the coordinated development between working pressure and mental health. **METHODS:** The occupation of the teacher is taken as the research object. First, the pressure source questionnaire and Symptom Check List 90 (SCL-90) are chosen to measure the working pressure and mental health. Also, the reliability and validity of the pressure source questionnaire are tested. Second, the gender, duty, teaching age, and workload of teachers are chosen as the foundation for comparing and analyzing the impact of various dimensions and project factors on teachers' working pressure and mental health. Finally, based on the method of univariate linear regression analysis, the correlation between teachers' working pressure and mental health is analyzed and characterized. **RESULTS:** The measurement tool based on the pressure source questionnaire has good performance reliability and validity. The five dimensions of Cronbach's coefficients are all greater than 0.8, and the indicators of fitting all meet psychometrics requirements. Significance analysis shows that different genders, duties, teaching ages, and workloads have different levels of significant influence on teachers' working pressure and mental health. Linear regression analysis shows that teachers' working pressure has a significant impact on their physical and mental health, which has a predictive effect. Teachers who bear high-intensity pressure have psychological problems. **CONCLUSIONS:** The research based on the JD-RS model has a positive role in promoting the balanced and coordinated development of working pressure and the physical and mental health of employed workers

**Olak AJ, Hejduk I, Karwowski W, Tomczyk P, Fazlagic J, Gac P, et al. The relationships between the use of smart mobile technology, safety knowledge and propensity to follow safe practices at work. International Journal of Occupational Safety & Ergonomics. 2021; 27(3):911-920.**

<https://doi.org/10.1080/10803548.2019.1658398>

Abstract: The main objective of this study was to investigate the



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relationships between the use of smart technology (mobile phones) and the implicit (tacit) and explicit safety knowledge of employees and their propensity to follow safe practices at work. A survey was performed with seven constructs: (a) use of mobile technology; (b) tacit safety knowledge; (c) explicit safety knowledge of unsafe behaviors; (d) attitudes toward safety: emotional aspects; (e) safety culture: behavioral and psychological aspects of work; (f) safety culture: aspects of work; (g) safety culture: regulations at work. Workers from three manufacturing companies located in southeastern Poland completed a paper-based survey. The results revealed that using mobile technology positively influenced the explicit safety knowledge of employees, as well as their assessed safety culture, in terms of behavioral aspects and their attitudes toward safety expressed through the psychological aspects of safety culture

**Ryynanen K, Oura P, Simula AS, Holopainen R, Paukkunen M, Lausmaa M, et al. Effectiveness of training in guideline-oriented biopsychosocial management of low-back pain in occupational health services: a cluster randomized controlled trial. Scandinavian Journal of Work, Environment & Health. 2021; 47(5):367-376. <https://doi.org/10.5271/sjweh.3959> [open access]**

**Abstract:** OBJECTIVE: This study aimed to investigate the effectiveness of brief training in the guideline-oriented biopsychosocial management of low-back pain (LBP) in occupational health services using a cluster-randomized design. A small sample of physiotherapists and physicians from the intervention units (N=12) were given three- to seven-day training focusing on the biopsychosocial management of LBP, while professionals in the control units (N=15) received no such training. METHODS: Eligible patients with LBP, with or without radicular pain, aged 18-65, were invited to participate. A web-based questionnaire was sent to all recruited patients at baseline, three months and one year. The primary outcome measure was disability (Oswestry Disability Index, ODI) over one year. Between-group differences were analyzed using linear and generalized linear mixed models adjusted for baseline-response delay as well as variables showing between-group imbalance at baseline. RESULTS: The final study sample comprised



234 and 81 patients in the intervention and control groups, respectively at baseline, and 137 and 47 patients, respectively, at one year. At baseline, the mean duration of pain was longer in the intervention group ( $P=0.017$ ), and pain-related fear concerning physical activity was lower ( $P=0.012$ ). We observed no significant difference between the groups' primary outcome measure (adjusted one-year mean difference in the ODI: 2.3; 95% confidence interval - 1.0-5.7;  $P=0.175$ ) or most secondary outcomes. **CONCLUSIONS:** Brief training in guideline-oriented biopsychosocial management of LBP for occupational health professionals did not appear to be effective in reducing patients' symptom over one-year follow-up compared to treatment as usual

**Sahar Kostis YO, Rinsky-Halivni L, Cohen C, Zack O, Dekel R, and Moshe S. Fitness for work during the COVID-19 disease: principles and suggested assistive tool for protecting workers during the pandemic era. International Archives of Occupational & Environmental Health. 2021; 94(6):1233-1238.**

<https://doi.org/10.1007/s00420-021-01722-x> [open access]

**Abstract:** **OBJECTIVE:** Amongst the many intricacies engendered by the COVID-19 pandemic was the posed risk of exposure to SARS-COV2 infections among workers and the need to evaluate fitness for work (FFW) of individuals in high exposure groups or those with background morbidity. A designated task force of the Israeli Association of Occupational Medicine has evaluated the relevant literature and published guidelines concerning medical work restrictions for employees in high-risk occupations during the epidemic of novel COVID-19. **METHODS:** The study depicts a case series of 17 FFW evaluations performed in Maccabi Health Services occupational clinics using the guidelines formulated by the Israeli Occupational Medicine Association. **RESULTS:** 17 patients, mainly healthcare workers, whose major health hazards were immunodeficiency, respiratory diseases and pregnancy, were assessed in this case series. We present the essential parameters of these FFW evaluations and discuss decision-making in selected cases. **CONCLUSIONS:** Applying guidelines in various work settings and health risk levels during the SARS-CoV-2 pandemic allows for both patients' health preservation and efficient workforce deployment



**Stefanovic V, Urosevic S, Stevic S, and Mladenovic-Ranisavljevic I. Multicriteria ranking of the influential factors of safety as criteria for development of the occupational safety and health climate. International Journal of Occupational Safety & Ergonomics. 2021; 27(3):763-773.**

<https://doi.org/10.1080/10803548.2019.1646474>

Abstract: The research in this article aimed at determining the importance of occupational safety and health (OSH) factors at work as criteria for development of the OSH climate. Based on the views of 28 responsible persons of the OSH management system, the significance of the criteria was determined using the rough step-wise weight assessment ratio analysis method. The obtained results show that development of the OSH climate in organizations primarily depends on the factors of the work environment and the commitment of the management to the OSH system. The results also point out that education of employees in the field of safety at work has a significant impact. A comparison of the obtained results was made in the sensitivity analysis using the full consistency method. The specific dimensions of the safety climate at work were determined and ranking of the OSH factors was performed

**Tani M. Occupational licensing and the skills mismatch of highly educated migrants. British Journal of Industrial Relations. 2021; 59(3):730-756.**

<https://doi.org/10.1111/bjir.12574>

**\*IWH authored publications.**



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