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

**\*Carnide N, Chrystoja BR, Lee H, Furlan AD, and Smith PM. Cannabis use motives and associations with personal and work characteristics among Canadian workers: a cross-sectional study. *Journal of Occupational Medicine and Toxicology*. 2024; 19(1):25.**

<https://doi.org/10.1186/s12995-024-00424-7> [open access]

**Abstract:** Background: Research on cannabis use motives has focused on youth. Little is known about motives among working adults, including how work may play a role. This study aimed to describe cannabis use motives and their connection to work, and identify the personal and work correlates of work-related motives among a sample of workers. Methods: A national, cross-sectional sample of Canadian workers were queried about their cannabis use. Workers reporting past-year cannabis use (n = 589) were asked their motives for using cannabis and whether each motive was related to work or helped them manage at work (i.e., work-related). Multinomial logistic regression analyses were conducted to estimate the associations of personal and work characteristics with work-related cannabis use motives (no work-related motives, < 50% of motives work-related, = 50% of motives work-related). Results: Use for relaxation (59.3%), enjoyment (47.2%), social reasons (35.3%), coping (35.1%), medical reasons (30.9%), and sleep (29.9%) were the most common motives. Almost 40% of respondents reported one or more of their cannabis use motives were work-related, with coping (19.9%) and relaxation (16.3%) most commonly reported as work-related. Younger age, poorer general health, greater job stress, having a supervisory role, and hazardous work were associated with increased odds of reporting at least some cannabis use motives to be work-related, while work schedule and greater frequency of alcohol use were associated with reduced odds of motives being primarily work-related. Conclusions: Cannabis use motives among workers are diverse and frequently associated with work. Greater attention to the role of work in motivating cannabis use is warranted.

**\*Orchard C, Lin E, Rosella L, and Smith PM. Using unsupervised clustering approaches to identify common mental health profiles and associated mental healthcare service use patterns in Ontario, Canada. *American Journal of Epidemiology*. 2024; [epub ahead of print].**

<https://doi.org/10.1093/aje/kwae030> [open access]

Abstract: Mental health is a complex, multidimensional concept that goes beyond clinical diagnoses, including psychological distress, life stress and well-being. This study aims to use unsupervised clustering approaches to identify multidimensional mental health profiles that exist in the population, and their associated service use patterns. The data source for this study is the 2012 Canadian Community Health Survey- Mental Health linked to administrative healthcare data holdings, included were all Ontario adult respondents. We used a Partitioning Around Medoids clustering algorithm with Gower's proximity to identify groups with distinct combinations of mental health indicators and described them by their sociodemographic and service use characteristics. We identified four groups with distinct mental health profiles, including one group who met the clinical threshold for a depressive diagnosis, with the remaining three groups expressing differences in positive mental health, life stress and self-rated mental health. The four groups had different age, employment and income profiles and exhibited differential access to mental healthcare services. This study represents the first step in identifying complex profiles of mental health at the population level in Ontario, Canada. Further research is required to better understand the potential causes and consequences of belonging to each of the mental health profiles identified

**Allan BA, Kim T, and Pham J. Disentangling underemployment and precarious work: a latent profile analysis. *Journal of Career Assessment*. 2024; 32(3):560-577.**

<https://doi.org/10.1177/10690727231212187>

**van Bezooijen E, van den Berge W, and Salomons A. The young bunch: youth minimum wages and labor market outcomes. *ILR Review*. 2024; 77(3):428-460.**

<https://doi.org/10.1177/00197939241239317> [open access]

Abstract: The authors estimate the effects of an increase in the youth minimum wage in the Netherlands on low-paid workers' employment and earnings, using a difference-in-differences approach with detailed administrative data. Findings show that the increase does not have a negative effect on the number of jobs or hours worked, hence raising overall earnings for affected workers. Further, the minimum wage increase has substantial spillover effects, accounting for close to 70% of the average wage increase experienced by workers. While employment grows in fixed-term and temporary help agency contracts, the authors do not find evidence of declines in employment in other types of work arrangements, nor of labor-labor substitution. Labor market outcomes evolve most favorably for full-time incumbent workers who are not enrolled in education and are thus less likely to be transient occupants of minimum wage jobs.

**Chen C, Xiao B, He X, Wu J, Li W, and Yan M. Prevalence of low back pain in professional drivers: a meta-analysis. *Public Health*. 2024; 231:23-30.**

<https://doi.org/10.1016/j.puhe.2024.03.007> [open access]

Abstract: OBJECTIVE: This meta-review aimed to investigate the prevalence of low back pain (LBP) in professional drivers. STUDY DESIGN: This study is a meta-analysis. METHODS: PubMed, Scopus, Embase, and Web of Science were searched for cross-sectional studies on the prevalence of LBP in professional drivers up to August 2023. The Agency for Healthcare Research and Quality was utilized

for cross-sectional analytical studies. Statistical analysis of the included outcome indicators was conducted using Stata 16.0. The prevalence of LBP among professional drivers was measured using the random effects model, and heterogeneity was evaluated utilizing subgroup analysis. This meta-analysis review was registered with PROSPERO on April 28, 2023, under the registration number CRD42023422205. RESULTS: In total, 1, 558 results met the inclusion and exclusion criteria, and 53 studies were included. The meta-analysis results indicated that professional drivers had a LBP prevalence of 35.0%, 95%CI (0.266, 0.433) for one week, 33.80%, 95%CI (0.233, 0.443) for one month, and 55.30%, 95%CI (0.503,0.603) for one year. In the global population of professional drivers, the prevalence of LBP was 56.0%, 95%CI (0.472, 0.648) and 54.5%, 95%CI (0.488, 0.602) without and with a history and high risk of LBP, respectively. CONCLUSIONS: LBP remains prevalent among international drivers and has multiple contributing factors, highlighting the urgent need for increased awareness and prevention strategies

**Coats SF, Roemer EC, Kent KB, Zhang Y, Davis MF, and Goetzel RZ. Scoping review of workplace mental health and well-being programs in higher education institutions. *Journal of Occupational & Environmental Medicine*. 2024; 66(6):461-466.**

<https://doi.org/10.1097/JOM.0000000000003086>

Abstract: OBJECTIVE: The study aimed to conduct a scoping review of stressors in higher education institutions (HEIs), exacerbated by the COVID-19 pandemic, and to identify successful interventions. METHODS: We reviewed 79 studies published between January 2020 and January 2023. RESULTS: Stressors were organized into psychosocial, organizational, and environmental categories. They included high job demand/low control, work/personal life imbalance, pressure to publish, lack of resources, low perceived organizational support, and fear of infection. Interventions included providing back-up childcare, employee assistance programs, financial well-being resources, paid medical leave, flexible work arrangements, greater transparency in decision making, leadership development, and adaptive physical space design. CONCLUSIONS: Mental health and well-being interventions directed at faculty and staff in HEIs are needed given the many stressors faced by this workforce. Several interventions are highlighted in the literature, but most are speculative regarding their impact, given the limited number of outcome studies

**Foncubierto-Rodriguez MJ, Poza-Mendez M, and Holgado-Herrero M. Workplace health promotion programs: the role of compliance with workers' expectations, the reputation and the productivity of the company. *Journal of Safety Research*. 2024; 89:56-63.**

<https://doi.org/10.1016/j.jsr.2024.02.008> [open access]

Abstract: INTRODUCTION: Addressing the health and safety of workers is key to achieving Sustainable Development Goals 3 and 8. The European Union urges companies in its member countries to promote measures in this regard. However, this type of program is not a general approach in European companies. This study aims to identify whether the implementation of Workplace Health Promotion measures is influenced by the company's desire to meet its employees' expectations in this area; and if this relationship involves the company's reputation and productivity. METHODS: A multi-step methodology is used (descriptive sample portrait, analysis of influences by linear regression, and double-intermediation model analysis) to find out if reputation and productivity mediate the relationship between the satisfaction of employee health expectations and the number of Workplace Health Promotion measures applied. RESULTS: The more weight the company gives to this

compliance, the more motivated it is to implement a more significant number of Workplace Health Promotion measures. The increase in productivity does not seem to weigh in this relationship, but the improvement of the company's reputation does. **CONCLUSIONS:** The more the employees' expectations of working in a healthy company are desired to be met, the more measures the company will put in place. **PRACTICAL APPLICATIONS:** The findings have theoretical implications, by increasing knowledge about the factors that influence a company's decision to activate Workplace Health Promotion policies. They can also serve as guidance for implementing policies that encourage health promotion in companies and contribute to the achievement of Sustainable Development Goals 3 and 8: for workers' representatives, by better understanding how these factors influence the fulfillment of their constituents' expectations; for company managers, by better knowing the variables involved in this relationship; and for researchers of this topic

**Hayes JS, Barreto M, Kalin-Manttari L, Mexia R, Connolly MA, and Voutilainen L. Development of a workforce self-assessment tool for public health emergency preparedness. *European Journal of Public Health*. 2024; 34(3):482-489.**

<https://doi.org/10.1093/eurpub/ckae030> [open access]

**Abstract:** **BACKGROUND:** In collaboration with six European public health agencies as part of the PANDEM-2 consortium, we have developed and validated a self-assessment tool that captures the workforce capacities and capabilities needed at the institutional level within National Public Health Institutes (NPHIs) to deal with public health emergencies. **METHODS:** The work carried out in this study included (i) a review of existing tools for workforce assessment, (ii) focus group discussions and interviews to map the experiences and needs of NPHI's, (iii) the development of a tool for NPHI's to assess their workforce capacity and capabilities in public health emergency preparedness (PHEP) and (iv) refinement of the assessment tool via a Delphi study. **RESULTS:** Capacity markers were identified to assess the workforce required for PHEP functions and the availability of surge capacity during a public health emergency. The tool also enables NPHIs to analyze gaps in PHEP staff competencies. The assessment scores can assist NPHI pandemic preparedness by identifying and prioritizing training and recruitment needs. **CONCLUSIONS:** In line with EU Regulation 2022/2371 on serious cross-border threats to health, article 11 Training of healthcare staff and public health staff, Member States (MS) are tasked with assessing current workforce capacity and capability gaps. The PANDEM-2 workforce self-assessment tool aligns with this requirement and will support effective planning and development to strengthen the public health workforce capacity in EU MS

**Janssens KME, Joosen MCW, Henderson C, van Weeghel J, and Brouwers EPM. Improving work participation outcomes among unemployed people with mental health issues/mental illness: feasibility of a stigma awareness intervention. *Journal of Occupational Rehabilitation*. 2024; 34(2):447-460.**

<https://doi.org/10.1007/s10926-023-10141-3> [open access]

**Abstract:** **PURPOSE:** As stigma is a barrier to work participation of unemployed people with mental health issues/mental illness (MHI), a stigma awareness intervention can be helpful to make informed decisions about disclosing MHI. The aim of this process evaluation was to investigate the feasibility of a stigma awareness intervention, to explore experiences of clients and their employment specialists; and to give recommendations for further implementation. **METHODS:** The intervention consisted of a stigma awareness training for employment specialists and a decision aid tool for their clients with (a

history of) MHI. For the process evaluation, six process components of the Linnan & Stecklar framework were examined: recruitment, reach, dose delivered, dose received, fidelity and context. Using a mixed-methods design, quantitative and qualitative data were collected and analyzed. RESULTS: The six components showed the intervention was largely implemented as planned. Questionnaire data showed that 94% of the clients found the tool useful and 87% would recommend it to others. In addition, more than half (54%) indicated the tool had been helpful in their disclosure decision. Qualitative data showed that participants were mainly positive about the intervention. Nevertheless, only a minority of clients and employment specialists had actually discussed the tool together. According to both, the intervention had increased their awareness of workplace stigma and the disclosure dilemma. CONCLUSION: The implementation of a stigma awareness intervention was feasible and did increase stigma awareness. Experiences with the intervention were mainly positive. When implementing the tool, it is recommended to embed it in the vocational rehabilitation system, so that discussing the disclosure dilemma becomes a routine. TRAIL REGISTER: The study was retrospectively registered at the Dutch Trial Register (TRN: NL7798, date: 04-06-2019)

**Keet MG, Boudewijns B, Jongenotter F, van Iersel S, van Werkhoven CH, van Gageldonk-Lafeber RB, et al. Association between work sick-leave absenteeism and SARS-CoV-2 notifications in the Netherlands during the COVID-19 epidemic. *European Journal of Public Health*. 2024; 34(3):497-504. <https://doi.org/10.1093/eurpub/ckae051> [open access]**

Abstract: BACKGROUND: Alternative data sources for surveillance have gained importance in maintaining coronavirus disease 2019 (COVID-19) situational awareness as nationwide testing has drastically decreased. Therefore, we explored whether rates of sick-leave from work are associated with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) notification trends and at which lag, to indicate the usefulness of sick-leave data for COVID-19 surveillance. METHODS: We explored trends during the COVID-19 epidemic of weekly sick-leave rates and SARS-CoV-2 notification rates from 1 June 2020 to 10 April 2022. Separate time series were inspected visually. Then, Spearman correlation coefficients were calculated at different lag and lead times of zero to four weeks between sick-leave and SARS-CoV-2 notification rates. We distinguished between four SARS-CoV-2 variant periods, two labour sectors and overall, and all-cause sick-leave versus COVID-19-specific sick-leave. RESULTS: The correlation coefficients between weekly all-cause sick-leave and SARS-CoV-2 notification rate at optimal lags were between 0.58 and 0.93, varying by the variant period and sector (overall: 0.83, lag -1; 95% CI [0.76, 0.88]). COVID-19-specific sick-leave correlations were higher than all-cause sick-leave correlations. Correlations were slightly lower in healthcare and education than overall. The highest correlations were mostly at lag -2 and -1 for all-cause sick-leave, meaning that sick-leave preceded SARS-CoV-2 notifications. Correlations were highest mostly at lag zero for COVID-19-specific sick-leave (coinciding with SARS-CoV-2 notifications). CONCLUSION: All-cause sick-leave might offer an earlier indication and evolution of trends in SARS-CoV-2 rates, especially when testing is less available. Sick-leave data may complement COVID-19 and other infectious disease surveillance systems as a syndromic data source

**Mofakhami M, Council E, and Pailhe A. Telework, working conditions, health and wellbeing during the Covid crisis: a gendered analysis. *Social Science & Medicine*. 2024; 350:116919. <https://doi.org/10.1016/j.socscimed.2024.116919>**

Abstract: OBJECTIVE: Telework was massively adopted during the COVID-19 crisis. Related changes in

working conditions may have affected women's and men's health differently due to the gendered division of work. Our study aimed to assess the gendered association of telework with physical and mental health outcomes one year after the onset of the pandemic and to determine whether the pathways of working conditions underlying these associations are gender-related. **METHODS:** We compared pre-pandemic and Covid-crisis work contexts using a large representative sample of French employees surveyed in early 2021. We identified potential work-related mediators of the relationship between telework and well-being, i.e., change in autonomy, low support, work overload, digital issues, atypical working time, meaning at work, and work-life balance, and used multiple-matching and adjusting for confounders. **RESULTS:** All things being equal, the health and well-being of teleworkers were, on average, less favourable than that of on-site workers, with little gender differences. The selected working conditions mediated a substantial part of the relationship, indicating that important pathways were captured, such as meaning at work. These pathways partly differed between women and men. In particular, in new teleworkers, the largest contributions came from digital issues for women, and from low support at work and work overload for men. **CONCLUSION:** People who teleworked during the pandemic were at higher odds of deterioration of health and well-being than onsite workers. Health patterns were similar among male and female teleworkers; however, the pathways differed. These negative effects may yet have been absorbed once the government pandemic response became less stringent

**Mori T, Nagata T, Odagami K, Nagata M, Purwito AN, and Mori K. A prospective cohort study of perceived organizational support and occupational accidents and near-miss events among Japanese workers. *Journal of Safety Research*. 2024; 89:19-25.**

<https://doi.org/10.1016/j.jsr.2024.01.002>

**Abstract:** Introduction: Preventing occupational accidents is a major global challenge, and employee safety practices play a crucial role in accident prevention. Although perceived organizational support (POS) is related to safety practices, there is currently insufficient evidence supporting a relationship between POS and occupational accidents. We investigated the relationships between POS and both occupational accidents and near-miss events that can lead to accidents in the following year among workers in various industries in Japan. **Method:** This prospective cohort study was conducted from March 2022 to March 2023 using a questionnaire survey. In total, 9916 participants who completed the follow-up survey and met our inclusion criteria were analyzed. The follow-up survey asked participants about both occupational accidents and near-miss events experienced in the year following the baseline assessment. POS was evaluated at baseline using the eight-item version of the Survey of Perceived Organizational Support. Odds ratios (ORs) for the relationships between POS and occupational accidents and near-miss events were estimated using multilevel logistic regression analyses nested by industries. **Results:** The ORs for self-reported occupational accidents were significantly higher for the moderate (OR = 1.41, 95% confidence interval [CI]: 1.10-1.82), low (OR = 1.49, 95%CI: 1.18-1.89), and very low (OR = 2.03, 95%CI: 1.61-2.56) POS groups compared with the very high group. The ORs for self-reported near-miss events were also significantly higher for the moderate (OR = 1.21, 95%CI: 1.03-1.43), low (OR = 1.20, 95%CI: 1.03-1.40), and very low (OR = 1.56, 95%CI: 1.34-1.82) groups than the very high group. **Conclusions:** Our findings suggest lower POS is related to a higher occurrence of occupational accidents and near-miss events in the following year. Organizations should consider enhancing employees' POS to reduce occupational accidents and near-miss events. **Practical applications:** To enhance employees' POS, organizations should address

identified antecedents of POS (e.g., fairness, supervisor support, rewards, favorable job conditions, and human resource practices).

**Niedhammer I, Sultan-Taieb H, and Chastang JF. The overall fractions of coronary heart diseases and depression attributable to multiple dependent psychosocial work factors in Europe. *International Archives of Occupational & Environmental Health*. 2024; 97(5):569-574.**

<https://doi.org/10.1007/s00420-024-02067-x> [open access]

Abstract: OBJECTIVES: The literature is nonexistent on the assessment of overall fractions of diseases attributable to multiple dependent psychosocial work factors. The objectives of the study were to calculate the overall fractions of coronary heart diseases (CHD) and depression attributable to multiple dependent psychosocial work factors in 35 European countries. METHODS: We used already published fractions of CHD and depression attributable to each of the following psychosocial work factors: job strain, effort-reward imbalance, job insecurity, long working hours, and workplace bullying. We took all exposures and their correlations into account to calculate overall attributable fractions. Wald tests were performed to test differences in these overall attributable fractions between genders and between countries. RESULTS: The overall fractions of CHD and depression attributable to all studied psychosocial work factors together were found to be 8.1% [95% CI: 2.0-13.9] and 26.3% [95% CI: 16.2-35.5] respectively in the 35 European countries. There was no difference between genders and between countries. CONCLUSION: Our study showed that the overall fractions attributable to all studied psychosocial work factors were substantial especially for depression. These overall attributable fractions may be particularly useful to evaluate the burden and costs attributable to psychosocial work factors, and also to inform policies makers at European level

**Rosa DKS, Rosa MABMV, and Padula RS. Factors associated with nonspecific neck pain incidence in industrial workers: a systematic review. *International Journal of Industrial Ergonomics*. 2024; 101:103596.**

<https://doi.org/10.1016/j.ergon.2024.103596>

**Santos C, Gabriel AT, Quaresma C, and Nunes IL. Risk factors, symptoms, and prevalence of lower limb work-related musculoskeletal disorders among orthopedic surgeons. *International Journal of Industrial Ergonomics*. 2024; 101:103597.**

<https://doi.org/10.1016/j.ergon.2024.103597> [open access]

Abstract: While performing orthopedic surgeries, surgeons stand for long hours, carrying out repetitive and/or forceful movements, in sustained awkward postures, increasing the risk of work-related musculoskeletal disorders (WRMSD). Nonetheless, the literature addressing the risk factors, prevalence and symptoms of lower limb WRMSD remains dispersed and lacks a comprehensive synthesis. However, considering the critical role of lower limbs in maintaining surgical stability and balance, WRMSD affecting lower limbs could significantly compromise precision and motor skills, potentially impacting surgery outcomes. This systematic review addresses this gap by consolidating evidence on lower limb WRMSD incidence and symptoms among orthopedic surgeons, while identifying the underlying risk factors. The selection of the papers for this systematic review follows the PRISMA methodology and includes articles from Scopus, PubMed, and Web of Science published between 2013 and 2023. Among 320 articles initially identified, 14 met the inclusion criteria. This systematic review shows knee WRMSD symptoms as the most prevalent, followed by foot/ankle and hip/thigh symptoms. The prevalence of foot/ankle WRMSD was the highest, followed by knee/lower

leg and hip/thigh WRMSD. Additionally, the main risk factors reported as contributing to the development of these disorders included prolonged standing, static postures, higher body mass index, aging, smoking, and years of experience. The findings of this systematic review highlight the substantial prevalence of lower limb WRMSD and symptoms among orthopedic surgeons and shed light on the associated risk factors. Understanding these factors is crucial for devising preventive measures and ergonomic interventions, ultimately enhancing the well-being of surgeons, and improving patient care.

**Yeo H, Lee J, Jeon S, Hwang Y, Kim J, Lee S, et al. Moderating effect of shift work on sleep and depression in individuals at high risk of bipolar disorder. *Journal of Affective Disorders*. 2024; 359(206-214).**

<https://doi.org/10.1016/j.jad.2024.05.090>

**Abstract:** Background: Social Zeitgeber Theory posits that disruptions in social rhythms can increase susceptibility to bipolar disorder (BD). Shift work (SW) is one of the external factors that cause instability in social rhythms and the sleep-wake cycle. This study evaluated the moderating influences of SW on the risks of BD and sleep-related parameters and depressive symptoms. Furthermore, we evaluated the specific work schedules including daytime, nighttime, and regular and irregular rotating SW. Methods: An online survey was administered to 6665 participants, with 3379 (50.7 %) classified as individuals with high scores of Mood Disorder Questionnaire (MDQ). The survey included the Pittsburgh Sleep Quality Index (PSQI), Insomnia Severity Scale (ISI), Epworth Sleepiness Scale (ESS), and Center for Epidemiologic Studies Depression Scale (CES-D). Results: A multivariate regression model revealed significant interactive effects of MDQ positivity and SW on PSQI, ISI, and CES-D scores, but not ESS scores. In a secondary analysis of the high MDQ screen group, daytime workers had lower scores in sleep disturbances and depressive symptoms compared to those engaged in other forms of SW. Limitations: Online surveys were accessible voluntarily, leading to potential selection bias. Cross-sectional data identified associations, not causal relationships. Only a self-reported questionnaire was used. Conclusions: Our findings emphasize the advantages of a daytime work schedule for individuals at high risk of BD. In accordance with the principles of social rhythm interpersonal therapy, sleep interventions for individuals at high risk of BD should include the maintenance of a consistent daytime schedule.

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