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**February 19, 2021**

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**Anderson J, Williams AE, and Nester C. Musculoskeletal disorders, foot health and footwear choice in occupations involving prolonged standing. *International Journal of Industrial Ergonomics*. 2021; 81:103079.**

<https://doi.org/10.1016/j.ergon.2020.103079>

**Aviram J, Pud D, Gershoni T, Schiff-Keren B, Ogintz M, Vulfsons S, et al. Medical cannabis treatment for chronic pain: outcomes and prediction of response. *European Journal of Pain*. 2021; 25(2):359-374.**

<https://doi.org/10.1002/ejp.1675> [open access]

**Abstract:** Background: Although studied in a few randomized controlled trials, the efficacy of medical cannabis (MC) for chronic pain remains controversial. Using an alternative approach, this multicentre, questionnaire-based prospective cohort was aimed to assess the long-term effects of MC on chronic pain of various aetiologies and to identify predictors for MC treatment success. **Methods:** Patients with chronic pain, licensed to use MC in Israel, reported weekly average pain intensity (primary outcome) and related symptoms before and at 1, 3, 6, 9 and 12 months following MC



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treatment initiation. A general linear model was used to assess outcomes and identify predictors for treatment success (=30% reduction in pain intensity). Results: A total of 1,045 patients completed the baseline questionnaires and initiated MC treatment, and 551 completed the 12-month follow-up. At 1 year, average pain intensity declined from baseline by 20% [-1.97 points (95%CI = -2.13 to -1.81;  $p < 0.001$ )]. All other parameters improved by 10%-30% ( $p < 0.001$ ). A significant decrease of 42% [reduction of 27 mg; (95%CI = -34.89 to 18.56,  $p < 0.001$ )] from baseline in morphine equivalent daily dosage of opioids was also observed. Reported adverse effects were common but mostly non-serious. Presence of normal to long sleep duration, lower body mass index and lower depression score predicted relatively higher treatment success, whereas presence of neuropathic pain predicted the opposite. Conclusions: This prospective study provides further evidence for the effects of MC on chronic pain and related symptoms, demonstrating an overall mild-to-modest long-term improvement of the tested measures and identifying possible predictors for treatment success.

**Deepak MD and Mahesh G. Influence of knowledge-based safety culture in the construction industry: a stakeholder's perspective. International Journal of Workplace Health Management. 2020; 14(1):111-128.**

<https://doi.org/10.1108/IJWHM-11-2019-0150>

**Dong Y, Jin X, Wang J, Maimaiti N, He L, Wang F, et al. Study on the associations of individual and work-related factors with low back pain among manufacturing workers based on logistic regression and structural equation model. International Journal of Environmental Research and Public Health. 2021; 18(4):1525.**

<https://doi.org/10.3390/ijerph18041525> [open access]

Abstract: Work-related musculoskeletal injuries are one of the major occupational health issues of the workers, especially low back pain (LBP). The aim of this study was to survey the prevalence of LBP among manufacturing workers and to identify associations of individual and work-related factors with LBP. A cross-sectional questionnaire study was performed with 1173 participating manufacturing workers. The questionnaire included individual factors, psychosocial and physical exposures, and musculoskeletal



discomfort. It was analyzed by logistic regression and structural equation modeling (SEM). The 1-year prevalence of LBP among Chinese manufacturing workers was 33.6%. Logistic regression analysis showed that job tenure, awkward postures, vibration and job demand were positively-while social support and job control were negatively associated with LBP ( $p < 0.05$ ). The SEM results indicated that, as shown in other studies, job types, job tenure, postural load, high job demand, low job control and vibration were directly associated with LBP, but also that job types, high job demand, low social support and vibration may have indirect effects on LBP-mediated by postural load

**Gerhardsson L, Hou L, and Pettersson K. Work-related exposure to organic solvents and the risk for multiple sclerosis: a systematic review. *International Archives of Occupational and Environmental Health*. 2021; 94(2):221-229.**

<https://doi.org/10.1007/s00420-020-01564-z>

Abstract: **PURPOSE:** Multiple sclerosis (MS) is a chronic progressive neurological disorder. Several environmental factors have been discussed as possible causing agents, e.g. organic solvents, whose impact on the disease is analysed in this review. **METHODS:** Systematic search strategies were used to identify high-quality studies of workers exposed to organic solvents, published up to September 30, 2019, in databases, such as PubMed, Cochrane library and Scopus. The exposure was in most studies obtained by questionnaires, supplemented with telephone interviews. The diagnosis MS was mainly determined following a thorough neurological examination. Finally, fourteen case-control studies and two cohort studies met the inclusion criteria and were included in the meta-analysis. Random effects models were used to pool the results of the studies. **RESULTS:** The odds ratios from the 14 case-control studies included in the meta-analysis ranged from 0.12-4.0. Five case-control studies and one cohort study showed a significant association between the development of multiple sclerosis and exposure to organic solvents. The results from the other nine case-control studies and from one of the two cohort studies did not reach statistical significance. The pooled data from the 14 case-control studies gave an OR of 1.44 (95% CI 1.03-1.99), which shows a moderately increased risk of developing MS after exposure to organic



solvents. CONCLUSIONS: The final interpretation of the result is that organic solvents may be slightly associated with an increased risk to develop MS. In addition, other factors, e.g. genetic markers and smoking, may contribute to the development of the disease

**Gilbert-Ouimet M, Trudel X, Aube K, Ndjaboue R, Duchaine CS, Blanchette C, et al. Validity of participants' self-reported diagnosis for a work absence due to a mental health problem compared with physician-certified diagnosis for the same work absence among 709 Canadian workers. Occupational & Environmental Medicine. 2020; 78:221-224.**

<https://doi.org/10.1136/oemed-2020-106658>

Abstract: OBJECTIVES: This study assesses the validity of a self-reported mental health problem (MHP) diagnosis as the reason for a work absence of 5 days or more compared with a physician-certified MHP diagnosis related to the same work absence. The potential modifying effect of absence duration on validity is also examined.

METHODS: A total of 709 participants (1031 sickness absence episodes) were selected and interviewed. Total per cent agreement, Cohen's kappa, sensitivity and specificity values were calculated using the physician-certified MHP diagnosis related to a given work absence as the reference standard. Stratified analyses of total agreement, sensitivity and specificity values were also examined by duration of work absence (5-20 workdays, >20 workdays). RESULTS: Total agreement value for self-reported MHP was 90%. Cohen's kappa value was substantial (0.74). Sensitivity was 77% and specificity was 95%. Absences of more than 20 workdays had a better sensitivity than absences of shorter duration. A high specificity was observed for both short and longer absence episodes.

CONCLUSION: This study showed high specificity and good sensitivity of self-reported MHP diagnosis compared with physician-certified MHP diagnosis for the same work absence. Absences of longer durations had a better sensitivity

**Greene AM, Kirton G, Koumenta M, and Humphris A. The gender representation gap: implications for workplace union effectiveness. Industrial Relations Journal. 2021; 52(1):40-63.**

<https://doi.org/10.1111/irj.12316>



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**Hakansson C, Gard G, and Lindegard A. Perceived work stress, overcommitment, balance in everyday life, individual factors, self-rated health and work ability among women and men in the public sector in Sweden: a longitudinal study. Archives of Public Health. 2020; 78(1):132.**

<https://doi.org/10.1186/s13690-020-00512-0> [open access]

Abstract: BACKGROUND: The aim was to investigate whether perceived work stress, overcommitment, balance in everyday life, individual factors and self-rated health in combination predict work ability among women and men in the public sector in Sweden. METHODS: A sample was randomly selected from the employee records of the participating public health care organisation in Western Sweden. In total, 2223 employees were included and answered a postal survey twice, at a 2 year interval. The survey included questions about work ability, perceived work stress, overcommitment, balance in everyday life, individual factors and self-rated health. Odds ratios with 95% confidence intervals for work ability were estimated using logistic regression. RESULTS: Imbalance in everyday life and overcommitment predicted reduced work ability in women and imbalance in everyday life and low educational level predicted reduced work ability in men. However, when poor self-rated health was added to the models this was the strongest predictor of work ability for both genders. CONCLUSION: A combination of poor self-rated health, imbalance in everyday life, and overcommitment predicted reduced work ability. This multifactorial nature of work ability should be taken into account in health promotion programmes

**Kayabinar E, Kayabinar B, Onal B, Zengin HY, and Kose N. The musculoskeletal problems and psychosocial status of teachers giving online education during the COVID-19 pandemic and preventive telerehabilitation for musculoskeletal problems. Work. 2021; 68(1):33-43.**

<https://doi.org/10.3233/WOR-203357>

Abstract: BACKGROUND: Musculoskeletal and psychosocial problems have tended to increase during the COVID-19 pandemic. OBJECTIVE: To evaluate the changes in musculoskeletal problems and psychosocial status of teachers during the COVID-19 pandemic due to online education and to investigate the effects of preventive telerehabilitation applications for musculoskeletal problems.



**METHODS:** Forty teachers who conducted online education during the pandemic volunteered to participate in the study. All assessments were performed via online methods. The Cornell Musculoskeletal Discomfort Questionnaire (CMDQ), ProFitMap-Neck questionnaire, Oswestry Disability Index (ODI), and Upper Extremity Functional Index (UEFI) were used to evaluate musculoskeletal problems; the Beck Anxiety Inventory (BAI) and the Beck Depression Inventory (BDI) were used to evaluate anxiety and depression, respectively; and the Work-Life Balance Scale (WLBS) was used to evaluate how well individuals achieve this balance. Information about before online education, during online education, and after training was obtained with the assessments. After the first assessment, telerehabilitation, which involved presentations and brochures, was applied to 18 participants willing to participate in the training. **RESULTS:** The ProFitMap, UEFI, and WLBS scores during the online education decreased significantly, while the scores of the CMDQ, ODI, BDI, and BAI during the online education increased significantly compared to the pre-online education scores ( $p < 0.05$ ). In addition, the total CMDQ, ProFitMap, and ODI scores improved significantly after the training ( $p < 0.05$ ). **CONCLUSION:** Musculoskeletal and psychosocial problems increased in teachers during online education. Preventive telerehabilitation methods will be beneficial for individuals who do not have access to face-to-face physiotherapy

**Kwon MJ. The role of social capital and welfare in absenteeism across 26 OECD countries: moderating effect on employment and working conditions. Journal of Occupational & Environmental Medicine. 2021; 63(2):104-110.**

<https://doi.org/10.1097/JOM.0000000000002037>

Abstract: **OBJECTIVES:** This study attempted to investigate social contextual effect on the occurrence of workers' absenteeism.

**METHODS:** Survey data on 30,913 wage workers in 26 countries were linked to the indicators for social capital and welfare from the national database. Multi-level logistic regression was used for analyses. **RESULTS:** Employment contract, atypical work, physical and psycho-social working conditions (effort and reward), social capital and welfare significantly explained the differences in occurrence of absenteeism across countries. Analysis of cross-level interactions revealed that macro indicators related to social capital,



and public social and health expenditure had moderating effects on the relation between individual-level factors and absenteeism.  
**CONCLUSION:** High level of public spending on welfare policies and social bonding decrease the risk of absenteeism caused by vulnerable working environments, but it also worsen gaps in coping capabilities of workers in non-permanent contract and atypical work pattern

**Nguyen TL and Xie L. Incomparability of treatment groups is often blindly ignored in randomised controlled trials: a post hoc analysis of baseline characteristic tables. Journal of Clinical Epidemiology. 2021; 130:161-168.**

<https://doi.org/10.1016/j.jclinepi.2020.10.012>

**Abstract:** Objectives: Randomisation is often believed to lead to baseline comparability of treatment groups in controlled trials. This study aims to challenge this popular belief, which is relevant in expectation- but not necessarily in realisation. Study design and setting: After presenting an overview of methods for assessing baseline comparability of treatment groups in randomised controlled trials (RCTs), we reviewed RCTs published over 1 year in three high-impact medical journals. We extracted data regarding the methods used to evaluate baseline comparability. To quantify baseline balance, we calculated post hoc standardised mean differences (SMDs) in baseline characteristics reported in these trials. Results: Amongst 142 RCTs, 120 (84.5%) claimed that baseline comparability was achieved. However, 81 RCTs (57%) did not report how they assessed this balance. The rest (61 RCTs, 43%) used traditional statistical tests, which are deemed inappropriate for balance checking. Our post hoc calculation of SMDs showed that 49 (34.5%) RCTs had at least one baseline variable, which might have been strongly unbalanced (i.e., SMD =25%) across treatment groups. Conclusion: Baseline incomparability of treatment groups in RCTs is often blindly ignored. We suggest it be thoroughly evaluated and transparently reported, using the standardised mean difference or other proper balance metrics.

**Nyberg A, Kecklund G, Hanson LM, and Rajaleid K. Workplace violence and health in human service industries: a systematic review of prospective and longitudinal studies. Occupational &**



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**Environmental Medicine. 2021; 78(2):69-81.**

<https://doi.org/10.1136/oemed-2020-106450> [open access]

Abstract: OBJECTIVES: To provide systematically evaluated evidence of prospective associations between exposure to physical, psychological and gender-based violence and health among healthcare, social care and education workers. METHODS: The guidelines on Preferred Reporting Items for Systematic Reviews and Meta-Analyses were followed. Medline, Cinahl, Web of Science and PsycInfo were searched for population: human service workers; exposure: workplace violence; and study type: prospective or longitudinal in articles published 1990-August 2019. Quality assessment was performed based on a modified version of the Cochrane's 'Tool to Assess Risk of Bias in Cohort Studies'. RESULTS: After deduplication, 3566 studies remained, of which 132 articles were selected for full-text screening and 28 were included in the systematic review. A majority of the studies focused on healthcare personnel, were from the Nordic countries and were assessed to have medium quality. Nine of 11 associations between physical violence and poor mental health were statistically significant, and 3 of 4 associations between physical violence and sickness absence. Ten of 13 associations between psychological violence and poor mental health were statistically significant and 6 of 6 associations between psychological violence and sickness absence. The only study on gender-based violence and health reported a statistically non-significant association. CONCLUSION: There is consistent evidence mainly in medium quality studies of prospective associations between psychological violence and poor mental health and sickness absence, and between physical violence and poor mental health in human service workers. More research using objective outcomes, improved exposure assessment and that focus on gender-based violence is needed

**Schall C, Brooke V, Rounds R, and Lynch A. The resiliency of employees with intellectual and developmental disabilities during the COVID-19 pandemic and economic shutdown: a retrospective review of employment files. Journal of Vocational Rehabilitation. 2021; 54(1):15-24.**

<https://doi.org/10.3233/JVR-201113>



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**Stratton E, Player MJ, Dahlheimer A, Choi I, and Glozier N. Prevalence and association of discrimination and bullying and the impact on mental health in an occupational setting. International Journal of Workplace Health Management. 2020; 14(1):32-49.**

<https://doi.org/10.1108/IJWHM-02-2020-0018>

**Strauser DR, Greco CE, Koscuilek JF, Shen S, George Strauser D, and Phillips B. A tool to measure work adjustment in the post-pandemic economy: the Illinois work adjustment scale. Journal of Vocational Rehabilitation. 2021; 54(1):51-58.**

<https://doi.org/10.3233/JVR-201117>

**Thorsen SV, Flyvholm MA, Pedersen J, Bultmann U, Andersen LL, and Bjorner JB. Associations between physical and psychosocial work environment factors and sickness absence incidence depend on the lengths of the sickness absence episodes: a prospective study of 27 678 Danish employees. Occupational & Environmental Medicine. 2021; 78(1):46-53.**

<https://doi.org/10.1136/oemed-2020-106554> [open access]

**Abstract: Objectives:** This study examined if the association between work environment factors and sickness absence (SA) depended on the inclusion or exclusion of short-term SA episodes. **Methods:** We linked the 'Work Environment and Health in Denmark' survey with the 'Danish Register of Work Absences' (n=27 678). Using covariate adjusted Cox regression, we examined the associations between work environment factors and SA by changing the cut-off points for the length of the SA episodes, for example, episodes  $\geq 1$  day,  $\geq 6$  days and  $\geq 21$  days. We examined three physical work environment factors: 'Back bend or twisted', 'Lifting or carrying', 'Wet hands' and three psychosocial work environment factors: 'Poor influence', 'Role conflicts' and 'Bullying'. **Results:** 'Back bend or twisted' and 'Lifting or carrying' had small significant HRs for SA episodes  $\geq 1$  day and large and highly significant HRs for SA episodes  $\geq 6$  days and  $\geq 21$  days. 'Wet hands' had small significant HRs for SA episodes  $\geq 1$  day for both sexes and large and highly significant HR for  $\geq 6$  days for women. HRs of all three psychosocial factors were highly significant for SA episodes  $\geq 1$  day and  $\geq 6$  days for both sexes, and 'Poor influence' and 'Role conflicts' were significant for SA episodes  $\geq 21$



days for women. Conclusions: The physical work factors had higher associations with SA when SA episodes of 1-5 days were excluded and focus was on SA episodes  $\geq 6$  days. The psychosocial work factors were strongly associated with SA both with and without SA episodes of 1-5 days included in the analyses.

**Unal O, Akbolat M, Amarat M, and Tilkilioglu S. The role of the human factor in occupational safety and health performance. International Journal of Occupational Safety & Ergonomics. 2021; 27(1):179-184.**

<https://doi.org/10.1080/10803548.2018.1554932>

**Abstract:** Objectives. The purpose of this study is to determine the effect of managers' commitment to occupational safety and health (OSH) on employees' safety awareness and competency, employees' involvement, reporting culture and OSH performance; the effect of employees' involvement in OSH on safety awareness and competency, reporting culture and OSH performance; and the mediating role of employees' involvement in the effect of managers' commitment to OSH on OSH performance. Methods. The study population consisted of 600 people working in a private company and the sample consisted of 533 employees agreeing to participate in the survey. Data were analyzed using structural equation modeling. Results. The analysis results showed that managers' commitment to OSH had no significant effect on OSH performance but a significant positive effect on employees' safety awareness and competency, employees' involvement in OSH and reporting culture. Although managers' commitment to OSH alone had no significant effect on OSH performance, it had a significant effect on OSH performance when employees' involvement was used as a mediating variable. Conclusion. OSH should not be considered only as a technical matter. It is recommended that arrangements should be made to improve OSH considering the human factors involved in OSH

