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August 7, 2020

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Aitken Z, Simpson JA, Bentley R, Milner A, LaMontagne AD, and Kavanagh AM. Does the effect of disability acquisition on mental health differ by employment characteristics? A longitudinal fixed-effects analysis. *Social Psychiatry and Psychiatric Epidemiology*. 2020; 55(8):1031-1039.

<https://doi.org/10.1007/s00127-019-01783-x> [open access]

Abstract: Purpose: Longitudinal studies have suggested a causal relationship between disability acquisition and mental health, but there is substantial heterogeneity in the magnitude of the effect. Previous studies have provided evidence that socioeconomic characteristics can buffer the effect but have not examined the role of employment characteristics.

Methods: We used data from 17 annual waves of the Household, Income and Labour Dynamics in Australia Survey to compare the mental health of working age individuals before and after disability acquisition, using the Mental Health Inventory, a subscale of the SF-36 health questionnaire. Linear fixed-effects regression models were used to estimate the effect of disability acquisition on mental health. We tested for effect modification by two characteristics of people's employment prior to disability acquisition: occupational skill level and contract type. Multiple imputation using chained equations was used

to handle missing data.

Results: Disability acquisition was associated with a substantial decline in mental health score (estimated mean difference: - 4.3, 95% CI - 5.0, - 3.5). There was evidence of effect modification by occupational skill level, with the largest effects seen for those in low-skilled jobs (- 6.1, 95% CI - 7.6, - 4.5), but not for contract type.

Conclusions: The findings highlight the need for social and health policies that focus on increasing employment rates, improving the sustainability of employment, and providing employment services and education and training opportunities for people who acquire a disability, particularly for people in low-skilled occupations, to reduce the mental health inequalities experienced by people with disabilities.

Antosz P, Rembiasz T, and Verhagen H. Employee shirking and overworking: modelling the unintended consequences of work organisation. *Ergonomics*. 2020; 63(8):997-1009.

<https://doi.org/10.1080/00140139.2020.1744710> [open access]

Abstract: Underworking (i.e. shirking) and overworking of employees can have detrimental effects for the individual and the organisation. We develop a computational model to investigate how work structure, specifically the way in which managers distribute work tasks amongst employees, impacts work intensity and working time. The model draws on theories from economics, psychology and management, and on empirical observations. The simulations show that when managers correctly estimate task difficulty, but undervalue the employee's competence, opportunities for shirking are provided due to longer deadlines. Similarly, if managers overvalue the employee's competence, they set tighter deadlines leading to overwork. If task difficulty is misjudged, initially only influence on employee working time is observed. However, it gradually generates competence misjudgements, indirectly impacting the employee's effort level. An interaction between competence misjudgement and task uncertainty slows the manager's ability to correctly estimate employee competence and prolongs initial competence misjudgements. The study highlights the importance of applying dynamic modelling methods, which allows for testing theory assumptions in silico, generating new hypotheses and offers a foundation for future research. Practitioner summary: A computational model was developed to investigate how the structure of work allocation

influences opportunities for shirking and overworking by employees. The paper demonstrates how dynamic modelling can be used to explain workplace phenomena and develop new hypotheses for further research. Abbreviations: KSA: knowledge, skills, attitudes; MIT: motivation intensity theory

Bilandzic A and Bozat-Emre S. Initial evaluation of Manitoba's cannabis surveillance system. Health Promotion and Chronic Disease Prevention in Canada. 2020; 40(7-8):245-249.

<https://doi.org/10.24095/hpcdp.40.7/8.04> [open access]

Abstract: The Government of Manitoba created a cannabis public health surveillance system in 2018 in preparation for nonmedical cannabis legalization on 17 October, 2018. An initial evaluation was conducted to assess the usefulness, flexibility and simplicity attributes of the system, using an online stakeholder survey, website metrics, system analysis and interviews. Resulting recommendations included creating a detailed communication plan for surveillance products, changing the format and frequency of reporting, maintaining strong relationships with partners and building towards a centralized provincial substance use surveillance database and surveillance system

Boyle CA, Fox MH, Havercamp SM, and Zubler J. The public health response to the COVID-19 pandemic for people with disabilities. Disability and Health Journal. 2020; 13(3):100943.

<https://doi.org/10.1016/j.dhjo.2020.100943> [open access]

Abstract: With the rapidly changing landscape of the COVID-19 outbreak, how to best address the needs and continue to protect the health and well-being of people with disabilities (PwDs) is a global public health priority. In this commentary we identify three public health areas of ongoing need and offer possible strategies to address each. These areas include: the types of data that would help clarify risks for PwDs and help assure their safety long term; the prevention, treatment and mitigation measures for PwDs that are needed through the duration of the outbreak; and the issues of equity in access to and quality of medical care for PwDs. Because of the rapid nature of the public health response, it is critical to reassess and readjust our approach to best address the needs of PwDs in the months and

years to come and to incorporate these new practices into future emergency preparedness responses

Colquhoun HL, Jesus TS, O'Brien KK, Tricco AC, Chui A, Zarin W, et al. Scoping review on rehabilitation scoping reviews. Archives of Physical Medicine and Rehabilitation. 2020; 101(8):1462-1469.

<https://doi.org/10.1016/j.apmr.2020.03.015>

Abstract: **OBJECTIVE:** To examine the extent, scope, and methodological quality of rehabilitation scoping reviews. **DATA SOURCES:** A comprehensive list of scoping reviews conducted in the broader health field (inception to July 2014), with a further update of that list (up to February 2017) using similar methods, including searching 9 electronic databases. **STUDY SELECTION:** Articles were included if they were scoping reviews within rehabilitation.

Established review methods were used including (1) a PubMed filter detecting rehabilitation content and (2) title-and-abstract screening by 2 independent reviewers applied sequentially to articles from the existing list of scoping reviews and to the updated search results.

Full-text articles were reviewed by 1 reviewer, with discrepancies resolved by another after pilot screening with > 80% agreement.

Remaining discrepancies were resolved by external experts.

DATA EXTRACTION: Two independent reviewers used piloted and standardized data extraction forms. **DATA SYNTHESIS:** We screened 1823 records, including 992 full texts, to identify 251 rehabilitation-related scoping reviews. Rehabilitation scoping reviews had an exponential yearly increase since 2008 ($r(2)=0.89$; $P<.01$).

The literature addressed diverse topics (eg, spread over 43 condition groupings); 43% were published in Canada. Examples of methodological limitations included: 39% of reviews did not cite the use of a methodological framework, 96% did not include the appropriate flow diagram, 8% did not report eligibility criteria, and 57% did not report data extraction details.

CONCLUSIONS: The increasing popularity of scoping reviews in rehabilitation has not been met by high standards in methodological quality. To increase the value of rehabilitation scoping reviews, rehabilitation stakeholders need to use existing methodological standards for the conduct, reporting, and appraisal of scoping reviews

Contractor AA, Weiss NH, Kearns NT, Caldas SV, and Dixon-Gordon KL. Assessment of posttraumatic stress disorder's E2 criterion: development, pilot testing, and validation of the Posttrauma Risky Behaviors Questionnaire. International Journal of Stress Management. 2020; 27(3):292-303.

<https://doi.org/10.1037/str0000145>

Dewa CS, Weeghel JV, Joosen MC, and Brouwers EP. What could influence workers' decisions to disclose a mental illness at work? International Journal of Occupational and Environmental Medicine. 2020; 11(3):119-127.

<https://doi.org/10.34172/ijoem.2020.1870> [open access]

Abstract: BACKGROUND: Stigma can be a barrier for workers experiencing a mental illness to access accommodations at work. However, work accommodations may be necessary to maintain a worker's ability to work. Therefore, it may be important to develop effective interventions to address workplace stigma. OBJECTIVE: To determine (1) what proportion of workers would probably disclose their mental health issue to their manager, (2) what are the motivating factors for the decision of whether or not to disclose, and (3) what would potentially change the disclosure decision? METHODS: A link to a Web-based questionnaire was sent to a nationally representative sample of 1671 Dutch adults over 18 years of age. The response rate was 74%. We focused on the 892 respondents who indicated they were either employed for pay or looking for employment, not in management positions, and never experienced a mental health issue. This group comprised 73% of the total sample. They were asked if they would disclose their mental health issue to their manager. For what reasons would they disclose/not disclose the issue? And, what could change their decision? RESULTS: We found that almost 75% of workers would disclose to their managers. The perceived relationship with their managers and feelings of responsibility to their workplaces were important contributors to the decision. A large minority of workers would not tell, preferring to deal with their issues alone. In addition, a significant proportion of workers would choose not to disclose fearing negative consequences. CONCLUSION: Our results indicate that the majority of these Dutch workers would disclose a mental health issue to their managers. The relationship with the manager plays a central role. The advice from a trusted

individual and the experiences of colleagues are also significant factors in the disclosure decision

Evans MK. Covid's color line: infectious disease, inequity, and racial justice. *New England Journal of Medicine*. 2020; 383(5):408-410.

<https://doi.org/10.1056/NEJMp2019445>

Halonen JI, Manty M, Pietilainen O, Kujanpaa T, Kanerva N, Lahti J, et al. Physical working conditions and subsequent disability retirement due to any cause, mental disorders and musculoskeletal diseases: does the risk vary by common mental disorders? *Social Psychiatry and Psychiatric Epidemiology*. 2020; 55(8):1021-1029.

<https://doi.org/10.1007/s00127-019-01823-6>

Abstract: PURPOSE: Physical work exposures and common mental disorders (CMD) have been linked to increased risk of work disability, but their joint associations with disability retirement due to any cause, mental disorders or musculoskeletal diseases have not been examined. METHODS: The data for exposures and covariates were from the Finnish Helsinki Health Study occupational cohort surveys in 2000-2002, 2007 and 2012. We used 12,458 observations from 6159 employees, who were 40-60 years old at baseline. CMD were measured by the General Health Questionnaire (GHQ-12, cut-off point 3+). Four self-reported work exposures (hazardous exposures, physical workload, computer and shift work) were combined with CMD and categorized as "neither", "work exposure only", "CMD only", and "both". Associations with register-based disability retirement were assessed with Cox proportional hazards models for sample survey data adjusting for confounders over 5-year follow-up. Additionally, synergy indices were calculated for the combined effects. RESULTS: Those reporting CMD and high physical workload had a greater risk of disability retirement due to any cause (HR 4.26, 95% CI 3.60-5.03), mental disorders (HR 5.41, 95% CI 3.87-7.56), and musculoskeletal diseases (HR 4.46, 95% CI 3.49-5.71) when compared to those with neither. Synergy indices indicated that these associations were synergistic. Similar associations were observed for CMD and hazardous exposures, but not for combined exposures to CMD and computer or shift work. CONCLUSIONS: Identification of

mental health problems among employees in physically demanding jobs is important to support work ability and reduce the risk of premature exit from work due to disability

Karimi A, Dianat I, Barkhordari A, Yusefzade I, and Rohani-Rasaf M. A multicomponent ergonomic intervention involving individual and organisational changes for improving musculoskeletal outcomes and exposure risks among dairy workers. *Applied Ergonomics*. 2020; 88:103159.

<https://doi.org/10.1016/j.apergo.2020.103159>

Abstract: A field intervention study was implemented to evaluate the effects of individual (physical exercise programme and worker ergonomics training) and organisational changes (optimising work-rest schedule and revised task procedure) on musculoskeletal outcomes and their exposure risks among milking workers in a dairy plant. A questionnaire survey (including the Cornell Musculoskeletal Discomfort Questionnaire [CMDQ]) and direct observations of working postures by using the Quick Exposure Check (QEC) method were used at baseline and 12-month follow-up. Shoulder, lower back and neck discomfort were found to be the most common problems. The results showed significant improvements in the frequency (neck, shoulder, lower back, forearm and knee symptoms), severity (shoulder, lower back and knee symptoms) and interference with work (particularly due to lower back symptoms) as well as in the exposure risks to musculoskeletal problems (using the QEC method) after the intervention. The findings support the effectiveness of implemented multiple component intervention for improving musculoskeletal health and exposure risks in the studied occupational group

Nambiema A, Bodin J, Fouquet N, Bertrais S, Stock S, Aublet-Cuvelier A, et al. Upper-extremity musculoskeletal disorders: how many cases can be prevented? Estimates from the COSALI cohort. *Scandinavian Journal of Work, Environment & Health*. 2020; [epub ahead of print].

<https://doi.org/10.5271/sjweh.3911>

Abstract: Objective This study aimed to estimate the proportion and number of incident upper-extremity musculoskeletal disorders (UEMSD) cases attributable to occupational risk factors in a working

population. Methods Between 2002-2005, occupational physicians randomly selected 3710 workers, aged 20-59, from the Pays de la Loire (PdL) region. All participants underwent a standardized clinical examination. Between 2007-2010, 1611 workers were re-examined. This study included 1246 workers who were free of six main clinically diagnosed UEMSD at baseline but were diagnosed with at least one of these UEMSD at follow-up [59% of men, mean age: 38 (standard deviation 8.6) years]. Relative risks and population-attributable fractions (PAF) were calculated using Cox multivariable models with equal follow-up time and robust variance. The total number of incident UEMSD in the PdL region was estimated after adjustment of the sample weights using 2007 census data. The estimated number of potentially avoidable UEMSD was calculated by multiplying PAF by the total number of incident UEMSD in PdL. Results At follow-up, 139 new cases of UEMSD (11% of the study sample) were diagnosed. This represented an estimated 129 320 incident cases in the PdL in 2007. Following adjustment for personal factors, 26 381 (20.4% of all incident UEMSD) were attributable to high physical exertion, 16 682 (12.9%) to low social support, and 8535 (6.6%) to working with arms above shoulder level. Conclusions A large number and important proportion of incident UEMSD may be preventable by reducing work exposures to physical exertion and working with arms above shoulder level as well as improving social support from co-workers/supervisors

Nguyen TH, Hoang DL, Hoang TG, Pham MK, Bodin J, Dewitte JD, et al. Prevalence and characteristics of multisite musculoskeletal symptoms among district hospital nurses in Haiphong, Vietnam. *BioMed Research International*. 2020; 2020:3254605.

<https://doi.org/10.1155/2020/3254605> [open access]

Abstract: BACKGROUND: Musculoskeletal disorders (MSDs) are commonly observed among workers around the world. These diseases not only affect the health of workers, their quality of life, and their performance, but the effects of such diseases also represent a great burden for the health and social systems. These issues are even more prevalent in developing countries, and nurses are no exception. Many studies worldwide have shown a high prevalence of work-related MSDs in each body position among nurses. However, there are very few studies that have mentioned multisite

musculoskeletal symptoms (MMS). OBJECTIVES: To describe the prevalence and characteristics of MMS among district hospital nurses in Haiphong, Vietnam. Material and Methods. A cross-sectional study was carried out on 1179 nurses working in all 15 district hospitals using the Modified Nordic Questionnaire at 9 anatomical sites on the body (neck, shoulder/upper arm, elbow/forearm, wrist/hand, upper back, lower back, hip/thigh, knee/lower leg, and ankle/foot). The following main indicators were calculated: the prevalence of musculoskeletal symptoms (MS) (at least 1 of 9 sites), MMS (two or more sites), and widespread musculoskeletal symptoms (WMS) (MS of the upper limb, the lower limb, and the back or the neck). RESULTS: The prevalence of MS during the past 12 months and symptoms lasting for at least 30 days was 60.6% and 17.2% in men and 77.6% and 21.5% in women, respectively. The lower back, neck, upper back, and shoulder/upper arm were the most common sites affected. In terms of MMS, the prevalence was 37.6% in men and 57.1% in women during the past 12 months while 8.6% of men and 11.3% of women reported that symptoms lasted for at least 30 days. The prevalence of MMS tended to increase with age, seniority, having a history of musculoskeletal diseases, and in nurses working in district hospitals located in urban areas. Nearly 90% of MMS concerned two or three anatomical regions during the past 12 months, and almost 80% of MMS lasting at least 30 days involved two or three anatomical regions. The prevalence of WMS was 10.4% in men and 18.6% in women during the past 12 months and 0.9% in men and 2.1% in women lasting at least 30 days. CONCLUSIONS: This study showed the high prevalence of MMS and WMS among nursing staff. Further and more extensive research is needed to improve our understanding of multisite musculoskeletal symptoms and act as the foundation for developing preventive measures for nurses

Okuda Y, Iwasaki S, Deguchi Y, Nitta T, Mitake T, Sakaguchi A, et al. Burnout and occupational stressors among non-medical occupational health staff. Occupational Medicine. 2020; 70(1):45-51.

<https://doi.org/10.1093/occmed/kqz160>

Abstract: BACKGROUND: The work required to assist individuals in improving their mental health is stressful and known to be associated

with burnout. In Japanese companies, non-medical occupational health (OH) staff often take the role of maintaining and improving workers' mental health. However, few studies have examined burnout in this population. AIMS: To assess the relationship between burnout and occupational stressors among non-medical OH staff. METHODS: We conducted a cross-sectional study of OH staff who had participated in mental health seminars between 2016 and 2018. Occupational stressors were assessed using the Japanese version of the Job Content Questionnaire. Burnout was assessed using the Japanese version of the Maslach Burnout Inventory. RESULTS: We administered the survey to 230 non-medical OH staff, of which 188 completed the questionnaire. According to a hierarchical multiple linear regression analysis, high job demands were associated with greater emotional exhaustion, depersonalization and personal accomplishment. Greater job control was associated only with higher personal accomplishment. Lower job support was associated with greater emotional exhaustion and depersonalization. CONCLUSIONS: The present study found relationships between occupational stressors and burnout dimensions among OH staff. To avoid burnout among non-medical OH staff, it is important to take measures against occupational stressors, especially job demands and low levels of job support

Pedersen J, Schultz BB, Madsen IEH, Solovieva S, and Andersen LL. High physical work demands and working life expectancy in Denmark. Occupational and Environmental Medicine. 2020; 77(8):576-582.

<https://doi.org/10.1136/oemed-2019-106359> [open access]

Abstract: OBJECTIVE: In most European countries, political reforms gradually increase the statutory retirement age to counter the economic costs of a growing elderly population. However, working to a high age may be difficult for people with hard physical labour. We aim to study the impact of high physical work demands on working life expectancy (WLE). METHODS: We combined physical work demands assessed by job exposure matrix (JEM) and longitudinal high-quality national registers (outcome) in 1.6 million Danish workers to estimate WLE and years of sickness absence, unemployment and disability pension. The JEM value for physical work demand is a summarised score of eight ergonomic exposures for 317 occupations

groups, sex and age. The WLE was estimated using a multistate proportional hazards model in a 4-year follow-up period. RESULTS: Individuals with high physical work demands had a significantly lower WLE, than those with low physical work demands, with largest differences seen among women. At age 30 years, women with high physical work demands can expect 3.1 years less working, 11 months more of sickness absence and 16 months more of unemployment than low-exposed women. For 30-year-old men, the corresponding results were 2.0 years, 12 months and 8 months, respectively. CONCLUSION: Our findings show that high physical work demands are a marked risk factor for a shortened working life and increased years of sickness absence and unemployment. The results are important when selecting high-risk occupations, and expand the knowledge base for informed political decision making concerning statutory retirement age

Potvin L. Public health saves lives: sad lessons from COVID-19. Canadian Journal of Public Health. 2020; 111(3):308-311.
<https://doi.org/10.17269/s41997-020-00344-z> [open access]

Quinlan E, Robertson S, Urban AM, Findlay IM, and Bilson B. Ameliorating workplace harassment among direct caregivers in Canada's healthcare system: a theatre-based intervention. Work, Employment and Society. 2020; 34(4):626-643.
<https://doi.org/10.1177/0950017019867279>

Shaw WS, Roelofs C, and Punnett L. Work environment factors and prevention of opioid-related deaths. American Journal of Public Health. 2020; 110(8):1235-1241.
<https://doi.org/10.2105/AJPH.2020.305716> [open access]

Abstract: Opioid use disorder (OUD) and opioid overdose deaths (OODs) are prevalent among US workers, but work-related factors have not received adequate attention as either risk factors or opportunities for OOD prevention. Higher prevalence of OOD in those with heavy physical jobs, more precarious work, and limited health care benefits suggest work environment and organizational factors may predispose workers to the development of OUD. Organizational policies that reduce ergonomic risk factors, respond effectively to employee health and safety concerns, provide access to

nonpharmacologic pain management, and encourage early substance use treatment are important opportunities to improve outcomes. Organizational barriers can limit disclosure of pain and help-seeking behavior, and opioid education is not effectively integrated with workplace safety training and health promotion programs. Policy development at the employer, government, and association levels could improve the workplace response to workers with OUD and reduce occupational risks that may be contributing factors

Opioid use disorder (OUD) and opioid overdose deaths (OODs) are prevalent among US workers, but work-related factors have not received adequate attention as either risk factors or opportunities for OOD prevention. Higher prevalence of OOD in those with heavy physical jobs, more precarious work, and limited health care benefits suggest work environment and organizational factors may predispose workers to the development of OUD. Organizational policies that reduce ergonomic risk factors, respond effectively to employee health and safety concerns, provide access to nonpharmacologic pain management, and encourage early substance use treatment are important opportunities to improve outcomes. Organizational barriers can limit disclosure of pain and help-seeking behavior, and opioid education is not effectively integrated with workplace safety training and health promotion programs. Policy development at the employer, government, and association levels could improve the workplace response to workers with OUD and reduce occupational risks that may be contributing factors

Shires A, Sharpe L, Davies JN, and Newton-John TRO. The efficacy of mindfulness-based interventions in acute pain: a systematic review and meta-analysis. *Pain*. 2020; 161(8):1698-1707.

<https://doi.org/10.1097/j.pain.0000000000001877>

Abstract: Recent meta-analyses have shown mindfulness-based interventions (MBIs) to be effective for chronic pain, but no pooled estimates of the effect of MBIs on acute pain are available. This meta-analysis was conducted to fill that gap. A literature search was conducted in 4 databases. Articles were eligible if they reported on randomized controlled trials of MBIs for people with acute pain and one of the following outcomes: pain severity, pain threshold, pain

tolerance, or pain-related distress. Two authors independently extracted the data, assessed risk of bias, and provided GRADE ratings. Twenty-two studies were included. There was no evidence of an effect of MBIs on the primary outcome of pain severity in clinical {Hedges' $g = 0.52$; (95% confidence interval [CI] -0.241 to 1.280)} or experimental settings (Hedges' $g = 0.04$; 95% CI [-0.161 to 0.247]). There was a beneficial effect of MBIs on pain tolerance (Hedges' $g = 0.68$; 95% CI [0.157-1.282]) and pain threshold (Hedges' $g = 0.72$; 95% CI [0.210-1.154]) in experimental studies. There was no evidence of an effect of MBIs compared to control for pain-related distress in clinical (Hedges' $g = 0.16$; 95% CI [-0.018 to 0.419]) or experimental settings (Hedges' $g = 0.44$; 95% CI [-0.164 to 0.419]). GRADE assessment indicated that except for pain tolerance, the data were of low or very low quality. There is moderate evidence that MBIs are efficacious in increasing pain tolerance and weak evidence for pain threshold. However, there is an absence of good-quality evidence for the efficacy of MBIs for reducing the pain severity or pain-related distress in either clinical or experimental settings

Zhang L, Yao Y, and Yiu TW. Job burnout of construction project managers: exploring the consequences of regulating emotions in workplace. Journal of Construction Engineering and Management. 2020; 146(10):04020117.

[https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0001913](https://doi.org/10.1061/(ASCE)CO.1943-7862.0001913)