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**February 28, 2020**

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**\*Choi K, Maas ET, Koehoorn M, and McLeod CB. Time to return to work following workplace violence among direct healthcare and social workers. *Occupational and Environmental Medicine*. 2020; 77(3):160-167.**

<https://doi.org/10.1136/oemed-2019-106211> [open access]

**Abstract:** OBJECTIVES: This study examined time to return-to-work (RTW) among direct healthcare and social workers with violence-related incidents compared with these workers with non-violence-related incidents in British Columbia, Canada. METHODS: Accepted workers' compensation lost-time claims were extracted between 2010 and 2014. Workers with violence-related incidents and with non-violence-related incidents were matched using coarsened exact matching (n=5762). The outcome was days until RTW within 1 year after the first day of time loss, estimated with Cox regression using piecewise models, stratified by injury type, occupation, care setting and shift type. RESULTS: Workers with violence-related incidents, compared with workers with non-violence-related incidents, were more likely to RTW within 30 days postinjury, less likely within 61-180 days, and were no different after 181 days. Workers with psychological injuries resulting from a violence-related incident had a lower likelihood to RTW during the year postinjury (HR 0.61, 95% CI

0.43 to 0.86). Workers with violence-related incidents in counselling and social work occupations were less likely to RTW within 90 days postinjury (HR 31-60 days: 0.67, 95% CI 0.48 to 0.95 and HR 61-90 days: 0.46, 95% CI 0.30 to 0.69). Workers with violence-related incidents in long-term care and residential social services were less likely to RTW within 91-180 days postinjury. **CONCLUSIONS:** Workers with psychological injuries, and those in counselling and social work occupations and in long-term care and residential social services, took longer to RTW following a violence-related incident than workers with non-violence-related incidents. Future research should focus on identifying risk factors to reduce the burden of violence and facilitate RTW

**\*Gignac MAM, Irvin E, Cullen K, Van Eerd D, Beaton DE, Mahood Q, McLeod C and Backman CL. Men and women's occupational activities and the risk of developing osteoarthritis of the knee, hip, or hands: a systematic review and recommendations for future research. Arthritis Care and Research. 2020; 72(3):378-396.**

<https://doi.org/10.1002/acr.23855> [open access]

Abstract: **OBJECTIVE:** To systematically review the evidence for an increased risk of osteoarthritis in the hip, knee, hand, wrist, finger, ankle, foot, shoulder, neck, and spine related to diverse occupational activities of men and women and to examine dose-response information related to the frequency, intensity, and duration of work exposures and the risk of osteoarthritis (OA). **METHODS:** Established guidelines for systematic reviews in occupational health and safety studies were followed. MEDLINE, Embase, CINAHL, and Cochrane Library were searched from inception to December 2017. Studies were reviewed for relevance, quality was appraised, and data were extracted and synthesized. **RESULTS:** Sixty-nine studies from 23 countries yielded strong and moderate evidence for lifting, cumulative physical loads, full-body vibration, and kneeling/squatting/bending as increasing the risks of developing OA in men and women. Strong and moderate evidence existed for no increased risk of OA related to sitting, standing, and walking (hip and knee OA), lifting and carrying (knee OA), climbing ladders (knee OA), driving (knee OA), and highly repetitive tasks (hand OA). Variability in dose-response data resulted in an inability to synthesize these data. **CONCLUSION:** Evidence

points to the potential for OA occupational recommendations and practice considerations to be developed for women and men. However, research attention is needed to overcome deficits in the measurement and recall of specific work activities so that recommendations and practice considerations can provide the specificity needed to be adopted in workplaces

**\*Jetha A, Johnson SR, and Gignac MAM. Unmet workplace support needs and lost productivity of workers with systemic sclerosis: a path analysis study. Arthritis Care and Research. 2019; [Epub ahead of print].**

<https://doi.org/10.1002/acr.24123> [open access]

Abstract: OBJECTIVE: Few studies have examined how workplace support can address work productivity loss among individuals with systemic sclerosis (SSc). We examined: 1) the relationship between unmet workplace support needs and work productivity loss among workers with SSc; and 2) whether SSc symptom severity, fatigue, active disease periods and workplace activity limitations mediate the relationship between unmet workplace support and work productivity loss. METHOD: A cross-sectional survey was conducted of employed individuals with SSc who were recruited through rheumatology clinics. Information on work productivity loss (i.e., absenteeism, presenteeism, job disruptions), and the need, availability and use of workplace supports were collected. SSc symptom severity (e.g., workplace activity limitations, active disease periods, fatigue and overall SSc symptom severity), demographic, health and work context characteristics were collected. Three Bayesian path models examined the association between unmet workplace support needs and each work productivity loss outcome. SSc symptom severity variables were examined as mediators in each model. RESULTS: 110 employed participants were recruited (mean age=49 years +/- 12.9). Over three quarters of participants were female (77%) and worked full-time (77%). Most needed workplace supports included extended health benefits (84%), special equipment (63%) and flex-time (59%). Additionally, 61% reported unmet workplace support needs. Path models indicated that indirect relationships between unmet workplace support needs and work productivity loss were significant. For all models, workplace activity limitations mediated the relationship between unmet workplace support need and productivity

loss. **CONCLUSION:** To foster productive employment of people with SSc, interventions need to address symptom severity and meet workplace support needs

**\*Weis CA, Baas E, Ciesla K, Kimpinski C, and Landsman V. Ontario chiropractor's knowledge of exercise guidelines for pregnant patients. Journal of the Canadian Chiropractic Association. 2019; 63(1):5-17.**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6493206/pdf/jcca-63-5.pdf>

**Abstract:** Objective: To describe the Ontario chiropractors' knowledge regarding the current guidelines for exercise during pregnancy through a knowledge score and exploring its distribution across different strata of interest including gender, experience, location of practice and type of practice. Methods: A previously used survey was modified and sent to 500 randomly selected Ontario chiropractors. Demographic and continuing education questions were included, and the knowledge score was calculated using 10 items. Results: The differences between the knowledge score values across the four strata of interest were not statistically significant. The average knowledge score in the sample of respondents was low (5.2 out of 10) and highly variable (SD=1.8). Conclusion: The average knowledge score of the respondents was found to be low and highly variable but not statistically or practically different across various strata of interest. A well-designed curriculum or post-graduate courses may be beneficial for practicing chiropractors in Ontario

**Chaiklieng S, Suggaravetsiri P, and Stewart J. Incidence and risk factors associated with lower back pain among university office workers. International Journal of Occupational Safety & Ergonomics. 2020; [Epub ahead of print].**

<https://doi.org/10.1080/10803548.2019.1706827>

**Abstract:** This prospective cohort study investigated the incidence of lower back pain (LBP) and the risk factors for LBP among university-based office workers. Participants were 159 office workers in one Thailand university who met the inclusion criteria of the cohort group. Data were collected using a follow-up interview questionnaire and measurements of physical fitness and lighting intensity. Results showed that the incidence of LBP during 12-month follow-up was

83.0%. Physical fitness tests showed that the back, leg and hand grip strengths were significantly lower in LBP cases than in non-cases. Multiple logistic regression analysis indicated that the risk factors associated with LBP were body mass index  $\leq 25$  (adjusted relative risk [RRadj] = 3.49, 95% confidence interval [CI] [1.27, 9.55]), poor back-pain preventive behavior (RRadj = 3.44, 95% CI [1.08, 10.98]) and inappropriate workstation width (RRadj = 5.72, 95% CI [1.44, 22.70]). In conclusion, most workstations (91.8%) had a lighting intensity lower than the standard requirement (400-500 lx). The results indicate the nature of hazards affecting LBP in office workers in the academic workplace. In order to prevent LBP in this group of office workers, ergonomics education and the better design of workspace, improved lighting and greater emphasis on the physical fitness of staff are needed

**Chung F, Wong J, Bellingham G, Lebovic G, Singh M, Waseem R, Peng P, George CFP, Furlan A, et al. Predictive factors for sleep apnoea in patients on opioids for chronic pain. *BMJ Open Respiratory Research*. 2019; 6(1):e000523.**

<https://doi.org/10.1136/bmjresp-2019-000523> [open access]

Abstract: Background: The risk of death is elevated in patients taking opioids for chronic non-cancer pain. Respiratory depression is the main cause of death due to opioids and sleep apnoea is an important associated risk factor. Methods: In chronic pain clinics, we assessed the STOP-Bang questionnaire (a screening tool for sleep apnoea; Snoring, Tiredness, Observed apnoea, high blood Pressure, Body mass index, age, neck circumference and male gender), Epworth Sleepiness Scale, thyromental distance, Mallampati classification, daytime oxyhaemoglobin saturation (SpO<sub>2</sub>) and calculated daily morphine milligram equivalent (MME) approximations for each participant, and performed an inlaboratory polysomnogram. The primary objective was to determine the predictive factors for sleep apnoea in patients on chronic opioid therapy using multivariable logistic regression models. Results: Of 332 consented participants, 204 underwent polysomnography, and 120 (58.8%) had sleep apnoea (AHI  $\geq 5$ ) (72% obstructive, 20% central and 8% indeterminate sleep apnoea), with a high prevalence of moderate (23.3%) and severe (30.8%) sleep apnoea. The STOP-Bang questionnaire and SpO<sub>2</sub> are predictive factors for sleep apnoea (AHI

$\geq 15$ ) in patients on opioids for chronic pain. For each one-unit increase in the STOP-Bang score, the odds of moderate-to-severe sleep apnoea (AHI  $\geq 15$ ) increased by 70%, and for each 1% SpO<sub>2</sub> decrease the odds increased by 33%. For each 10 mg MME increase, the odds of Central Apnoea Index  $\geq 5$  increased by 3%, and for each 1% SpO<sub>2</sub> decrease the odds increased by 45%. Conclusion: In patients on opioids for chronic pain, the STOP-Bang questionnaire and daytime SpO<sub>2</sub> are predictive factors for sleep apnoea, and MME and daytime SpO<sub>2</sub> are predictive factors for Central Apnoea Index  $\geq 5$ . Trial registration number: NCT02513836

**Collins R, Bowman L, Landray M, and Peto R. The magic of randomization versus the myth of real-world evidence. *New England Journal of Medicine*. 2020; 382(7):674-678.**

<https://doi.org/10.1056/NEJMsb1901642>

**Esmail R, Hanson HM, Holroyd-Leduc J, Brown S, Strifler L, Straus SE, et al. A scoping review of full-spectrum knowledge translation theories, models, and frameworks. *Implementation Science*. 2020; 15(1):11.**

<https://doi.org/10.1186/s13012-020-0964-5> [open access]

Abstract: BACKGROUND: Application of knowledge translation (KT) theories, models, and frameworks (TMFs) is one method for successfully incorporating evidence into clinical care. However, there are multiple KT TMFs and little guidance on which to select. This study sought to identify and describe available full-spectrum KT TMFs to subsequently guide users. METHODS: A scoping review was completed. Articles were identified through searches within electronic databases, previous reviews, grey literature, and consultation with KT experts. Search terms included combinations of KT terms and theory-related terms. Included citations had to describe full-spectrum KT TMFs that had been applied or tested. Titles/abstracts and full-text articles were screened independently by two investigators. Each KT TMF was described by its characteristics including name, context, key components, how it was used, primary target audience, levels of use, and study outcomes. Each KT TMF was also categorized into theoretical approaches as process models, determinant frameworks, classic theories, implementation theories, and evaluation frameworks. Within each category, KT TMFs were compared and contrasted to

identify similarities and unique characteristics. RESULTS: Electronic searches yielded 7160 citations. Additional citations were identified from previous reviews (n = 41) and bibliographies of included full-text articles (n = 6). Thirty-six citations describing 36 full-spectrum were identified. In 24 KT TMFs, the primary target audience was multi-level including patients/public, professionals, organizational, and financial/regulatory. The majority of the KT TMFs were used within public health, followed by research (organizational, translation, health), or in multiple contexts. Twenty-six could be used at the individual, organization, or policy levels, five at the individual/organization levels, three at the individual level only, and two at the organizational/policy level. Categorization of the KT TMFs resulted in 18 process models, eight classic theories, three determinant frameworks, three evaluation frameworks, and four that fit more than one category. There were no KT TMFs that fit the implementation theory category. Within each category, similarities and unique characteristics emerged through comparison. CONCLUSIONS: A systematic compilation of existing full-spectrum KT TMFs, categorization into different approaches, and comparison has been provided in a user-friendly way. This list provides options for users to select from when designing KT projects and interventions. TRIAL REGISTRATION: A protocol outlining the methodology of this scoping review was developed and registered with PROSPERO (CRD42018088564)

**Ezzatvar Y, Calatayud J, Andersen LL, Aiguade R, Benitez J, and Casana J. Professional experience, work setting, work posture and workload influence the risk for musculoskeletal pain among physical therapists: a cross-sectional study. International Archives of Occupational & Environmental Health. 2020; 93(2):189-196.**

<https://doi.org/10.1007/s00420-019-01468-7>

Abstract: PURPOSE: Physical therapists (PTs) have a high risk of developing musculoskeletal pain (MP) due to the physically demanding nature of their work tasks. Experience or the specialty area, have been associated with MP, however, previous studies are few and small. The aim of this study was to investigate the association between work-related factors and MP among PTs.

METHODS: In this cross-sectional study, we collected information

about MP and work-related factors of 1006 PTs using an online questionnaire. Associations between various work-related factors and MP were modelled using logistic regression controlled for various confounders. RESULTS: Neck (57%) and low back pain (49%) were most common. Work-related factors associated with higher risk for having moderate-to-high MP ( $\geq 3$  on a scale of 0-10) were "treating more patients at the same time" [OR 2.14 (95% CI 1.53-2.99)], "working  $\geq 45$  h per week" [OR 1.73 (95% CI 1.05-2.84)], and "work in a seated position" [OR 2.04 (95% CI 1.16-3.57)] for the low back. "More years of experience" showed a negative association for elbow pain [OR 0.41 (95% CI 0.21-0.78)] and low back pain [OR 0.48 (95% CI 0.29-0.79)] compared with their less experienced counterparts. CONCLUSIONS: The lack of professional experience, working in private clinics, working in a seated position and high workload are associated with the higher risk for MP among PTs. These results add further insight about the relevance of such factors, which might be considered for developing effective interventions to prevent work-related MP and better working conditions among PTs

**Ghimire KM and Maclean JC. Medical marijuana and workers' compensation claiming. Health Economics. 2020; [Epub ahead of print].**

<https://doi.org/10.1002/hec.3992> [open access]

Abstract: We study the effect of state medical marijuana laws (MMLs) on workers' compensation (WC) claiming among adults. Medical marijuana is plausibly related to WC claiming by allowing improved symptom management, and thus reduced need for the benefit, among injured or ill workers. We use data on claiming drawn from the Annual Social and Economic supplement to the Current Population Survey over the period 1989 to 2012, coupled with a differences-in-differences design to provide the first evidence on this relationship. Our estimates show that, post MML, WC claiming declines, both the propensity to claim and the level of income from WC. These findings suggest that medical marijuana can allow workers to better manage symptoms associated with workplace injuries and illnesses and, in turn, reduce need for WC. However, the reductions in WC claiming post MML are very modest in size



**Hasanzadeh S, de la Garza JM, and Geller ES. Latent effect of safety interventions. Journal of Construction Engineering and Management. 2020; 146(5):04020033.**

[https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0001812](https://doi.org/10.1061/(ASCE)CO.1943-7862.0001812)

**Jones CL, Deane FP, Wolstencroft K, and Zimmermann A. File audit to assess sustained fidelity to a recovery and wellbeing oriented mental health service model: an Australian case study. Archives of Public Health. 2019; 77:50.**

<https://doi.org/10.1186/s13690-019-0377-6> [open access]

**Abstract:** Background: Over the past decade there has been increasing attention to implementing recovery-oriented approaches within mental health service practice and enhancing fidelity to such approaches. However, as is often the case with evidence-based practices, less attention has been paid to the sustainability of recovery-oriented approaches over time. This study sought to investigate whether fidelity to a recovery-oriented practice framework - the Collaborative Recovery Model could be sustained over time. Method: The study setting was an Australian community managed mental health organisation. A file audit of consumer support plans was undertaken using the Goal and Action Plan Instrument for Quality audit tool (GAP-IQ). The audit tool assessed 17 areas for quality. Consumers (n = 116) from a large community managed mental health organisation participated in the study. Sustained fidelity to the Collaborative Recovery Model (CRM) was determined by comparing results from the file audit to a similar audit conducted 3 years earlier. Results: The file audit revealed a significant increase in fidelity to CRM practices between 2011 and 2014. Fidelity to individual audit items that comprise the GAP-IQ was also found to significantly increase across 16 of the 17 GAP-IQ audit items, with the exception of the 'Action Plan Review' audit item. Conclusions: A comparison of file audit data across different time points within the same setting can provide useful feedback about whether or not a practice is being sustained over time. Although fidelity increased overtime the study design does not allow conclusions that training and coaching practices implemented by the organisation were responsible

**Lin MH, Huang YC, Chen WK, and Wang JY. Sleepiness and injury risk in emergency medical service workers in Taiwan. PLoS ONE. 2020; 15(2):e0229202.**

<https://doi.org/10.1371/journal.pone.0229202> [open access]

**Abstract:** BACKGROUND: Insufficient sleep is a common health and safety risk factor in high-impact workplaces where workers are required to take rotating shifts. However, studies on sleepiness-related risks and incidents, particularly among emergency medical services (EMS) workers are limited. OBJECTIVE: This study sought to investigate the prevalence of sleepiness and related workplace incidents among EMS workers. METHODS: This study utilized a cross-sectional survey design on a convenient sample of 500 EMS workers from 41 EMS squads across Taiwan. Data were collected using structured online questionnaires on workplace sleepiness and related safety incidents based on the Epworth Sleepiness Scale (ESS) and a modified 25-item EMS Safety Inventory respectively. RESULTS: With a response rate of 79.8% (n = 399), 36.9% of the respondents were identified as having mild daytime sleepiness, while 39.2% of the respondents were identified as having excessive daytime sleepiness. Multivariate analysis indicated that not only was working on rotating shifts the main cause of the high ESS scores among EMS workers, but also that higher ESS scores increased their risk of sustaining a workplace injury. Furthermore, ill-at-work incidents were associated with an increased risk of workplace-related injuries. CONCLUSION: Overall, the findings indicated a correlation among working on rotation shifts, the prevalence of sleepiness, and a higher risk of workplace injury among EMS workers

**Ma Z, Dhir P, Perrier L, Bayley M, and Munce S. The impact of vocational interventions on vocational outcomes, quality of life, and community integration in adults with childhood onset disabilities: a systematic review. Journal of Occupational Rehabilitation. 2020; 30(1):1-21.**

<https://doi.org/10.1007/s10926-019-09854-1>

**Abstract:** Purpose Despite the desire and ability to work, individuals with childhood onset disabilities are under-represented in employment. Vocational interventions alleviate some barriers to obtaining and maintaining employment for this population. The research question addressed is: What is the impact of vocational

interventions on vocational outcomes, quality of life (QoL), and community integration (CI) in adults with childhood onset neurological disabilities including cerebral palsy (CP), spina bifida, and acquired brain injury (ABI)? Methods A literature search was conducted in multiple electronic databases. All experimental and observational studies with comparator group(s) were included. Two reviewers independently completed titles and abstracts screening, full text screening, data abstraction, and risk of bias assessment. Results Seventeen studies were eligible for final inclusion including three randomized-controlled trials, four non-randomized studies, and ten observational studies. Sixteen of seventeen studies included only individuals with ABI, while one study included individuals with CP. Vocational interventions from experimental studies were mainly components of multi-faceted interventions. Most observational studies were from the United States Vocational Rehabilitation Service. Conclusions Vocational interventions may be effective in improving vocational outcomes, QoL, and CI for individuals with ABI. There is limited experimental evidence on interventions that specifically target employment. Observational data suggest that receiving job placement assistance, on-the-job training and supports, counselling/guidance, maintenance, and supported employment successfully predicted employment outcomes

**Marklund S, Mienna CS, Wahlstrom J, Englund E, and Wiesinger B. Work ability and productivity among dentists: associations with musculoskeletal pain, stress, and sleep. International Archives of Occupational & Environmental Health. 2020; 93(2):271-278.**

<https://doi.org/10.1007/s00420-019-01478-5> [open access]

Abstract: PURPOSE: Work ability can be measured by the work ability index (WAI), and work-related questions measuring productivity loss in terms of quality and quantity of work. Dentists have high occupational risk of musculoskeletal pain and the exposure of ergonomic strain is already high during dental education. The aim was to evaluate work ability and productivity among dentists, and to identify gender differences and associations with sleep, stress, and reported frequent pain. METHODS: The study population comprised 187 dentists (123 women and 64 men) who had been working as dentists between 5 and 12 years. Participants completed a

questionnaire regarding sleep, stress, presence of pain at different sites, work ability assessed by WAI, and productivity in terms of quality and quantity of work. RESULTS: Poor sleep quality and high level of stress were reported by 31% and 48.1% of participants, respectively, with no gender differences and no association with age. The prevalence of frequent pain ranged 6.4-46.5% with shoulders being the most prevalent site. Thirty-three percent reported reduced work ability. Poor sleep, high amount of stress, and multi-site pain were associated with decreased work ability. CONCLUSIONS: A high prevalence of pain was shown among dentists. Decreased work ability in terms of productivity loss was associated with poor sleep quality, high amount of stress, and multi-site pain. Preventive actions at the workplace should promote good musculoskeletal health, and measures taken, both individual and organizational, to minimize the risk of high, persistent stress and work-related pain

**Nielsen K and Yarker J. Job crafting as a work adjustment strategy for workers returning after long-term sickness absence due to common mental disorders. International Journal of Rehabilitation Research. 2020; [Epub ahead of print].**

<https://doi.org/10.1097/MRR.000000000000398>

Abstract: The purpose of this qualitative study was to examine the way workers with common mental disorders use job crafting to adjust their work to their levels of functioning after returning from long-term sick leave. Thirty-eight workers who had returned within the last 24 months from sickness absence due to common mental disorders were interviewed using semistructured interviews. Questions were asked about how they job crafted to match their changed needs for work functioning post return. To interpret the results, we coded the data according to the Wrzesniewski and Dutton typology of job crafting and conducted thematic analysis. We identified task, relational and cognitive job crafting strategies that workers had employed after returning to work. Our findings have important implications for how managers and organizations can support workers to make adjustments that enable them to stay and thrive at work with reduced work functioning

**Nichols VP, Abraham C, Eldabe S, Sandhu HK, Underwood M, and Seers K. Process evaluation protocol for the I-WOTCH**

**study: an opioid tapering support programme for people with chronic non-malignant pain. *BMJ Open*. 2019; 9(10):e028998. <https://doi.org/10.1136/bmjopen-2019-028998> [open access]**

**Abstract:** INTRODUCTION: The Improving the Wellbeing of people with Opioid Treated CHronic Pain (I-WOTCH) randomised controlled trial uses a multicomponent self-management intervention to help people taper their opioid use. This approach is not widely used and its efficacy is unknown. A process evaluation alongside the trial will help to assess how the intervention was delivered, looking at the dose of intervention received and the fidelity of the delivery. We will explore how the intervention may have brought about change through the experiences of the participants receiving and the staff delivering the intervention and whether there were contextual factors involved. METHODS AND ANALYSIS: A mixed methods process evaluation will assess how the processes of the I-WOTCH intervention fared and whether these affected the outcomes. We will collect quantitative data, for example, group attendance analysed with statistical methods. Qualitative data, for example, from interviews and feedback forms will be analysed using framework analysis. We will use a 'following a thread' and a mixed methods matrix for the final integrated analysis. ETHICS AND DISSEMINATION: The I-WOTCH trial and process evaluation were granted full ethics approval by Yorkshire and The Humber-South Yorkshire Research Ethics Committee on 13 September 2016 (16/YH/0325). All data were collected in accordance with data protection guidelines. Participants provided written informed consent for the main trial, and all interviewees provided additional written informed consent. The results of the process evaluation will be published and presented at conferences. TRIAL REGISTRATION NUMBER: ISRCTN49470934; Pre-results

**Patel PC, Reid SW, and Wolfe MT. Self-employment, depression, and older individuals: a cross-country study. *Journal of Affective Disorders*. 2020; 265:175-184.**

**<https://doi.org/10.1016/j.jad.2020.01.067>**

**Abstract:** BACKGROUND: Self-employment has become an increasingly popular occupational choice, and there are substantial mental health and well-being benefits that can accrue for individuals who remain active and engaged later in life. In this study, we examine

the association between reduced depression symptoms and self-employment in aging workers. **METHODS:** Drawing from The Survey of Health, Ageing and Retirement in Europe (SHARE) data, our study examines a longitudinal sample of 35,717 individuals aged 50 years or older. **RESULTS:** Our results indicate that self-employment is negatively associated with depression among aging workers. Additionally, we find that this relationship weakens as aging self-employed individuals grow older, and that gender moderates this relationship such that older female self-employed individuals report lower depression symptoms than their male counterparts. **LIMITATIONS:** Our sample is limited to European workers aged 50 years and older, and as such might have limited generalizability to younger self-employed individuals from other geographic regions. Moreover, although we control for factors that could play a role in the association between depression symptoms and self-employment (e.g. quality of life, personality traits, etc.), additional research will be needed in order to determine the potential mediating and moderating roles such factors might have on this relationship. **CONCLUSIONS:** The results we present demonstrate the important and nuanced nature between self-employment and depression symptoms in aging workers. These findings call to light the need to continue to foster and develop systems and programs that help to facilitate self-employment for individuals as they transition into older ages

**Sahota B, Alavinia SM, Kumbhare D, Sangha H, Flannery J, and Furlan A. A retrospective study of the association between pain intensity and opioid use with length of stay during musculoskeletal inpatient rehabilitation after primary knee and hip arthroplasty. PM & R. 2019; [Epub ahead of print].**

<https://doi.org/10.1002/pmrj.12250> [open access]

**Abstract:** **BACKGROUND:** The relationship between pain intensity, opioid consumption, and length of stay (LOS) has received little attention in primary, lower extremity joint arthroplasty patients admitted to inpatient musculoskeletal rehabilitation. **OBJECTIVE:** To assess how initial pain and other clinical factors are associated with rehabilitation LOS. **DESIGN:** Retrospective chart review. **SETTING:** Rehabilitation hospital. **PARTICIPANTS:** One hundred ninety nine patients admitted for inpatient rehabilitation. **INTERVENTIONS:** Not Applicable. **MAIN OUTCOME MEASURES:** Pain intensities on the

Numeric Rating Scale (NRS) were completed 3 times daily and total daily opioid consumption recorded in terms of morphine equivalents (MEQ). Confounding variables included patient demographics, medical comorbidity burden using the Charlson Comorbidity Index (CCI), and early functional status as measured by the motor subscale from the Functional Independence Measure (FIM). RESULTS: Mean day 3 NRS values of  $\geq 5.2$  and total day 3 opioid consumption of  $>50$  MEQ were associated with a prolonged LOS by nearly 3 and 2 days, respectively. Within a multivariate linear regression, age, mean day 3 pain, comorbidity burden, and early motor functional status accounted for 36% of the variability seen in joint replacement rehabilitation LOS. With all other variables remaining constant, for every unit increase in mean day 3 pain and CCI, this amounted to an additional 5% and 4% increase to LOS, whereas each unit increase in admission motor FIM decreased estimated LOS by 3%. CONCLUSION: Mean pain intensity and total opioid consumption on day 3 of inpatient rehabilitation is associated with LOS. For the rehabilitation physician, this is useful information as the earlier identification of patients with poorly controlled pain can lead to directed intervention, better patient care, and significant cost savings

**Svedahl SR, Hilt B, and Svendsen K. Work environment factors and respiratory complaints in Norwegian cooks. International Archives of Occupational & Environmental Health. 2020; 93(2):205-212.**

<https://doi.org/10.1007/s00420-019-01473-w>

Abstract: PURPOSE: Norwegian cooks exhibit relatively high mortality, particularly from respiratory diseases. Both occupational hazards and lifestyle factors have been suggested as possible explanations. Negative health effects from exposure to cooking fumes are well documented in non-Western populations, and it has been claimed that cooking fumes in Western style cooking might be substantially different. We hypothesise that exposure to cooking fumes contributes to respiratory diseases also in professional cooks in Western countries. The aim of this study was to elucidate if specific work environment factors related to cooking fume exposure are determinants for respiratory morbidity in Norwegian cooks.

METHODS: We surveyed specific work environment factors and respiratory complaints in 553 subjects that were currently working as

skilled cooks. Inclusion was based on the register of people that had graduated as skilled cooks in central Norway between 1988 and 2008. Determinants for the occurrence of respiratory complaints were explored by logistic regression. RESULTS: Overall, 17.2% of subjects reported respiratory complaints at work, while 8.1% had chronic bronchitis. Those who performed frying for over half of their workday exhibited an increased odds ratio for having chronic bronchitis of 2.5 (95% CI 1.2-5.3). Using gas for frying and using a fryer in the kitchen were also related to the occurrence of respiratory complaints. CONCLUSIONS: This study in Norwegian cooks demonstrates a relationship between the extent of frying and the occurrence of work-related respiratory complaints. Therefore, reducing exposure to cooking fumes could reduce respiratory complaints in cooks, and potentially help alleviate excess morbidity and mortality in this occupation

**Wolf JM, Turkiewicz A, Atroshi I, and Englund M. Occupational load as a risk factor for clinically relevant base of thumb osteoarthritis. Occupational and Environmental Medicine. 2020; 77(3):168-171.**

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Abstract: OBJECTIVE: It is postulated that increased load from pinch and grasp in occupational tasks increases the risk of thumb carpometacarpal (CMC1) osteoarthritis (OA). We sought to characterise the relationship between doctor-diagnosed CMC1 OA and occupation in a large working population. METHODS: We performed a matched case-control study using a Swedish healthcare register. We identified residents aged 30-65 years in 2013 with physician-diagnosed CMC1 OA from 1998 to 2013. We matched four controls per person with CMC1 OA by age, sex, education and postcode. Swedish Standard Classification of Occupations was used to assign occupation. Occupation was categorised as light, light-moderate, moderate and heavy labour. We used conditional logistic regression to estimate ORs with 95% CIs. RESULTS: We identified 3462 patients with CMC1 OA and matched 13 211 controls. The mean age of the CMC1 OA group was 63 (SD 7) years, with 81% women. The ORs for CMC1 OA in men were 1.31 (95% CI 0.96 to 1.79) for light-moderate, 1.76 (95% CI 1.29 to 2.40) for moderate and 2.00 (95% CI 1.59 to 2.51) for heavy compared with light work.



Women had ORs for CMC1 OA of 1.46 (95% CI 1.32 to 1.61) for light-moderate, 1.27 (95% CI 1.10 to 1.46) for moderate and 1.31 (95% CI 1.07 to 1.59) for heavy compared with light work.

**CONCLUSIONS:** The association between increased manual load in occupation and risk of CMC1 OA is more pronounced in men than in women, likely due to higher workload in the heavy labour category

\*IWH authored publications.