

IWH Research Alert
February 16, 2018

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***Gignac MAM, Ibrahim S, Smith PM, Kristman V, Beaton DE, and Mustard CA. The role of sex, gender, health factors, and job context in workplace accommodation use among men and women with arthritis. *Annals of Work Exposures and Health*. 2018; [epub ahead of print].**
<http://dx.doi.org/10.1093/annweh/wxx115> [open access]

Abstract: Background: With the aging of populations in many countries, workers are expected to remain employed longer but may struggle with the onset of common, chronic conditions like arthritis. To date, few studies have examined workplace policies and practices that could help accommodate individuals with arthritis, and fewer still have used a sex and gender-based approach to explore similarities and differences between women and men. Objectives: This study compared the health and work contexts of workers aged ≥ 50 years to better understand similarities and differences between women and men in accommodation availability, need, use, and unmet needs. Methods: A cross-sectional survey of men and women with osteoarthritis (OA), inflammatory arthritis (IA), or both OA and IA was administered online or by telephone and assessed demographics (e.g. age, education), health (e.g. pain, fatigue, workplace activity limitations), work context factors (e.g. job sector, full/part-time work, job control), and workplace accommodations (e.g. health benefits, flexible hours, special equipment/adaptations, modified duties). Sex and gender-based analyses examined similarities and differences between men and women and included descriptive statistics, multivariable multinomial analyses, and nested regression analyses. Results: There was a 58.9% response rate and final sample of 463 participants (women, $n = 266$; men, $n = 197$; OA = 59.0%; IA/both IA and OA = 23.7%; unsure = 17.3%). Women and men were significantly different in a number of health (e.g. fatigue, health variability, workplace activity limitations)

and work context factors (e.g. job sector, part-time work, job stress). However, in other respects, they were similar (e.g. pain, job involving physical demands, size of organization, shift work, union membership, job control). There were no differences between men and women in the availability or use of workplace accommodations. However, women reported significantly more accommodation needs and had greater unmet needs. Multivariable multinomial analyses found male/female as a binary variable did not explain differences in accommodation need, use, and unmet need. Nested analyses highlighted that differences in health variables explained male/female differences in accommodation need, while work context differences explained male/female differences in whether needs were met. Conclusions: The findings highlight that women and men draw on a range of existing accommodation policies and practices to help manage their arthritis and that most have their accommodation needs met. Decomposing the context within which men and women with arthritis work suggests that women may face health and work context challenges that differ from men and that are related to greater accommodation needs and unmet need. This highlights potential vulnerabilities in the work of women that need to be addressed

Ajslev JZN, Moller JL, Persson R, and Andersen LL. Trading health for money: agential struggles in the (re)configuration of subjectivity, the body and pain among construction workers. *Work, Employment & Society*. 2017; 31(6):887-903.

<http://dx.doi.org/10.1177/0950017016668141>

Alexandridis AA, McCort A, Ringwalt CL, Sachdeva N, Sanford C, Marshall SW, Mack K, and Dasgupta N. A statewide evaluation of seven strategies to reduce opioid overdose in North Carolina. *Injury Prevention*. 2018; 24(1):48-54.

<http://dx.doi.org/10.1136/injuryprev-2017-042396>

Abstract: BACKGROUND: In response to increasing opioid overdoses, US prevention efforts have focused on prescriber education and supply, demand and harm reduction strategies. Limited evidence informs which interventions are effective. We evaluated Project Lazarus, a centralised statewide intervention designed to prevent opioid overdose. METHODS: Observational intervention study of seven strategies. 74 of 100 North Carolina counties implemented the intervention. Dichotomous variables were constructed for each strategy by county-month. Exposure data were: process logs, surveys, addiction treatment interviews, prescription drug monitoring data. Outcomes were: unintentional and undetermined opioid overdose deaths, overdose-related emergency department (ED) visits. Interrupted time-series Poisson regression was used to estimate rates during preintervention (2009-2012) and intervention periods (2013-2014). Adjusted IRR controlled for prescriptions, county health status and time trends. Time-lagged regression models considered delayed impact (0-6 months). RESULTS: In adjusted immediate-impact models, provider education was associated with lower overdose mortality (IRR 0.91; 95% CI 0.81 to 1.02) but little

change in overdose-related ED visits. Policies to limit ED opioid dispensing were associated with lower mortality (IRR 0.97; 95% CI 0.87 to 1.07), but higher ED visits (IRR 1.06; 95% CI 1.01 to 1.12). Expansions of medication-assisted treatment (MAT) were associated with increased mortality (IRR 1.22; 95% CI 1.08 to 1.37) but lower ED visits in time-lagged models. **CONCLUSIONS:** Provider education related to pain management and addiction treatment, and ED policies limiting opioid dispensing showed modest immediate reductions in mortality. MAT expansions showed beneficial effects in reducing ED-related overdose visits in time-lagged models, despite an unexpected adverse association with mortality

Carter EW and Bumble JL. The promise and possibilities of community conversations: expanding opportunities for people with disabilities. Journal of Disability Policy Studies. 2018; 28(4):195-202.
<http://dx.doi.org/10.1177/1044207317739408>

Dingemans E, Henkens K, and van Solinge H. Working retirees in Europe: individual and societal determinants. Work, Employment & Society. 2017; 31(6):972-991.
<http://dx.doi.org/10.1177/0950017016664677>

Elliott JH, Synnot A, Turner T, Simmonds M, Akl EA, McDonald S, Salanti G, Meerpohl J, MacLehose H, Hilton J, Tovey D, Shemilt I, and Thomas J. Living systematic review: 1. introduction-the why, what, when, and how. Journal of Clinical Epidemiology. 2017; 91:23-30.
<http://dx.doi.org/10.1016/j.jclinepi.2017.08.010>

Abstract: Systematic reviews are difficult to keep up to date, but failure to do so leads to a decay in review currency, accuracy, and utility. We are developing a novel approach to systematic review updating termed "Living systematic review" (LSR): systematic reviews that are continually updated, incorporating relevant new evidence as it becomes available. LSRs may be particularly important in fields where research evidence is emerging rapidly, current evidence is uncertain, and new research may change policy or practice decisions. We hypothesize that a continual approach to updating will achieve greater currency and validity, and increase the benefits to end users, with feasible resource requirements over time

Foster D. The health and well-being at work agenda: good news for (disabled) workers or just a capital idea? Work, Employment & Society. 2018; 32(1):186-197.
<http://dx.doi.org/10.1177/0950017016682458>

Ge L, Tian JH, Li YN, Pan JX, Li G, Wei D, Xing X, Pan B, Chen YL, Song FJ, and Yang KH. Association between prospective registration and overall reporting and methodological quality of systematic reviews: a meta-epidemiological study. Journal of Clinical Epidemiology. 2018; 93:45-55.

<http://dx.doi.org/10.1016/j.iclinepi.2017.10.012>

Abstract: OBJECTIVES: The aim of this study was to investigate the differences in main characteristics, reporting and methodological quality between prospectively registered and nonregistered systematic reviews. STUDY DESIGN AND SETTING: PubMed was searched to identify systematic reviews of randomized controlled trials published in 2015 in English. After title and abstract screening, potentially relevant reviews were divided into three groups: registered non-Cochrane reviews, Cochrane reviews, and nonregistered reviews. For each group, random number tables were generated in Microsoft Excel, and the first 50 eligible studies from each group were randomly selected. Data of interest from systematic reviews were extracted. Regression analyses were conducted to explore the association between total Revised Assessment of Multiple Systematic Review (R-AMSTAR) or Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) scores and the selected characteristics of systematic reviews. RESULTS: The conducting and reporting of literature search in registered reviews were superior to nonregistered reviews. Differences in 9 of the 11 R-AMSTAR items were statistically significant between registered and nonregistered reviews. The total R-AMSTAR score of registered reviews was higher than nonregistered reviews [mean difference (MD) = 4.82, 95% confidence interval (CI): 3.70, 5.94]. Sensitivity analysis by excluding the registration-related item presented similar result (MD = 4.34, 95% CI: 3.28, 5.40). Total PRISMA scores of registered reviews were significantly higher than nonregistered reviews (all reviews: MD = 1.47, 95% CI: 0.64-2.30; non-Cochrane reviews: MD = 1.49, 95% CI: 0.56-2.42). However, the difference in the total PRISMA score was no longer statistically significant after excluding the item related to registration (item 5). Regression analyses showed similar results. CONCLUSION: Prospective registration may at least indirectly improve the overall methodological quality of systematic reviews, although its impact on the overall reporting quality was not significant

van den Heuvel SG, Vergeer R, and de Weerd M. The effect of a policy measure on work-related health risks – combine the quantitative and the qualitative. Policy and Practice in Health and Safety. 2017; [epub ahead of print].

<http://dx.doi.org/10.1080/14773996.2017.1415421>

Joseph B, Walker A, and Fuller-Tyszkiewicz M. Evaluating the effectiveness of employee assistance programmes: a systematic review. European Journal of Work and Organizational Psychology. 2018; 27(1):1-15.

<http://dx.doi.org/10.1080/1359432X.2017.1374245>

Lee G. A systematic review of occupational health and safety business cases. Workplace Health & Safety. 2018; 66(2):95-104.

<http://dx.doi.org/10.1177/2165079917730073>

Abstract: Business cases are arguments developed to secure management

commitment and approval for investment in an intervention. This systematic review evaluated 12 experimental and quasi-experimental studies on occupational health and safety interventions (OHSI) in various settings. The search engines used in this systematic review include PubMed, CINAHL, and Scopus. A cost and benefit analysis of OHSI was completed at the organizational level in these studies. The focus of this analysis included sample, design, theoretical framework, interventional strategies, and threats to validity and outcomes. Positive returns on investment of OHSI outcomes were shown in 10 of the studies. The other two studies concluded that their chosen OHSI were not cost-effective

Oranye NO. Nature of injury and risk of multiple claims among workers in Manitoba health care. *Workplace Health & Safety*. 2018; 66(2):70-83.

<http://dx.doi.org/10.1177/2165079917728942>

Abstract: In industrial societies, work-related musculoskeletal disorders are common among workers, frequently resulting in recurrent injuries, work disability, and multiple compensation claims. The risk of idiopathic musculoskeletal injuries is thought to be more than twice the risk of any other health problem among workers in the health care sector. This risk is highly prevalent particularly among workers whose job involves frequent physical tasks, such as patient lifting and transfer. Workers with recurrent occupational injuries are likely to submit multiple work disability claims and progress to long-term disability. The objective of this study was to explore the influence of injury type and worker characteristics on multiple compensation claims, using workers' compensation claims data. This retrospective study analyzed 11 years of secondary claims data for health care workers. Workers' occupational groups were classified based on the nature of physical tasks associated with their jobs, and the nature of work injuries was categorized into non-musculoskeletal, and traumatic and idiopathic musculoskeletal injuries. The result shows that risk of multiple injury claims increased with age, and the odds were highest for older workers aged 55 to 64 (odds ratio [OR] = 3.5). A large proportion of those who made an injury claim made multiple claims that resulted in more lost time than single injury claims. The study conclusion is that the nature of injury and work tasks are probably more significant risk factors for multiple claims than worker characteristics

Page MJ, Altman DG, Shamseer L, McKenzie JE, Ahmadzai N, Wolfe D, Yazdi F, Catala-Lopez F, Tricco AC, and Moher D. Reproducible research practices are underused in systematic reviews of biomedical interventions. *Journal of Clinical Epidemiology*. 2018; 94:8-18.

<http://dx.doi.org/10.1016/j.jclinepi.2017.10.017>

Abstract: OBJECTIVES: To evaluate how often reproducible research practices, which allow others to recreate the findings of studies, given the original data, are used in systematic reviews (SRs) of biomedical research. STUDY DESIGN AND SETTING: We evaluated a random sample of SRs indexed in MEDLINE during February 2014, which focused on a therapeutic intervention and reported at least

one meta-analysis. Data on reproducible research practices in each SR were extracted using a 26-item form by one author, with a 20% random sample extracted in duplicate. We explored whether the use of reproducible research practices was associated with an SR being a Cochrane review, as well as with the reported use of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement. RESULTS: We evaluated 110 SRs of therapeutic interventions, 78 (71%) of which were non-Cochrane SRs. Across the SRs, there were 2,139 meta-analytic effects (including subgroup meta-analytic effects and sensitivity analyses), 1,551 (73%) of which were reported in sufficient detail to recreate them. Systematic reviewers reported the data needed to recreate all meta-analytic effects in 72 (65%) SRs only. This percentage was higher in Cochrane than in non-Cochrane SRs (30/32 [94%] vs. 42/78 [54%]; risk ratio 1.74, 95% confidence interval 1.39-2.18). Systematic reviewers who reported imputing, algebraically manipulating, or obtaining some data from the study author/sponsor infrequently stated which specific data were handled in this way. Only 33 (30%) SRs mentioned access to data sets and statistical code used to perform analyses. CONCLUSION: Reproducible research practices are underused in SRs of biomedical interventions. Adoption of such practices facilitates identification of errors and allows the SR data to be reanalyzed

Puljak L. If there is only one author or only one database was searched, a study should not be called a systematic review. Journal of Clinical Epidemiology. 2017; 91:4-5.

<http://dx.doi.org/10.1016/j.jclinepi.2017.08.002>

Raynor O, Hayward K, Semenza G, and Stoffmacher B. Community conversations to increase employment opportunities for young adults with developmental disabilities in California. Journal of Disability Policy Studies. 2018; 28(4):203-215.

<http://dx.doi.org/10.1177/1044207317739405>

Smeaton D and White M. Britain's older employees in decline, 1990 - 2006: a panel analysis of pay. Work, Employment & Society. 2018; 32(1):93-113.

<http://dx.doi.org/10.1177/0950017016687717>

Thuesen F. Linguistic barriers and bridges: constructing social capital in ethnically diverse low-skill workplaces. Work, Employment & Society. 2017; 31(6):937-953.

<http://dx.doi.org/10.1177/0950017016656321>

Vaughn LM, Jacquez F, Lindquist-Grantz R, Parsons A, and Melink K. Immigrants as research partners: a review of immigrants in community-based participatory research (CBPR). Journal of Immigrant and Minority Health. 2017; 19(6):1457-1468.

<http://dx.doi.org/10.1007/s10903-016-0474-3>

Abstract: Community-based participatory research (CBPR) is uniquely suited to

engage immigrants in all aspects of research, from research question development to data collection to interpretation and dissemination of results. An increasing number of research studies have utilized the methodology for exploring complex health issues for immigrants. In the current manuscript, we present a review of peer-reviewed articles in health-related research where CBPR was conducted in partnership with immigrants. We examined the role of immigrants in the CBPR process and how immigrant involvement improved/enhanced the research rigor. A total of 161 articles met the inclusion criteria. The results of this literature review enhance our understanding of how CBPR can be used in direct collaboration with immigrants and highlights the many potential benefits for both researchers and immigrant communities

Vornholt K, Villotti P, Muschalla B, Bauer J, Colella A, Zijlstra F, Van Ruitenbeek G, Uitdewilligen S, and Corbiere M. Disability and employment: overview and highlights. European Journal of Work and Organizational Psychology. 2018; 27(1):40-55.

<http://dx.doi.org/10.1080/1359432X.2017.1387536>

***IWH authored publication.**