

IWH Research Alert
April 6, 2018

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***Biswas A, Smith PM, and Gignac MAM. Naturally occurring workplace facilities to increase the leisure time physical activity of workers: a propensity-score weighted population study. Preventive Medicine Reports. 2018; [Epub ahead of print].**
<http://dx.doi.org/10.1016/j.pmedr.2018.03.013> [open access]

***Quinn MM and Smith PM. Gender, work, and health. Annals of Work Exposures and Health. 2018; [Epub ahead of print].**
<http://dx.doi.org/10.1093/annweh/wxy019>

Andersen LP, Nordam L, Joensson T, Kines P, and Nielsen KJ. Social identity, safety climate and self-reported accidents among construction workers. Construction Management and Economics. 2018; 36(1):22-31.
<http://dx.doi.org/10.1080/01446193.2017.1339360> [open access]

Brough P, Drummond S, and Biggs A. Job support, coping, and control: assessment of simultaneous impacts within the occupational stress process. Journal of Occupational Health Psychology. 2018; 23(2):188-197.
<http://dx.doi.org/10.1037/ocp0000074>

Abstract: The assessment of occupational stress is marred by an overwhelming adoption of simplistic research designs that generally fail to represent the complex reality of the occupational stress process. Informed by the theoretical tenants of both the transactional stress model and the job-demands-control-support model, this paper presents a rare simultaneous assessment of how two types of job demands (cognitive and emotional) are both moderated by job control and social support and mediated by coping for the prediction of work

engagement and psychological strain over time. Self-report surveys were administered twice over 12 months to a sample of police-service workers and moderated mediation analyses were conducted on the matched sample of N = 2,481 respondents. The results offer support for the process of occupational stress by demonstrating how both accommodation and avoidance coping mediate the job-demands-outcome relationship over time. The results also demonstrate that this stressor-coping-strain process is simultaneously moderated by job support or job control. We found it interesting that this research also demonstrated that the estimation of work engagement was not unduly influenced by the type of job demands these police employees were exposed to. (PsycINFO Database Record

Emerson E, Hatton C, Baines S, and Robertson J. The association between employment status and health among British adults with and without intellectual impairments: cross-sectional analyses of a cohort study. BMC Public Health. 2018; 18(1):401.

<http://dx.doi.org/10.1186/s12889-018-5337-5> [open access]

Abstract: BACKGROUND: There exists a well established link between employment status and health, with unemployment being associated with poorer health. Much less is known about the association between economic inactivity and health, especially among people with disabilities. Our aim is to determine whether the association between employment status and health is similar for adults with and adults without intellectual impairment. METHODS: Using nationally representative data from the 1970 British Cohort Study, we undertook a series of cross sectional analyses of the association between employment status and health (self-reported general health, mental health) among British adults with and without intellectual impairments at ages 26, 30, 34, 38 and 42. RESULTS: People with intellectual disability and borderline intellectual functioning had markedly lower employment rates and poorer health than other participants at all waves of data collection. When compared with participants in full-time employment the prevalence of poorer self rated health and mental health was higher among participants with and without intellectual impairment who were in either part-time employment or were economically inactive at all ages. When compared with participants in employment the prevalence of poorer self rated health and mental health was higher among participants with and without intellectual impairment who were in the economically inactive categories of unemployment, education/training and ill/disabled at all ages. Intellectual disability status appeared to moderate the strength of the relationship between economic activity and self-rated health and, to a much lesser extent, the relationship between economic activity and mental health. In all instances the moderation indicated a stronger association among participants without intellectual impairment. CONCLUSIONS: The results provide substantive evidence to suggest that the nature of the well-established association between employment and better health is similar for British adults with and without intellectual impairments. The results do, however, indicate that the magnitude of

the effect involved differed. Further research is needed to identify mechanisms that may underlie this difference

Gkiouleka A, Huijts T, Beckfield J, and Bambra C. Understanding the micro and macro politics of health: inequalities, intersectionality & institutions: research agenda. *Social Science & Medicine*. 2018; 200:92-98.

<http://dx.doi.org/10.1016/j.socscimed.2018.01.025> [open access]

Abstract: This essay brings together intersectionality and institutional approaches to health inequalities, suggesting an integrative analytical framework that accounts for the complexity of the intertwined influence of both individual social positioning and institutional stratification on health. This essay therefore advances the emerging scholarship on the relevance of intersectionality to health inequalities research. We argue that intersectionality provides a strong analytical tool for an integrated understanding of health inequalities beyond the purely socioeconomic by addressing the multiple layers of privilege and disadvantage, including race, migration and ethnicity, gender and sexuality. We further demonstrate how integrating intersectionality with institutional approaches allows for the study of institutions as heterogeneous entities that impact on the production of social privilege and disadvantage beyond just socioeconomic (re)distribution. This leads to an understanding of the interaction of the macro and the micro facets of the politics of health. Finally, we set out a research agenda considering the interplay/intersections between individuals and institutions and involving a series of methodological implications for research - arguing that quantitative designs can incorporate an intersectional institutional approach

van der Graaf P, Francis O, Doe E, Barrett E, O'Rourke M, and Docherty G. Structural approaches to knowledge exchange: comparing practices across five centres of excellence in public health. *Journal of Public Health*. 2018; 40(suppl 1):i31-i38.

<http://dx.doi.org/10.1093/pubmed/fox150>

Abstract: Background: In 2008, five UKCRC Public Health Research Centres of Excellence were created to develop a coordinated approach to policy and practice engagement and knowledge exchange. The five Centres have developed their own models and practices for achieving these aims, which have not been compared in detail to date. Methods: We applied an extended version of Saner's model for the interface between science and policy to compare five case studies of knowledge exchanges, one from each centre. We compared these practices on three dimensions within our model (focus, function and type/scale) to identify barriers and facilitators for knowledge exchange. Results: The case studies shared commonalities in their range of activities (type) but illustrated different ways of linking these activities (function). The Centres' approaches ranged from structural to more organic, and varied in the extent that they engaged internal audiences (focus). Each centre addressed policymakers at different geographical levels and scale. Conclusions: This article emphasizes the

importance of linking a range of activities that engage policymakers at different levels, intensities and points in their decision-making processes to build relationships. Developing a structural approach to knowledge exchange activities in different contexts presents challenges of resource, implementation and evaluation

Kim S, Park Y, and Headrick L. Daily micro-breaks and job performance: general work engagement as a cross-level moderator. Journal of Applied Psychology. 2018; [Epub ahead of print].

<http://dx.doi.org/10.1037/apl0000308>

Abstract: Despite the growing research on work recovery and its well-being outcomes, surprisingly little attention has been paid to at-work recovery and its job performance outcomes. The current study extends the work recovery literature by examining day-level relationships between prototypical microbreaks and job performance as mediated by state positive affect. Furthermore, general work engagement is tested as a cross-level moderator weakening the indirect effects of microbreaks on job performance via positive affect. Using multisource experience sampling method, the authors collected two daily surveys from 71 call center employees and obtained objective records of daily sales performance for two consecutive weeks (n = 632). Multilevel path analysis results showed that relaxation, socialization, and cognitive microbreaks were related to increased positive affect at work which, in turn, predicted greater sales performance. However, breaks for nutrition-intake (having snacks and drinks) did not show significant effects. Importantly, microbreaks had significant indirect effects on job performance via positive affect only for workers who had lower general work engagement, whereas the indirect effects did not exist for workers who had higher general work engagement. Furthermore, Bayesian multilevel analyses confirmed the results. Theoretical and practical implications, limitations, and future research directions are discussed. (PsycINFO Database Record

Maas ET, Koehoorn M, and McLeod CB. Return-to-work for multiple jobholders with a work-related musculoskeletal disorder: a population-based, matched cohort in British Columbia. PLoS ONE. 2018; 13(4):e0193618.

<http://dx.doi.org/10.1371/journal.pone.0193618> [open access]

Abstract: INTRODUCTION: Multiple jobholders (MJHs) have a higher risk of injury compared to single jobholders (SJHs), but it is unknown if return-to-work (RTW) after a work injury is affected by multiple jobholding. This study examined the association between multiple versus single jobholding and time to RTW for workers with a work-related musculoskeletal disorder (MSD). METHODS: We used administrative workers' compensation data to identify injured workers with an accepted MSD lost-time claim between 2010-2014 in British Columbia, Canada (n = 125,639 SJHs and 9,029 MJHs). The outcome was days until RTW during twelve months after the first day of time-loss. The MJH and SJH cohorts were balanced using coarsened exact matching that yielded a final matched

cohort of 8,389 MJHs and 8,389 SJHs. The outcome was estimated with Cox regression, using piecewise models, and the hazard ratios were stratified by type of MSD, a serious injury indicator, gender, weekly workdays preceding MSD, and wage categories. RESULTS: MJHs were less likely to RTW compared to SJHs within the first six months after the first time-loss day, with greater and longer lasting effects for males, workers with a serious injury, and a higher wage. No difference between MJHs and SJHs was found for workers who had a six- or seven-day work week preceding MSD, for workers with dislocations, and for workers who were still off work after six months. CONCLUSIONS: Overall, MJHs with a workweek of maximum five days are disadvantaged compared to SJHs in terms of RTW following a work-related MSD within the first six months after the first time-loss day. This difference might be caused by more precarious job contracts for MJHs that challenges RTW because of lack of support for modified work, higher workload, and reduced likelihood that MJHs file a workers' compensation claim. Despite adjusting for type of MSD, severity of injury and occupation, the differences persisted for the vast majority of the study sample

Mazzucca S, Tabak RG, Pilar M, Ramsey AT, Baumann AA, Kryzer E, Lewis EM, Padek M, Powell BJ, and Brownson RC. Variation in research designs used to test the effectiveness of dissemination and implementation strategies: a review. *Frontiers in Public Health*. 2018; 6:32.

<http://dx.doi.org/10.3389/fpubh.2018.00032> [open access]

Abstract: Background: The need for optimal study designs in dissemination and implementation (D&I) research is increasingly recognized. Despite the wide range of study designs available for D&I research, we lack understanding of the types of designs and methodologies that are routinely used in the field. This review assesses the designs and methodologies in recently proposed D&I studies and provides resources to guide design decisions. Methods: We reviewed 404 study protocols published in the journal *Implementation Science* from 2/2006 to 9/2017. Eligible studies tested the efficacy or effectiveness of D&I strategies (i.e., not effectiveness of the underlying clinical or public health intervention); had a comparison by group and/or time; and used ≥ 1 quantitative measure. Several design elements were extracted: design category (e.g., randomized); design type [e.g., cluster randomized controlled trial (RCT)]; data type (e.g., quantitative); D&I theoretical framework; levels of treatment assignment, intervention, and measurement; and country in which the research was conducted. Each protocol was double-coded, and discrepancies were resolved through discussion. Results: Of the 404 protocols reviewed, 212 (52%) studies tested one or more implementation strategy across 208 manuscripts, therefore meeting inclusion criteria. Of the included studies, 77% utilized randomized designs, primarily cluster RCTs. The use of alternative designs (e.g., stepped wedge) increased over time. Fewer studies were quasi-experimental (17%) or observational (6%). Many study design categories (e.g., controlled pre-post, matched pair cluster design) were represented by only one or two studies. Most articles proposed quantitative and qualitative methods (61%), with the

remaining 39% proposing only quantitative. Half of protocols (52%) reported using a theoretical framework to guide the study. The four most frequently reported frameworks were Consolidated Framework for Implementing Research and RE-AIM (n = 16 each), followed by Promoting Action on Research Implementation in Health Services and Theoretical Domains Framework (n = 12 each). Conclusion: While several novel designs for D&I research have been proposed (e.g., stepped wedge, adaptive designs), the majority of the studies in our sample employed RCT designs. Alternative study designs are increasing in use but may be underutilized for a variety of reasons, including preference of funders or lack of awareness of these designs. Promisingly, the prevalent use of quantitative and qualitative methods together reflects methodological innovation in newer D&I research

McCluney CL, Schmitz LL, Hicken MT, and Sonnega A. Structural racism in the workplace: does perception matter for health inequalities? *Social Science & Medicine*. 2018; 199:106-114.

<http://dx.doi.org/10.1016/j.socscimed.2017.05.039>

Abstract: Structural racism has been linked to racial health inequalities and may operate through an unequal labor market that results in inequalities in psychosocial workplace environments (PWE). Experiences of the PWE may be a critical but understudied source of racial health disparities as most adults spend a large portion of their lives in the workplace, and work-related stress affects health outcomes. Further, it is not clear if the objective characteristics of the workplace are important for health inequalities or if these inequalities are driven by the perception of the workplace. Using data from the 2008 to 2012 waves of the Health and Retirement Study (HRS), a probability-based sample of US adults 50 years of age and older and the Department of Labor's Occupational Information Network (O*NET), we examine the role of both standardized, objective (O*NET) and survey-based, subjective (as in HRS) measures of PWEs on health and Black-White health inequalities. We find that Blacks experience more stressful PWEs and have poorer health as measured by self-rated health, episodic memory function, and mean arterial pressure. Mediation analyses suggest that these objective O*NET ratings, but not the subjective perceptions, partially explain the relationship between race and health. We discuss these results within the extant literature on workplace and health and health inequalities. Furthermore, we discuss the use of standardized objective measures of the PWE to capture racial inequalities in workplace environment

Navestad TO, Elvebakk B, and Phillips RO. The safety ladder: developing an evidence-based safety management strategy for small road transport companies. *Transport Reviews*. 2018; 38(3):372-393.

<http://dx.doi.org/10.1080/01441647.2017.1349207> [open access]

Poot CC, van der Kleij RM, Brakema EA, Vermond D, Williams S, Cragg L, van den Broek JM, and Chavannes NH. From research to evidence-informed decision making: a systematic approach. *Journal of Public*

Health. 2018; 40(suppl 1):i3-i12.

<http://dx.doi.org/10.1093/pubmed/fox153> [open access]

Abstract: Background: Knowledge creation forms an integral part of the knowledge-to-action framework aimed at bridging the gap between research and evidence-informed decision making. Although principles of science communication, data visualisation and user-centred design largely impact the effectiveness of communication, their role in knowledge creation is still limited. Hence, this article aims to provide researchers a systematic approach on how knowledge creation can be put into practice. Methods: A systematic two-phased approach towards knowledge creation was formulated and executed. First, during a preparation phase the purpose and audience of the knowledge were defined. Subsequently, a developmental phase facilitated how the content is 'said' (language) and communicated (channel). This developmental phase proceeded via two pathways: a translational cycle and design cycle, during which core translational and design components were incorporated. The entire approach was demonstrated by a case study. Results: The case study demonstrated how the phases in this systematic approach can be operationalised. It furthermore illustrated how created knowledge can be delivered. Conclusion: The proposed approach offers researchers a systematic, practical and easy-to-implement tool to facilitate effective knowledge creation towards decision-makers in healthcare. Through the integration of core components of knowledge creation evidence-informed decision making will ultimately be optimized

Posthuma RA, Campion MC, and Campion MA. A taxonomic foundation for evidence-based research on employee performance management. European Journal of Work and Organizational Psychology. 2018; 27(2):168-187.

<http://dx.doi.org/10.1080/1359432X.2018.1438411>

Rattan A and Dweck CS. What happens after prejudice is confronted in the workplace? How mindsets affect minorities' and women's outlook on future social relations. Journal of Applied Psychology. 2018; [Epub ahead of print].

<http://dx.doi.org/10.1037/apl0000287>

Abstract: Organizations are increasingly concerned with fostering successful diversity. Toward this end, diversity research has focused on trying to reduce prejudice and biased behavior. But what happens when prejudice in the workplace inevitably occurs? Research also needs to focus on whether recovery and repair of social relations after expressions of prejudice are possible. To begin investigating this question, we develop a new framework for understanding reactions to prejudice in the workplace. We hypothesized that when women and minorities choose to confront a prejudiced comment in a workplace interaction (vs. remain silent) and hold a growth (vs. fixed) mindset-the belief that others can change-they remain more positive in their subsequent outlook in the workplace.

Studies 1a, 1b, and 2 used hypothetical workplace scenarios to expose participants to someone who expressed bias; Study 3 ensured real-world relevance by eliciting retrospective accounts of workplace bias from African American employees. Across studies, women and minorities who confronted the perpetrator of prejudice exhibited more positive subsequent expectations of that coworker when they held a growth mindset. It is important that these more positive expectations were associated with reports of greater workplace belonging (Study 2), ratings of improved relations with coworkers who had displayed bias (Study 3), and greater workplace satisfaction (Studies 2-3). Thus, a growth mindset contributes to successful workplace diversity by protecting women's and minorities' outlook when they opt to confront expressions of bias. (PsycINFO Database Record

Spitters HPEM, van de Goor LAM, Lau CJ, Sandu P, Eklund KL, Jansen J, and van Oers JAM. Learning from games: stakeholders' experiences involved in local health policy. Journal of Public Health. 2018; 40(suppl 1):i39-i49.

<http://dx.doi.org/10.1093/pubmed/fox149>

Abstract: Since public health problems are complex and the related policies need to address a wide range of sectors, cross-sectoral collaboration is beneficial. One intervention focusing on stimulating collaboration is a 'policy game'. The focus on specific problems facilitates relationships between the stakeholders and stimulates cross-sectoral policymaking. The present study explores stakeholders' learning experiences with respect to the collaboration process in public health policymaking. This was achieved via their game participation, carried out in real-life stakeholder networks in the Netherlands, Denmark and Romania. The policy game (In2Action) was developed and implemented as a 1-day role-play. The data consisted of: (i) observations and evaluation notes during the game and (ii) participant questionnaire after the game. All three countries showed similar results in learning experience during the collaboration processes in local policymaking. Specific learning experiences were related to: (i) the stakeholder network, (ii) interaction and (iii) relationships. The game also increased participant's understanding of group dynamics and need for a coordinator in policymaking. This exploratory study shows that the game provides participants with learning experiences during the collaboration process in policymaking. Experiencing what is needed to establish cross-sectoral collaboration is a first step towards enhancing knowledge exchange and more effective public health policies

Tei-Tominaga M and Nakanishi M. The influence of supportive and ethical work environments on work-related accidents, injuries, and serious psychological distress among hospital nurses. International Journal of Environmental Research and Public Health. 2018; 15(2):E240.

<http://dx.doi.org/10.3390/ijerph15020240> [open access]

Abstract: The healthcare industry in Japan has experienced many cases of work-

related injuries, accidents, and workers' compensation claims because of mental illness. This study examined the influence of supportive and ethical work environments on work-related accidents, injuries, and serious psychological distress among hospital nurses. Self-reported questionnaires were distributed to nurses (n = 1114) from 11 hospitals. Valid responses (n = 822, 93% women, mean age = 38.49 +/- 10.09 years) were used for analyses. The questionnaire included items addressing basic attributes, work and organizational characteristics, social capital and ethical climate at the workplace, psychological distress, and experience of work-related accidents or injuries in the last half year. The final model of a multivariate logistic regression analysis revealed that those who work less than 4 h of overtime per week (OR = 0.313), those who work on days off more than once per month (OR = 0.424), and an exclusive workplace climate (OR = 1.314) were significantly associated with work-related accidents or injuries. Additionally, an exclusive workplace climate (OR = 1.696) elevated the risk of serious psychological distress. To prevent work-related compensation cases, which are caused by these variables, strengthening hospitals' occupational health and safety is necessary

Turk MA and McDermott S. Knowledge translation and the health of people with disability. *Disability and Health Journal*. 2018; 11(2):169.

<http://dx.doi.org/10.1016/j.dhjo.2018.01.008>

Urtasun A and Nunez I. Healthy working days: the (positive) effect of work effort on occupational health from a human capital approach. *Social Science & Medicine*. 2018; 202:79-88.

<http://dx.doi.org/10.1016/j.socscimed.2018.02.028>

Abstract: The neoclassic economic rationale has taken for granted that the effect of effort on health is negative. However, several studies in the field of occupational health and medicine claim that working is clearly better for health than non-working or being unemployed, as some psychological and physical condition may improve with work effort. This paper analyzes the effect of work effort on occupational health. The proposed human capital approach builds upon the classic economic perspective, that assumes a negative effect of effort on health, and extends it by allowing positive effects, as suggested by occupational researchers. Using a sample from 2010 of 20,000 European workers we find that, under adequate working conditions, the level of effort (measured in working hours) at which health starts to deteriorate is very high (120h per week). However, if working conditions are not adequate, even a moderate effort (35h per week) can harm workers health

Walters KM, Fisher GG, and Tenney L. An overview of health and safety in the Colorado cannabis industry. *American Journal of Industrial Medicine*. 2018; [Epub ahead of print].

<http://dx.doi.org/10.1002/ajim.22834>

Abstract: BACKGROUND: Understanding worker health and safety in the rapidly growing legal U.S. cannabis industry is important. Although little published

research exists, workers may be exposed to biological, chemical, and physical hazards. This study investigated the Colorado cannabis industry workforce and both physical and psychosocial hazards to worker health and safety. **METHODS:** Two hundred and fourteen Colorado cannabis workers completed an online survey after in-person and online recruitment. Participants answered questions about their occupation, job tasks, general well-being, occupational health and safety, cannabis use, and tobacco use. **RESULTS:** Colorado cannabis workers were generally job secure and valued safety. However, they regularly consumed cannabis, expressed low concerns about workplace hazards, reported some occupational injuries and exposures, and reported inconsistent training practices. **CONCLUSIONS:** Working in the cannabis industry is associated with positive outcomes for workers and their organizations, but there is an imminent need to establish formal health and safety training to implement best practices

Watson D, Tregaskis O, Gedikli C, Vaughn O, and Semkina A. Well-being through learning: a systematic review of learning interventions in the workplace and their impact on well-being. *European Journal of Work and Organizational Psychology*. 2018; 27(2):247-268.

<http://dx.doi.org/10.1080/1359432X.2018.1435529> [open access]

***IWH authored publications.**