

IWH Research Alert
March 17, 2017

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***Black O, Keegel T, Sim MR, Collie A, and Smith P. The effect of self-efficacy on return-to-work outcomes for workers with psychological or upper-body musculoskeletal injuries: a review of the literature. *Journal of Occupational Rehabilitation*. 2017; [Epub ahead of print].**

<http://dx.doi.org/10.1007/s10926-017-9697-y>

Abstract: Purpose Work absence can result in substantial losses to the economy and workers. As a result, identifying modifiable factors associated with return-to-work (RTW) following an injury or illness is the focus of many empirical investigations. Self-efficacy, the belief about one's ability to undertake behaviours to achieve desired goals, has been identified as an important factor in RTW for injured workers. This paper systematically reviewed the literature on the association between self-efficacy and RTW outcomes for workers with an upper-body musculoskeletal injury or psychological injury. Methods A systematic search was conducted across five databases using two main search concepts- 'self-efficacy' and 'RTW'. After removing duplicates, our search strategy identified 836 studies, which were screened for relevance using titles and abstracts. Results A two stage screening process reduced the study pool to six studies using psychological injury cohorts and three using upper-body musculoskeletal (UB-MSK) cohorts. Eight cohorts from seven prospective cohort studies and one sample from a randomised control trial (RCT) were subjected to a risk of bias assessment. Higher levels of self-efficacy appeared to have a consistent and positive association with RTW across return-to-work status and work absence outcomes, injury type and follow-up periods. Effect ratios ranged from 1.00 to 5.26 indicating a potentially large impact of self-efficacy on RTW outcomes. The relationship between self-efficacy and RTW strengthened as the domain of self-efficacy became more specific to RTW and job

behaviours. Studies assessing workers with psychological injuries were of a lower quality compared to those assessing workers with UB-MSK injuries. Conclusions Higher self-efficacy had consistent positive associations with RTW outcomes. Further empirical research should identify the determinants of self-efficacy, and explore the processes by which higher self-efficacy improves RTW outcomes

***Cullen KL, Dickey JP, Brown SH, Nykamp SG, Bent LR, Thomason JJ, and Moens NM. The magnitude of muscular activation of four canine forelimb muscles in dogs performing two agility-specific tasks. BMC Veterinary Research. 2017; 13(1):68. <http://dx.doi.org/10.1186/s12917-017-0985-8> [open access]**

Abstract: BACKGROUND: The purpose of this study was to measure the muscular activation in four forelimb muscles while dogs performed agility tasks (i.e., jumping and A-frame) and to provide insight into potential relationships between level of muscular activation and risk of injury. Muscle activation in eight healthy, client-owned agility dogs was measured using ultrasound-guided fine-wire electromyography of four specific forelimb muscles: Biceps Brachii, Supraspinatus, Infraspinatus, and Triceps Brachii - Long Head, while dogs performed a two jump sequence and while dogs ascended and descended an A-frame obstacle at two different competition heights. RESULTS: The peak muscle activations during these agility tasks were between 1.7 and 10.6 fold greater than walking. Jumping required higher levels of muscle activation compared to ascending and descending an A-frame, for all muscles of interest. There was no significant difference in muscle activation between the two A-frame heights. CONCLUSIONS: Compared to walking, all of the muscles were activated at high levels during the agility tasks and our findings indicate that jumping is an especially demanding activity for dogs in agility. This information is broadly relevant to understanding the pathophysiology of forelimb injuries related to canine athletic activity

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Hauret L and Williams DR. Cross-national analysis of gender differences in job satisfaction. Industrial Relations: A Journal of Economy and Society. 2017; 56(2):203-235. <http://dx.doi.org/10.1111/irel.12171>

Jordan VM, Lensen SF, and Farquhar CM. There were large discrepancies in risk of bias tool judgments when a randomized controlled trial appeared in more than one systematic review. Journal of Clinical Epidemiology. 2017; 81:72-76.

<http://dx.doi.org/10.1016/j.jclinepi.2016.08.012>

Abstract: OBJECTIVES: To assess the consistency in risk of bias (RoB) judgments across Cochrane reviews for studies appearing in more than one Cochrane review in the field of subfertility. STUDY DESIGN AND SETTING: We retrieved any study that had been used more than once in systematic reviews present on the Cochrane Database of Systematic Reviews in the area of subfertility. We then retrieved the recorded RoB assessments for these studies and looked at the consistency of judgments made between different authoring teams on the same trials. RESULTS: From the 156 bias judgments that were completed by at least two separate groups of authors, 45% of these judgments differed. For the domains of random sequence generation and incomplete outcome data, there was reasonably high level of agreement (71% and 79%, respectively). However, for the domain of blinding, agreement was reached in only 35% of cases. CONCLUSION: This assessment of how consistently the RoB is being applied in Cochrane reviews has shown that, especially in some domains, there are large discrepancies in how RoB is being evaluated. Further work needs to be undertaken to improve the application of this tool

Lee M, Lee SH, Kim T, Yoo HJ, Kim SH, Suh DW, Son J, and Yoon B. Feasibility of a smartphone-based exercise program for office workers with neck pain: an individualized approach using a self-classification algorithm. Archives of Physical Medicine and Rehabilitation. 2017; 98(1):80-87.

<http://dx.doi.org/10.1016/j.apmr.2016.09.002>

Abstract: OBJECTIVE: To explore the feasibility of a newly developed smartphone-based exercise program with an embedded self-classification algorithm for office workers with neck pain, by examining its effect on the pain intensity, functional disability, quality of life, fear avoidance, and cervical range of motion (ROM). DESIGN: Single-group, repeated-measures design. SETTING: The laboratory and participants' home and work environments. PARTICIPANTS: Offices workers with neck pain (N=23; mean age +/- SD, 28.13+/-2.97y; 13 men). INTERVENTION: Participants were classified as having 1 of 4 types of neck pain through a self-classification algorithm implemented as a smartphone application, and conducted corresponding exercise programs for 10 to 12min/d, 3d/wk, for 8 weeks. MAIN OUTCOME MEASURES: The visual analog scale (VAS), Neck Disability Index (NDI), Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36), Fear-Avoidance Beliefs Questionnaire (FABQ), and cervical ROM were measured at baseline and postintervention. RESULTS: The VAS (P<.001) and NDI score (P<.001) indicated significant improvements in pain intensity and functional disability. Quality of life showed significant improvements in the physical functioning (P=.007), bodily pain (P=.018), general health (P=.022), vitality (P=.046), and physical component scores (P=.002) of the SF-36. The FABQ, cervical ROM, and mental component score of the SF-36 showed no significant improvements. CONCLUSIONS: The smartphone-based exercise program with an embedded self-classification algorithm improves the pain intensity and perceived physical health of office workers with neck pain, although not enough to affect their mental and emotional states

Martin L. Do Innovative work practices and use of information and communication technologies motivate employees? *Industrial Relations: A Journal of Economy and Society*. 2017; 56(2):263-292.

<http://dx.doi.org/10.1111/irel.12173>

Mateen BA, Doogan C, Hayward K, Hourihan S, Hurford J, and Playford ED. Systematic review of health-related work outcome measures and quality criteria-based evaluations of their psychometric properties. *Archives of Physical Medicine and Rehabilitation*. 2017; 98(3):534-560.

<http://dx.doi.org/10.1016/j.apmr.2016.06.013>

Abstract: OBJECTIVE: To examine the state of psychometric validation in the health-related work outcome literature. DATA SOURCES: We searched PubMed, PubMed Central, CINAHL, Embase (plus Embase Classic), and PsycINFO from inception to January 2016 using the following search terms: stroke, multiple sclerosis, epilepsy, spinal cord injury, brain injury, musculoskeletal disease, work, absenteeism, presenteeism, occupation, employment, job, outcome measure, assessment, work capacity evaluation, scale, and questionnaire. STUDY SELECTION: From the 22,676 retrieved abstracts, 597 outcome measures were identified. Inclusion was based on content analysis. There were 95 health-related work outcome measures retained; of these, 2 were treated as outliers and therefore are discussed separately. All 6 authors individually organized the 93 remaining scales based on their content. DATA EXTRACTION: A follow-up search using the same sources, and time period, with the name of the outcome measures and the terms psychometric, reliability, validity, and responsiveness, identified 263 unique classical test theory psychometric property datasets for the 93 tools. An assessment criterion for psychometric properties was applied to each article, and where consensus was not achieved, the rating delivered by most of the assessors was reported. DATA SYNTHESIS: Of the articles reported, 18 reporting psychometric data were not accessible and therefore could not be assessed. There were 39 that scored <20% of the maximum achievable score, 106 scored between 20% and 40%, 82 scored between 40% and 60%, 15 scored between 60% and 80%, and only 1 scored >80%. The 3 outcome measures associated with the highest scoring datasets were the Sheehan Disability Scale, the Fear Avoidance Beliefs Questionnaire, and the assessment of the Subjective Handicap of Epilepsy. Finally, only 2 psychometric validation datasets reported the complete set of baseline psychometric properties. CONCLUSIONS: This systematic review highlights the current limitations of the health-related work outcome measure literature, including the limited number of robust tools available

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Pyrko I, Dorfler V, and Eden C. Thinking together: what makes communities of practice work? Human Relations. 2017; 70(4):389-409.

<http://dx.doi.org/10.1177/0018726716661040> [open access]

Abstract: In this article, we develop the founding elements of the concept of Communities of Practice by elaborating on the learning processes happening at the heart of such communities. In particular, we provide a consistent perspective on the notions of knowledge, knowing and knowledge sharing that is compatible with the essence of this concept - that learning entails an investment of identity and a social formation of a person. We do so by drawing richly from the work of Michael Polanyi and his conception of personal knowledge, and thereby we clarify the scope of Communities of Practice and offer a number of new insights into how to make such social structures perform well in professional settings. The conceptual discussion is substantiated by findings of a qualitative empirical study in the UK National Health Service. As a result, the process of 'thinking together' is conceptualized as a key part of meaningful Communities of Practice where people mutually guide each other through their understandings of the same problems in their area of mutual interest, and this way indirectly share tacit knowledge. The collaborative learning process of 'thinking together', we argue, is what essentially brings Communities of Practice to life and not the other way round

Reader TW, Mearns K, Lopes C, and Kuha J. Organizational support for the workforce and employee safety citizenship behaviors: a social exchange relationship. Human Relations. 2016; 70(3):362-385.

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Sanchez R. Does a mandatory reduction of standard working hours improve employees' health status? Industrial Relations: A Journal of Economy and Society. 2017; 56(1):3-39.

<http://dx.doi.org/10.1111/irel.12163>

Tabak RG, Padek MM, Kerner JF, Stange KC, Proctor EK, Dobbins MJ, Colditz GA, Chambers DA, and Brownson RC. Dissemination and implementation science training needs: insights from practitioners and researchers. American Journal of Preventive Medicine. 2017; 52(3S3):S322-S329.

<http://dx.doi.org/10.1016/j.amepre.2016.10.005> [open access]

Abstract: INTRODUCTION: Dissemination and implementation research training has great potential to improve the impact and reach of health-related research; however, research training needs from the end user perspective are unknown. This paper identifies and prioritizes dissemination and implementation research training needs. METHODS: A diverse sample of researchers, practitioners, and policymakers was invited to participate in Concept Mapping in 2014-2015. Phase 1 (Brainstorming) gathered participants' responses to the prompt: To improve the impact of research evidence in practice and policy settings, a skill in which researchers need more training is... The resulting statement list was edited and included subsequent phases. Phase 2 (Sorting) asked participants to sort each statement into conceptual piles. In Phase 3 (Rating), participants rated the difficulty and importance of incorporating each statement into a training curriculum. A multidisciplinary team synthesized and interpreted the results in 2015-2016. RESULTS: During Brainstorming, 60 researchers and 60 practitioners/policymakers contributed 274 unique statements. Twenty-nine researchers and 16 practitioners completed sorting and rating. Nine concept clusters were identified: Communicating Research Findings, Improve Practice Partnerships, Make Research More Relevant, Strengthen Communication Skills, Develop Research Methods and Measures, Consider and Enhance Fit, Build Capacity for Research, and Understand Multilevel Context. Though researchers and practitioners had high agreement about importance ($r = 0.93$) and difficulty ($r = 0.80$), ratings differed for several clusters (e.g., Build Capacity for Research). CONCLUSIONS: Including researcher and practitioner perspectives in competency development for dissemination and implementation research identifies skills and capacities needed to conduct and communicate contextualized, meaningful, and relevant research

Vossen E, Van Gestel N, Van der Heijden BI, and Rouwette EA. "Dis-able bodied" or "dis-able minded": stakeholders' return-to-work experiences compared between physical and mental health conditions. Disability and Rehabilitation. 2017; 39(10):969-977.

<http://dx.doi.org/10.3109/09638288.2016.1172675>

Abstract: PURPOSE: This study aimed to explore if and why the return-to-work (RTW) experiences of various workplace stakeholders in the Netherlands and Denmark differ between physical and mental health conditions, and to understand the consequences of potentially different experiences for the RTW process in both health conditions. METHODS: We studied 21 cases of long-term sickness absence, and held a total of 61 semi-structured interviews with the various actors involved in these cases. RESULTS: Physical cases were seen as "easy" and mental cases as "difficult" to manage, based on the visibility and predictability of health complaints. On this ground, assessing work

ability and following required RTW actions were perceived as more urgent in mental than in physical cases. Despite these perceptions, in practice, the assessment of work ability seemed to impair the RTW process in mental cases (but not in physical ones), and the (non-)uptake of RTW actions appeared to have similar results in both mental and physical cases. CONCLUSIONS: With these outcomes, the effectiveness of a differential approach is questioned, and the relevance of a bidirectional dialog on work ability and a phased RTW plan is highlighted, regardless of the absence cause. Our study also demonstrates how policymakers need to strike a balance between obligatory and permissive legislation to better involve workplaces in RTW issues. Implications for rehabilitation Both physically and mentally sick-listed employees could benefit from a bidirectional dialog on work ability as well as from a phased RTW plan. A greater role for employers in the RTW process should be accompanied with a support for sick-listed employees, in both physical and mental sickness absence cases. Dutch and Danish RTW legislation could be improved by carefully balancing obligatory and permissive rules and regulations to involve workplaces in RTW matters

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