IWH Research Alert August 11, 2017

Missed an issue? Catch up on previous 2017 *Research Alerts* available on the IWH website <u>http://www.iwh.on.ca/research-alerts</u>

Research Alerts is a service provided to you by the Institute for Work & Health (IWH) to help you keep abreast of recent literature in the areas of occupational health and safety, epidemiology, public health and others within the IWH mandate. Please note that these articles have not been reviewed by Institute scientists to assess the quality of the studies. *Research Alerts* should not be considered an endorsement of the findings. Readers are cautioned not to act on the results of single studies, but rather to seek bodies of evidence. It should also be noted that the Institute for Work & Health cannot provide full-text of articles listed in *Research Alerts* to individuals outside of the organization, as this violates copyright legislation.

*Van Eerd D, Cardoso S, Irvin E, Saunders R, King T, and Macdonald S. Occupational safety and health knowledge users' perspectives about research use. Policy and Practice in Health and Safety. 2017; 1-16. http://dx.doi.org/10.1080/14773996.2017.1356544

*Walker TJ, Tullar JM, Diamond PM, Kohl HW, III, and Amick BC, III. The longitudinal relation between self-reported physical activity and presenteeism. Preventive Medicine. 2017; 102:120-126.

http://dx.doi.org/10.1016/j.ypmed.2017.07.003

Abstract: This study evaluates the longitudinal relation between self-reported physical activity and health related work limitations (also known as presenteeism) among employees from a public university system. A retrospective longitudinal study design was used to examine research aims. Data were from self-reported health assessments collected from employees at a large University System in Texas during the 2013-2015 plan years (n=6515).Work limitations were measured using the self-report 8-item work limitations questionnaire. Latent growth curve models were used to test whether: 1) baseline physical activity was associated with baseline work limitations; 2) changes in physical activity were related to changes in work limitations; and 3) baseline physical activity predicted changes in work limitations. Models were adjusted for demographic and health-related variables. The final adjusted growth curve model demonstrated excellent fit. Results revealed baseline physical activity was inversely associated with baseline work limitations (beta=-0.12, p<0.001). In addition, changes in physical activity were related to changes activity and changes in work limitations (beta=-0.33, p=0.02). However, no relation was found between baseline physical activity and changes in work limitations (beta=-



Research Excellence
Advancing Employee
Health

0.06, p=0.42). Results provide evidence that increasing physical activity among employees leads to decreases in health-related work limitations. Therefore, promoting physical activity among employee populations can help prevent and reduce presenteeism

Davis MM, Howk S, Spurlock M, McGinnis PB, Cohen DJ, and Fagnan LJ. A qualitative study of clinic and community member perspectives on intervention toolkits: "unless the toolkit is used it won't help solve the problem". BMC Health Services Research. 2017; 17(1):497.

http://dx.doi.org/10.1186/s12913-017-2413-y [open access]

Abstract: BACKGROUND: Intervention toolkits are common products of grant-funded research in public health and primary care settings. Toolkits are designed to address the knowledge translation gap by speeding implementation and dissemination of research into practice. However, few studies describe characteristics of effective intervention toolkits and their implementation. Therefore, we conducted this study to explore what clinic and community-based users want in intervention toolkits and to identify the factors that support application in practice. METHODS: In this qualitative descriptive study we conducted focus groups and interviews with a purposive sample of community health coalition members, public health experts, and primary care professionals between November 2010 and January 2012. The transdisciplinary research team used thematic analysis to identify themes and a cross-case comparative analysis to explore variation by participant role and toolkit experience. RESULTS: Ninety six participants representing primary care (n = 54, 56%) and community settings (n = 42, 44%) participated in 18 sessions (13 focus groups, five key informant interviews). Participants ranged from those naive through expert in toolkit development; many reported limited application of toolkits in actual practice. Participants wanted toolkits targeted at the right audience and demonstrated to be effective. Well organized toolkits, often with a quick start guide, with tools that were easy to tailor and apply were desired. Irrespective of perceived quality, participants experienced with practice change emphasized that leadership, staff buy-in, and facilitative support was essential for intervention toolkits to be translated into changes in clinic or public -health practice. CONCLUSIONS: Given the emphasis on toolkits in supporting implementation and dissemination of research and clinical guidelines, studies are warranted to determine when and how toolkits are used. Funders, policy makers, researchers, and leaders in primary care and public health are encouraged to allocate resources to foster both toolkit development and implementation. Support, through practice facilitation and organizational leadership, are critical for translating knowledge from intervention toolkits into practice

Facey M, MacEachen E, Verma A, and Morales K. The everyday functioning of joint health and safety committees in unionized workplaces: a labour perspective. Policy and Practice in Health and Safety. 2017; 1-14. http://dx.doi.org/10.1080/14773996.2017.1341595



Research Excellence Advancing Employee Health Grundy A, Cotterchio M, Kirsh VA, Nadalin V, Lightfoot N, and Kreiger N. Rotating shift work associated with obesity in men from northeastern Ontario. Health Promotion and Chronic Disease Prevention in Canada. 2017; 37(8):238-247. <u>http://dx.doi.org/10.24095/hpcdp.37.8.02</u>

Hunt HA and Dillender M. Workers' compensation: analysis for its second century. Kalamazoo, MI, W.E: Upjohn Institute for Employment Research; 2017. <u>http://research.upjohn.org/cgi/viewcontent.cgi?article=1262&context=up_press</u>

Jiang L. Perception of and reactions to job insecurity: the buffering effect of secure attachment. Work and Stress. 2017; 31(3):256-275. http://dx.doi.org/10.1080/02678373.2017.1305005

Kawaguchi M, Matsudaira K, Sawada T, Koga T, Ishizuka A, Isomura T, and Coggon D. Assessment of potential risk factors for new onset disabling low back pain in Japanese workers: findings from the CUPID (cultural and psychosocial influences on disability) study. BMC Musculoskeletal Disorders. 2017; 18(1):334.

http://dx.doi.org/10.1186/s12891-017-1686-y [open access]

Abstract: BACKGROUND: Most studies of risk factors for new low back pain (LBP) have been conducted in Western populations, but because of cultural and environmental differences, the impact of causal factors may not be the same in other countries. We used longitudinal data from the Cultural and Psychosocial Influences on Disability (CUPID) study to assess risk factors for new onset of disabling LBP among Japanese workers. METHODS: Data came from a 1-year prospective follow-up of nurses, office workers, sales/marketing personnel, and transportation workers, initially aged 20-59 years, who were employed in or near Tokyo. A baseline questionnaire included items on past history of LBP, personal characteristics, ergonomic work demands, and workrelated psychosocial factors. Further information about LBP was collected at follow-up. Analysis was restricted to participants who had been free from LBP during the 12 months before baseline. Logistic regression was used to assess baseline risk factors for new onset of disabling LBP (i.e. LBP that had interfered with work) during the 12 months of follow-up. RESULTS: Among 955 participants free from LBP during the 12 months before baseline, 58 (6.1%) reported a new episode of disabling LBP during the 12-month follow-up period. After mutual adjustment in a multivariate logistic regression analysis, which included the four factors that showed associations individually (p < 0.1) in analyses adjusted only for gender and age, the highest odds ratio (OR) was for past history of LBP (2.8, 95% [confidence interval {CI}]: 1.6-4.9), followed by working >/=60 h per week (1.8, 95% CI: 1.0-3.5) and lifting weights >/=25 kg by hand (1.6, 95% CI: 0.9-3.0). When past history of LBP was excluded from the model, ORs for the remaining risk factors were virtually unchanged. CONCLUSIONS: Our findings suggest that among Japanese workers, as elsewhere, past history of LBP is a major risk factor for the development of new episodes of disabling back pain. They give limited support to the



Research Excellence
Advancing Employee
Health

association with occupational lifting that has been observed in earlier research, both in Japan and in Western countries. In addition, they suggest a possible role of long working hours, which merits further investigation

Lakerveld J, Loyen A, Schotman N, Peeters CFW, Cardon G, van der Ploeg HP, Lien N, Chastin S, and Brug J. Sitting too much: a hierarchy of socio-demographic correlates. Preventive Medicine. 2017; 101:77-83.

http://dx.doi.org/10.1016/j.ypmed.2017.05.015 [open access] Abstract: Too much sitting (extended sedentary time) is recognized as a public health concern in Europe and beyond. Time spent sedentary is influenced and conditioned by clusters of individual-level and contextual (upstream) factors. Identifying population subgroups that sit too much could help to develop targeted interventions to reduce sedentary time. We explored the relative importance of socio-demographic correlates of sedentary time in adults across Europe. We used data from 26,617 adults who participated in the 2013 Special Eurobarometer 412 "Sport and physical activity". Participants from all 28 EU Member States were randomly selected and interviewed face-to-face. Self-reported sedentary time was dichotomized into sitting less or >7.5h/day. A Chi-squared Automatic Interaction Detection (CHAID) algorithm was used to create a tree that hierarchically partitions the data on the basis of the independent variables (i.e., socio-demographic factors) into homogeneous (sub)groups with regard to sedentary time. This allows for the tentative identification of population segments at risk for unhealthy sedentary behaviour. Overall, 18.5% of the respondents reported sitting >7.5h/day. Occupation was the primary discriminator. The subgroup most likely to engage in extensive sitting were higher educated, had white-collar jobs, reported no difficulties with paying bills, and used the internet frequently. Clear socio-demographic profiles were identified for adults across Europe who engage in extended sedentary time. Furthermore, physically active participants were consistently less likely to engage in longer daily sitting times. In general, those with more indicators of higher wealth were more likely to spend more time sitting

Morton Ninomiya ME. More than words: using visual graphics for community-based health research. Canadian Journal of Public Health. 2017; 108(1):e91-e94. http://dx.doi.org/10.17269/cjph.108.5660

Abstract: With increased attention to knowledge translation and community engagement in the applied health research field, many researchers aim to find effective ways of engaging health policy and decision makers and community stakeholders. While visual graphics such as graphs, charts, figures and photographs are common in scientific research dissemination, they are less common as a communication tool in research. In this commentary, I illustrate how and why visual graphics were created and used to facilitate dialogue and communication throughout all phases of a community-based health research study with a rural Indigenous community, advancing community engagement and knowledge utilization of a research study. I suggest that it is essential that researchers consider the use of visual graphics to accurately communicate and



Research Excellence Advancing Employee Health translate important health research concepts and content in accessible forms for diverse research stakeholders and target audiences

Oldenkamp M, Bultmann U, Wittek RPM, Stolk RP, Hagedoorn M, and Smidt N. Combining informal care and paid work: the use of work arrangements by working adult-child caregivers in the Netherlands. Health and Social Care in the Community. 2017; [epub ahead of print].

http://dx.doi.org/10.1111/hsc.12485

Abstract: An increasing number of people combine paid work with the provision of informal care for a loved one. This combination of work and care may cause difficulties, necessitating adaptations at work, i.e. work arrangements. The present study explores what types of work arrangements are used by working caregivers, and which caregiver, care and work characteristics are associated with the use of these work arrangements. Within the Lifelines Informal Care Add-on Study (Lifelines ICAS), data on 965 Dutch informal caregivers in the North of the Netherlands were collected between May 2013 and July 2014 (response rate 48%), and data on 333 working adult-child caregivers (aged 26-68 years, 82% female) were used in this study. A small majority (56%) of the working caregivers used one or more work arrangement(s): taking time off (41%), individual agreements with supervisor (30%), formal care leave arrangement (13%), and reduction in paid work hours (6%). Logistic regression analyses showed that long working hours (OR 1.06, 95% CI 1.01-1.08), and the experience of more health problems (OR 2.54, 95% CI 1.56-4.05) or a disrupted schedule due to caregiving (OR 2.50, 95% CI 1.66-3.78) increased the chance to have used one or more work arrangements. Lower educated working caregivers were less likely to have used a formal care leave arrangement (tertiary vs. primary education OR 2.75, 95% CI 1.13-6.67; tertiary vs. secondary education OR 1.27, 95% CI 1.27-5.09). Policy makers should inform working caregivers about the availability of the different work arrangements, with specific attention for low educated working caregivers. Employers need to consider a more caregiver-friendly policy, as almost half of the working adult-child caregivers did not use any work arrangement

Oranye NO and Bennett J. Prevalence of work-related musculoskeletal and nonmusculoskeletal injuries in health care workers: the implications for work disability management. Ergonomics. 2017; 1-12.

http://dx.doi.org/10.1080/00140139.2017.1361552

Park J, Roberts MR, Esmail S, Rayani F, Norris CM, and Gross DP. Validation of the readiness for return-to-work scale in outpatient occupational rehabilitation in Canada. Journal of Occupational Rehabilitation. 2017; [epub ahead of print]. http://dx.doi.org/10.1007/s10926-017-9721-2

Abstract: Purpose To examine construct and concurrent validity of the Readiness for Return-To-Work (RRTW) Scale with injured workers participating in an outpatient occupational rehabilitation program. Methods Lost-time claimants (n = 389) with sub-



acute or chronic musculoskeletal disorders completed the RRTW Scale on their first day of their occupational rehabilitation program. Statistical analysis included exploratory and confirmatory factor analyses of the readiness items, reliability analyses, and correlation with related scales and questionnaires. Results For claimants in the non-job attached/not working group (n = 165), three factors were found (1) Contemplation (2) Prepared for Action-Self-evaluative and (3) Prepared for Action-Behavioural. The precontemplation stage was not identified within this sample of injured workers. For claimants who were job attached/working group in some capacity (n = 224), two factors were identified (1) Uncertain Maintenance and (2) Proactive Maintenance. Expected relationships and statistically significant differences were found among the identified Return-To-Work (RTW) readiness factors and related constructs of pain, physical and mental health and RTW expectations. Conclusion Construct and concurrent validity of the RRTW Scale were supported in this study. The results of this study indicate the construct of readiness for RTW can vary by disability duration and occupational category. Physical health appears to be a significant barrier to RRTW for the job attached/working group while mental health significantly compromises RRTW with the non-job attached/not working group

Schmucker CM, Blumle A, Schell LK, Schwarzer G, Oeller P, Cabrera L, von Elm E, Briel M, and Meerpohl JJ. Systematic review finds that study data not published in full text articles have unclear impact on meta-analyses results in medical research. PLoS ONE. 2017; 12(4):e0176210.

http://dx.doi.org/10.1371/journal.pone.0176210

Abstract: BACKGROUND: A meta-analysis as part of a systematic review aims to provide a thorough, comprehensive and unbiased statistical summary of data from the literature. However, relevant study results could be missing from a meta-analysis because of selective publication and inadequate dissemination. If missing outcome data differ systematically from published ones, a meta-analysis will be biased with an inaccurate assessment of the intervention effect. As part of the EU-funded OPEN project (www.open-project.eu) we conducted a systematic review that assessed whether the inclusion of data that were not published at all and/or published only in the grey literature influences pooled effect estimates in meta-analyses and leads to different interpretation. METHODS AND FINDINGS: Systematic review of published literature (methodological research projects). Four bibliographic databases were searched up to February 2016 without restriction of publication year or language. Methodological research projects were considered eligible for inclusion if they reviewed a cohort of meta-analyses which (i) compared pooled effect estimates of meta-analyses of health care interventions according to publication status of data or (ii) examined whether the inclusion of unpublished or grey literature data impacts the result of a meta-analysis. Seven methodological research projects including 187 meta-analyses comparing pooled treatment effect estimates according to different publication status were identified. Two research projects showed that published data showed larger pooled treatment effects in favour of the intervention than unpublished or grey literature data (Ratio of



Research Excellence
Advancing Employee
Health

ORs 1.15, 95% CI 1.04-1.28 and 1.34, 95% CI 1.09-1.66). In the remaining research projects pooled effect estimates and/or overall findings were not significantly changed by the inclusion of unpublished and/or grey literature data. The precision of the pooled estimate was increased with narrower 95% confidence interval. CONCLUSIONS: Although we may anticipate that systematic reviews and meta-analyses not including unpublished or grey literature study results are likely to overestimate the treatment effects, current empirical research shows that this is only the case in a minority of reviews. Therefore, currently, a meta-analyst should particularly consider time, effort and costs when adding such data to their analysis. Future research is needed to identify which reviews may benefit most from including unpublished or grey data

Shokraneh F and Adams CE. Increasing value and reducing waste in data extraction for systematic reviews: tracking data in data extraction forms. Systematic Reviews. 2017; 6(1):153.

http://dx.doi.org/10.1186/s13643-017-0546-z [open access]

Abstract: Data extraction is one of the most time-consuming tasks in performing a systematic review. Extraction is often onto some sort of form. Sharing completed forms can be used to check quality and accuracy of extraction or for re-cycling data to other researchers for updating. However, validating each piece of extracted data is time-consuming and linking to source problematic. In this methodology paper, we summarize three methods for reporting the location of data in original full-text reports, comparing their advantages and disadvantages

Stergiou-Kita M, Qie X, Yau HK, and Lindsay S. Stigma and work discrimination among cancer survivors: a scoping review and recommendations: stigmatisation et discrimination au travail des survivants du cancer : examen de la portee et recommandations. Canadian Journal of Occupational Therapy. 2017; 84(3):178-188. http://dx.doi.org/10.1177/0008417417701229

Abstract: BACKGROUND: Stigma and workplace discrimination can hinder employment opportunities for cancer survivors. PURPOSE: This study explored perceptions of stigma and workplace discrimination for cancer survivors to understand the impact on survivors' engagement in paid work and to identify strategies to address stigma and workplace discrimination. METHOD: Using Arksey and O'Malley's framework, we searched Medline, Embase, PsycINFO, Scopus, and CINAHL for evidence that intersected three concepts: cancer, stigma, and employment/workplace discrimination. Of the 1,514 articles initially identified, 39 met our inclusion criteria. Findings were charted, collated, and analyzed using content analysis. FINDINGS: Myths regarding cancer (i.e., it is contagious, will always result in death) persist and can create misperceptions regarding survivors' employability and lead to self-stigmatization. Workplace discrimination may include hiring discrimination, harassment, job reassignment, job loss, and limited career advancement. Strategies to mitigate stigma and workplace discrimination include education, advocacy, and antidiscrimination policies.



IMPLICATIONS: Occupational therapists can enhance awareness of workplace concerns and advocate on behalf of cancer survivors

*IWH authored publications.

