

IWH Research Alert
June 22, 2018

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***Engel L, Chui A, Beaton DE, Green RE, and Dawson DR. Systematic review of measurement property evidence for 8 financial management instruments in populations with acquired cognitive impairment. Archives of Physical Medicine & Rehabilitation. 2018; [Epub ahead of print].**
<http://dx.doi.org/10.1016/j.apmr.2018.02.004>

Abstract: OBJECTIVES: To critically appraise the measurement property evidence (ie, psychometric) for 8 observation-based financial management assessment instruments. DATA SOURCES: Seven databases were searched in May 2015. STUDY SELECTION: Two reviewers used an independent decision-agreement process to select studies of measurement property evidence relevant to populations with adulthood acquired cognitive impairment, appraise the quality of the evidence, and extract data. Twenty-one articles were selected. DATA EXTRACTION: This review used the COnsensus-based Standards for the selection of health Measurement Instruments review guidelines and 4-point tool to appraise evidence. After appraising the methodologic quality, the adequacy of results and volume of evidence per instrument were synthesized. Measurement property evidence with high risk of bias was excluded from the synthesis. DATA SYNTHESIS: The volume of measurement property evidence per instrument is low; most instruments had 1 to 3 included studies. Many included studies had poor methodologic quality per measurement property evidence area examined. Six of the 8 instruments reviewed had supporting construct validity/hypothesis-testing evidence of fair methodologic quality. There is a dearth of acceptable quality content validity, reliability, and responsiveness evidence for all 8 instruments. CONCLUSIONS: Rehabilitation practitioners assess financial management functions in adults with acquired cognitive impairments. However, there is limited published evidence to support using any of the reviewed

instruments. Practitioners should exercise caution when interpreting the results of these instruments. This review highlights the importance of appraising the quality of measurement property evidence before examining the adequacy of the results and synthesizing the evidence

***Macpherson RA, Lane TJ, Collie A, and McLeod CB. Age, sex, and the changing disability burden of compensated work-related musculoskeletal disorders in Canada and Australia. BMC Public Health. 2018; 18(1):758. <http://dx.doi.org/10.1186/s12889-018-5590-7> [open access]**

Abstract: BACKGROUND: The objectives of this study were (1) to identify age and sex trends in the disability burden of compensated work-related musculoskeletal disorders (MSDs) in Canada and Australia; and (2) to demonstrate a means of comparing workers' compensation data internationally. METHODS: All non-fatal, work-related MSD claims with at least one day of compensated time-loss were extracted for workers aged 15-80 during a 10-year period (2004-2013) using workers' compensation data from five Canadian and eight Australian jurisdictions. Disability burden was calculated for both countries by sex, age group, and injury classification, using cumulative compensated time-loss payments of up to two years post-injury. RESULTS: A total of 1.2 million MSD claims were compensated for time-loss in the Canadian and Australian jurisdictions during 2004-2013. This resulted in time-loss equivalent to 239,345 years in the Canadian jurisdictions and 321,488 years in the Australian jurisdictions. The number of time-loss years declined overall among male and female workers, but greater declines were observed for males and younger workers. The proportion of the disability burden grew among older workers (aged 55+), particularly males in the Canadian jurisdictions (Annual Percent Change [APC]: 7.2, 95% CI 6.7 to 7.7%) and females in the Australian jurisdictions (APC: 7.5, 95% CI 6.2 to 8.9%). CONCLUSIONS: The compensated disability burden of work-related MSDs is shifting towards older workers and particularly older females in Australia and older males in Canada. Employers and workers' compensation boards should consider the specific needs of older workers to reduce injuries and time off work. Comparative research made possible through research-stakeholder partnerships offers a unique opportunity to use existing administrative data to identify long-term trends in disability burden. Future research can apply similar approaches for estimating long-term trends in occupational health

Ahonen EQ, Fujishiro K, Cunningham T, and Flynn M. Work as an inclusive part of population health inequities research and prevention. American Journal of Public Health. 2018; 108(3):306-311.

<http://dx.doi.org/10.2105/AJPH.2017.304214> [open access]

Abstract: Despite its inclusion in models of social and ecological determinants of health, work has not been explored in most health inequity research in the United States. Leaving work out of public health inequities research creates a blind spot in our understanding of how inequities are created and impedes our progress

toward health equity. We first describe why work is vital to our understanding of observed societal-level health inequities. Next, we outline challenges to incorporating work in the study of health inequities, including (1) the complexity of work as a concept; (2) work's overlap with socioeconomic position, race, ethnicity, and gender; (3) the development of a parallel line of inquiry into occupational health inequities; and (4) the dearth of precise data with which to explore the relationships between work and health status. Finally, we summarize opportunities for advancing health equity and monitoring progress that could be achieved if researchers and practitioners more robustly include work in their efforts to understand and address health inequities

Baker R, Coenen P, Howie E, Lee J, Williamson A, and Straker L. A detailed description of the short-term musculoskeletal and cognitive effects of prolonged standing for office computer work. *Ergonomics*. 2018; 61(7):877-890.

<http://dx.doi.org/10.1080/00140139.2017.1420825>

Abstract: Due to concerns about excessive sedentary exposure for office workers, alternate work positions such as standing are being trialled. However, prolonged standing may have health and productivity impacts, which this study assessed. Twenty adult participants undertook two hours of laboratory-based standing computer work to investigate changes in discomfort and cognitive function, along with muscle fatigue, movement, lower limb swelling and mental state. Over time, discomfort increased in all body areas (total body IRR [95% confidence interval]: 1.47[1.36-1.59]). Sustained attention reaction time (beta = 18.25[8.00-28.51]) deteriorated, while creative problem solving improved (beta = 0.89[0.29-1.49]). There was no change in erector spinae, rectus femoris, biceps femoris or tibialis anterior muscle fatigue; low back angle changed towards less lordosis, pelvis movement increased, lower limb swelling increased and mental state decreased. Body discomfort was positively correlated with mental state. The observed changes suggest replacing office work sitting with standing should be done with caution. Practitioner Summary: Standing is being used to replace sitting by office workers; however, there are health risks associated with prolonged standing. In a laboratory study involving 2 h prolonged standing discomfort increased (all body areas), reaction time and mental state deteriorated while creative problem-solving improved. Prolonged standing should be undertaken with caution

Bertoni M, Brunello G, and Mazzarella G. Does postponing minimum retirement age improve healthy behaviors before retirement? Evidence from middle-aged Italian workers. *Journal of Health Economics*. 2018; 58:215-227.

<http://dx.doi.org/10.1016/j.jhealeco.2018.02.011>

Abstract: By increasing the residual working horizon of employed individuals, pension reforms that rise minimum retirement age can affect individual investment in health-promoting behaviors before retirement. Using the expected

increase in minimum retirement age induced by a 2004 Italian pension reform and a difference-in-differences research design, we show that middle-aged Italian males affected by the reform reacted to the longer working horizon by increasing regular exercise, with positive consequences for obesity and self-reported satisfaction with health

Branker RR. Labour market discrimination: the lived experiences of English-speaking Caribbean immigrants in Toronto. Journal of International Migration and Integration. 2017; 18(1):203-222.

<http://dx.doi.org/10.1007/s1213>

Chamberlin H. Mistakes were made: how small businesses commonly get into trouble with the Fair Labor Standards Act. The Florida Bar Journal. 2018; 92(5):32-37.

<http://www3.flabar.org/DIVCOM/JN/JNJournal01.nsf/8c9f13012b96736985256aa900624829/a3087a4d01af6c588525827b006df123!OpenDocument>

Kirsh B, Krupa T, and Luong D. How do supervisors perceive and manage employee mental health issues in their workplaces? Work. 2018; 59(4):547-555.

<http://dx.doi.org/10.3233/WOR-182698>

Abstract: BACKGROUND: Organizations have become increasingly concerned about mental health issues in the workplace as the economic and social costs of the problem continue to grow. Addressing employees' mental health problems and the stigma that accompanies them often falls to supervisors, key people in influencing employment pathways and the social climate of the workplace. OBJECTIVE: This study examines how supervisors experience and perceive mental illness and stigma in their workplaces. It was conducted under the mandate of the Mental Health Commission of Canada's Opening Minds initiative. METHODS: The study was informed by a theoretical framework of stigma in the workplace and employed a qualitative approach. Eleven supervisors were interviewed and data were analyzed for major themes using established procedures for conventional content analysis. RESULTS: Themes relate to: perceptions of the supervisory role relative to managing mental health problems at the workplace; supervisors' perceptions of mental health issues at the workplace; and supervisors' experiences of managing mental health issues at work. The research reveals the tensions supervisors experience as they carry out responsibilities that are meant to benefit both the individual and workplace, and protect their own well-being as well. CONCLUSION: This study emphasizes the salience of stigma and mental health issues for the supervisor's role and illustrates the ways in which these issues intersect with the work of supervisors. It points to the need for future research and training in areas such as balancing privacy and supports, tailoring disclosure processes to suit individuals and workplaces, and managing self-care in the workplace

Kontopantelis E, Mamas MA, van Marwijk H, Buchan I, Ryan AM, and Doran T. Increasing socioeconomic gap between the young and old: temporal trends in health and overall deprivation in England by age, sex, urbanity and ethnicity, 2004-2015. Journal of Epidemiology & Community Health. 2018; 72(7):636-644.

<http://dx.doi.org/10.1136/jech-2017-209895> [open access]

Abstract: BACKGROUND: At a low geographical level, little is known about the associations between population characteristics and deprivation, and their trends, which would be directly affected by the house market, labour pressures and government policies. We describe temporal trends in health and overall deprivation in England by age, sex, urbanity and ethnicity. METHODS: Repeated cross-sectional whole population study for England, 2004-2015, at a low geographical level (average 1500 residents). We calculated weighted medians of the Index of Multiple Deprivation (IMD) for each subgroup of interest. RESULTS: Over time, we observed increases in relative deprivation for people aged under 30, and aged 30-59, while median deprivation decreased for those aged 60 or over. Subgroup analyses indicated that relative overall deprivation was consistently higher for young adults (aged 20-29) and infants (aged 0-4), with increases in deprivation for the latter. Levels of overall deprivation in 2004 greatly varied by ethnicity, with the lowest levels observed for White British and the highest for Blacks. Over time, small reductions were observed in the deprivation gap between White British and all other ethnic groups. Findings were consistent across overall IMD and its health and disability subdomain, but large regional variability was also observed. CONCLUSIONS: Government policies, the financial crisis of 2008, education funding and the increasing cost of houses relative to real wages are important parameters in interpreting our findings. Socioeconomic deprivation is an important determinant of health and the inequalities this work highlights may have significant implications for future fiscal and healthcare policy

Lefever M, Decuman S, Perl F, Braeckman L, and Van de Velde D. The efficacy and efficiency of disability management in job-retention and job-reintegration. A systematic review. Work. 2018; 59(4):501-534.

<http://dx.doi.org/10.3233/WOR-182709>

Abstract: BACKGROUND: Disability management (DM) is a systematic method to ensure job-retention and job-reintegration in competitive employment for individuals with a disability. There is evidence that 'returning to work' has a positive impact on the individual, the company and on the society. However, a clear overview of the efficacy and efficiency of the DM programs is scarce. OBJECTIVE: To systematically review the efficacy and efficiency of the disability management programs. Cochrane, PubMed, Google Scholar, and Web of Science were searched from 1994 to 2015. METHODS: Two reviewers independently evaluated the articles on title, abstract, and full text. The data extraction and results are documented according to the study designs. RESULTS: Twenty-eight articles were included in the review. These 28 articles

consisted of 7 systematic reviews, 3 randomized controlled trials, 9 clinical trials, 4 mixed-method studies and 5 qualitative studies. CONCLUSIONS: The DM program has shown to be effective and efficient. A consensus about the DM components is still not reached. Nevertheless, some components are emphasized more than others; job accommodation, facilitation of transitional duty, communication between all stakeholders, health care provider advice, early intervention, and acceptance, goodwill and trust in the stakeholders, in the organization, and in the disability management process

Lin YP, Hong O, Lin CC, Lu SH, Chen MM, and Lee KC. A "sit less, walk more" workplace intervention for office workers: long-term efficacy of a quasi-experimental study. *Journal of Occupational & Environmental Medicine*. 2018; 60(6):e290-e299.

<http://dx.doi.org/10.1097/JOM.0000000000001299>

Abstract: OBJECTIVE: This study tested the maintenance outcomes of a 3-month Sit Less, Walk More (SLWM) workplace intervention for office workers compared with usual care at 12 months from the baseline. METHOD: A quasi-experimental study was conducted in two workplaces. The intervention group (n = 51) received multi-component intervention and the comparison group (n = 50) received newsletters only. The outcomes of the study (self-reported psychosocial, physical activity, sitting, and lost productivity; objectively measured cardiometabolic biomarkers) were compared at baseline, 3, and 12 months. RESULTS: Generalized estimating equations analyses found that the intervention group had significant improvements in self-regulation for sitting less and moving more (P = 0.017), walking (P = 0.003), weight (P = 0.013), waist circumference (P = 0.002), and insulin (P = 0.000) at 12 months compared with the comparison group. CONCLUSION: The SLWM intervention was effective in improving self-regulation, walking, and some cardiometabolic biomarkers in office workers

Lork K and Holmgren K. The experience of return to work self-efficacy among people on sick leave. *Work*. 2018; 59(4):479-490.

<http://dx.doi.org/10.3233/WOR-182697>

Abstract: BACKGROUND: In the complex interaction between individual and environmental factors the return to work self-efficacy (RTWSE) plays a key role. RTWSE is the belief in the capacity to meet the demands required for RTW. OBJECTIVE: The purpose of this study was to explore how individuals on sick leave experience their RTWSE. METHOD: A modified phenomenology method was used. This perspective is useful in qualitative research to understand complex phenomena such as RTWSE. It was designed as an interview study and nine individuals participated in the age from 30 to 60 years. RESULTS: Four main themes with a total of ten sub-themes emerged from the analysis showing different aspects of RTWSE. The experience of working capacity in terms of health perception and the general sense of self-efficacy shaped the more specific RTWSE. The pursuit towards an active and fulfilling life and regaining control

together with autonomy and the experience of support from others influenced the RTWSE. CONCLUSIONS: RTWSE is a global phenomenon reflecting the experience of vital parts of the life-world. RTWSE is about working capacity, but also concerns engagement in a meaningful occupation, being independent and participating. A holistic approach is therefore needed in order to strengthen self-efficacy

Mauramo E, Lallukka T, Lahelma E, Pietilainen O, and Rahkonen O. Common mental disorders and sickness absence: a register-linkage follow-up study among Finnish municipal employees. Journal of Occupational & Environmental Medicine. 2018; 60(6):569-575.

<http://dx.doi.org/10.1097/JOM.0000000000001289>

Abstract: OBJECTIVE: This study examined how common mental disorders (CMD) at different severity levels are associated with short (1 to 3-day), intermediate (4 to 14-day), and long (15+ day) sickness absence (SA) among Finnish municipal employees. METHODS: Survey data collected among the 40 to 60-year-old employees of the City of Helsinki in 2000 to 2002 were prospectively linked with employer's SA register data (N = 6554). Associations of CMD (GHQ-12) with SA in a 5-year follow-up were examined with quasi-Poisson regression. RESULTS: Increasing GHQ-12 scores were associated with a higher number of SA spells. The highest GHQ-12 scores were associated with the highest number of short, intermediate, and long SA spells. Adjusting for social and health-related covariates attenuated the associations but they remained. CONCLUSION: Increasing severity of CMD increased the risk of short, intermediate, and long SA among Finnish employees. CMD should be tackled to prevent SA and promote work-ability among aging employees

Mistretta EG, Davis MC, Temkit M, Lorenz C, Darby B, and Stonnington CM. Resilience training for work-related stress among health care workers: results of a randomized clinical trial comparing in-person and smartphone-delivered interventions. Journal of Occupational & Environmental Medicine. 2018; 60(6):559-568.

<http://dx.doi.org/10.1097/JOM.0000000000001285>

Abstract: OBJECTIVE: The aim of this study was to assess whether an in-person mindfulness-based resilience training (MBRT) program or a smartphone-delivered resiliency-based intervention improved stress, well-being, and burnout in employees at a major tertiary health care institution. METHODS: Sixty participants were randomized to a 6-week MBRT, a resiliency-based smartphone intervention, or an active control group. Stress, well-being, and burnout were assessed at baseline, at program completion, and 3 months postintervention. RESULTS: Both the MBRT and the smartphone groups showed improvements in well-being, whereas only the MBRT group showed improvements in stress and emotional burnout over time. The control group did not demonstrate sustained improvement on any outcome. CONCLUSION: Findings suggest that brief, targeted interventions improve psychological outcomes and point to the need for

larger scale studies comparing the individual and combined treatments that can inform development of tailored, effective, and low-cost programs for health care workers

Morissette R. Wages for young workers up to the age of 40. Analytical studies branch research paper series [Statistics Canada Catalogue no. 11F0019M - No. 405]. Ottawa, ON: Statistics Canada; 2018.

<https://www150.statcan.gc.ca/n1/en/pub/11f0019m/11f0019m2018405-eng.pdf?st=lr5Nh2Hb>

Rudbeck M, Johansen JP, and Omland O. A follow-up study on return to work in the year after reporting an occupational injury stratified by outcome of the workers' compensation system. Journal of Occupational & Environmental Medicine. 2018; 60(6):542-547.

<http://dx.doi.org/10.1097/JOM.0000000000001274> [open access]

Abstract: OBJECTIVE: The aim of this study was to compare return rates to work between different groups according to the decision from the workers' compensation. METHOD: Register data on disability benefits were used to describe return rates to work in Kaplan-Meier curves and association with decision on compensation claims. Disability benefits were granted by the municipalities independently of any compensation claim if sick-listed. RESULTS: Claimants with ongoing claims were the group with the largest proportion remaining on disability benefits. Claimants with rejected claims returned to work at the same rate (occupational disease) or slower (industrial accident) than claimants with recognized claim without compensation the subsequent year and at a faster rate after decision. CONCLUSION: Compensation claims and proceedings of the workers' compensation system probably increase time to return to work; other factors such as health and social difficulties, however, may explain some of these differences

Wixted F, Shevlin M, and O'Sullivan LW. Distress and worry as mediators in the relationship between psychosocial risks and upper body musculoskeletal complaints in highly automated manufacturing. Ergonomics. 2018; 61(8):1079-1093.

<http://dx.doi.org/10.1080/00140139.2018.1449253>

Abstract: As a result of changes in manufacturing including an upward trend in automation and the advent of the fourth industrial revolution, the requirement for supervisory monitoring and consequently, cognitive demand has increased in automated manufacturing. The incidence of musculoskeletal disorders has also increased in the manufacturing sector. A model was developed based on survey data to test if distress and worry mediate the relationship between psychosocial factors (job control, cognitive demand, social isolation and skill discretion), stress states and symptoms of upper body musculoskeletal disorders in highly automated manufacturing companies (n = 235). These constructs facilitated the development of a statistically significant model (RMSEA 0.057, TLI 0.924, CFI 0.935). Cognitive demand was shown to be related to higher distress in

employees, and distress to a higher incidence of self-reported shoulder and lower back symptoms. The mediation model incorporating stress states (distress, worry) as mediators is a novel approach in linking psychosocial risks to musculoskeletal disorders. Practitioners' Summary With little requirement for physical work in many modern automated manufacturing workplaces, there is often minimal management focus on Work-Related Musculoskeletal Disorders (WRMSDs) as important occupational health problems. Our model provides evidence that psychosocial factors are important risk factors in symptoms of WRMSD and should be managed

*IWH authored publications.