IWH Research Alert November 29, 2019

Missed an issue? Catch up on previous Research Alerts available on the IWH website https://www.iwh.on.ca/journal-articles/research-alerts

Research Alert 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.

Andersen LL, Vinstrup J, Villadsen E, Jay K, and Jakobsen MD. Physical and psychosocial work environmental risk factors for back injury among healthcare workers: prospective cohort study. International Journal of Environmental Research and Public Health. 2019; 16(22):E4528.

https://doi.org/10.3390/ijerph16224528 [open access] Abstract: The incidence of occupational back injury in the healthcare sector remains high despite decades of efforts to reduce such injuries. This prospective cohort study investigated the risk factors for back injury during patient transfer. Healthcare workers (n = 2080) from 314 departments at 17 hospitals in Denmark replied to repeated questionnaires sent every 14 days for one year. Using repeatedmeasures binomial logistic regression, controlling for education, work, lifestyle, and health, the odds for back injury (i.e., sudden onset episodes) were modeled. On the basis of 482 back injury events, a higher number of patient transfers was an important risk factor, with odds ratio (OR) 3.58 (95% confidence interval (CI) 2.51-5.10) for 1-4 transfers per day, OR 7.60 (5.14-11.22) for 5-8 transfers per day, and OR 8.03 (5.26-12.27) for 9 or more transfers per day (reference: less than 1 per day). The lack of necessary assistive devices was a common phenomenon during back injury events, with the top four lacking devices being sliding sheets (30%), intelligent beds (19%),

walking aids (18%), and ceiling lifts (13%). For the psychosocial factors, poor collaboration between and support from colleagues increased the risk for back injury, with OR 3.16 (1.85-5.39). In conclusion, reducing the physical burden in terms of number of daily patient transfers, providing the necessary assistive devices, and cultivating good collaboration between colleagues are important factors in preventing occupational back injuries among healthcare workers

Barlow P, Reeves A, McKee M, and Stuckler D. Employment relations and dismissal regulations: does employment legislation protect the health of workers? Social Policy & Administration. 2019; 53(7):939-957.

[open access] https://doi.org/10.1111/spol.12487

Abstract: Abstract Sociologists have long acknowledged that being in a precarious labour market position, whether employed or unemployed, can harm peoples' health. However, scholars have yet to fully investigate the possible contextual, institutional determinants of this relationship. Two institutions that were overlooked in previous empirical studies are the regulations that set minimum compensation for dismissal, severance payments, and entitlements to a period of notice before dismissal, notice periods. These institutions may be important for workers' health as they influence the degree of insecurity that workers are exposed to. Here, we test this hypothesis by examining whether longer notice periods and greater severance payments protect the health of labour market participants, both employed and unemployed. We constructed two cohorts of panel data before and during the European recession using data from 22 countries in the European Union Statistics on Income and Living Conditions (person years-á=-á338,000). We find more generous severance payments significantly reduce the probability that labour market participants, especially the unemployed, will experience declines in self-reported health, with a slightly weaker relationship for longer notice periods

Boateng GO, Schuster RC, and Odei Boateng M. Uncovering a health and wellbeing gap among professional nurses: situated experiences of direct care nurses in two Canadian cities. Social Science & Medicine. 2019; 242:112568.

https://doi.org/10.1016/j.socscimed.2019.112568

Abstract: Understanding the drivers of nurses' poor health and the implications for quality of care are important in sustaining a healthy workforce, stimulating professional nursing practice, and ensuring healthy lives while promoting the wellbeing of nurses of all ages. Previous scholarship has identified factors influencing nurses' wellbeing, but have neglected to take a comprehensive approach to assessing the multiple dimensions of nurses' wellbeing and their collective, syndemic effects. Neither have these studies explored the context within which these experiences occur, or how these experiences differ for nurses with multiple marginalized identities in spite of an increasingly diverse workforce. Using the six dimensions of wellness framework, we examined the distinct and interrelated dimensions of nurses' wellbeing that were either enhanced or aggravated by professional practice and how it changed by nurses' race and ethnicity using their situated experiences. The study was conducted using a qualitative research design, which drew on phenomenology and in-depth interviews with Registered and Practical Nurses (n=70) in two Canadian cities. Of the six dimensions of wellbeing identified, direct care practice enhanced nurses' occupational, intellectual, and spiritual wellbeing, but worsened their physical, emotional and social health. A health gap was found along racial lines, as ethnic minority nurses reported more detrimental effects of direct care nursing on their physical, emotional, occupational, and social wellbeing than their white counterparts. Nurses resorted to institutional structures, social and emotional support from supervisors, coworkers and family members, and engaged in spiritual activities to cope with these adverse health effects. These findings highlight the utility of an adaptable framework in identifying the multiple dimensions and gaps in nurses' wellbeing. Furthermore, our findings echo the urgent need for workplace and safety policies that address issues of diversity and make the work environment safe, equitable and promote nurse productivity and quality care

Canacott L, Moghaddam N, and Tickle A. Is the Wellness Recovery Action Plan (WRAP) efficacious for improving personal and clinical recovery outcomes? A systematic review and meta-analysis. Psychiatric Rehabilitation Journal. 2019;

42(4):372-381.

https://doi.org/10.1037/prj0000368

Abstract: OBJECTIVE: The Wellness Recovery Action Plan (WRAP) is a structured approach to illness self-management that is widely used within mental health services. This systematic review identifies, appraises, and meta-analyzes quantitative evidence from experimental or quasi-experimental comparison group designs for effects of WRAP on measures reflecting personal recovery and clinical symptomatology. METHOD: A systematic strategy was used to search 6 electronic reference databases (Medline, CINAHL, EMBASE, PsycINFO, PsycARTICLES, The Cochrane Library) using full-text, keywords, and Medical Subject Headings (MeSh)/Thesaurus headings terms. Unpublished research was identified using the same strategy in the EThOS database. Controlled trials of WRAP were selected and assessed for quality. Meta-analyses were applied to quantitative data to establish the effects of WRAP on outcomes of interest. RESULTS: Of 253 studies initially identified, 5 quantitative studies (reported in 6 papers) reporting controlled trials were included in the review. Meta-analyses revealed that, relative to inactive control conditions, WRAP was (a) superior for promoting self-perceived recovery outcomes (demonstrating a small-but-significant pooled effect), but (b) not superior for reducing clinical symptomatologyalthough restriction to randomized-controlled trials revealed 1 small effect favoring WRAP for reducing depression. CONCLUSIONS AND IMPLICATIONS FOR PRACTICE: Participation in WRAP has positive outcomes for participants, quantifiable using comprehensive measures of self-perceived recovery. Improvements were not sustained over time. Future research could explore this, as well as potential effects of follow-up WRAP sessions. The results support a move to broader measurement of outcomes within mental health, away from a reliance on clinical outcome measures. Recommendations for further research are made. (PsycINFO) Database Record (c) 2019 APA, all rights reserved)

Framke E, Sorensen JK, Nordentoft M, Johnsen NF, Garde AH, Pedersen J, et al. Perceived and content-related emotional demands at work and risk of long-term sickness absence in the Danish workforce: a cohort study of 26 410 Danish employees. Occupational and Environmental Medicine. 2019; 76(12):895-900.

https://doi.org/10.1136/oemed-2019-106015 [open access] Abstract: OBJECTIVES: This study aimed to examine whether high emotional demands at work predict long-term sickness absence (LTSA) in the Danish workforce and whether associations differ by perceived and content-related emotional demands. METHODS: We included 26 410 individuals from the Work Environment and Health in Denmark Study, a nationwide sample of the Danish workforce. Emotional demands at work were measured with two items: one assessing perceived emotional demands (asking how often respondents were emotionally affected by work) and one assessing content-related emotional demands (frequency of contact with individuals in difficult situations). LTSA was register based and defined as spells of >/=6 weeks. Respondents with LTSA during 2 years before baseline were excluded. Follow-up was 52 weeks. Using Cox regression, we estimated risk of LTSA per one-unit increase in emotional demands rated on a five-point scale. RESULTS: During 22 466 person-years, we identified 1002 LTSA cases. Both perceived (HR 1.20, 95% CI 1.12 to 1.28) and content-related emotional demands (HR 1.07, 95% CI 1.01 to 1.13) predicted risk of LTSA after adjustment for confounders. Further adjustment for baseline depressive symptoms substantially attenuated associations for perceived (HR 1.08, 95% CI 1.01 to 1.16) but not content-related emotional demands (HR 1.05, 95% CI 1.00 to 1.11). Individuals working in occupations with above-average values of both exposures had an increased risk of LTSA (HR 1.32, 95% CI 1.14 to 1.52) compared with individuals in all other job groups. CONCLUSIONS: Perceived and content-related emotional demands at work predicted LTSA, also after adjustment for baseline depressive symptoms, supporting the interpretation that high emotional demands may be hazardous to employee's health

Hill A and Mann DR. Do short-term changes in funding improve Vocational Rehabilitation outcomes? Evidence from the ARRA. Journal of Vocational Rehabilitation. 2019; 51(3):355-367. https://doi.org/10.3233/JVR-191051

Jang HS, Leem JH, Jeon SS, Park SG, Lee S, Kang Y, et al. Relationship between occupational sunlight exposure and the incidence of renal cancer. Annals of Occupational and

Environmental Medicine. 2019; 31:e32.

https://doi.org/10.35371/aoem.2019.31.e32 [open access]

Abstract: Background: The risk factors for renal cancer include smoking, obesity, hypertension, and exposure to trichloroethylene. Recent studies have shown that low sunlight exposure increases the risk of developing a range of cancers, including renal cancer. Given that most of the daytime is spent at work, a lack of occupational sunlight exposure can be a risk factor for renal cancer. Therefore, this study examined the relationship between occupational sunlight exposure and the incidence of renal cancer. Methods: This was a university hospital-based case-control study on renal cancer. Of the 706 newly diagnosed patients with renal cell carcinoma (RCC), 633 cases were selected; 73 who had no occupational history were excluded. In addition, 633 controls were selected from the general population after 1:1 matching with respect to sex, age (within 5 years), and residential area (constituency-level). Information on sunlight exposure by the occupational group was referred to data from France. To estimate the association between occupational sunlight exposure and the RCC risk, the odds ratios (ORs) were calculated using conditional logistic regression analysis. Results: Sunlight exposure was divided into quartiles and the risk of RCC was analyzed. The adjusted OR of RCC (OR: 0.664, 95% confidence interval: 0.449-0.983) was significantly lower for the Q4 group than Q1 group but the Q2 and Q3 groups did not show significant results. The risk of RCC tended to decrease with increasing exposure to sunlight (p for trend < 0.028). Conclusions: Higher occupational sunlight exposure reduces the risk of RCC

Judon N, Galey L, de Almeida VS, and Garrigou A. Contributions of participatory ergonomics to the involvement of workers in chemical risk prevention projects. Work. 2019; 64(3):651-660. https://doi.org/10.3233/WOR-193001

Abstract: BACKGROUND: In a context where preventive measures are developed via a functionalist and technological approach, the aim of this work is to set out general principles and methods for new preventive solutions that will enrich these existing measures.

OBJECTIVE: We propose an approach centered on the involvement of workers at all hierarchical levels around "intermediary objects" of prevention in order to foster a collective debate. This might provide

empowered workers to be actors into their own prevention of risk faced. METHODS: Observational data was coupled with chemical and physiological measurements. We developed, reworked and enriched the notion of risk representation, which promotes the visibility and recognition of the knowledge built, developed and held by workers on their activities and on ways to protect themselves from dangers or hazards. RESULTS: Implementation of the method generates detailed knowledge of chemical risks, knowledge that is constructed by the workers. This knowledge is made possible by the experience of the body and senses, and becomes accessible via references to the domestic and professional sphere in reflexive activities. The actors get involved and make use of their individual, collective and organizational resources to propose prevention solutionsCONCLUSIONS:Use of intermediate prevention objects in an "intermediate space for dialogue" allows dialogues to be produced and fostered. Ultimately, these spaces are circulating entities for the co-production of knowledge for action: to generate knowledge and innovative prevention solutions collectively

Kim EJ, Parish SL, and Skinner T. The impact of gender and disability on the economic well-being of disabled women in the United Kingdom: a longitudinal study between 2009 and 2014. Social Policy & Administration. 2019; 53(7):1064-1080. https://doi.org/10.1111/spol.12486

Knott M, Classen S, Krasniuk S, Tippett M, and Alvarez L. Insufficient sleep and fitness to drive in shift workers: a systematic literature review. Accident Analysis and Prevention. 2020; 134:105234.

https://doi.org/10.1016/j.aap.2019.07.010

Abstract: BACKGROUND: Insufficient sleep, <6.5h per night, majorly affects shift workers, placing them at higher risk for motor vehicle crash related injury or fatality. While systematic reviews (SLRs) examine the effects of insufficient sleep and driving, to date, no SLR focuses on driver fitness or performance in shift workers. OBJECTIVES: Determine the class of evidence (Class I-highest to Class IV-lowest), and level of confidence (Level A-high, to Level Uinsufficient) in the determinants of driver fitness and performance in shift workers. Next, consider evidence-based recommendations for

clinical practice, research, and policy. METHODS: A protocol was registered on PROSPERO (#CRD42018052905) using an established SLR methodology: a comprehensive electronic database search, study selection, data extraction, critical appraisal, analysis, and interpretation using published guidelines. RESULTS: Searches identified 1226 unique records with 11(2 on-road, 9 simulator) meeting final inclusion criteria. Class III to IV evidence identified that exposure to overnight shift work possibly predicts (Level C confidence) drivers at risk for adverse on-road outcomes and likely predicts (Level B) drivers at risk for adverse driving simulator outcomes. Higher ratings of subjective sleepiness and extended time driving possibly predict (Level C) drivers at risk for adverse driving simulator outcomes. CONCLUSIONS: This study demonstrates a low to moderate level of confidence in the determinants of driving in shift workers. A critical need exists for gold-standard on-road assessments integrating complex driving environments representative of real-world demands, targeting tactical and strategic outcomes in a broad spectrum of shift workers

Lee DW, Kim HR, Myong JP, Choi J, Hong YC, and Kang MY. Does working long hours increase the risk of cardiovascular disease for everyone? Journal of Occupational Health. 2019; 61(6):431-441.

https://doi.org/10.1002/1348-9585.12069 [open access] Abstract: INTRODUCTION: It has been suggested that long working hours are associated with cardiovascular disease (CVD). Although studies on health inequality caused by income inequality have been performed, income levels of workers have been considered only as an adjusting factor in the relationship between long working hours and CVD. In the present study, we investigated the modifying effects of household income level in the relationship between working hours and estimated risk of CVD. MATERIALS AND METHODS: We analysed a total of 11,602 Koreans who were randomly enrolled in the Korea National Health and Nutrition Examination Survey (2007-2016) with complete data. Nonparametric associations between weekly working hours and estimated risk of CVD were explored according to quartiles of equalised household income by gender, and the size of linear associations among weekly working hours and estimated CVD risk after stratifying for equalised household income

by gender was considered. RESULTS: A 4.1% increased risk of CVD was associated with 10 hours or longer per day weekly working hours among males with the highest household income after adjusting for age, equalised household income, occupation, and shift work, but such was not associated among lower income groups. Negative associations between equalised household income and estimated CVD risk were observed only among low household income males. CONCLUSION: Long working hours and household income level can have differential effects on the risk of CVD by socioeconomic status. This study shows that positive income effect may dominate the potential negative effect of long working hours with respect to the risk of CVD in the low-income group

Lenferink LIM, de Keijser J, van Denderen MY, and Boelen PA. Latent classes of posttraumatic stress symptoms in two samples of bereaved people. International Journal of Stress Management. 2019; 26(4):401-410. https://doi.org/10.1037/str0000121

Mokarami H, Varmazyar S, Kazemi R, Taghavi SM, Stallones L, Marioryad H, et al. Low cost ergonomic interventions to reduce risk factors for work related musculoskeletal disorders during dairy farming. Work. 2019; 64(2):195-201.

https://doi.org/10.3233/WOR-192986

Abstract: BACKGROUND: Workers engaged in dairy farming are exposed to awkward and poor postures that may result in workrelated musculoskeletal disorders (WMSDs). OBJECTIVE: This study carried out ergonomic interventions in order to eliminate and reduce awkward postures in dairy farming. METHODS: This quasiexperimental study applied rapid entire body assessments (REBA) to evaluate the risks associated with each posture while performing the assigned tasks on a dairy farm in Iran to identify high and very highrisk tasks. A participatory ergonomics model was used that incorporated suggestions by dairy workers to design the used interventions. RESULTS: In the first intervention, by using an automatic transmission system for pouring milk, one high and one very high-risk task- pouring milk into a bucket and pouring milk from a bucket into a tank, respectively- were eliminated. In the second intervention, two high-risk tasks-filling corn containers and pouring

corn into the milling machine- were eliminated by using a material conveying vacuum pump to transfer corn from the ground to the opening of the milling machine. In the third intervention, a simple and cheap holding device for the bag was designed to reduce the posture risk score from very high to medium. The fourth intervention involved the use of a shovel with a handle appropriate to the anthropometric characteristics of the workers that reduced the posture risk from very high to medium. CONCLUSIONS: The results indicated that applying participatory ergonomic principles along with low cost and simple designs with high performance resulted in significant reductions in postural risks pertaining to of musculoskeletal disorders on Iran dairy farms

Muir C, Prang KH, Sheppard D, and Newnam S. Occupational injuries among police workers: patterns and contributing factors in an Australian jurisdiction. Safety Science. 2020; 122:104525. https://doi.org/10.1016/j.ssci.2019.104525

Oikonomidi T, Vivot A, Tran VT, Riveros C, Robin E, and Ravaud P. A methodologic systematic review of mobile health behavior change randomized trials. American Journal of Preventive Medicine. 2019; 57(6):836-843.

https://doi.org/10.1016/j.amepre.2019.07.008

Abstract: CONTEXT: Mobile health helps providers offer accessible. affordable, tailored behavior change interventions. However, research assessing mobile health interventions may feature methodologic shortcomings and poor reporting. This review aims to summarize the characteristics, methods, and intervention reporting of RCTs evaluating mobile health behavior change interventions. EVIDENCE ACQUISITION: This was a methodologic systematic review of RCTs assessing mobile health behavior change interventions published in PubMed from January 1, 2014 to January 1, 2018, in journals with the upper half of Impact Factors (Clarivate Analytics). Three reviewers independently extracted sample characteristics. Primary outcomes were classified as patient-important or not using definitions from the literature. Any non-patient-important outcomes were then reclassified by a panel of 3 patients. Intervention reporting was assessed by the mobile health Evidence Reporting and Assessment checklist. Data were analyzed in December 2018. EVIDENCE SYNTHESIS: Most of

the 231 included RCTs assessed text messaging (51%) or smartphone app (28%) interventions aiming to change nutrition and physical activity (36%) or treatment adherence (25%). Only 8% of RCTs had a patient-important primary outcome, follow-up of >/=6 months, and intent-to-treat analysis. Most primary outcomes were behavioral measures (60%). Follow-up was <3 months in 29% of RCTs. Regarding reporting, 12 of the 16 checklist items were reported in less than half of RCTs (e.g., usability/content testing, 32%; data security, 13%). CONCLUSIONS: Reports of RCTs assessing mobile health behavior change interventions lack information that would be useful for providers, including reporting of long-term intervention impact on patient-important primary outcomes and information needed for intervention replicability

Oliv S, Gustafsson E, Baloch AN, Hagberg M, and Sanden H. Important work demands for reducing sickness absence among workers with neck or upper back pain: a prospective cohort study. BMC Musculoskeletal Disorders. 2019; 20(1):529. https://doi.org/10.1186/s12891-019-2909-1 [open access] Abstract: BACKGROUND: The aim of this study was to investigate what exposure to work demands, physical and psychosocial, is associated with lower levels of sickness absence among workers with neck or upper back pain in different groups, by age, gender, duration of sickness absence and work ability score. METHODS: This study was a prospective study of 4567 workers with neck or upper back pain. Data on neck or upper back pain, work demand and work ability were obtained from the Swedish Work Environment survey over a 3year period (2009-2013). Register data on sickness absence, 1 year after each survey was conducted, were obtained from the Swedish health insurance database. Analyses were performed to estimate the association between self-reported work demands and registered sick days > 14 days. The analyses were stratified for gender, age group and work ability score. RESULTS: Lower numbers of sick days were found for workers reporting low exposure to lifting >/=15 kg and twisted or forward-leaning work postures. Lower numbers of sick days were found for workers reporting high work control and seated work. The associations were generally stronger in the older age groups for the physical work demands. CONCLUSIONS: The findings in this study suggest that certain physical work demands and having

high control over one's work can result in lower sickness absence, especially among middle-aged and older workers with neck or upper back pain

Roux AM, Garfield T, and Shattuck PT. Employment policy and autism: analysis of state Workforce Innovation and Opportunity Act (WIOA) implementation plans. Journal of Vocational Rehabilitation. 2019; 51(3):285-298. https://doi.org/10.3233/JVR-191046

Schreijenberg M, Lin CC, McLachlan AJ, Williams CM, Kamper SJ, Koes BW, et al. Paracetamol is ineffective for acute low back pain even for patients who comply with treatment: complier average causal effect analysis of a randomized controlled trial. Pain. 2019; 160(12):2848-2854.

https://doi.org/10.1097/j.pain.000000000001685

Abstract: In 2014, the Paracetamol for Acute Low Back Pain (PACE) trial demonstrated that paracetamol had no effect compared with placebo in acute low back pain (LBP). However, noncompliance was a potential limitation of this trial. The aim of this study was to investigate the efficacy of paracetamol in acute LBP among compliers. Using individual participant data from the PACE trial (ACTN12609000966291), complier average causal effect (CACE), intention-to-treat, and per protocol estimates were calculated for pain intensity (primary), disability, global rating of symptom change, and function (all secondary) after 2 weeks of follow-up. Compliance was defined as intake of an average of at least 4 of the prescribed 6 tablets of regular paracetamol per day (2660 mg in total) during the first 2 weeks after enrolment. Exploratory analyses using alternative time points and definitions of compliance were conducted. Mean between-group differences in pain intensity on a 0 to 10 scale using the primary time point and definition of compliance were not clinically relevant (propensity-weighted CACE 0.07 [-0.37 to 0.50] P = 0.76; joint modelling CACE 0.23 [-0.16 to 0.62] P = 0.24; intention-to-treat 0.11 [-0.20 to 0.42] P = 0.49; per protocol 0.29 [-0.07 to 0.65] P =0.12); results for secondary outcomes and for exploratory analyses were similar. Paracetamol is ineffective for acute LBP even for patients who comply with treatment. This reinforces the notion that

management of acute LBP should focus on providing patients advice and reassurance without the addition of paracetamol

Stanfors M, Jacobs JC, and Neilson J. Caregiving time costs and trade-offs: gender differences in Sweden, the UK, and Canada. SSM - Population Health. 2019; 9:100501.

https://doi.org/10.1016/j.ssmph.2019.100501 [open access] Abstract: Population ageing is putting pressure on pension systems and health care services, creating an imperative to extend working lives. At the same time, policy makers throughout Europe and North America are trying to expand the use of home care over institutional services. Thus, the number of people combining caregiving responsibilities with paid work is growing. We investigate the conflicts that arise from this by exploring the time costs of unpaid care and how caregiving time is traded off against time in paid work and leisure in three distinct policy contexts. We analyze how these tradeoffs differ for men and women (age 50-74), using time diary data from Sweden, the UK and Canada from 2000 to 2015. Results show that women provide more unpaid care in each country, but the impact of unpaid care on labor supply is similar for male and female caregivers. Caregivers in the UK and Canada, particularly those involved in intensive caregiving, reduce paid work in order to provide unpaid care. Caregivers in Sweden do not trade off time in paid work with time in caregiving, but they have less leisure time. Our findings support the idea that the more extensive social infrastructure for caring in Sweden may diminish the labor market effects of unpaid care, but highlight that throughout contexts, intensive caregivers make important labor and leisure tradeoffs. Respite care and financial support policies are important for caregivers who are decreasing labor and leisure time to provide unpaid care

Weatherson KA, Wunderlich KB, and Faulkner GE. Impact of a low-cost standing desk on reducing workplace sitting (StandUP UBC): a randomised controlled trial. Applied Ergonomics. 2020; 82:102951.

https://doi.org/10.1016/j.apergo.2019.102951

Abstract: Sit-stand desks can reduce occupational sitting time, however, their cost can limit scalability. The purpose of this study was to evaluate the impact of a low-cost standing desk on objectivelymeasured occupational sitting and prolonged sitting bouts over 3- and 6-months. Secondary outcomes included self-report work engagement and occupational fatigue. Forty-eight office employees (91.7% female, Mage=39.8+/-10.1) were randomized to receive a low-cost standing desk or to a control group. At 3-months, the intervention group sat 0.7h (42min) less at work compared to the control group; F(1, 45)=5.90, partial eta(2)=0.12, p=.019. The effect was small, yet comparable to findings from studies using costlier alternatives. However, these reductions were not maintained at 6-months. No changes in prolonged sitting bouts or secondary outcomes were found. There is some potential for low-cost standing desk converters as a scalable workplace health intervention. TRIAL REGISTRATION: ClinicalTrials.gov, NCT03375749, Registered 18 December 2017,

https://clinicaltrials.gov/ct2/show/NCT03375749?term=NCT03375749 &rank=1