

IWH Research Alert
May 11, 2018

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.

***Van Eerd D, Cullen K, Irvin E, Le Pouésard M, Gignac M, Cardoso S, Mahood Q, Dubey A, and Geary J. Managing depression in the workplace - bridging the research-to-practice gap. Toronto, ON: Institute for Work & Health; 2018.**

***Jetha A, Bowring J, Furrie A, Smith F, and Breslin C. Supporting the transition into employment: a study of Canadian young adults living with disabilities. *Journal of Occupational Rehabilitation*. 2018; [epub ahead of print].**

<http://dx.doi.org/10.1007/s10926-018-9772-z>

Abstract: Objective To examine the job accommodation and benefit needs of young adults with disabilities as they transition into employment, and their perceived barriers to meeting support needs. Methods An online survey was conducted of 155 Canadian young adults with disabilities (mean age = 25.8 years). Respondents were either employed or seeking employment, and were asked about their need for health benefits, and soft (e.g., flexible scheduling) and hard accommodations (e.g., ergonomic interventions), and perceived accommodation barriers. Disability characteristics (e.g., disability type), demographic details and work context information were collected. Multivariable logistic analyses were conducted to examine the factors associated with a greater need for health benefits and hard and soft accommodations. Result Participants reported having a physical (79%), psychological (79%) or cognitive/learning disability (77%); 68% had > 1 disability. Over half (55%) were employed. Health benefits and soft accommodations were most needed by participants. Also, an average of six perceived accommodation barriers were indicated; difficulty with disability disclosure was most frequently reported. More

perceived accommodation barriers were associated with a greater need for health benefits (OR 1.17, 95% CI 1.04-1.31) and soft accommodations (OR 1.13, 95% CI 1.01-1.27). A psychological disability was associated with a greater need for health benefits (OR 2.91, 95% CI 1.09-7.43) and soft accommodations (OR 3.83, 95% CI 1.41-10.42). Discussion Employers can support the employment of young adults with disabilities through provision of extended health benefits and soft accommodations. Addressing accommodation barriers could minimize unmet workplace need, and improve employment outcomes for young adults with disabilities as they begin their career and across the life course

***Johansen T, Lund T, Jensen C, Momsen AH, Eftedal M, Oyeflaten I, Braathen TN, Stapelfeldt CM, Amick B, and Labriola M. Cross-cultural adaptation of the Work Role Functioning Questionnaire 2.0 to Norwegian and Danish. *Work*. 2018; 59(4):471-478.**

<http://dx.doi.org/10.3233/WOR-182705> [open access]

Abstract: BACKGROUND: A healthy and productive working life has attracted attention owing to future employment and demographic challenges. OBJECTIVE: The aim was to translate and adapt the Work Role Functioning Questionnaire (WRFQ) 2.0 to Norwegian and Danish. METHODS: The WRFQ is a self-administered tool developed to identify health-related work limitations. Standardised cross-cultural adaptation procedures were followed in both countries' translation processes. Direct translation, synthesis, back translation and consolidation were carried out successfully. RESULTS: A pre-test among 78 employees who had returned to work after sickness absence found idiomatic issues requiring reformulation in the instructions, four items in the Norwegian version, and three items in the Danish version, respectively. In the final versions, seven items were adjusted in each country. Psychometric properties were analysed for the Norwegian sample (n = 40) and preliminary Cronbach's alpha coefficients were satisfactory. A final consensus process was performed to achieve similar titles and introductions. CONCLUSIONS: The WRFQ 2.0 cross-cultural adaptation to Norwegian and Danish was performed and consensus was obtained. Future validation studies will examine validity, reliability, responsiveness and differential item response. The WRFQ can be used to elucidate both individual and work environmental factors leading to a more holistic approach in work rehabilitation

Aghazadeh-Attari J, Mobaraki K, Ahmadzadeh J, Mansorian B, and Mohebbi I. Quality of observational studies in prestigious journals of occupational medicine and health based on Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: a cross-sectional study. *BMC Research Notes*. 2018; 11(1):266.

<http://dx.doi.org/10.1186/s13104-018-3367-9> [open access]

Abstract: OBJECTIVE: The present study applied the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement to observational studies published in prestigious occupational medicine and health

journals. RESULTS: A total of 60 articles was evaluated. All sub-items were reported in 63.74% (95% confidence interval [CI], 56.24-71.24%), not reported in 29.70% (95% CI, 20.2-39.2%), and not applicable in 6.56% (95% CI, 4.86-8.26%) of the studies. Of the 45 sub-items investigated in this survey, eight were reported 100% of the time, 13 were addressed in more than 90% of the articles, 22 were included in more than 75% of the studies, and 27 sub-items were applied in more than 50% of the articles published in the journals included in this study

Baker PMA, Linden MA, LaForce SS, Rutledge J, and Goughnour KP. Barriers to employment participation of individuals with disabilities: addressing the impact of employer (MIS) perception and policy. American Behavioral Scientist. 2018; [epub ahead of print].

<http://dx.doi.org/10.1177/0002764218768868> [open access]

Abstract: Although progress has been made toward the objective of increased employment for people with disabilities, the 17.2% employment rate of people with disabilities stands in distressing contrast to the 65% rate of those without disabilities. This article summarizes the results of a comparative survey of representative academic literature and industry publications related to employer policies and practices that can affect workforce participation of individuals with disabilities. Emergent themes include variance in employer perspectives on hiring of individuals with disabilities, impact of perceived versus actual cost as a hiring barrier, and the perceived mismatch of education and/or skills to job qualifications among applicants with disabilities. These themes represent key areas to probe in subsequent research. The research objective is to identify focal points in the industry literature, representative of employer and industry (demand side) points of view that differ from those generally portrayed in the academic literature (more generally, supply side). Findings from a thematic analysis of industry publications can provide (1) evidenced based background to assist in crafting targeted policy to address employer awareness, (2) informed development of industry guidance on topics that may assist employers to achieve a more inclusive workplace, and (3) insights applicable to addressing barriers to broadening participation by technical, scientific, and engineering trained individuals with disabilities

Bellman S, Burgstahler S, and Chudler EH. Broadening participation by including more individuals with disabilities in STEM: promising practices from an engineering research center. American Behavioral Scientist. 2018; [epub ahead of print].

<http://dx.doi.org/10.1177/0002764218768864> [open access]

Abstract: This article describes successful practices for including individuals with disabilities (e.g., leaders, students, faculty researchers, advisory board members) in the Center for Sensorimotor Neural Engineering (CSNE), an Engineering Research Center funded by the National Science Foundation. The methods, tools, and materials presented in this article can be used by others seeking to

increase the inclusion of individuals with disabilities in postsecondary science, technology, engineering, and mathematics (STEM) programs. Methods are employed to ensure that the CSNE is welcoming and accessible to individuals with a wide range of abilities and to recruit individuals with disabilities into significant roles that support the Center's mission. These efforts have resulted in the engagement of individuals with disabilities in the Center's operations, activities, and research at a higher rate when compared with all Engineering Research Centers

Bernstrom VH. Long working hours and sickness absence: a fixed effects design. BMC Public Health. 2018; 18(1):578.

<http://dx.doi.org/10.1186/s12889-018-5473-y> [open access]

Abstract: BACKGROUND: While long working hours seem to lead to impaired health, several studies have also shown that long working hours are related to lower levels of sickness absence. Previous studies on the relationship between long working hours and sickness absence have compared those who work long hours to those who do not, looking only at between-individual correlations. Those results might therefore reflect relatively stable differences between employees who typically work long hours and employees who typically do not. The aim of the present study is to examine within-individual correlations between long working hours and sickness absence. METHODS: Records from the Human Resources department in a large Norwegian hospital from 2012 to 2015 provided objective data on both working hours and sickness absence. Two analyses were performed: a prospective cohort analysis to replicate the results from previous between-individual analyses and a second analysis of within-individual correlations using a fixed effect design. RESULTS: In line with existing research, both between-individual and within-individual analyses showed a negative relationship between long working hours (> 48 h/week) and short-term sickness absence (1-8 days) and no significant difference in incidence of long-term sickness absence (> 8 days). CONCLUSIONS: The results indicate that the negative relationship between long working hours and sickness absence is not due only to relatively stable individual differences between those who typically work long hours and those who do not. The results from both analyses therefore still contrast with previous research showing a negative relationship between long working hours and other health indicators

Bontemps S, Barlet-Ghaleb C, Mediouni Z, Besse C, Bonsack C, Wild P, and Danuser B. Long title: protocol for evaluating a consultation for suffering at work in French-speaking Switzerland. Contemporary Clinical Trials Communications. 2018; 9:71-76.

<http://dx.doi.org/10.1016/j.conctc.2017.12.002> [open access]

Abstract: Introduction: Psychosocial suffering entails human, social and economic costs. In Switzerland, 34.4% of workers report chronic work-related stress. Our medical Consultation for Suffering at Work aims to preserve-or restore-the patient's capacity to act and make decisions after a diagnosis of

work-related psychological suffering; it also aims to help employees get back to or remain at work. Our hypothesis is that the dynamic of the consultation itself and adherence to its medical advice are active factors of these results. Objectives: Understand changes in patients' work and health status 12 months after a Consultation for Suffering at Work. Determine the effects of the consultation on health and working status via identified active factors: the consultation dynamic and the ability to adhere to the consultation's advice. Evaluate the consultation's effects qualitatively. Materials and Methods: This longitudinal, monocentric study with a quasi-experimental design will include patients consulting between 1 January and 31 December 2018. Changes in patients' work and health status will be analysed using data collected via questionnaires at 0, 3 and 12 months. Qualitative data will be collected via a semi-structured telephone interview 3 months after the consultation. The quantitative part will include 150-170 patients; the qualitative part will include 30. Conclusion: This exploratory research project will provide a better understanding of issues of work-related psychological suffering and effective strategies to support patients. The absence of a control group and the impossibility of applying a randomised controlled design are constraints on this study

Fliesser M, De Witt Huberts J, and Wippert PM. Education, job position, income or multidimensional indices? Associations between different socioeconomic status indicators and chronic low back pain in a German sample: a longitudinal field study. BMJ Open. 2018; 8(4):e020207.

<http://dx.doi.org/10.1136/bmjopen-2017-020207> [open access]

Abstract: OBJECTIVE: To investigate associations between socioeconomic status (SES) indicators (education, job position, income, multidimensional index) and the genesis of chronic low back pain (CLBP). DESIGN: Longitudinal field study (baseline and 6-month follow-up). SETTING: Four medical clinics across Germany. PARTICIPANTS: 352 people were included according to the following criteria: (1) between 18 and 65 years of age, (2) intermittent pain and (3) an understanding of the study and the ability to answer a questionnaire without help. Exclusion criteria were: (1) pregnancy, (2) inability to stand upright, (3) inability to give sick leave information, (4) signs of serious spinal pathology, (5) acute pain in the past 7 days or (6) an incomplete SES indicators questionnaire. OUTCOME MEASURES: Subjective intensity and disability of CLBP. RESULTS: Analysis showed that job position was the best single predictor of CLBP intensity, followed by a multidimensional index. Education and income had no significant association with intensity. Subjective disability was best predicted by job position, succeeded by the multidimensional index and education, while income again had no significant association. CONCLUSION: The results showed that SES indicators have different strong associations with the genesis of CLBP and should therefore not be used interchangeably. Job position was found to be the single most important indicator. These results could be helpful in the planning of back pain care programmes, but in general, more research on the relationship between SES and health outcomes is needed

Fouquet N, Bodin J, Chazelle E, Descatha A, and Roquelaure Y. Use of multiple data sources for surveillance of work-related chronic low-back pain and disc-related sciatica in a French region. *Annals of Work Exposures and Health*. 2018; [epub ahead of print].

<http://dx.doi.org/10.1093/annweh/wxy023>

Abstract: Objectives: To compare the data of the French workers' compensation system (WCS) and three surveillance networks, and to determine the possibility of identifying the industry sectors most in need of programs for prevention of low-back pain (LBP). Methods: This study compared four databases and two types of indicators in a west central region of France: * surveillance of musculoskeletal symptoms in the working population [LBP and disc-related sciatica (DRS) indicators; Cosali study] * surveillance of uncompensated work-related diseases (LBP and DRS indicators) * surveillance of lumbar disc surgery (LDS) in the general population (DRS indicator) * French WCS (disc herniation with radiculopathy caused by vibration or handling of materials; DRS indicator) People aged 20-59 were studied. The prevention index (PI) was used to rank industry sectors according to the number of cases and the prevalence/incidence rate. Results: Construction and manufacturing were the first sectors in terms of PI for men in all databases and indicators. Moreover, transport and agriculture were not consistently highlighted. For women, manufacturing was the leading sector (except for the LDS study: health sector), followed by the health sector. Specific epidemiologic surveillance networks (LDS and Cosali studies) provided ranking of the greatest number of sectors out of the 17 classified. For DRS indicators, the LDS study classified 13 sectors for both genders, and for LBP indicators, the Cosali study ranked 8 and 7 sectors in men and women, respectively. Conclusions: The results showed the complementarity of the four surveillance programs. A multi-component surveillance system allowed detection of industry sectors most in need of prevention programs

Hango D and LaRochelle-Cote S. Association between the frequency of cannabis use and selected social indicators. *Insights on Canadian Society*. 2018; May:1-18.

<http://www.statcan.gc.ca/pub/75-006-x/2018001/article/54968-eng.pdf>

Jeong HS, Suh BS, Kim SG, Kim WS, Lee WC, Son KH, and Nam MW. Comparison of work-related musculoskeletal symptoms between male cameramen and male office workers. *Annals of Occupational and Environmental Medicine*. 2018; 30:28.

<http://dx.doi.org/10.1186/s40557-018-0243-y>

Abstract: Background: Previous studies have classified cameramen's job as physiologically heavy work and identified the risk factors of work-related musculoskeletal disorders (WRMDs) in cameramen. However, those studies limited their research subjects to cameramen. In this study, we compared the frequency and severity of WRMDs between cameramen and office workers. Methods: A total of 293 subjects working in four broadcasting companies in

Korea were recruited. A questionnaire survey was conducted for a month, starting in October 2016. The subjects were divided into cameramen and office workers according to their occupation. We compared the frequency and severity of WRMDs and ergonomic risk assessment results between the two groups. Results: The high-risk WRMD group had a higher proportion of cameramen than office workers. Moreover, the high ergonomic risk group also had a higher proportion of cameramen than office workers for WRMDs in the upper extremities and waist+lower extremities. In the multivariable-adjusted model comparing cameramen and office workers, the odds ratio (OR) with 95% confidence interval (95% CI) for high-risk WRMDs was 3.50 (95% CI: 1.92-7.72) for the upper extremities and 3.18 (95% CI: 1.62-6.21) for the waist and the lower extremities. The ORs by body parts were 3.11 (95% CI: 1.28-7.57) for the neck, 3.90 (95% CI: 1.79-8.47) for the shoulders, and 4.23 (95% CI: 1.04-17.18) for the legs and feet. Conclusions: Our study suggests that cameramen are at high risk of WRMDs. Workplace improvements and management of the neck, shoulders, and lower extremities, which are susceptible to WRMDs, are necessary to prevent musculoskeletal disorders among cameramen

Levere M, Hyde JS, and Liu S. Disability beneficiary work activity, 2002 - 2014: evidence from the Social Security Administration's Disability Analysis File (DAF). Washington, D.C.: Center for Studying Disability Policy, Mathematica Policy Research; 2018.

<https://www.mathematica-mpr.com/our-publications-and-findings/publications/disability-beneficiary-work-activity-2002-2014-evidence-from-the-social-security-administrations>

Miller R, Sevak P, and Honeycutt T. State vocational rehabilitation agencies' early implementation experiences with pre-employment transition services. Washington, D.C.: Rehabilitation Research and Training Center on VR Practices and Youth; 2018.

<https://www.mathematica-mpr.com/our-publications-and-findings/publications/state-vocational-rehabilitation-agencies-early-implementation-experiences-with-pre-employment>

Smith R, Hall KE, Etkind P, and Van DM. Current marijuana use by industry and occupation - Colorado, 2014-2015. Morbidity and Mortality Weekly Report. 2018; 67(14):409-413.

<http://dx.doi.org/10.15585/mmwr.mm6714a1> [open access]

Abstract: The effects of marijuana use on workplace safety are of concern for public health and workplace safety professionals. Twenty-nine states and the District of Columbia have enacted laws legalizing marijuana at the state level for recreational and/or medical purposes. Employers and safety professionals in states where marijuana use is legal have expressed concerns about potential increases in occupational injuries, such as on-the-job motor vehicle crashes, related to employee impairment. Data published in 2017 by the Colorado Department of Public Health and Environment (CDPHE) showed that more than

one in eight adult state residents aged ≥ 18 years currently used marijuana in 2014 (13.6%) and 2015 (13.4%) (1). To examine current marijuana use by working adults and the industries and occupations in which they are employed, CDPHE analyzed data from the state's Behavioral Risk Factor Surveillance System (BRFSS) regarding current marijuana use (at least 1 day during the preceding 30 days) among 10,169 persons who responded to the current marijuana use question. During 2014 and 2015, 14.6% of these 10,169 Colorado workers reported current marijuana use, with the highest reported prevalence among workers in the Accommodation and Food Services industry (30.1%) and Food Preparation and Serving (32.2%) occupations. Understanding the industries and occupations of adults with reported marijuana use can help direct and maximize impact of public health messaging and potential safety interventions for adults

Stochkendahl MJ, Larsen OK, Nim CG, Axen I, Haraldsson J, Kvammen OC, and Myburgh C. Can chiropractors contribute to work disability prevention through sickness absence management for musculoskeletal disorders? A comparative qualitative case study in the Scandinavian context.

Chiropractic and Manual Therapies. 2018; 26:15.

<http://dx.doi.org/10.1186/s12998-018-0184-0>

Abstract: Background: Despite extensive publication of clinical guidelines on how to manage musculoskeletal pain and back pain in particular, these efforts have not significantly translated into decreases in work disability due to musculoskeletal pain. Previous studies have indicated a potential for better outcomes by formalized, early referral to allied healthcare providers familiar with occupational health issues. Instances where allied healthcare providers of comparable professional characteristics, but with differing practice parameters, can highlight important social and organisational strategies useful for informing policy and practice. Currently, Norwegian chiropractors have legislated sickness certification rights, whereas their Danish and Swedish counterparts do not. Against the backdrop of legislative variation, we described, compared and contrasted the views and experiences of Scandinavian chiropractors engaging in work disability prevention and sickness absence management. **Methods:** This study was embedded in a two-phased, sequential exploratory mixed-methods design. In a comparative qualitative case study design, we explored the experience of chiropractors regarding sickness absence management drawn from face-to-face, semi-structured interviews. We subsequently coded and thematically restructured their experiences and perceptions. **Results:** Twelve interviews were conducted. Thematically, chiropractors' capacity to support patients in sickness absence management revolved around four key issues: issues of legislation and politics; the rationale for being a sickness absence management partner; whether an integrated sickness absence management pathway existed/could be created; and finally, the barriers to service provision for sickness absence management. **Conclusion:** Allied health providers, in this instance chiropractors, with patient management expertise can fulfil a key role in

sickness absence management and by extension work disability prevention when these practices are legislatively supported. In cases where these practices occur informally, however, practitioners face systemic-related issues and professional self-image challenges that tend to hamper them in fulfilling a more integrated role as providers of work disability prevention practices

*IWH authored publications.