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***Biswas A, Oh PI, Faulkner GE, and Alter DA. A prospective study examining the influence of cardiac rehabilitation on the sedentary time of highly sedentary, physically inactive patients. *Annals of Physical and Rehabilitation Medicine*. 2017; [epub ahead of print].**
<http://dx.doi.org/10.1016/j.rehab.2017.06.003>

Abstract: OBJECTIVES: Prolonged sedentary time is recognized as a distinct health risk, and mortality risks are expected to be greatest for individuals with low exercise levels. It is unknown whether participation in exercise-based cardiac rehabilitation (CR) programs influences sedentary behaviour particularly among those patients expected to be at greatest mortality risk. This study examined the influence of CR participation on sedentary behaviour and identified the proportion and characteristics (socio-demographic and clinical) of patients who do not meet exercise recommendations and have prolonged sedentary times. METHODS: A prospective study was conducted among patients of an exercise-based CR program and assessments performed at baseline and 3 months. Physical activity and sedentary behaviour information were collected by self-report, and convergent validity was examined on an accelerometer-wearing subsample. RESULTS: Of 468 CR patients approached, 130 participants were recruited with an average sedentary time of 8hours/day. Sedentary behaviour remained consistent at follow-up (relative change= -2.4%, P=0.07) notwithstanding a greater proportion meeting exercise recommendations (relative change= 57.4%). 19.2% of participants were classified to have prolonged sedentary time and not meet exercise recommendations at baseline. No significant differences were found between the characteristics of high-risk individuals and lower risk subgroups. Findings were consistent among the accelerometer-derived subgroup and the overall sample despite poor to moderate convergent validity.



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CONCLUSIONS: These results suggest that the exercise-focus of CR may not reduce sedentary behaviours. Future studies are needed to determine whether sedentary behaviour-specific reduction strategies are more effective than traditional exercise-based strategies and lead to meaningful improvements in clinical outcomes

Allaouat S, Roustaei Z, Verbeek J, and Ruotsalainen J. Five indicators were developed to assess the quality of reviews on preventive interventions. *Journal of Clinical Epidemiology*. 2017; [epub ahead of print].

<http://dx.doi.org/10.1016/j.jclinepi.2017.08.017>

Abstract: OBJECTIVES: The objective of the study was to develop quality indicators for preventive effectiveness and to evaluate their use with Cochrane Reviews of primary preventive interventions. STUDY DESIGN AND SETTING: Based on the quality of care framework, we searched the literature to develop a set of quality indicators. Two authors applied the quality indicators independently to a sample of Cochrane systematic reviews of primary prevention. RESULTS: Five quality indicators were developed: sample size, directness of evidence, adherence, harm, and costs. We applied the quality indicators to a random sample of 84 of a total of 264 Cochrane reviews of primary preventive interventions. Only 70% reviews (n = 59) complied with the indicator sample size, whereas 61% (n = 51) complied with directness of the outcome, 48% (n = 40) with adherence, 76% (n = 64) with harm, and 46% (n = 39) with the indicator cost. CONCLUSION: Applying the five quality indicators is feasible. The quality of evidence in reviews of primary prevention can be substantially improved. Trialists and review authors should provide more information especially on adherence, costs, and indirectness of the outcome. Methodological research is needed on how to incorporate cost information in systematic reviews and how to better deal with indirectness

Bae SH. Work hours of immigrant versus U.S.-born female workers. *Workplace Health & Safety*. 2017; 65(10):478-486.

<http://dx.doi.org/10.1177/2165079916686358>

Abstract: This study was a secondary analysis of cross-sectional data extracted from the 2011-2012 California Health Interview Survey. Data from 8,931 full-time (i.e., 21 hours or more per week) women workers aged 18 to 85 years were analyzed to examine the nature and prevalence of immigrant female workers' work hours, overtime, and related factors in the United States compared to U.S.-born female workers. Results showed that foreign-born female workers did not work longer hours than U.S.-born female workers. Foreign-born female workers who reported poor health worked longer hours than did their U.S.-born counterparts. Foreign-born female workers who were self-employed or worked in family businesses tended to work longer hours than did those women who worked for private companies or nonprofit organizations

van der Beek AJ, Dennerlein JT, Huysmans MA, Mathiassen SE, Burdorf A, van Mechelen W, and et al. A research framework for the development and

implementation of interventions preventing work-related musculoskeletal disorders. *Scandinavian Journal of Work, Environment, & Health*. 2017; [epub ahead of print].

<http://dx.doi.org/10.5271/sjweh.3671>

Abstract: Objectives Work-related musculoskeletal disorders (MSD) are highly prevalent and put a large burden on the (working) society. Primary prevention of work-related MSD focuses often on physical risk factors (such as on manual lifting and awkward postures) but has not been too successful in reducing the MSD burden. This may partly be caused by insufficient knowledge of etiological mechanisms and/or a lack of adequately feasible interventions (theory failure and program failure, respectively), possibly due to limited integration of research disciplines. A research framework could link research disciplines thereby strengthening the development and implementation of preventive interventions. Our objective was to define and describe such a framework for multi-disciplinary research on work-related MSD prevention. Methods We described a framework for MSD prevention research, partly based on frameworks from other research fields (ie, sports injury prevention and public health). Results The framework is composed of a repeated sequence of six steps comprising the assessment of (i) incidence and severity of MSD, (ii) risk factors for MSD, and (iii) underlying mechanisms; and the (iv) development, (v) evaluation, and (vi) implementation of preventive intervention(s). Conclusions In the present framework for optimal work-related MSD prevention, research disciplines are linked. This framework can thereby help to improve theories and strengthen the development and implementation of prevention strategies for work-related MSD

Colosio C, Mandic-Rajcevic S, Godderis L, van der Laan G, Hulshof C, and van DF. Workers' health surveillance: implementation of the Directive 89/391/EEC in Europe. *Occupational Medicine*. 2017; 67(7):574-578.

<http://dx.doi.org/10.1093/occmed/kqx113>

Abstract: Background: European Union (EU) Directive 89/391 addressed occupational health surveillance, which recommends to provide workers with 'access to health surveillance at regular intervals', aiming to prevent work-related and occupational diseases. Aims: To investigate how EU countries adopted this Directive. Methods: We invited one selected representative per member state to complete a questionnaire. Results: All 28 EU countries implemented the Directive in some form. Workers' health surveillance (WHS) is available to all workers in 15 countries, while in 12, only specific subgroups have access. In 21 countries, workers' participation is mandatory, and in 22, the employer covers the cost. In 13 countries, access to WHS is not available to all workers but depends on exposure to specific risk factors, size of the enterprise or belonging to vulnerable groups. In 26 countries, the employer appoints and revokes the physician in charge of WHS. Twelve countries have no recent figures, reports or cost-benefit analyses of their WHS programmes. In 15 countries where reports exist, they are often in the native language. Conclusions: Coverage and quality of occupational health surveillance should be evaluated to facilitate learning from good practice

and from scientific studies. We propose a serious debate in the EU with the aim of protecting workers more effectively, including the use of evidence-based WHS programmes

Doran K and Resnick B. Cardiovascular risk factors of long-term care workers. *Workplace Health & Safety*. 2017; 65(10):467-477.

<http://dx.doi.org/10.1177/2165079917693018>

Abstract: Little is known about long-term care workers' cardiovascular disease (CVD) risk. Thus, the authors used baseline objective and subjective data from 98 long-term care staff participating in a worksite health promotion study to provide a comprehensive CVD assessment. The median age of the sample was 32 years (SD = 13.38). Nine (12.2%) participants smoked and 27 (37.0%) participants reported exposure to secondhand smoke. The average nightly hours of sleep was 6.5 (SD = 1.18), with 24 (32%) participants reporting sleeping at least fairly bad. Sixty-eight participants (73.1%) were overweight or obese. The median aerobic activity was 0 (SD = 18.56). Participants ate on average 27 (SD = 17.34) servings of high fatty and/or salty foods per week. Although blood pressure and cholesterol levels were within normal limits, this population demonstrated poor behavioral CVD risk factors. Given this finding and the young age of the sample, these workers may be ideal candidates for health promotion efforts before health risk factors are present

Gabrovec B. Prevalence of violence toward community nurses: a questionnaire survey. *Workplace Health & Safety*. 2017; 65(11):527-532.

<http://dx.doi.org/10.1177/2165079917691767>

Abstract: Violence toward nursing staff occurs frequently, particularly in intensive care units and closed or intensive psychiatric facilities, which have been studied previously. However, violence toward community nurses has not been investigated. The purpose of this study was to explore the frequency of violence toward community nurses in Slovenia. More than 56% of study respondents were verbally abused by their patients during the past year. More than 42% of all cases of horizontal violence were directed at community nurses

Gilman SE, Sucha E, Kingsbury M, Horton NJ, Murphy JM, and Colman I. Depression and mortality in a longitudinal study: 1952-2011. *CMAJ*. 2017; 189(42):E1304-E1310.

<http://dx.doi.org/10.1503/cmaj.170125>

Abstract: BACKGROUND: Many studies have shown that depression increases mortality risk. We aimed to investigate the duration of time over which depression is associated with increased risk of mortality, secular trends in the association between depression and mortality, and sex differences in the association between depression and mortality. METHODS: We conducted a cohort study of 3410 adults enrolled in 3 representative samples of a county in Atlantic Canada in 1952 (n = 1003), 1970 (n = 1203) or 1992 (n = 1402) (the Stirling County Study). Depression was measured using a diagnostic algorithm based on the presence of depressed mood and associated symptoms, duration of more than 1

month, and substantial impairment. Vital status of participants through 2011 was determined using probabilistic linkages to the Canadian Mortality Database. RESULTS: Depression was associated with a heightened risk of mortality among men during the 3 time periods of the study, with hazard ratios (HRs) of 2.90 (95% confidence interval [CI] 1.69-4.98) between 1952 and 1967, 1.97 (CI 1.34-2.89) between 1968 and 1990, and 1.52 (CI 1.09-2.13) between 1991 and 2011. Elevated risk of mortality was noted among women only between 1990 and 2011 (HR = 1.51; CI = 1.11-2.05). INTERPRETATION: The association between depression and mortality persists over long periods of time and has emerged among women in recent decades, despite contemporaneous improvements in the treatment of depression and reduction of stigma associated with depression. Further research is needed to better understand the mechanisms involved

Hall AL, Davies HW, and Koehoorn M. Personal light-at-night exposures and components of variability in two common shift work industries: uses and implications for future research. *Scandinavian Journal of Work, Environment, & Health*. 2017; [epub ahead of print].

<http://dx.doi.org/10.5271/sjweh.3673>

Abstract: Objectives Shift workers' increased risk of various adverse health outcomes has been linked to light-at-night (LAN) exposure, but few studies have measured LAN exposure in workplaces. To inform future research methods, this study aimed to (i) measure shift workers' exposures to LAN across industries, occupations, and work environments and (ii) assess components of variance across different exposure groupings and metrics. Methods Between October 2015 and March 2016, 152 personal full-shift measurements were collected from 102 night shift workers in emergency health services (paramedics, dispatchers) and healthcare industries (nurses, care aides, security guards, unit clerks, and laboratory, pharmacy, and respiratory therapy staff) in the province of British Columbia, Canada. Descriptive and variance component analyses were conducted for the 23:00-05:00 period to characterize exposures using multiple metrics of potential biological relevance (median lux, 90 thpercentile lux, sum of minutes \geq 30 lux, and sum of minutes \geq 100 lux). Results Average exposure levels were highest in the healthcare industry. By occupation, laboratory workers and care aides displayed the highest and emergency dispatch officers displayed the lowest levels for all LAN exposure metrics. Between-group variance was large relative to within-group variance for all exposure groupings and metrics, and increased as grouping specificity increased (moving from industry to occupation). Conclusions Results from this study suggest that high-level grouping schemes may provide a simple yet effective way of characterizing individual LAN exposures in epidemiological studies of shift work. Ongoing measurement of LAN exposures and assessment of exposure variability is needed in future studies of shift workers as a means to increase sampling efficiency, reduce measurement error, and maximize researchers' ability to detect relationships where they exist

Kontos P, Grigorovich A, Nowrouzi B, Sharma B, Lewko J, Mollayeva T, and Colantonio A. A qualitative exploration of work-related head injury: vulnerability at the intersection of workers' decision making and organizational values. BMC Public Health. 2017; 17(1):824.

<http://dx.doi.org/10.1186/s12889-017-4823-5> [open access]

Abstract: BACKGROUND: Work-related head injury is a critical public health issue due to its rising prevalence; the association with profound disruption of workers' lives; and significant economic burdens in terms of medical costs and lost wages. Efforts to understand and prevent these types of injuries have largely been dominated by epidemiological research and safety science, which has focused on identifying risk at the level of the individual worker, population group, or organizational sector. Limited research has focused on the perspectives of the workers, a key stakeholder group for informing understanding of vulnerability to work-related head injury. This study explored workers' perspectives to better understand their decision-making and how and why their injuries occurred. METHODS: We conducted a qualitative study using in-depth semi-structured interviews with thirty-two adult workers who had sustained a work-related head injury. Workers were recruited from an urban clinic in central Ontario, Canada. Labour Process Theory informed the thematic analysis. RESULTS: Three hazardous work conditions were identified: insufficient training; inadequate staffing; and inattention to the physical environment. In addition, professional and organizational norms were implicated in vulnerability to head injury including putting the client before the worker and the pressure to work unsafely. The findings also highlight a complex interrelationship between workers' decision-making and professional and organizational norms that produces vulnerability to head injury, a vulnerability which oftentimes is reproduced by workers' decisions to work despite hazardous conditions. CONCLUSIONS: Our findings suggest that, beyond the need to redress the inattention to hazards in the physical environment, there is a need to address norms that influence worker decision-making to improve the safety of workers. Using Labour Process Theory highlights an important social dynamic within workplace sectors that could inform future development and implementation of multi-level and integrated public health strategies to reduce work-related head injury

Lindsay S, Cagliostro E, Albarico M, Mortaji N, and Srikanthan D. Gender matters in the transition to employment for young adults with physical disabilities. Disability and Rehabilitation. 2017; 1-14.

<http://dx.doi.org/10.1080/09638288.2017.1390613>

Abstract: PURPOSE: The purpose of this study was to explore the role of gender in the transition to employment for young adults with physical disabilities.

METHODS: This study drew on in-depth interviews with a purposive sample of 33 participants (23 youth and 10 clinicians). The youth in our sample included 13 females (mean age 22.9) and 10 males (mean age 21.3) who had various types of physical disabilities. The person-environment-occupation (PEO) model informed our analysis. RESULTS: Our research showed several similarities and

some differences between young males and females with physical disabilities as they transition to employment and adulthood at the person, environment, and occupational level. At the person level, issues included managing their condition, self-advocacy, and willingness to ask for help. At the environment level, themes focused on parental and social support, accommodations, stigma and discrimination, and transportation challenges. Finally, in the occupation component of the PEO model, we found that males and females with disabilities had different levels of engagement in employment. Although most clinicians commented on gender differences, many reported that they did not tailor their clinical practice accordingly. **CONCLUSIONS:** Gender sensitive vocational approaches are needed for youth with disabilities as they transition to employment. Implications for rehabilitation Clinicians, educators, and parents should encourage independence and self-advocacy skills among youth so that they are prepared to ask for accommodations that they need to succeed in a work environment. Clinicians and educators should present a variety of career and job options to youth, including science, technology, engineering, and math disciplines, an area where youth with disabilities, particularly females, are under-represented. Males may feel less able to self-advocate and seek support and may need additional assistance from clinicians, educators, and parents. Clinicians should tailor their vocational rehabilitation practices to the gender-specific needs of youth with disabilities. Clinicians and parents should ensure that both males and females have the resources and supports they need to be successful in their transition to employment

Mitra S, Palmer M, Kim H, Mont D, and Groce N. Extra costs of living with a disability: a review and agenda for research. Disability and Health Journal. 2017; 10(4):475-484.

<http://dx.doi.org/10.1016/j.dhjo.2017.04.007> [open access]

Abstract: BACKGROUND: There has been a growing interest in disability and poverty on the international research and policy stages. Poverty assessments for persons with disabilities may be affected by the experience of extra costs associated with a disability. OBJECTIVE: This article provides a systematized review of the global literature on the direct costs associated with living with a disability at the individual or household level. METHODS: We searched three databases for peer-reviewed journal articles that estimated extra costs associated with disability: Econlit, SocIndex and PubMed. RESULTS: We found 20 such studies conducted in 10 countries. These studies were predominantly from high-income countries. Although studies were heterogeneous (e.g., in terms of disability measures and cost methodologies), estimated costs were sizeable and some patterns were consistent across studies. Costs varied according to the severity of disability, life cycle and household composition. Highest costs were observed among persons with severe disabilities, and among persons with disabilities living alone or in small sized households. CONCLUSIONS: More quantitative evidence is needed using rigorous methods, for instance evidence based on longitudinal data and as part of policy evaluations. More internationally

comparable data on disability is required for the quantitative evidence to develop, especially in low- and middle-income countries where studies are scarce. Qualitative and participatory research is also needed, especially to investigate unmet needs, and the consequences of extra costs

OECD. Preventing ageing unequally. Paris: OECD Publishing; 2017.

<http://dx.doi.org/10.1787/9789264279087-en>

Oviatt DP, Baumann MR, Bennett JM, and Garza RT. Undesirable effects of working while in college: work-school conflict, substance use, and health. *Journal of Psychology*. 2017; 151(5):433-452.

<http://dx.doi.org/10.1080/00223980.2017.1314927>

Postma J, Tuell E, James L, Graves JM, and Butterfield P. Nursing students' perceptions of the transition to shift work: a total worker health perspective. *Workplace Health & Safety*. 2017; 65(11):533-538.

<http://dx.doi.org/10.1177/2165079917719713>

Abstract: Nursing students make an abrupt transition from traditional classes to clinical rotations and shift work. Little is known about students' sleep, sleep disturbances, and safe practice behaviors during this critical phase of professional development. The purpose of this study was to identify nursing students' perceptions of problems and potential solutions related to shift work and long work hours. This qualitative, descriptive study used two nursing student focus groups which engaged in a two-round participatory process aimed at framing future interventions. Participants identified problems and solutions related to personal and workplace well-being. Findings will inform undergraduate curricular revisions, and hospital hiring and managerial practices

Ruotsalainen J, Sauni R, and Verbeek J. Cochrane work - championing facts since 2003. *Occupational Medicine*. 2017; 67(7):504-506.

<http://dx.doi.org/10.1093/occmed/kgx073>

Shiri R, Heliovaara M, Ahola K, Kaila-Kangas L, Haukka E, Kausto J, Saastamoinen P, Leino-Arjas P, and Lallukka T. A screening tool for the risk of disability retirement due to musculoskeletal disorders. *Scandinavian Journal of Work, Environment, & Health*. 2017; [epub ahead of print].

<http://dx.doi.org/10.5271/sjweh.3684>

Abstract: Objective This study aimed to develop and validate a risk screening tool using a points system to assess the risk of future disability retirement due to musculoskeletal disorders (MSD). Methods The development population, the Health 2000 Survey, consisted of a nationally representative sample of Finnish employees aged 30-60 years (N=3676) and the validation population, the Helsinki Health Study, consisted of employees of the City of Helsinki aged 40-60 years (N=6391). Both surveys were linked to data on disability retirement awards due to MSD from national register for an 11-year follow-up. Results The discriminative ability of the model with seven predictors was good (Gonen and

Heller's K concordance statistic=0.821). We gave points to seven predictors: sex-dependent age, level of education, pain limiting daily activities, multisite musculoskeletal pain, history of arthritis, and surgery for a spinal disorder or carpal tunnel syndrome. A score of 3 or higher out of 7 (top 30% of the index) had good sensitivity (83%) and specificity (70%). Individuals at the top 30% of the risk index were at 29 [95% confidence interval (CI) 15-55] times higher risk of disability retirement due to MSD than those at the bottom 40%. Conclusion This easy-to-use screening tool based on self-reported risk factor profiles can help identify individuals at high risk for disability retirement due to MSD

Versteeg K, Amoli T, Cao M, Chin M, Bigelow P, and Yazdani A. Mixed-method analysis of truck driver health knowledge using an online forum. Safety Science. 2018; 102(Supplement C):51-59.
<http://dx.doi.org/10.1016/j.ssci.2017.09.029>

Wan Mohd Yunus WMA, Musiat P, and Brown JSL. Systematic review of universal and targeted workplace interventions for depression. Occupational and Environmental Medicine. 2017; [epub ahead of print].
<http://dx.doi.org/10.1136/oemed-2017-104532>

Whiting P, Wolff R, Mallett S, Simera I, and Savovic J. A proposed framework for developing quality assessment tools. Systematic Reviews. 2017; 6(1):204.
<http://dx.doi.org/10.1186/s13643-017-0604-6> [open access]

Abstract: BACKGROUND: Assessment of the quality of included studies is an essential component of any systematic review. A formal quality assessment is facilitated by using a structured tool. There are currently no guidelines available for researchers wanting to develop a new quality assessment tool. METHODS: This paper provides a framework for developing quality assessment tools based on our experiences of developing a variety of quality assessment tools for studies of differing designs over the last 14 years. We have also drawn on experience from the work of the EQUATOR Network in producing guidance for developing reporting guidelines. RESULTS: We do not recommend a single 'best' approach. Instead, we provide a general framework with suggestions as to how the different stages can be approached. Our proposed framework is based around three key stages: initial steps, tool development and dissemination. CONCLUSIONS: We recommend that anyone who would like to develop a new quality assessment tool follow the stages outlined in this paper. We hope that our proposed framework will increase the number of tools developed using robust methods

*IWH authored publication.