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


Abstract: AIM: The aim of this study was to examine whether health status (number of chronic diseases, health shock and use of tranquilizers/sleeping pills) is related to labour-market outcomes later in life. METHODS: Twin data for Finnish men and women who were at least 33 years old in 1990 were linked to comprehensive register-based information on unemployment and the incidence of disability pension. We used the within-twin dimension of the data to account for shared family and genetic factors. Self-reported information on the number of diagnosed chronic diseases, health shock and drug use were obtained from the 1975 and 1981 twin surveys, when the twins were at least 18 years old. Unemployment months and the incidence of disability pension were measured during prime working age over the 1990-2004/2009 period. RESULTS: Poor health status is significantly positively related to unemployment and the incidence of disability pension. The results are robust to controlling for shared family and genetic factors and the key measures of risky health behaviours (alcohol use, lifetime smoking and body mass index). CONCLUSIONS: Health status is a fundamental determinant of long-term labour-market outcomes.
http://dx.doi.org/10.1177/1403494817732445
Abstract: AIMS: Return to work (RTW) after prolonged sickness absence benefits both the individual and society. However, the effectiveness of legislation aiming to improve RTW remains uncertain. We examined whether sustained RTW and work participation were different before and after a legislative change enacted in 2012 (i.e. an intervention) that obligated employers to give notice of prolonged sickness absence to occupational health services. METHODS: Two random samples (2010 and 2013) of the Finnish working aged population (70%, ~2.6 million each) were drawn. Using survival analysis, we assessed sustained RTW (>=28 consecutive working days) during a two-month follow-up after a sickness absence minimum of 30 calendar days in the pre- and post-intervention period. We also identified pathways for RTW with cluster analysis and calculated relative gain in work participation in the total sample and by several population subgroups. RESULTS: In the total sample, sustained RTW was 4% higher and the mean time to sustained RTW was 0.42 days shorter in the post- than in the pre-intervention period. The estimates were larger among women than men and among those with mental disorders compared with other diagnoses. Changes in the pathways for sustained RTW indicated a 4.9% relative gain in work participation in the total sample. The gain was larger among those who lived in areas of low unemployment rate (20.6%) or worked in the public sector (11.9%). CONCLUSIONS: From 2010 to 2013, RTW and work participation increased among the employees with prolonged sickness absence, suggesting that the legislative change enhanced RTW. The change in work participation varied by population subgroup.

http://dx.doi.org/10.1016/j.aap.2017.09.006
Abstract: This study examines the distinct contribution of supervisory safety communication and its interaction with safety climate in the prediction of safety performance and objective safety outcomes. Supervisory safety communication is defined as subordinates' perceptions of the extent to which their supervisor provides them with relevant safety information about their job (i.e., top-down communication) and the extent to which they feel comfortable discussing safety issues with their supervisor (i.e., bottom-up communication). Survey data were collected from 5162 truck drivers from a U.S. trucking company with a 62.1% response rate. Individual employees' survey responses were matched to their safety outcomes (i.e., lost-time injuries) six months after the survey data.
collection. Results showed that the quality of supervisor communication about safety uniquely contributes to safety outcomes, above and beyond measures of both group-level and organization-level safety climate. The construct validity of a newly-adapted safety communication scale was demonstrated, particularly focusing on its distinctiveness from safety climate and testing a model showing that communication had both main and moderating effects on safety behavior that ultimately predicted truck drivers' injury rates. Our findings support the need for continued attention to supervisory safety communication as an important factor by itself, as well as a contingency factor influencing how safety climate relates to safety outcomes

Jiang L, Probst TM, Benson W, and Byrd J. Voices carry: effects of verbal and physical aggression on injuries and accident reporting. Accident Analysis & Prevention. 2018; [Epub ahead of print].
http://dx.doi.org/10.1016/j.aap.2018.02.017

Abstract: Recent years have witnessed a staggeringly high number of workplace aggressive behaviors as well as employee accidents and injuries. Exposure to workplace aggression is associated with a host of negative psychological, emotional, and physiological outcomes, yet research relating workplace aggression to employee safety outcomes is lacking. This study aims to examine the association between exposure to workplace physical and verbal aggression with workplace injuries and underreporting of accidents and near misses. Furthermore, deriving from social exchange theory, we attempt to reveal an underlying mechanism in the association between workplace aggression and underreporting of accidents and near misses. Finally, borrowing from aggression research on intimate relationships, we compare the relative importance of exposure to physical and verbal aggression on workplace injuries and underreporting. Using survey data from 364 public transportation personnel, we found that both verbal and physical aggression significantly predict workplace injuries as well as underreporting. Moreover, mediation analyses found that the relationship between verbal and physical aggression and underreporting was largely explained by an increase in negative reporting attitudes (rather than decreases in safety knowledge or motivation). Compared to exposure to physical aggression, exposure to verbal aggression best predicted employee underreporting of accidents and near misses. However, physical aggression was a better predictor of injuries than verbal aggression. Given these findings, organizational leaders should strive to foster a safe working environment by minimizing interpersonal mistreatment and increasing employee attitudes for reporting accidents

http://dx.doi.org/10.5271/sjweh.3720 [open access]
Abstract: objectives Precarious employment conditions have become more common in many countries over the last decades, and have been linked to various adverse health outcomes. The objective of this review was to collect and summarize existing scientific research of the relationship between dimensions of precarious employment and the rate of occupational injuries. Methods A protocol was developed in accordance with the PRISMA-P checklist for systematic literature reviews. We searched PubMed, Web of Science and Scopus for articles on observational studies from North America, Europe, Australia and New Zealand published in peer-reviewed journals 1990-2017. A minimum of two independent reviewers assessed each article with respect to quality and eligibility criteria. Articles of high/moderate quality meeting all specified inclusion criteria were included in the review. Results The literature search resulted in 471 original titles, of which 17 articles met all the inclusion criteria. The most common exposures were in descending order; temporary employment, multiple jobs, working for a subcontractor at the same worksite/temp agency, part-time, self-employment, hourly pay, union membership, insurance benefits, flexible versus fixed work schedule, wages, job insecurity, work-time control and precarious career trajectories. Ten studies reported a positive association between precarious employment and occupational injuries. Four studies reported a negative association, and three studies did not show any significant association. Conclusions This review supports an association between some of the dimensions of precarious employment and occupational injuries; most notably for multiple jobholders and employees of temp agencies or subcontractors at the same worksite. However, results for temporary employment are inconclusive. There is a need for more prospective studies of high quality, designed to measure effect sizes as well as causality.

http://dx.doi.org/10.1186/s12891-018-1997-7 [open access]
Abstract: BACKGROUND: Self-care is often the first choice for people with chronic musculoskeletal pain. Self-care includes the use of non-prescription medications with no doctor's supervision, as well as the use of other modern and traditional treatment methods with no consultation of the health care provider. Self-care may have positive effects on the successful outcome of a multidisciplinary approach to treatment. The aim of this study was to investigate the experiences and attitudes of patients and health care providers to the self-care of chronic musculoskeletal pain. METHODS: Qualitative Phenomenological study, where the data were collected by the method of an audio-taped interview in 15 patients at the outpatient clinic for pain management and in 20 health care providers involved in the treatment of those patients. The interviews were transcribed verbatim and analyzed by principles of Interpretative Thematic Analysis. RESULTS: Topics identified in patients: a) positive aspects of self-care,
b) a need for pain self-care, c) social aspects of pain self-care. Topics identified in health care providers: a) aspects of self-care, b) a need for self-care c) risks of self-care. Most of patients have positive attitude to self-care and this is the first step to pain management and to care for itself. The most frequent factors influencing decision about the self-care are heavy pain, unavailability of the doctor, long awaiting time for the therapy, or ineffectiveness of methods of conventional medicine. The health care providers believe that self-care of chronic musculoskeletal pain may be a patient's contribution to clinical treatment. However, good awareness of methods used is important in this context, to avoid adverse effects of self-care. CONCLUSION: Patients understand the self-care of musculoskeletal pain as an individually adjusted treatment and believe in its effectiveness. Health care providers support self-care as an adjunction to clinical management only, and think that self-care of musculoskeletal pain acts as a placebo, with a short-lived effect on chronic musculoskeletal pain.


Abstract: OBJECTIVE: This study develops, and initial evaluates, a new measure of team-based resilience for use in research and practice. METHODS: We conducted preliminary analyses, based on a cross-sectional sample of 344 employees nested within 31 teams. RESULTS: Seven dimensions were identified through exploratory and confirmatory factor analyses. The measure had high reliability and significant discrimination to indicate the presence of a unique team-based aspect of resilience that contributed to higher work engagement and higher self-rated team performance, over and above the effects of individual resilience. Multilevel analyses showed that team, but not individual, resilience predicted self-rated team performance. CONCLUSION: Practice implications include a need to focus on collective as well as individual behaviors in resilience-building. The measure provides a diagnostic instrument for teams and a scale to evaluate organizational interventions and research the relationship of resilience to other constructs.


Abstract: BACKGROUND: Sitting (sedentary behaviour) is widespread among desk-based office workers and a high level of sedentary behaviour is a risk factor for poor health. Reducing workplace sitting time is therefore an important prevention strategy. Interventions are more likely to be effective if they are theory and evidence-based. The Behaviour Change Wheel (BCW) provides a
framework for intervention development. This article describes the development of the Stand More AT Work (SMArT Work) intervention, which aims to reduce sitting time among National Health Service (NHS) office-based workers in Leicester, UK. METHODS: We followed the BCW guide and used the Capability, Opportunity and Motivation Behaviour (COM-B) model to conduct focus group discussions with 39 NHS office workers. With these data we used the taxonomy of Behaviour Change Techniques (BCTv1) to identify the most appropriate strategies for facilitating behaviour change in our intervention. To identify the best method for participants to self-monitor their sitting time, a sub-group of participants (n = 31) tested a number of electronic self-monitoring devices. RESULTS: From our BCW steps and the BCT-Taxonomy we identified 10 behaviour change strategies addressing environmental (e.g. provision of height adjustable desks,), organisational (e.g. senior management support, seminar), and individual level (e.g. face-to-face coaching session) barriers. The Darma cushion scored the highest for practicality and acceptability for self-monitoring sitting. CONCLUSION: The BCW guide, COM-B model and BCT-Taxonomy can be applied successfully in the context of designing a workplace intervention for reducing sitting time through standing and moving more. The intervention was developed in collaboration with office workers (a participatory approach) to ensure relevance for them and their work situation. The effectiveness of this intervention is currently being evaluated in a randomised controlled trial. TRIAL REGISTRATION: ISRCTN10967042 . Registered on 2 February 2015


Rieger KL, West CH, Kenny A, Chooniedass R, Demczuk L, Mitchell KM, Chateau J, and Scott SD. Digital storytelling as a method in health research: a systematic review protocol. Systematic Reviews. 2018; 7(1):41. http://dx.doi.org/10.1186/s13643-018-0704-y [open access] Abstract: BACKGROUND: Digital storytelling is an arts-based research method with potential to elucidate complex narratives in a compelling manner, increase participant engagement, and enhance the meaning of research findings. This method involves the creation of a 3- to 5-min video that integrates multimedia materials including photos, participant voices, drawings, and music. Given the significant potential of digital storytelling to meaningfully capture and share participants' lived experiences, a systematic review of its use in healthcare research is crucial to develop an in-depth understanding of how researchers have used this method, with an aim to refine and further inform future iterations of its use. METHODS: We aim to identify and synthesize evidence on the use, impact, and ethical considerations of using digital storytelling in health research. The review questions are as follows: (1) What is known about the purpose, definition, use (processes), and contexts of digital storytelling as part of the
research process in health research? (2) What impact does digital storytelling have upon the research process, knowledge development, and healthcare practice? (3) What are the key ethical considerations when using digital storytelling within qualitative, quantitative, and mixed method research studies? Key databases and the grey literature will be searched from 1990 to the present for qualitative, quantitative, and mixed methods studies that utilized digital storytelling as part of the research process. Two independent reviewers will screen and critically appraise relevant articles with established quality appraisal tools. We will extract narrative data from all studies with a standardized data extraction form and conduct a thematic analysis of the data. To facilitate innovative dissemination through social media, we will develop a visual infographic and three digital stories to illustrate the review findings, as well as methodological and ethical implications. DISCUSSION: In collaboration with national and international experts in digital storytelling, we will synthesize key evidence about digital storytelling that is critical to the development of methodological and ethical expertise about arts-based research methods. We will also develop recommendations for incorporating digital storytelling in a meaningful and ethical manner into the research process. SYSTEMATIC REVIEW REGISTRATION: PROSPERO registry number CRD42017068002


http://dx.doi.org/10.1186/s13643-018-0709-6

Abstract: BACKGROUND: Epidemiology and the reporting characteristics of systematic reviews (SRs) and meta-analyses (MAs) are well known. However, no study has analyzed the influence of protocol features on the probability that a study's results will be finally reported, thereby indirectly assessing the reporting bias of International Prospective Register of Systematic Reviews (PROSPERO) registration records. OBJECTIVE: The objective of this study is to explore which factors are associated with a higher probability that results derived from a non-Cochrane PROSPERO registration record for a systematic review will be finally reported as an original article in a scientific journal. METHODS/DESIGN: The PROSPERO repository will be web scraped to automatically and iteratively obtain all completed non-Cochrane registration records stored from February 2011 to December 2017. Downloaded records will be screened, and those with less than 90% fulfilled or are duplicated (i.e., those sharing titles and reviewers) will be excluded. Manual and human-supervised automatic methods will be used for data extraction, depending on the data source (fields of PROSPERO registration records, bibliometric databases, etc.). Records will be classified into published, discontinued, and abandoned review subgroups. All articles derived
from published reviews will be obtained through multiple parallel searches using the full protocol "title" and/or "list reviewers" in MEDLINE/PubMed databases and Google Scholar. Reviewer, author, article, and journal metadata will be obtained using different sources. R and Python programming and analysis languages will be used to describe the datasets; perform text mining, machine learning, and deep learning analyses; and visualize the data. We will report the study according to the recommendations for meta-epidemiological studies adapted from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement for SRs and MAs. DISCUSSION: This meta-epidemiological study will explore, for the first time, characteristics of PROSPERO records that may be associated with the publication of a completed systematic review. The evidence may help to improve review workflow performance in terms of research topic selection, decision-making regarding team selection, planning relationships with funding sources, implementing literature search strategies, and efficient data extraction and analysis. We expect to make our results, datasets, and R and Python code scripts publicly available during the third quarter of 2018.


http://dx.doi.org/10.1097/JOM.0000000000001227

Abstract: OBJECTIVE: To describe characteristics of claimants reporting an occupational injury associated with disability benefits for income independently granted by the municipality the subsequent year. METHOD: Multivariate logistic regression was used on self-reported data and register data. Primary outcome was long-term disability benefits. RESULTS: We found that perceived low work ability, high emotional stress, perceived low health, and expected recognition increased the risk of disability benefits. Work ability was the most influential factor. Work ability of responders on benefits was 2.40 [2.23 to 2.58] (scale 1 to 10-low to high). Responders with recognized claims differed only little in characteristics regarding benefits. Responders with ongoing claims had highest risk (18.48%) of benefits despite few health differences. CONCLUSIONS: Low perceived work ability was characteristic; health and social issues explained only little of the differences in long-term benefits according to decision of workers' compensation system.


http://dx.doi.org/10.3233/WOR-172666

Abstract: BACKGROUND: A public accident investigation is carried out when the consequences of the incident are significant or the accident has occurred in unusual circumstances. OBJECTIVE: We evaluated the quality of the official accident investigations being conducted by Safety Specialists of the Labour...
Authorities in Andalusia. METHODS: To achieve this objective, we analysed 98 occupational accident investigations conducted by the Labour Authorities in Andalusia in the last quarter of 2014. Various phases in the accident investigation process were examined, such as the use of the Eurostat variables within European Statistics on Accidents at Work (ESAW), detection of causes, determination of preventive measures, cost analysis of the accidents, identification of noncompliance with legal requirements or the investigation method used. RESULTS: The results of this study show that 77% of the official occupational accident investigation reports analysed were conducted in accordance with all the quality criteria recommended in the literature. CONCLUSIONS: To enhance glogal learning, and optimize allocation of resources, we propose the development of a harmonized European model for the public investigation of occupational accidents. Further it would be advisable to create a common classification and coding system for the causes of accidents for all European Union Member States


Abstract: OBJECTIVE: The widely used Official Disability Guidelines (ODG), a utilization review guideline for occupational conditions, has not been independently evaluated recently. METHODS: We applied the appraisal of guidelines for research and evaluation (AGREE II) and modified a measurement tool to assess systematic reviews (AMSTAR) instruments to assess guideline development methods and the quality of supporting systematic reviews. Multidisciplinary experts rated the validity of clinical content for 47 topics. RESULTS: The overall AGREE II score was 58% due to a combination of favorable attributes (breadth, clear recommendations, frequent updating, and application tools) and unfavorable attributes (scant input from workers and uncertainty about editorial independence). The modified AMSTAR rating was fair/good due to limited information on methods. Panelists rated clinical content as valid for 41 topics. CONCLUSIONS: ODG appears to be acceptable to clinicians, but ODG requires greater rigor to keep pace with methodological advances in the field of guideline development


Abstract: BACKGROUND: Protective workshops and sheltered employment settings have been instrumental in developing the work skills of people with disabilities, however there has been a void in the literature about its influence on the ability of individuals to find employment in the open labor market.
OBJECTIVE: The aim of the study is to explore the experiences and perceptions of people with disabilities about the development of their work skills for transitioning into the open labor market. PARTICIPANTS: Five individuals with various types of disabilities and two key informants participated in the study. METHODS: The research study was positioned within the qualitative paradigm specifically utilizing an exploratory and descriptive research design. In order to gather data from the participants, semi structured interviews were used. RESULTS: Three themes emerged from the findings of the study. Theme one, designated as "Reaching a ceiling", reflected the barriers that the participants experienced regarding work skills development. Theme two, designated as "Enablers for growth within the workplace", related to the enabling factors related to development of the work skills of persons with a disability (PWD). The final theme related to the meaning that PWD associated to their worker role and was designated as "A sense of universality". CONCLUSION: The participants highlighted that they felt their coworkers in the workshops were "like family" to them and thoroughly enjoyed the work tasks and work environment, expressing specific support from their fellow workers. Through reaching their goals, engaging in their work tasks and having the sense of universality in the workplace, the workers felt that the work they participated in gave them meaning to their life. The findings of the study indicated that managers of protective workshops and sheltered employment settings should consider selecting work tasks that enable the development of skills needed in the open labour market. A work skills development system whereby PWD in these workshops could determine their own career progression is advocated.


Abstract: OBJECTIVE: To examine job stress and health behaviors, including their co-occurrence, in Australians aged 31 to 41 year assessed in 2009 to 2011. METHODS: Cross-sectional analyses using multivariable regression models of the association between the Effort Reward Imbalance (ERI) scale and health behaviors (smoking, alcohol consumption, diet, physical activity, and body mass index [BMI]) both individually and co-occurring (0 to 3 vs 4 to 5 behaviors) were undertaken. Covariates included sociodemographics, personality, and life events. RESULTS: Greater ERI was associated with a significantly lower prevalence of having co-occurring healthy behaviors and poorer diets in both sexes. Higher ERI was also associated greater physical inactivity and sedentary behavior in men and smoking, high alcohol consumption, and more pedometer-measured physical activity in women. CONCLUSION: Job stress at work was associated with a range of unhealthy behaviors, which may explain the higher chronic disease associated with job stress.
Zolnierczyk-Zreda D and Bedynska S. Associations between fixed-term employment and health and behaviors: what are the mechanisms? Journal of Occupational & Environmental Medicine. 2018; 60(3):273-278. [http://dx.doi.org/10.1097/JOM.0000000000001226](http://dx.doi.org/10.1097/JOM.0000000000001226)

Abstract: OBJECTIVE: To analyze the associations between fixed-term employment and health (work ability and mental health) and behaviors (engagement and performance). Psychological contract fulfilment (PCF) and breach (PCB) are investigated as potential mediators of these associations.

METHODS: Seven hundred workers employed on fixed-term contracts from a broad range of organizations participated in the study. The Structural Equation Model was performed to analyze the data.

RESULTS: Mediation analyses revealed that good physical and mental health and productivity are more likely to be achieved by those workers who perform non-manual work and (to some extent) accept their contracts because they experience high levels of PCF and low levels of PCB.

CONCLUSIONS: Apart from the lack of physical workload, psychological contract fulfilment has been revealed as yet another significant mediator between a higher socioeconomic position and good health and productivity of fixed-term workers.

*IWH authored publication.*