Good work is good for health and wellbeing

Comcare’s work is centred on the ever-increasing evidence that good work, in general, is good for health and wellbeing. Particularly that participation in work as part of recovery is good for people.

The emerging evidence alert

This Emerging Evidence Alert includes the latest news and evidence on the health benefits of work, recovery at and return to work, as well as a WHS issues to keep people healthy and safe in work.

We encourage employers to share their approaches and good practice in the emerging evidence alert.

Where possible, links to the full text of the articles have been included. The Digital Object Identifier (DOI) has also been included where possible, to enable direct links to the article and journal. Where some records are linked to subscription databases, check with your library to see if you have access or may ask for an interlibrary loan. Registered National Library of Australia users have access to a number of databases and resources.

Collaborate, innovate, achieve

Mr David Thodey, Chair of the CSIRO, was one of the keynote speakers at Comcare’s very successful conference. He spoke to the theme of Collaboration, Innovation and Achievement and highlighted what he saw as the four key things that support organisational transformation:

1. Have clarity of purpose and values – this is needed to change behaviour
2. Be customer-centric – focus on making a difference for those you serve
3. Promote innovation and creativity – embrace continuous improvement and re-invent yourself regularly
4. Focus on organisational design, agility and leadership – this will build discretionary effort

The recently released Future of Health report from the CSIRO highlights shifting the focus back onto the consumer. The CSIRO cites empowering consumers to better prevent illness and manage their health as a key enabler. The report notes that 60% of the Australian adult population have low levels of health literacy.

The topic of agility is addressed in a recent Gallup report entitled The Real Future of Work: Agility Issue. The report discusses how disruptor companies have rewritten the rules in major industries like entertainment, transportation and hospitality and are transforming customer relationships in others. Agile companies understand the importance of tapping employees’ ingenuity to develop novel approaches to emerging business challenges.
Emerging Evidence Topics

- Absenteeism and presenteeism
- Ageing workforce
- Case management
- Chronic health issues
- Disability
- Health and wellbeing
- Health promotion
- Management and leadership
- Musculoskeletal issues
- Occupational issues
- Psychosocial issues
- Public service
- Return to work
- Shift work
- Work ability
- Workers compensation
- Work health and safety
- Work stress
- Websites

ABSENTEEISM AND PRESENTEEISM

Title: Opioid and benzodiazepine use before injury among workers in Washington state 2012 to 2015

Author/s: Nkyekyer, E et al

Source: Journal of occupational and environmental medicine September 2018 60 9 820–826 doi: 10.1097/JOM.0000000000001346

Abstract: Objective: To characterize pre-injury prescription opioid and benzodiazepine use and its relationship with post-injury use and missed work among workers.

Methods: Three hundred thirteen thousand five hundred forty-three Washington State Department of Labor and Industries workers’ compensation injury claims from 2012 to 2015 were linked with State Prescription Monitoring Program data. Pre-injury prevalence of opioid and benzodiazepine use were compared between compensable and non-compensable claims, and between workers with and without post-injury prescriptions, using the Pearson’s chi-squared test.

Results: The prevalence of opioid or benzodiazepine use in the 90 days before injury was 8.6% and 2.9%, respectively. Workers with pre-injury opioid or benzodiazepine use were more likely to have compensable claims and be on opioids or benzodiazepines, respectively, after injury. Cases with chronic opioid use pre-injury nearly universally receive opioids post-injury.

Conclusions: Pre-injury opioid and benzodiazepine use may increase the risk of disability after work-related injury.

Title: Sleep: an integral component of employee well-being programs.

Author/s: Schultz, Alyssa B. Burton, Wayne N.


Abstract: Inadequate quantity or quality of sleep, over time, creates a significant economic and public health burden in the United States. The annual direct cost of insomnia is estimated to be almost $14 billion in the United States, while the annual indirect cost of sleep-related workplace costs (due to absenteeism, lost productivity ["presenteeism"], workplace accidents, and injuries) has been estimated to be $92 billion. The average number of hours of
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sleep per day has declined from 8 hours in the 1940s to about 6.8 hours. Sleep researchers
report that adults require hours of sleep per day to promote optimal health. Short sleep
duration (<7 hours per day) and sleep disorders have been linked to adverse health outcomes
including cardiovascular disease, obesity, type 2 diabetes, hypertension, depression, and
anxiety, as well as safety issues such as motor vehicle crashes and occupational accidents.
7,8 The 2010 National Health Interview Survey reported that 30% of employed US adults
reported an average of 6 hours of sleep per day. 9 In 2015, CDC 10 declared insufficient
sleep as a public health problem, and Healthy People 2020 has set an objective of 7 hours of
sleep for adults.

Title Work absenteeism and presenteeism loss in patients with non-cardiac chest pain

Author/s Feline-Germain, A et al

Source Journal of occupational and environmental medicine September 2018 60 9 781–786 doi:
10.1097/JOM.0000000000001363

Abstract Objective: To assess work absenteeism and presenteeism, and to identify biopsychosocial
predictors of these outcomes in workers with non-cardiac chest pain (NCCP).
Methods: This retrospective cohort study included 375 active workers consulting in an
emergency room for NCCP.
Results: About 66% (247/375) of participants reported work absenteeism in the 3 months
preceding the consultation, while 36% (134/375) reported presenteeism during the same
period. A family income >$29,999 and reporting at least a mild impact of chest pain on family
functioning, social functioning, or physical activities, were associated with work absenteeism.
Presenteeism was associated with younger age, symptoms of depression, and heart-focused
anxiety.
Conclusions: Work absenteeism and presenteeism are highly prevalent among patients with
NCCP. Family income and impacts of NCCP on functioning, are associated with increased
occupational burden in these patients.

Title Work outcomes in patients who stay at work despite musculoskeletal pain.

Author/s Cochrane, Andy et al

Source Journal of occupational rehabilitation September 2018 28 3 559-567 9
DOI:10.1007/s10926-017-9748-4

Abstract Purpose To assess self-reported work impacts and associations between psychosocial risk
factors and work impairment amongst workers seeking care for musculoskeletal pain while
continuing to work. Methods Patients were recruited from Musculoskeletal Assessment
Clinics at 5 hospitals across Ireland. Participants completed questionnaires including
assessments of work impairment (Work Productivity and Activity Impairment Questionnaire),
work ability (single item from the Work Ability Index) and work performance (Work Role
Functioning Questionnaire; WRFQ). Logistic and hierarchical regressions were conducted to
analyse the relation between psychosocial variables and work outcomes. Results 155
participants (53.5% female; mean age = 46.50 years) who were working at the time of
assessment completed the questionnaires. Absenteeism was low, yet 62.6% were classified
as functioning poorly according to the WRFQ; 52.3% reported having poor work ability.
Logistic regression analyses indicated that higher work role functioning was associated with
higher pain self-efficacy (OR 1.51); better work ability was associated with older age (OR
1.063) and lower functional restriction (OR 0.93); greater absenteeism was associated with
lower pain self-efficacy (OR 0.65) and poorer work expectancy (OR 1.18). Multiple regression
analysis indicated that greater presenteeism was associated with higher pain intensity
(β = 0.259) and lower pain self-efficacy (β = −0.385).
Conclusions While individuals continue to work with musculoskeletal pain, their work
performance can be adversely affected. Interventions that target mutable factors, such as
pain self-efficacy, may help reduce the likelihood of work impairment.
The association of adolescent spinal-pain-related absenteeism with early adulthood work absenteeism: a six-year follow-up data from a population-based cohort

Coenen, P et al

Scandinavian journal of work, environment & health 2018 44 5 521-529
doi:10.5271/sjweh.3744

Objectives Spinal (ie back and neck) pain often develops as early as during adolescence and can set a trajectory for later life. However, whether early-life spinal-pain-related behavioral responses of missing school/work are predictive of future work absenteeism is yet unknown. We assessed the association of adolescent spinal-pain-related work or school absenteeism with early adulthood work absenteeism in a prospective population-based cohort.

Methods Six-year follow-up data from the Western Australian Pregnancy Cohort (Raine) study were used (N=476; with a 54% response rate). At age 17, participants reported spinal pain (using the Nordic questionnaire) and adolescent spinal-pain-related work/school absenteeism (with a single item question). Annual total and health-related work absenteeism was assessed with the Health and Work Performance questionnaire distributed in four quarterly text messages during the 23rd year of age. We modelled the association of adolescent spinal-pain-related absenteeism with work absenteeism during early adulthood, using negative binomial regression adjusting for sex, occupation and comorbidities.

Results Participants with adolescent low-back or neck pain with work/school absenteeism reported higher total work absenteeism in early adulthood [148.7, standard deviation (SD) 243.4 hours/year], than those without pain [43.7 (SD 95.2) hours/year]; incidence rate ratio 3.4 (95% CI 1.2–9.2)]. Comparable findings were found when considering low-back and neck separately, and when considering health-related absenteeism.

Conclusions We found a more than three-fold higher risk of work absenteeism in early adulthood among those with adolescent spinal-pain-related absenteeism, compared to those without. These findings suggest that, to keep a sustainable workforce, pain prevention and management should focus on pain-related behaviours as early as in adolescence.

Sickness absence in a re-employment program as a predictor of labor market attachment among long-term unemployed individuals: a 6-year cohort study in Finland

Nwaru, CA

Scandinavian journal of work, environment & health 2018 44 5 496-502
doi:10.5271/sjweh.3742

Objectives We examined whether sickness absence during participation in a state subsidized re-employment program among long-term unemployed people was associated with subsequent labor market attachment.

Methods We linked 18 944 long-term unemployed participants (aged 18–60 years) of a six-month subsidized re-employment program in Finland to their records of sickness absence during the program and labor market status after the program. We used the latent class growth model to identify labor market attachment trajectories over a six-year follow-up period and multinomial logistic regression to investigate the association between sickness absence and labor market attachment trajectories.

Results We identified four labor market attachment trajectories: "strengthening", (77%), "delayed" (6%), "leavers" (10%), and "non-attached" (7%). Sickness absence was associated with an increased risk of belonging to the leavers and non-attached trajectories. Having >30 days of sickness absence during the six-month re-employment program increased the risk for belonging to the future non-attached trajectory in all age groups, but in particular for those aged 30–44 [odds ratio (OR) 7.35, 95% confidence interval (CI) 4.85–11.14] and 18–29 years (OR 5.38, 95%CI 3.76–7.69). At these ages, having fewer than 30 days sickness absences was also associated with an elevated risk of belonging to the non-attached trajectory, while this risk was lower for those aged 45–60.

Conclusions Sickness absence during participation in a subsidized re-employment program increased the risk for poor labor market attachment during the subsequent six years. The risk was particularly high among younger participants with >30 days of sickness absence.
AGEING WORKFORCE

Title  Oncological occupational physicians: meeting the challenge of an ageing workforce
Author/s  Wynn, P
Source  Occupational medicine 68 6 11 August 2018 348–349 https://doi.org/10.1093/occmed/kqy099
Abstract  Social, demographic and financial imperatives throughout the Western world have led to widespread increases in the official retirement age of workers. These changes are leading to an increasingly ageing workforce, further compounded by many countries having fewer younger people entering the workplace [1]. Arising from this, enduring age-related health conditions will increase in prevalence in the working population. How occupational health professionals can best advise employees and employers on the workplace implications of such disorders is a major challenge for the profession.

Title  Time takes us all? a two-wave observational study of age and time effects on sustainable employability
Author/s  Fleuren, BPI et al
Abstract  Objectives Various cognitive and physical abilities decline with age. Consequently, sustainable employability research has focused on the labor market participation of older employees. However, it remains unclear whether age actually affects employees’ work and labor-market functioning. A major complicating factor is that age effects can be distorted by time effects. That is, changes over time may not be due to aging but to some structural difference between the times of measurement. The present article aims to provide clarity by estimating age effects on sustainable employability while controlling for potential time effects. Methods Based on two-wave survey data from a sample of 2672 employees (ages 35–65 years) multilevel regressions are estimated to analyze the effects of age and time on sustainable employability. Here, sustainable employability is operationalized as a formative construct consisting of nine dimensions, each capturing a different facet of an individual’s ability to function at work and in the labor market. Results The analyses reveal that age has small effects on only two dimensions (employability and perceived health) while time affects three dimensions (fatigue, job performance, and skill gap) of sustainable employability. Moreover, for all dimensions of sustainable employability most variance exists between (61.43–84.96%) rather than within (15.04–38.57%) subjects. Conclusions These findings suggest that the process of aging has a limited effect on working individuals’ capacities to function in their job and the labor market. Consequently, the focus on age in the context of sustainable employability policies and research may require reconsideration.

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BULLYING AND HARASSMENT

Title  Prevention and management of unprofessional behaviour among adults in the workplace: a scoping review
Author/s  Tricco, Andrea C et al
Source  Plos one July 2018 13 7 1-25 25 DOI: 10.1371/journal.pone.0201187

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Abstract

Background: Unprofessional behaviour is a challenge in academic medicine. Given that faculty are role models for trainees, it is critical to identify strategies to manage these behaviours. A scoping review was conducted to identify interventions to prevent and manage unprofessional behaviour in any workplace or professional setting.

Methods: A search of 14 electronic databases was conducted in March 2016, reference lists of relevant systematic reviews were scanned, and grey literature was searched to identify relevant studies. Experimental and quasi-experimental studies that reported on interventions to prevent or manage unprofessional behaviours were included. Studies that reported impact on any outcome were eligible. Two reviewers independently screened articles and completed data abstraction. Qualitative analysis of the definitions of unprofessional behaviour was conducted. Data were charted to describe the study, participant, intervention and outcome characteristics.

Results: 12,482 citations were retrieved; 23 studies with 11,025 participants were included. The studies were 12 uncontrolled before and after studies, 6 controlled before and after studies, 2 cluster-randomised controlled trials (RCTs), 1 RCT, 1 non-randomised controlled trial and 1 quasi-RCT. Four constructs were identified in the definitions of unprofessional behaviour: verbal and/or non-verbal acts, repeated acts, power imbalance, and unwelcome behaviour. Interventions most commonly targeted individuals (22 studies, 95.7%) rather than organisations (4 studies, 17.4%). Most studies (21 studies, 91.3%) focused on increasing awareness. The most frequently targeted behaviour change was sexual harassment (4 of 7 studies).

Discussion: Several interventions appear promising in addressing unprofessional behaviour. Most of the studies included single component, in-person education sessions targeting individuals and increasing awareness of unprofessional behaviour. Fewer studies targeted the institutional culture or addressed behaviour change.

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Discussion: Several interventions appear promising in addressing unprofessional behaviour. Most of the studies included single component, in-person education sessions targeting individuals and increasing awareness of unprofessional behaviour. Fewer studies targeted the institutional culture or addressed behaviour change.

CASE MANAGEMENT

Title

Managing the social determinants of health: part ii leveraging assessment toward comprehensive case management

Author/s

Fink-Samnick,E

Source


Abstract

Behavioral Learning Objectives: This article will:
Explore health care industry considerations for the social determinants of health (SDH).
Identify industry initiatives and reimbursement strategies.
Discuss SDH-focused assessment tools for professional case managers.
Present and apply the Comprehensive Case Management Path. Primary Practice
Settings(s): Applicable to health and behavioral health settings where case management is practiced.

Findings/Conclusions: When professional case managers use comprehensive assessments to inform their work with populations impacted by the SDH, barriers to care access can be more readily addressed (e.g., poverty, employment, housing insufficiency, health literacy, migration, and medication adherence). Initiatives, programming, and treatment plans can be advanced to provide target populations with individualized and appropriate intervention. Case management involvement can also be leveraged to coordinate and facilitate successful interprofessional team efforts (Casteneda, Holmes, Madrigal, DeTrinidad, Beyeler, & Quesada, 2015; Davis, 2016).

Implications for Case Management Practice: Case managers must engage clients from a wholistic lens that reflects their standards of practice and accounts for all domains of assessment: medical, cognitive and behavioral, functional, and social. Comprehensive tools to guide a robust and exhaustive screening of issues and opportunities ensure more successful outcomes.
CHRONIC HEALTH ISSUES

Title: Mhealth for chronic disease management: a systematic review of experiences of young people and professionals

Author/s: Slater H, Campbell et al

Source: Move muscle, bone and joint health; and arthritis and osteoporosis Western Australia 2018

Abstract: The aim of this project was to identify, appraise and synthesise insights from users (collectively referring to both end-users and implementers) about the characteristics of acceptable and useful mHealth technologies for young people’s management of their chronic non-communicable diseases (NCDs). This report provides a user-friendly summary of the results of this project. Readers are referred to the full original version of the systematic review for a comprehensive analysis and interpretation of the study findings.

Title: A qualitative study of professional stakeholders’ perceptions about the implementation of a stepped care pain platform for people experiencing chronic widespread pain

Author/s: Gellatly, Judith et al

Source: Bmc family practice January 2018 19 1 N.PAG-N.PAG DOI: 10.1186/s12875-018-0838-

Abstract: Background: Chronic widespread pain (CWP) is a major public health problem. Many people experiencing CWP experience mental health problems such as anxiety or depression. Complete relief of skeletal and body pain symptoms is unlikely but with appropriate treatment the impact upon quality of life, functioning and mental health symptoms can be reduced. Cognitive behavioural therapy (CBT) is widely used for a range of health conditions and can have short and long-term improvements in patients with CWP. This research aimed to explore, from a professional stakeholder perspective, the implementation of a local Pain Platform offering a stepped care approach for interventions including telephone delivered CBT (T-CBT).

Methods: Fourteen professional stakeholders holding various roles across primary and secondary care services within the Pain Platform took part in semi-structured interviews. Their views and experiences of the implementation of the Pain Platform were explored. Interviews were recorded, transcribed verbatim and analysed according to Normalisation Process Theory (NPT).

Results: Professional stakeholders were positive about the Pain Platform and its potential to overcome previously identified existing access issues to psychological interventions for CWP patients. It was considered a valuable part of ensuring that patients’ preferences and needs are more readily addressed. In some circumstances, however, introducing psychological interventions to patients was considered challenging and the introduction of new referral processes was raised concerns. To ensure sustainability more work is required to reduce professional isolation and ensure efficient referral procedures between primary and secondary care services are established to reduce concerns over issues related to clinical governance and potential risk to patient.

Conclusions: The findings provide professional insight into the key challenges of introducing a Pain Platform incorporating psychological support across primary and secondary care services within a local service. These included developments of sustainable procedures and closer working relationships. Areas requiring future development are identified.

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DISABILITY

Title: International employee perspectives on disability management

Author/s: Wagner, Shannon et al
Source: Disability & rehabilitation May 2018 40 9 1049-1058 10 DOI: 10.1080/09638288.2017.1284907

Abstract: Purpose: To provide an international analysis of employees' views of the influence of disability management (DM) on the workplace. Methodology: An international research team with representation from Australia, Canada, China, and Switzerland collected survey data from employees in public and private companies in their respective regions. Due to lack of availability of current measures, a research team-created survey was used and a total of 1201 respondents were collected across the four countries. Analysis: Multiple linear (enter) regression was also employed to predict DM's influence on job satisfaction, physical health, mental health, workplace morale and reduced sickness absence, from respondents' perceptions of whether their company provided disability prevention, stay-at-work, and return-to-work initiatives within their organization. One-way ANOVA comparisons were used to examine differences on demographic variables including company status (public versus private), union status (union versus nonunion), and gender. Results: The perceived influence of DM programs was related to perceptions of job satisfaction; whereas, relationships with mental health, physical health, morale, and sickness absence were variable according to type of DM program and whether the response was related to self or others. Difference analyses (ANOVA) revealed significantly more positive perceptions for private and nonunion organizations; no gender effects were found. Conclusions: There is perceived value of DM from the perspective of employees, especially with respect to its value for coworkers.

Source: Journal of disability policy studies September 2018 29 2 119-128 10 DOI: 10.1177/1044207318782676

Abstract: In the United States, employment rates among individuals with disabilities are persistently low but vary substantially. In this study, we examined the relationship between employment outcomes and features of the state and county physical, economic, and policy environment among a national sample of individuals with disabilities. To do so, we merged a set of state- and county-level environmental variables with data from the 2009–2011 American Community Survey accessed in a U.S. Census Research Data Center. We estimated regression models of employment, work hours, and earnings as a function of disability, personal characteristics, and these environmental features. We found that economic conditions and physical environmental variables had stronger associations than policy variables with employment outcomes. Although the estimated importance of environmental variables was small relative to individual disability and personal characteristics, our results suggest that these variables may present barriers or facilitators to employment that can explain some geographic variation in employment outcomes across the United States.

Source: Journal of occupational and environmental medicine online first August 2018 doi: 10.1097/JOM.0000000000001434

Abstract: Office workers spend more than 60% of their time at work in a seated position1,2; thus, strategies to reduce sedentary time are important. Active workstations have been shown to be a potential solution to improve health3 without negatively affecting productivity parameters4. However, most studies have been conducted in a laboratory setting and might not apply to current workplaces.
Title: A case study detailing key considerations for implementing a telehealth approach to office ergonomics

Author/s: Ritchie, Catherine L. W et al

Source: Work 2017 57 4 469-473 5 http://dx.doi.org/10.3233/WOR-172579

Abstract: Telehealth approaches to delivering ergonomics assessment hold great potential to improve service delivery in rural and remote settings. This case study describes a telehealth-based ergonomics service delivery process and compares in-person and telehealth-based ergonomics approaches at an Alberta-based non-profit advocacy group. This project demonstrates that telehealth approaches to ergonomics do not lead to significantly different scoring outcomes for assessment of ergonomics issues, when compared to in-person assessments. This project also outlines the importance of live real-time video conferencing to improving communication, attaining key assessment information, and demonstrating ergonomic adjustments. However, some key considerations of bandwidth and hardware capabilities need to be taken into account. Key communication strategies are outlined to improve rapport, maintain employee confidentiality, and reduce client anxiety around telehealth ergonomics assessments. This project provides further support for telehealth approaches to office ergonomics, and outlines some key implementation strategies and barriers that should be considered.

Title: Regulatory capture and efficacy in workers' compensation.

Author/s: Clark, Steven P et al

Source: Journal of risk & insurance September 2018 85 3 663-694 7 DOI: 10.1111/jori.12183

Abstract: We examine changes in workers' compensation laws from 2003 to 2011 and their effect on insurer performance as measured by loss ratios and claim costs. We study changes to: length of temporary total loss indemnity, penalties on employees who do not comply with rehabilitation efforts, employer or employee choice of physician, and limits on attorney fees. We find differential effects among these reforms with the most robust being changes to limits on temporary total indemnity and penalties for workers who do not comply with rehabilitation efforts. We measure one effect of the political environment and find that appointing authority over the workers' compensation board or committee significantly affects loss costs. Lastly, we find evidence of regulatory capture in workers' compensation.

Title: Prison employment and post-traumatic stress disorder: risk and protective factors

Author/s: James, L Todak N

Source: American journal of industrial medicine September 2018 725-732

Abstract: Objectives: To examine the prevalence of Post-Traumatic Stress Disorder (PTSD) in a sample of prison employees, investigate risk factors, and explore protective factors for PTSD. Methods: We surveyed 355 Washington State Department of Corrections employees. The survey included the PTSD checklist for the DSM-5 (PCL-5), the Critical Incident History Questionnaire, and the Work Environment Inventory. Results: We found 19% of the sample met the criteria for diagnosable PTSD. Several risk factors were associated with a higher PCL-5 score, including exposure to critical incidents, and having greater ambiguity in the job role. Being happy with job assignments and having positive relationships with supervisors and coworkers were associated with decreased PCL-5 score. Conclusions: Prison employees have a PTSD rate equivalent to Iraq and Afghanistan war veterans and higher than police officers, suggesting the importance of developing programs.
for promoting resilience to stress, incorporating the knowledge gained on risk, and protective factors

Title Leg and back muscle activity, heart rate, performance and comfort during sitting, standing, and using a sit-stand-support with different seat angles.

Author/s Nicoletti, Corinne; Läubli, Thomas


Abstract Long-lasting sitting and standing is related to several health risks and alternatives to these positions are needed. This study compared muscle activity, heart rate, performance, and comfort between sitting, standing, and using a stable sit-stand-support with four different seat angles. Twenty-one subjects fulfilled three tasks (typing, a tweezing task and a task simulating ironing) in every position for five minutes. The heart rate was higher using a sit-stand-support and standing compared to sitting. The activity of the m. erector spinae was similar or lower using a sit-stand-support compared to sitting or standing. The activity of the m. gastrocnemius was in between the levels of sitting or standing. No significant differences were observed for the performance. The sit-stand-support most often was preferred to sitting. A stable sit-stand-support may be a solution for short interruptions of sitting or standing.

Relevance to industry A stable sit-stand-support may be an option for short interruptions of sitting and standing and may reduce the consequences of these static positions.

HEALTH AND WELLBEING

**Title** Acute effects of interrupting sitting on discomfort and alertness of office workers

**Author/s** Benzo, R M et

**Source** *Journal of occupational and environmental medicine* September 2018 60 9 804–809 doi: 10.1097/JOM.0000000000001329

**Abstract** Objective: The aim of this study was to compare the effect of 4 hours of sitting interrupted with hourly bouts of standing and/or pedaling versus uninterrupted sitting on alertness and discomfort among sedentary office workers.

Methods: Fifteen middle-aged sedentary workers were randomized to three 4-hour conditions: (1) uninterrupted sitting; (2) sitting interrupted with 10 minutes of standing/hour; and (3) sitting interrupted with 10 minutes of pedaling/hour. Self-reported measures of alertness and discomfort were collected.

Results: Uninterrupted sitting significantly increased discomfort ($P < 0.001$). Discomfort was lower in both the standing ($P < 0.001$) and pedaling ($P < 0.001$) conditions than the uninterrupted sitting condition. Short-lived improvements in alertness were observed immediately following several standing (50%) and pedaling (100%) interruptions.

Conclusion: Prolonged sitting increases discomfort while brief standing and pedaling interruptions attenuate impairments in discomfort among sedentary workers.

**Title** Blood pressure response to interrupting workplace sitting time with non-exercise physical activity: results of a 12-month cohort study

**Author/s** Mainsbridge, C et al

**Source** *Journal of occupational and environmental medicine* September 2018 60 9 769–774 doi: 10.1097/JOM.0000000000001377
Objective: To evaluate the blood pressure (BP) effects of a yearlong e-health solution designed to interrupt prolonged occupational sitting time.

Methods: BP data of 228 desk-based employees (45.1 ± 10.5 years) were analyzed at baseline, 3, 6, 9, and 12 months.

Results: Systolic BP significantly reduced from baseline for the first 9 months (1.0 to 3.4 mmHg; \( P < 0.01 \)) while diastolic and mean arterial pressure decreased for the full 12-months (4 to 5 mmHg for diastolic pressure and 3.6 to 4.2 mmHg for MAP; all \( P < 0.01 \)). Participants used the e-health solution 5.5 ± 2.0 times/day in the first 3 months which reduced to 4.2 ± 2.5 times/day by the end of the study (\( P < 0.05 \)).

Conclusions: An e-health solution designed to increase non-exercise physical activity by interrupting sitting time in the workplace is feasible and produced long-term reductions in blood pressure.

Title Efficacy of a multicomponent intervention to reduce workplace sitting time in office workers: a cluster randomized controlled trial

Author/s Maylor, B et al


Objective: The aim of this study was to investigate the efficacy of a work-based multicomponent intervention to reduce office workers' sitting time.

Methods: Offices (\( n = 12; 89 \) workers) were randomized into an 8-week intervention (\( n = 48 \)) incorporating organizational, individual, and environmental elements or control arm. Sitting time, physical activity, and cardiometabolic health were measured at baseline and after the intervention.

Results: Linear mixed modelling revealed no significant change in workplace sitting time, but changes in workplace prolonged sitting time (\( \sim 39 \) min/shift), sit-upright transitions (7.8 per shift), and stepping time (12 min/shift) at follow-up were observed, in favor of the intervention group (\( P < 0.001 \)). Results for cardiometabolic health markers were mixed.

Conclusion: This short multicomponent workplace intervention was successful in reducing prolonged sitting and increasing physical activity in the workplace, although total sitting time was not reduced and the impact on cardiometabolic health was minimal.

Title Working adults’ well-being: an online self-help goal-based intervention

Author/s Oliver, JJ Macleod, AK


An online self-help goal-setting and planning (GAP) intervention to improve working adults’ well-being was tested using a longitudinal, randomized crossover design. The study sought to (1) test the effectiveness of the intervention relative to wait-list controls; and (2) test the stability of effects over a 3-month follow-up period. Participants were recruited from the UK Civil Service and were randomized to either a GAP intervention or a wait-list control condition. Wait-list participants then crossed-over to receive GAP. Relative to wait-list controls (\( N = 149 \)), GAP participants (\( N = 158 \)) reported significantly higher levels of positive affect (PA) and flourishing, but similar levels of negative affect (NA) and life satisfaction immediately after the intervention. Longitudinal data were analysed for the whole sample (\( N = 307 \)). Compared to the start of the intervention, participants reported an increase in PA and flourishing directly after the intervention and 3 months later. NA and life satisfaction showed no change by the end of the intervention, but had improved by 3-month follow-up. Completing more modules predicted post-intervention improvements in well-being, accounting for pre-intervention well-being levels. The online self-help format allowed the intervention to be offered with minimal therapeutic support, enabling convenient access by a large group of employees. The study provides an example of a successful adaptation of a clinically proven well-being intervention to make it accessible to working adults.

Practitioner points
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Title The effect of interrupting sedentary behavior on the cardiometabolic health of adults with sedentary occupations: a pilot study.

Author/s Dunning, Jason R et al

Source Journal of occupational & environmental medicine August 2018 60 8 760-767 8 DOI: 10.1097/JOM.0000000000001327

Abstract Objective: The aim of this study was to determine whether mobile phone text messages could modify objectively measured sedentary behavior and cardiometabolic health in office workers.

Methods: Nine males and 12 females [mean (SD): 27.5 (5.7) years, 23.8 (2.8) kg/m2] were assigned to a control (CON) or intervention (PROMPT) group. PROMPT received an activity-promoting text message during office hours. Participants wore an actiGraph and activPAL accelerometer for 7 days during and after the intervention. Blood pressure, lipid, and metabolic profiles were measured before and after the intervention.

Results: PROMPT sat less [mean (95% confidence interval, 95% CI): 4.9 (4.4 to 5.4) hours/day] than CON [6.0 (5.5 to 6.4) hours/day; P = 0.04] during the message-receiving period. There was no difference between groups after the intervention and for the other activity variables. There were no changes in cardiometabolic health markers following the intervention.

Conclusion: Sitting time was lower during the message-receiving period, but the difference between groups was no longer apparent after the intervention.

Title Exploring the association between health literacy and psychological well-being among industry managers in Germany.

Author/s Fiedler, Silja et al

Source Journal of occupational & environmental medicine August 2018 60 8 743-753 11 DOI: 10.1097/JOM.0000000000001324

Abstract Objective: Industry managers are typically exposed to high work demands but have received limited attention by research, particularly concerning the issue of health literacy and how this relates to their psychological well-being. The aim of this study was to explore the association between health literacy and psychological well-being among managers in Germany.

Methods: An online survey of a sample of 126 commercial industry managers was conducted. Effects of health literacy on psychological well-being (WHO-5 index) were investigated using path analysis. Results: The findings show a quarter of managers were classified as having poor well-being. Health literacy, namely the facets self-regulation (P = 0.40, P < 0.001), self-perception (/1 = 0.26, P <0.001), self-control (/? = 0.25, P<0.01), and proactive approach to health (P = 0.09, P < 0.05), were positively associated with psychological well-being.

Conclusion: The study indicates that higher health literacy is associated with decreased risk of poor well-being.

Title Sedentary behaviour at work—an underappreciated occupational hazard?

Author/s Koh, D

Source Occupational medicine 68 6 11 August 2018 350–351

Abstract The link between a physically inactive job and heart disease was first recognized in the early 1950s, when Jeremy Morris and colleagues published their seminal paper [1], which indicated that `Men in physically active jobs [conductors] have a lower incidence of coronary heart-
disease in middle age men than have men in physically inactive jobs [drivers]. They also noted that the disease was not as severe as in physically active workers—‘tending to present first in them as angina pectoris and other relatively benign forms, and to have a smaller early case-fatality and a lower early mortality-rate’.

HEALTH PROMOTION

Title Total worker healthk intervention for construction workers alters safety, health, well-being measures
Author/s Anger, W. Kent et al
Source Journal of occupational & environmental medicine August 2018 60 8 700-709 10 DOI: 10.1097/JOM.0000000000001290
Abstract Objective: The aim of this study was to evaluate the effectiveness of a 14-week Total Worker Health intervention designed for construction crews. Methods: Supervisors (n = 22) completed computer-based training and self-monitoring activities on team building, work-life balance, and reinforcing targeted behaviors. Supervisors and workers (n = 13) also completed scripted safety and health education in small groups with practice activities. Results: The intervention led to significant (P < 0.05) improvements in family-supportive supervisory behaviors (d = 0.72). Additional significant improvements included reported frequency of exercising 30 minutes/day and muscle toning exercise (d = 0.50 and 0.59), family and coworker healthy diet support (d = 0.53 and 0.59), team cohesion (r = 0.38), reduced sugary snacks and drinks (4 = 0.46 and 4 = 0.46), sleep duration (4 = 0.38), and objectively-measured systolic blood pressure (d = 0.27). Conclusion: ATWH intervention tailored for construction crews can simultaneously improve safety, health, and well-being.

MANAGEMENT AND LEADERSHIP

Title Congruence effects of contingent reward leadership intended and experienced on team effectiveness: the mediating role of distributive justice climate
Author/s Carter, Min Z et al
Abstract We examined why congruence in contingent reward leadership (CRL) between leaders and teams can stimulate positive team processes and effectiveness. Specifically, our study explored the effect of congruence between perceptions of CRL intended by leaders and experienced collectively by team members. We hypothesized that team distributive justice climate serves as an emergent team state through which the positive effects of CRL congruence on team effectiveness occur. We found support for hypothesized congruence effects and discuss the implications of our findings as well as future research possibilities. Practitioner points: Our study demonstrates the benefits of getting leaders and teams to ‘see eye to eye’ on critical workplace perceptions such as CRL intended and experienced. The study findings indicate that distributive justice climate underlies the process through which leader–team agreement on CRL intended and experienced influences team effectiveness. Our study emphasizes the importance to examine CRL from the perspectives of both leaders and teams. Our results suggest that organization HR specialists and line managers should work together in executing compensation strategies.
Title: Design thinking is fundamentally conservative and preserves the status quo
Author/s: Iskander, N
Source: *Harvard business review* September 05 2018
Abstract: When it comes to design thinking, the bloom is off the rose. Billed as a set of tools for innovation, design thinking has been enthusiastically and, to some extent, uncritically adopted by firms and universities alike as an approach for the development of innovative solutions to complex problems. But skepticism about design thinking has now begun to seep out onto the pages of business magazines and educational publications.

Title: The gig economy and alternative work arrangements
Author/s: Gallup
Source: *Workplace 2018*
Abstract: The gig economy presents unique challenges for organizations with traditional management practices, but it also provides opportunities for companies seeking talent in a fast-paced, competitive marketplace. Managers have limited control over gig workers' performance and engagement compared with traditional team members. Leaders must identify the best projects for gig workers and communicate a compelling value proposition for them. To make the most of the gig economy at your organization, you must first understand how to attract, engage and retained gig talent.

Title: Manifesting legacy: looking beyond the digital era 2018 global CIO survey
Source: Deloitte Insights
Abstract: This 2018 survey reflects the immense changes brought about by the digital era.

MUSCULOSKELETAL ISSUES

Title: Bi-directional relation between effort–reward imbalance and risk of neck-shoulder pain: assessment of mediation through depressive symptoms using occupational longitudinal data
Author/s: Halonen, JL et al
Abstract: Depressive symptoms appeared as an intermediate factor in the relationship between effort-reward imbalance (ERI) (indicator of work-stress) and neck-shoulder pain, but had a smaller role in the "reversed" relation from neck-shoulder pain to ERI. Our findings suggest that in addition to interventions aiming to reduce work-stress and neck-shoulder pain, actions targeting mental well-being at work could improve employees’ physical health.

Title: Prolonged sitting at work is associated with a favorable time course of low-back pain among
blue-collar workers: a prospective study in the DPhacto cohort

Author/s  Korshoj, M et al


Abstract  Objective Low-back pain (LBP) is a massive health problem. Sitting at work has been suggested to be both a risk and protective factor for LBP. Thus, the objective of this study was to investigate the association between total and temporal patterns of objectively measured sitting duration and individual time course of LBP.

Methods  The analysis was performed among 665 participants from the DPhacto cohort of mainly blue-collar workers. Sitting at work was measured by accelerometry at baseline, expressed in total duration and temporal pattern [% of working time spent in brief bursts (≤5 minutes), moderate (>5–≤20 minutes) and prolonged periods (>20 minutes)] of sitting. Time course of LBP (0–10 scale) were collected by monthly text messages across one year. Linear mixed models were applied to investigate the association, adjusting for potential confounders.

Results  Significant negative associations between sitting duration at work and adjusted time course of LBP were found; total sitting (B -0.01, 95% CI -0.01–-0.004), brief bursts (B -0.01, 95% CI -0.02–-0.01), moderate (B -0.01, 95% CI -0.01–-0.008) and prolonged periods (B -0.01, 95% CI -0.02–-0.01). Meaning, a 5-minute increase of sitting at work will correspond to a decrease in one year time course of LBP by -0.05 points.

Conclusion  Longer duration of total and temporal sitting periods at work was significantly associated with a favorable time course of LBP. This finding shows sitting at work to be beneficial for LBP, among populations of mainly blue-collar workers, by protecting from LBP aggravation.

OCCUPATIONAL ISSUES

Title  Re-crafting the enterprise for the gig-economy

Author/s  Sarina, T Riley, J

Source  New Zealand journal of employment relations 2018 43 2

Abstract  Much of the voluminous literature emerging on the gig economy and the impact of “platform”-based work on labour standards focusses on the vulnerability of workers to particular forms of exploitation: low rates of pay, precarious engagement, and unsafe working conditions. Proposed solutions often focus on classification problems: should these workers be classified as “employees” to become entitled to various labour rights? Classifying the worker as an “employee” necessarily assumes the existence of an “employer”. This paper explores the potential for a (possibly) more radical solution to worker exploitation, by investigating an alternative form of business organisation for these kinds of enterprises. The cooperative (well known in Europe, and in agriculture in Australasia) may provide an appropriate enterprise model in the so-called “sharing” economy.

Title  Economic evaluation of a randomized controlled trial of an intervention to reduce office workers’ sitting time: the “stand up Victoria” trial

Author/s  Gao, L et al


Abstract  Objectives  This study aimed to assess the economic credentials of a workplace-delivered intervention to reduce sitting time among desk-based workers.

Methods  We performed within-trial cost-efficacy analysis and long-term cost-effectiveness analysis (CEA) and recruited 231 desk-based workers, aged 24–65 years, across 14
Multicomponent workplace-delivered intervention was compared to usual practice. Main outcome measures including total device-measured workplace sitting time, body mass index (BMI), self-reported health-related quality of life (Assessment of Quality of Life-8D, AQoL-8D), and absenteeism measured at 12 months. Results Compared to usual practice, the intervention was associated with greater cost (AU$431/person), benefits in terms of reduced workplace sitting time [-46.8 minutes/8-hour workday, 95% confidence interval (CI): -69.9–23.7] and increased workplace standing time (42.2 minutes/8-hour workday, 95% CI 23.8–60.6). However, there were no significant benefits for BMI [0.148 kg/m² (95% CI 1.407–1.703)], QoL-8D [-0.006 (95% CI -0.074–0.063)] and absenteeism [2.12 days (95% CI 2.01–6.26)]. The incremental cost-efficacy ratios (ICER) ranged from AU$9.94 cost/minute reduction in workplace sitting time to AU$13.37/minute reduction in overall sitting time. CEA showed the intervention contributed to higher life year (LY) gains [0.01 (95% CI 0.009–0.011)], higher health-adjusted life year (HALY) gains [0.012 (95% CI 0.0105–0.0135)], and higher net costs [AU$344 (95% CI $331–358)], with corresponding ICER of AU$34 443/LY and AU$28 703/HALY if the intervention effects were to be sustained for five-years. CEA results were sensitive to assumptions surrounding intervention-effect decay rate and discount rate. Conclusions The intervention was cost-effective over the lifetime of the cohort when scaled up to the national workforce and provides important.
Abstract
As individuals live longer, healthier lives, both Australia and New Zealand are experiencing a dramatic demographic shift. In an effort to support older workers’ increasing participation in the labour market, and recognize the dignity of workers of all ages, both jurisdictions have introduced age discrimination laws that prohibit discrimination on the basis of age in employment. However, ageism remains a serious challenge facing older workers in both jurisdictions. This article draws on comparative legal analysis of recent developments in age discrimination law in Australia and New Zealand, focussing particularly on developments in 2016, to consider emerging issues in the two jurisdictions. It argues that recent developments in age discrimination law in Australia and New Zealand reveal problematic tensions in the prohibition of age discrimination, that are likely to recur in years to come.

Title
Being perceived as a knowledge sender or knowledge receiver: a multistudy investigation of the effect of age on knowledge transfer.

Author/s
Burmeister, Anne et al

Source
Journal of occupational & organizational psychology
September 2018 91 3 518-545 28 2 4 1 DOI: 10.1111/joop.12208

Abstract
As a result of demographic changes, workforces are becoming older and more age diverse. While interactions between workers from different age groups can provide opportunities for mutual learning through bidirectional knowledge transfer, research has yet to investigate how age influences knowledge transfer between age-diverse colleagues. Building on the organizational theory of age effects, we conducted two studies to examine how age influenced the roles assigned to individuals in knowledge transfer processes, that is, whether they were perceived as knowledge senders or knowledge recipients. In Study 1, we used an experimental vignette design with 450 employees to assess how age affected perceived ability and motivation to share and receive knowledge. Further, we tested the extent to which trustworthiness moderated these relationships. In Study 2, we extended these findings using a dyadic research design with data from 53 age-diverse knowledge transfer dyads. We examined through which mechanisms the age of one's colleague affected one's knowledge transfer behaviour. We found that the age of one's colleague had a positive effect on one's knowledge receiving behaviour and a negative effect on one's knowledge sharing behaviour. Further, perceived ability to receive knowledge and perceived motivation to share knowledge mediated these effects.

Title
The emergence of team resilience: a multilevel conceptual model of facilitating factors

Author/s
Gucciardi, DF et al

Source
Journal of occupational & organizational psychology

Abstract
With empirical research on team resilience on the rise, there is a need for an integrative conceptual model that delineates the essential elements of this concept and offers a heuristic for the integration of findings across studies. To address this need, we propose a multilevel model of team resilience that originates in the resources of individual team members and emerges as a team-level construct through dynamic person–situation interactions that are triggered by adverse events. In so doing, we define team resilience as an emergent outcome characterized by the trajectory of a team’s functioning, following adversity exposure, as one that is largely unaffected or returns to normal levels after some degree of deterioration in functioning. This conceptual model offers a departure point for future work on team resilience and reinforces the need to incorporate inputs and process mechanisms inherent within dynamic interactions among individual members of a team. Of particular, importance is the examination of these inputs, process mechanisms and emergent states, and outcomes over time, and in the context of task demands, objectives, and adverse events. Practitioner points Team resilience as a dynamic, multilevel phenomenon requires clarity on the individual- and team-level factors that foster its emergence within occupational and organizational settings.
An understanding of the nature (e.g., timing, chronicity) of adverse events is key to studying and intervening to foster team resilience within occupational and organizational settings.

Pre-retirement job and the work-to-retirement occupational transition process in Australia: a review

Eagers, Jackie et al

Australian occupational therapy journal August 2018 65 4 314-328 15 2 2 DOI: 10.1111/1440-1630.12452

Background: The transition from work to retirement is a complex process and unique experience with a relationship existing between work and retirement with implications for health in later life. This review explored the relationship between pre-retirement job and participation in the work-to-retirement transition process in Australia by exploring: (i) factors influencing retirement in relation to pre-retirement job; (ii) how jobs are classified; (iii) the effect of pre-retirement job (based on categories) on this occupational transition; and (iv) the potential role for occupational therapy in this occupational transition. Method: An integrative literature review was completed. PRISMA guidelines were used. Study designs were analysed for methodological quality using the National Health and Medical Research Council levels of evidence. Thematic analysis determined retirement factors which were used to compare differences between jobs. Results: This review included 15 papers. There were two Level III-2, one Level III-3 and 13 Level IV studies. Factors influencing retirement related to the stages of work, preparation, transition and retired. White collar and blue collar was the most common job classification system. Although white collar and blue-collar worker definitions utilised were inconsistent, differences between the two groups were still determined in all stages. Conclusion: Differences in the work-to-retirement transition process, based on pre-retirement job, are evident. Understanding differences by job groupings may assist occupational therapists to understand individualised needs during this occupational transition and subsequent tailoring of interventions (both individual and group based) to enable engagement in meaningful occupation in the work-to-retirement occupational transition to effect active healthy ageing.

Strategic dilemmas: how managers use hour practices to meet multiple goals

Lee, JE Batt, R Moynihan, LM

British journal of industrial relations 2018 early view

Contrary to the classic assumptions in the business and human resource (HR) strategy literatures, real-world organizations often pursue multiple and potentially contradictory performance goals. They may adopt ‘hybrid’ strategies to maximize both differentiation and low cost — leading middle managers to face dilemmas in how to achieve different goals using the same HR practices. We link employee-level surveys of HR practices to establishment-level data on service quality, labour efficiency and profitability to examine the effects of HR practices on these outcomes. We find that establishments with greater use of high involvement practices have significantly higher service quality, which mediates the relationship between HR practices and profitability. Findings for labour efficiency are positive, but generally not significant. These findings also have implications for the quality of jobs.

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PSYCHOSOCIAL ISSUES

Content and quality of workplace guidelines developed to prevent mental health problems: results from a systematic review
Title: Understanding mental health, mental illness, and their impacts in the workplace

Author/s: Howatt, B et al

Source: Mental health commission of Canada

Abstract: One in every five Canadians experiences a mental health problem or illness within a given year [1]. This figure equates to 20% of the Canadian population, approximately 7.1 million individuals; or the population of the 15 largest Canadian cities combined. We also know one in two Canadians under the age of 40 will experience a mental health problem or illness by the time they turn 40 years of age [1]. These numbers also have a direct impact on the workplace, as every week 500,000 Canadians are unable to work due to mental health problems or illnesses [2].

These statistics were the genesis for asking the research question, “Who are the one in five Canadians in the workplace and what is their daily experience?” Morneau Shepell, in partnership with the Globe and Mail created The Mental Health Experience in Canada’s Workplaces survey, encouraging readers to fill in the survey through a series of thoughtful articles on workplace mental health co-authored by, among others, the President and CEO of the Mental Health Commission of Canada. The goal was to understand what insights we could provide to employers to support employees who experience mental health problems and illnesses in the workplace [3].
The aim of this study was to explore physicians' tacit knowledge of performing assessments of capacity to work and the need for sickness absence in patients with depression and anxiety disorders.

Methods: We performed a qualitative study with open-ended interviews and a short video vignette of a physician and a patient with depression as stimuli. Participating physicians (n = 24) were specialized in general practice, occupational health or psychiatry and experienced in treating patients with depression and anxiety. Interviews were audio-recorded and transcribed verbatim. Inductive content analysis was used as the analytical tool.

Results: Five categories were identified. Category 1 identified work capacity assessment as doing a jigsaw puzzle without any master model. The physicians both identified and created the pieces of the puzzle, mainly by facilitating strategies to make the patient a better supplier of essential information. The finished puzzle made up a highly individualized comprehensive picture required for adequate assessment. Categories 2–4 identified the particular essential pieces of information the participants used, relating to the patient's disorder, capacity in the work place and contextual everyday life. For the sickness absence assessment, apart from decreased work capacity, the physicians also took particulars of the work place into account; e.g. could the work place handle an employee with reduced capacity.

Conclusions: Physicians' tacit knowledge of assessing work capacity and the need for sickness absence for patients with CMD was identified as doing a jigsaw puzzle. The physicians became identifiers and creators of the pieces of the puzzle using a broad palette of essential information. Our findings contribute to the knowledge gap on clinical assessment and can be used as an educational tool. Because they are based on the professions' tacit knowledge, acceptance of the model can be expected to be high.
limited attention in the human resource literature, social psychology literature has identified inadequacies with this practice, including that such training may entrench and normalise unconscious biases. We argue that the popularity of unconscious bias training invites agencies to view this practice as a ‘silver bullet’ to achieve gender equity, but that its effectiveness is likely to be limited unless accompanied by sustained interventions to address discrimination. Further, the impacts of unconscious bias training need to be rigorously evaluated to assess whether government resources are being effectively utilised. Consistent with international research, such an evaluation may reveal that unconscious bias training has unintended negative consequences, but that the training can be improved to reduce these consequences.

Title Utterly disgraceful’: social media and the workplace
Author/s Barnes, A Balnave, N Holland, P
Source Australian journal of public administration September 2018 77 3 492-499
Abstract Social media use by Australian public servants has given rise to questions pertaining to their political rights, impartiality and privacy outside of work. Drawing on the recent case Starr v Department of Human Services these issues are explored. The findings suggest that social media use has heightened tensions around public servant’s rights to comment on issues of the day, and its use by employees both inside and beyond the workplace remains contested terrain

Title Working the spaces in between: a case study of a boundary-spanning model to help facilitate cross-sectoral policy work
Author/s Carey, G Landvogt, K Corrie, T
Source Australian journal of public administration September 2018 77 3 500-509
Abstract Since the 1990s, ‘joined-up government,’ ‘whole-of-government,’ and ‘horizontal governance’ approaches have emerged in many industrialized countries, resulting in the devolution of government functions to diverse policy networks. From these shifts, complex systems of networked actors have emerged, involved in designing, implementation, and influencing policy. Arguably, networked approaches to policy may solve some problems. However, as with all paradigm shifts, new problems have emerged. Specifically, skill and knowledge gaps have opened, reflecting the need for new collaborative and networked relationships that can increase the capabilities and agility to work in these ways. In response to these gaps, we developed the Power to Persuade initiative. Power to Persuade is an annual symposium and online forum, aimed at deepening knowledge and awareness of current problems faced by policy networks, and providing the skills and knowledge to overcome them. In this paper, we discuss how Power to Persuade works within the spaces in between as a vehicle for relationship building and better policy.

RETURN TO WORK

Title Systematic review and meta-analysis of interventions aimed at enhancing return to work for sick-listed workers with common mental disorders, stress-related disorders, somatoform disorders and personality disorders
Author/s Mikkelsen, M B Rosholm, M
Source Occupational & environmental medicine 2018 75 9 675-686 http://dx.doi.org/10.1136/oemed-2018-105073
Abstract Objectives Mental disorders are associated with significant functional impairment, sickness absence and disability. The consequences of sickness absence warrant investigation into interventions aimed at enhancing return to work (RTW) for workers with mental disorders. The
present systematic review and meta-analysis aim to synthesise evidence on the effectiveness of interventions aimed at enhancing RTW in sick-listed workers with mental disorders. Methods EconLit, Embase, PsychInfo, PubMed, Svedem+ and Web of Science were searched for peer-reviewed, randomised or controlled studies assessing employment-related outcomes of interventions. A meta-analysis was conducted and meta-regressions were performed to explore prespecified potential sources of heterogeneity between studies.

**Results** The literature search yielded 3777 publications of which 42 (n=38,938) were included in the systematic review and 32 (n=9459) had appropriate data for the meta-analysis. The pooled effect size (95% CI) was 0.14 (0.07 to 0.22). Meta-regressions revealed that the heterogeneity could not be attributed to study quality, timing of the intervention or length of the intervention. However, it could be partly explained by number of components included in the intervention, if the intervention included contact to the work place and by the disorder targeted by the intervention.

**Conclusions** The results reveal strong evidence for interventions including contact to the work place and multicomponent interventions and moderate evidence for interventions including graded RTW. In addition, the results provide strong evidence for interventions targeting stress compared with interventions targeting other mental disorders. The findings point to important implications for policy and design of future interventions.

**Title** Motivational interviewing in long-term sickness absence: study protocol of a randomized controlled trial followed by qualitative and economic studies

**Author/s** Aasdahl, Lene et al

**Source** BMC public health June 2018 18 1 1

**Abstract** Background: Motivational interviewing (MI), mainly used and shown effective in health care (substance abuse, smoking cessation, increasing exercise and other lifestyle changes), is a collaborative conversation (style) about change that could be useful for individuals having problems related to return to work (RTW). The aim of this paper is to describe the design of a randomized controlled trial evaluating the effect of MI on RTW among sick listed persons compared to usual care, in a social security setting.

Methods: The study is a randomized controlled trial with parallel group design. Individuals between 18 and 60 years who have been sick listed for more than 7 weeks, with a current sick leave status of 50-100%, are identified in the Norwegian National Social Security System and invited to participate in the study. Exclusion criteria are no employment and pregnancy. Included participants are randomly assigned to the MI intervention or one of two control groups. The MI intervention consists of two MI sessions offered by caseworkers at the Norwegian Labor and Welfare Service (NAV), while the comparative arms consist of a usual care group and a group that receives two extra sessions without MI content (to control for attentional bias). The primary outcome measure is the total number of sickness absence days during 12 months after inclusion, obtained from national registers. Secondary outcomes include time until full sustainable return to work, health-related quality of life and mental health status. In addition, a health economic evaluation, a feasibility/process evaluation and qualitative studies will be performed as part of the study.

Discussion: A previous study has suggested an effect of MI on RTW for sick listed workers with musculoskeletal complaints. The present study will evaluate the effect of MI for all sick listed workers, regardless of diagnosis. The knowledge from this study will potentially be important for policy makers, clinicians and other professionals’ practical work.

**Title** Return to work after rehabilitation in chronic low back pain workers. does the interprofessional collaboration work?

**Author/s** Michel, Clotilde et al

**Source** Journal of interprofessional care July 2018 32 4 521-524 4 1 1 DOI: 10.1080/13561820.2018.1450231
Abstract

The objective of this study was to assess the workplace information collected and shared between professionals of the centers and occupational health professionals during functional restoration programs intended to chronic low back pain patients. A descriptive study carried out by a questionnaire sent to the French rehabilitation centers offering a functional restoration program. Data collection focused on the kinds of professionals involved in programs, professionals who approach work issues, work analysis, social and occupational information collected, existence of a specific work rehabilitation program, frequency of and methods for sharing information with occupational health professionals. Occupational information was mostly collected at inclusion during an individual interview by the rehabilitation physicians, social workers, and occupational therapists. Workplace environment was the most poorly discussed aspect. A minority of centers adapted their programs regarding this information. Information sharing with occupational physicians was mostly through the patient and was influenced by the presence of an ergonomist or of an occupational physician in the team. The study found poor interest about work environment and that the cooperation between practitioners in disability management remains limited. The various practitioners' cultures and interests may be a brake on cooperation and exchange of information.

Weblink

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SHIFT WORK

Title

The effects of fatigue on cognitive performance in police officers and staff during a forward rotating shift pattern.

Author/s

Yvonne Taylor, et al

Source

Safety and health at work online first August 2018 doi: 10.1016/j.shaw.2018.08.003

Abstract

Background: Few studies have examined the effects of a forward rotating shift pattern on police employee performance and well-being. This study sought to compare sleep duration, cognitive performance and vigilance at the start and end of each shift within a three-shift, forward rotating shift pattern, common in United Kingdom police forces.

Methods: Twenty-three police employee participants were recruited from North Yorkshire Police (mean age 43). The participants were all working the same, 10-day, forward rotating shift pattern. No other exclusion criteria were stipulated. Sleep data were gathered utilising both actigraphy and self-reported methods; cognitive performance and vigilance was assessed using a customised test battery comprising of five tests; MPT, VOLT, NBACK, DSST and PVT. Statistical comparisons were conducted, taking into account Shift Type, Shift Number and the Start and End of each shift worked.

Results: Sleep duration was found to be significantly reduced following night shifts. Results showed a significant main effect of Shift Type in the VOLT and NBACK tasks and also a significant main effect of Start/End in the DSST task, along with a number of significant interactions.

Conclusion: The results of the tests indicated that learning and practice effects may have an effect on results of some of the tests. However, it is also possible that due to the fast-rotating nature of the shift pattern, participants did not adjust to any particular shift, hence their performance in the cognitive and vigilance tests did not suffer significantly as a result of this particular shift pattern.

Weblink

Title

Investigating daily fatigue scores during two-week offshore day shifts.

Author/s

Riethmeister, Vanessa et al

Source


Abstract

Objectives: This study examined daily scores of fatigue and circadian rhythm markers over two-week offshore day shift periods.

Methods: A prospective cohort study among N = 60 offshore day-shift workers working two-
Week offshore shifts were conducted. Offshore day shifts lasted from 07:00 - 19:00 h. Fatigue was measured objectively with pre- and post-shift scores of the 3-minute psychomotor vigilance tasks (PVT-B) parameters (reaction times, number of lapses, errors and false starts) and subjectively with pre- and post-shift Karolinska Sleepiness Scale (KSS) ratings. Evening saliva samples were collected on offshore days 2, 7 and 13 to measure circadian rhythm markers such as dim-light melatonin onset times and cortisol. Generalized and linear mixed model analyses were used to examine daily fatigue scores over time.

Results: Complete data from N = 42 offshore day shift workers was analyzed. Daily parameters of objective fatigue, PVT-B scores (reaction times, average number of lapses, errors and false starts), remained stable over the course of the two-week offshore day shifts. Daily subjective post-shift fatigue scores significantly increased over the course of the two-week offshore shifts. Each day offshore was associated with an increased post-shift subjective fatigue score of 0.06 points (95%CI: .03 - .09 p < .001). No significant statistical differences in subjective pre-shift fatigue scores were found. Neither a circadian rhythm phase shift of melatonin nor an effect on the pattern and levels of evening cortisol was found.

Conclusion: Daily parameters of objective fatigue scores remained stable over the course of the two-week offshore day shifts. Daily subjective post-shift fatigue scores significantly increased over the course of the two-week offshore shifts. No significant changes in circadian rhythm markers were found. Increased post-shift fatigue scores, especially during the last days of an offshore shift, should be considered and managed in (offshore) fatigue risk management programs and fatigue risk prediction models.

Title: Sleep at work: the economic and societal argument for workplace-based health promotion tailored to shift workers

Author/s: Robbins, Rebecca; Jean-Louis, Girardin et al

Source: American journal of health promotion September 2018 32 7 1641-1644 4 DOI: 10.1177/0890117118790621d

Abstract: Sleep and work take up the largest proportion of an average day for US employees. Sleep and work are also intricately related to one another. Specifically, insufficient sleep negatively impacts workplace outcomes (eg, employee productivity, absenteeism). In addition, the nature of work (eg, workload, job demands) can result in insufficient sleep or sleep difficulties among employees. Shift work is one such work characteristic that is known to adversely affect employee health.

Title: Night work and risk of common mental disorders: analyzing observational data as a non-randomized pseudo trial

Author/s: Beltagy, MS et al


Abstract: Objectives The aim of this study was to examine the status of night work as a risk factor for common mental disorders (CMD).

Methods A cohort study with three data waves was conducted on populations of social and healthcare employees for a duration of eight years (total N=46 010). Data were analyzed as a non-randomized pseudo trial to examine (i) whether moving from non-night work to night work is associated with the development of CMD, (ii) the extent to which moving back to non-night work biases this association and (iii) whether moving from night to non-night work is associated with the recovery from CMD.

Results According to logistic regression with generalized estimating equation and without bias-correction, changing to night work was not associated with the odds of acquiring CMD [odds ratio (OR) 1.03, 95% confidence interval (CI) 0.82–1.30]. However, night workers with CMD had higher odds of recovery from CMD when changing to non-night work compared to continuing night work (1.99, 95% CI 1.20–3.28). When night workers developed CMD, the
odds of moving back to non-night work increased by 68%. In analyses corrected for this bias, changing from non-night to night work was associated with a 1.25-fold (95% CI 1.03–1.52) increased odds of acquiring CMD.

Conclusions A change from non-night to night work may increase the risk of CMD, while moving back from night to non-night work increased recovery from CMD.

WORK ABILITY

**Title**
Edmonton obesity staging system (eoss) and work ability in the evaluation of workers affected by obesity: a preliminary report.

**Author/s**
Vigna, Luisella M et al

**Source**
Journal of occupational & environmental medicine August 2018 60 8 732-736 5 DOI: 10.1097/JOM.0000000000001321

**Abstract**
Objective: Obesity and work-ability may be influenced by reduced performance, associated diseases, and obesogenic environment. Methods: Two hundred seventy-six male (46.7 ± 10.6 years; BMI 33.3 ± 4.4 kg/m²) and 658 female (48.4 ± 9.7 years; BMI 33.6 ± 5.4 kg/m²) were enrolled. They were classified by Edmonton Obesity Staging System (EOSS) and interviewed for "perceived" work-ability. Results: Total work ability score was 1.3±2.1 in EOSS 0, 1.2±1.5 in EOSS 1, 1.8 ± 2 in EOSS 2, 2.0 ± 2.2 in EOSS 3. Work-ability, in relation to EOSS adjusted for sex, age, work categories referred to EOSS 0, was highest in EOSS stage 3 (P < 0.001 for trend) and with reference to Administration; Industries showed the worst score (BcO.OOI) followed by Health (P = 0.001) and Service (P = 0.01).

Conclusion: The relation between EOSS and work-ability empowers clinical decision-making and helps to assess the impact of overweight on health and fitness for work.

**Title**
Work ability meetings—a survey of Finnish occupational physicians

**Author/s**
Honkonen, N et al

**Source**
Occupational medicine 2018 115

**Abstract**
Background: Work ability meetings (WAMs) are planned discussions between an employee, a manager and an occupational physician (OP) to support work ability and return to work (RTW). During the last decade, WAMs become a popular intervention in Finnish occupational healthcare, although research on their content is lacking.

Aims: To describe the practice of WAMs in Finland.

Methods: We sent an internet survey by e-mail to members of the Finnish Society of Occupational Health Physicians in August 2014. We asked them to describe the last WAM they had attended, the employee the meeting concerned, the reason why it was convened, the content of the meeting and the action plan developed.

Results: A total of 303 of 1304 OPs responded (24%) to the survey. The meetings were most often arranged for employees in manual or clerical work (71%). There were several overlapping reasons for convening a WAM, including a worker’s reduced work ability (57%), functional ability (42%) or long-term sickness absence (38%). The meetings consisted of RTW planning, clarification of the situation and a dialogue between the three parties. In half of the cases, the action plans dealt with modifications of work tasks. A third of cases were forwarded to vocational rehabilitation, while permanent disability pension was considered in 6% of cases.

Conclusions: The focus of WAMs was on workplace adjustments to support workers to remain at work. The WAMs dealt mostly with early interventions for RTW: work modifications, adjustments and vocational rehabilitation.
WORKERS COMPENSATION

Title: Competitive federalism and workers’ compensation: do states race to the bottom?
Author/s: Hollander, Robyn; Thornthwaite, Louise
Source: Australian journal of political science September 2018 53 3 336-352 17 DOI: 10.1080/10361146.2018.1477115
Abstract: This article builds on the competitive federalism literature by examining the role federalism plays in determining policy trajectories with consequences for public welfare in individual jurisdictions. It examines the argument that federalism encourages a ‘race to the bottom’ using the case of workers’ compensation benefits for injured workers in Australia. It finds state systems have been characterised by a downward slide in the protections afforded injured workers since the late 1970s, and this has been associated with policy makers’ real or rhetorical concerns around interstate competition for business investment.

Title: Correlates of occupational heat-induced illness costs: case study of South Australia 2000 to 2014
Author/s: Xiang, J et al
Source: Journal of occupational and environmental medicine September 2018 60 9 463–469 doi: 10.1097/JOM.0000000000001395
Abstract: Objective: To investigate the profile of occupational heat-induced illness costs in South Australia and to examine the association with high temperature. Methods: Workers’ compensation claim data were used to quantify the associations between maximum temperature ($T_{max}$) and occupational heat illness (OHI)-related costs, using time-series analysis after controlling for confounding factors. Results: Four hundred thirty-eight OHI claims in 2000 to 2014 resulted in total medical costs of AU$6,002,840 and 5,036 work days lost. Relatively higher OHI burdens were found in men, those aged 25 to 44 years, new workers, medium-size businesses, and those employed in the mining industry. A 1 °C increase in $T_{max}$ above about 33 °C was associated with a 41.6% increase in medical costs and a 74.8% increase in days lost due to OHI, respectively. Conclusions: The cost profile of OHI may be used to justify interventions for particular industries, occupations, and worker categories.

Title: The future of workers compensation in Australia
Source: Konekt
Abstract: At the recent National Council of Self Insurer’s (NCSI) Conference held on the Sunshine Coast, the central theme of “The Future of Workers’ Compensation in Australia” was discussed. Many leading thinkers and influencers from government, insurance and self-insured sectors presented their views on managing existing and future injuries and disease trends. It was an opportunity to look at and dissect the potential outlook for workers’ compensation in Australia, and what the future might hold.

Title: Physiotherapy for injured workers in Canada: are insurers’ and clinics’ policies threatening good quality and equity of care? results of a qualitative study.
Author/s: Hudon, Anne; Hunt, Matthew; Ehrmann Feldman, Debbie.
Source: BMC health services research September 2018 18 1 1 2 DOI: 10.1186/s12913-018-3491-
Abstract

Background: In recent years, significant efforts have been made to improve the provision of care for compensated injured workers internationally. However, despite increasing efforts at implementing best practices in this field, some studies show that policies overseeing the organisation of care for injured workers can have perverse influences on healthcare providers’ practices and can prevent workers from receiving the best care possible. The influence of these policies on physiotherapists’ practices has yet to be investigated. Our objectives were thus to explore the influence of 1) workers’ compensation boards’ and 2) physiotherapy clinics’ policies on the care physiotherapists provide to workers with musculoskeletal injuries in three large Canadian provinces.

Methods: The Interpretive Description framework, a qualitative methodological approach, guided this inquiry. Forty participants (30 physiotherapists and 10 leaders and administrators from physiotherapy professional groups and workers’ compensation boards) were recruited in British Columbia, Ontario and Quebec to participate in an in-depth interview. Inductive analysis was conducted using constant comparative techniques.

Results: Narratives from participants show that policies of workers’ compensation boards and individual physiotherapy clinics have significant impacts on physiotherapists’ clinical practices. Policies found at both levels often place physiotherapists in uncomfortable positions where they cannot always do what they believe to be best for their patients. Because of these policies, treatments provided to compensated injured workers markedly differ from those provided to other patients receiving physiotherapy care at the same clinic. Workers’ compensation board policies such as reimbursement rates, end points for treatment and communication mechanisms, and clinic policies such as physiotherapists’ remuneration schemes and restrictions on the choice of professionals had negative influences on care. Policies that were viewed as positive were board policies that recognize, promote and support physiotherapists’ duties and clinics that provide organisational support for administrative tasks.

Conclusion: In Canada, workers’ compensation play a significant role in financing physiotherapy care for people injured at work. Despite the best intentions in promoting evidence-based guidelines and procedures regarding rehabilitation care for injured workers, complex policy factors currently limit the application of these recommendations in practice. Research that targets these policies could contribute to significant changes in clinical settings.

Title
Regulatory capture and efficacy in workers’ compensation

Author/s
Clark, Steven P. Marlett, David C.; Neale, Faith R.

Source
Journal of risk & insurance September 2018 85 3 663-694 32 DOI: 10.1111/jori.12183

Abstract
We examine changes in workers’ compensation laws from 2003 to 2011 and their effect on insurer performance as measured by loss ratios and claim costs. We study changes to: length of temporary total loss indemnity, penalties on employees who do not comply with rehabilitation efforts, employer or employee choice of physician, and limits on attorney fees. We find differential effects among these reforms with the most robust being changes to limits on temporary total indemnity and penalties for workers who do not comply with rehabilitation efforts. We measure one effect of the political environment and find that appointing authority over the workers’ compensation board or committee significantly affects loss costs. Lastly, we find evidence of regulatory capture in workers’ compensation.

Title
Workers’ compensation insurer risk control systems: opportunities for public health collaborations

Author/s
Moore, Libby L.; Wurzelbacher, Steven J.; Shockey, Taylor M.

Source

Abstract
Introduction
Workers’ compensation (WC) insurers offer services and programs for prospective client selection and insured client risk control (RC) purposes. Toward these aims, insurers collect employer data that may include information on types of hazards present in the workplace, safety and health programs and controls in place to prevent injury/illness, and...
return-to-work programs to reduce injury/illness severity. Despite the potential impact of RC systems on workplace safety and health and the use of RC data in guiding prevention efforts, few research studies on the types of RC services provided to employers or the RC data collected have been published in the peer-reviewed literature.

Methods Researchers conducted voluntary interviews with nine private and state-fund WC insurers to collect qualitative information on RC data and systems.

Results Insurers provided information describing their RC data, tools, and practices. Unique practices as well as similarities including those related to RC services, policyholder goals, and databases were identified.

Conclusions Insurers collect and store extensive RC data, which have utility for public health research for improving workplace safety and health. Practical applications Increased public health understanding of RC data and systems and an identification of key collaboration opportunities between insurers and researchers will facilitate increased use of RC data for public health purposes.

Title Workplace social system and sustained return-to-work: a study of supervisor and co-worker supportiveness and injury reaction.

Author/s Jetha, Arif et al

Source Journal of occupational rehabilitation September 2018 28 3 486-494 9 DOI: http://dx.doi.org/10.1007/s10926-017-9724-z

Abstract Objective To examine the impact of the social workplace system on sustained return-to-work (SRTW). Methods A random sample of workers' compensation claimants was recruited to complete a survey following claim acceptance (baseline), and 6 months later (time 2). SRTW, at baseline and time 2, was classified as those reporting being back at work for >28 days. Co-worker and supervisor support were assessed using five and seven items, respectively, and total scores were produced. A list of potential supervisory and co-worker reactions was presented to participants who were asked whether the reaction applied to them; response were coded as positive or non-positive. Demographic and injury characteristics, and work context factors were collected. Baseline and at time 2 multivariable models were conducted to examine the impact of supervisory and coworker support and injury reaction on SRTW. Results 551 (baseline) and 403 (time 2) participants from the overall cohort met study eligibility criteria. At baseline, 59% of all participants indicated SRTW; 70% reported SRTW at time 2. Participants reported moderate support from their supervisor (mean = 8.5 ± 3.9; median = 8.2; range = 5-15) and co-workers (mean = 10.2 ± 4.5; median = 10.3; range = 5-25). Over half reported a positive supervisor (59%) or co-worker injury reaction (71%). Multivariable models found that a positive supervisor injury reaction was significantly associated with SRTW at baseline (OR 2.3; 95% CI 1.4-3.9) and time 2 (OR 1.6; 95% CI 1.1-2.3). Conclusions Promoting supervisor positivity towards an injured worker is an important organizational work disability management strategy.

Title Cohort profile: workers’ compensation in a changing Australian labour market: the return to work (RTW) study

Author/s Dimitriadis C et al

Source BMJ open 2017 7 016366. doi: 10.1136/bmjopen-2017-016366

Abstract Purpose Workers’ compensation claims for older workers and workers who have suffered psychological injury are increasing as a proportion of total claims in many jurisdictions. In the Australian state of Victoria, claims from both these groups are associated with higher than average wage replacement and healthcare expenditures. This cohort profile describes a longitudinal study which aims to investigate differences in the return to work (RTW) process for older workers compared with younger workers and claimants with musculoskeletal injuries compared with those with psychological injuries. Participants This prospective cohort study involved interviewing workers’ compensation claimants at three-time points. The cohort was restricted to psychological and
musculoskeletal claims. Only claimants aged 18 and over were recruited, with no upper age limit. A total of 869 claimants completed the baseline interview, representing 36% of the eligible claimant population. Ninety-one per cent of participants agreed at baseline to have their survey responses linked to administrative workers’ compensation data. Of the 869 claimants who participated at baseline, 632 (73%) took part in the 6-month follow-up interview, and 572 (66%) participated in the 12-month follow-up interview.

Findings to date Information on different aspects of the RTW process and important factors that may impact the RTW process was collected at the three survey periods. At baseline, participants and non-participants did not differ by injury type or age group but were more likely to be female and from the healthcare and social assistance industry. The probability of non-participation at follow-up interviews showed younger age was a statistically significant predictor of non-participation.

Future plans Analysis of the longitudinal cohort will identify important factors in the RTW process and explore differences across age and injury type groups. Ongoing linkage to administrative workers’ compensation data will provide information on wage replacement and healthcare service use into the future.

Title How can workers’ compensation systems promote occupational safety and health? stakeholder views on policy and research priorities

Author/s Dworsky, M Broten, N

Source RAND 2018

Abstract Stakeholders involved in workers’ compensation systems have long voiced concerns about the extent to which workers’ compensation serves to promote occupational safety and health (OSH) and the well-being of injured workers. However, it is not clear how much consensus there is about the specific challenges to OSH and worker well-being in the workers’ compensation system or how to address those challenges.

Title Reoccurring injury, chronic health conditions, and behavioral health: gender differences in the causes of workers’ compensation claims

Author/s Schwatka, Natalie et al

Source Journal of occupational & environmental medicine August 2018 60 8 710-716 7 DOI: 10.1097/JOM.0000000000001301

Abstract Objective: The aim of this study was to examine how work and nonwork health-related factors contribute to workers’ compensation (WC) claims by gender. Methods: Workers (N= 16,926) were enrolled in the Pinnacol Assurance Health Risk Management study, a multiyear, longitudinal research program assessing small and medium-sized enterprises in Colorado. Hypotheses were tested using gender-stratified logistic regression models. Results: For both women and men, having incurred a prior WC claim increased the odds of a future claim. The combination of incurring a prior claim and having metabolic health conditions resulted in lower odds of a future claim. Behavioral health risk factors increased the odds of having a claim more so among women than among men. Conclusion: This study provides data to support multifactorial injury theories, and the need for injury prevention efforts that consider workplace conditions as well as worker health.
Cost-effectiveness analysis of a military hearing conservation program

Introduction: Occupational noise threatens U.S. worker health and safety and commands a significant financial burden on state and federal government worker compensation programs. Previous studies suggest that hearing conservation programs have contributed to reduced occupational hearing loss for noise-exposed workers. Many military personnel are overexposed to noise and are provided hearing conservation services. Select military branches require all active duty personnel to follow hearing conservation program guidelines, regardless of individual noise exposure. We evaluated the cost-effectiveness of a military hearing conservation program, relative to no intervention, in relation to cases of hearing loss prevented.

Methods: We employed cost-effectiveness analytic methods to compare the costs and effectiveness, in terms of hearing loss cases prevented, of a military hearing conservation program relative to no program. We used costs and probability estimates available in the literature and publicly available sources. The effectiveness of the interventions was analyzed based on whether hearing loss occurred over a 20-yr time frame.

Results: The incremental cost-effectiveness ratio of the hearing conservation program compared with no intervention was $10,657 per case of hearing loss prevented. Workers were 28% less likely to sustain hearing loss in our model when they received the hearing conservation program compared with no intervention, which reflected the greater effectiveness of the hearing conservation program. Cost-effectiveness results were sensitive to estimated values for the probability of acquiring hearing loss from both interventions and the cost of hearing protection. We performed a Monte Carlo probabilistic sensitivity analysis where we simultaneously varied all the model parameters to their extreme plausible bounds. When we ran 10,000 Monte Carlo iterations, we observed that the hearing conservation program was more cost-effective in 99% of cases when decision makers were willing to pay $64,172 per case of hearing loss prevented.

Conclusions: Conceding a lifetime cost for service-related compensation for hearing loss per individual of $64,172, the Department of Defense Hearing Conservation Program is an economically reasonable program relative to no intervention, if a case of hearing loss avoided costs $10,657. Considering the net difference of the costs and comparative benefits of both treatment strategies, providing a hearing conservation program for all active duty military workers may be a cost-effective intervention for the Department of Defense.

Emergency department visits for work-related injuries.

Background: Work-related injuries are commonly seen in the emergency department (ED). This study sought to analyze characteristics of ED patient visits that were billed under workers’ compensation.

Methods: This was a retrospective chart review of visits during 2015 that were billed under workers’ compensation at an academic ED. The following variables were collected: age, gender, mechanism of injury/exposure, diagnoses, imaging performed, specialty consultation, operative requirement, follow-up specialty, and ED disposition.

Results: In 2015, 377 patients presented to the ED for work-related injuries. The most common mechanism of injury was fall. Frequent diagnoses included lower extremity injuries and hand/finger injuries. The most common consulting service was orthopedics. Only five patients were referred to occupational medicine for follow up.

Conclusion: Knowledge of the types of occupational injuries and subsequent care required may help guide both workers and employers how to best triage patients within the healthcare setting.
system. Alternative settings such as occupational medicine or primary care services may be appropriate for some patients

Title Experiencing a probabilistic approach to clarify and disclose uncertainties when setting occupational exposure limits.

Author/s Vernez, David et al

Source Health 2018 31 4 475-489 DOI: 10.13075/ijomeh.1896.01184

Abstract Assessment factors (AFs) are commonly used for deriving reference concentrations for chemicals. These factors take into account variabilities as well as uncertainties in the dataset, such as inter-species and intra-species variabilities or exposure duration extrapolation or extrapolation from the lowest-observed-adverse-effect level (LOAEL) to the no observed-adverse-effect level (NOAEL). In a deterministic approach, the value of an AF is the result of a debate among experts and, often, a conservative value is used as a default choice. A probabilistic framework to better take into account uncertainties and/or variability when setting occupational exposure limits (OELs) is presented and discussed in this paper. <bold>Material and Methods: </bold>Each AF is considered as a random variable with a probabilistic distribution. A short literature was conducted before setting default distributions ranges and shapes for each AF commonly used. A random sampling, using Monte Carlo techniques, is then used for propagating the identified uncertainties and computing the final OEL distribution. <bold>Results: </bold>Starting from the broad default distributions obtained, experts narrow it to its most likely range, according to the scientific knowledge available for a specific chemical. Introducing distribution rather than single deterministic values allows disclosing and clarifying variability and/or uncertainties inherent to the OEL construction process. <bold>Conclusions: </bold>This probabilistic approach yields quantitative insight into both the possible range and the relative likelihood of values for model outputs. It thereby provides a better support in decision-making and improves transparency.

Title How much is too much on monitoring tasks? visual scan patterns of single air traffic controller performing multiple remote tower operations.

Author/s Li, Wen-Chin et al


Abstract The innovative concept of multiple remote tower operation (MRTO) is where a single air traffic controller (ATCO) provides air traffic services to two or more different airports from a geographically separated virtual Tower. Effective visual scanning by the air traffic controller is the main safety concern for human-computer interaction, as the aim of MRTO is a single controller performing air traffic management tasks originally carried out by up to four ATCOs, comprehensively supported by innovative technology. Thirty-two scenarios were recorded and analyzed using an eye tracking device to investigate the above safety concern and the effectiveness of multiple remote tower operations. The results demonstrated that ATCOs' visual scan patterns showed significant task related variation while performing different tasks and interacting with various interfaces on the controller's working position (CWP). ATCOs were supported by new display systems equipped with pan tilt zoom (PTZ) cameras allowing enhanced visual checking of airport surfaces and aircraft positions. Therefore, one ATCO could monitor and provide services for two airports simultaneously. The factors influencing visual attention include how the information is presented, the complexity of that information, and the characteristics of the operating environment. ATCO's attention distribution among display systems is the key human-computer interaction issue in single ATCO performing multiple monitoring tasks.

Title Mutagenic and DNA repair activity in traffic policemen: a case-crossover study
Background: Emissions from vehicles are composed of heterogeneous mixtures of hazardous substances; several pollutants such as Polycyclic Aromatic Hydrocarbons (PAHs) are amongst the most dangerous substances detected in urban monitoring. A cohort of traffic policemen usually occupationally exposed to PAHs present in the urban environment were examined in order to assess the mutagenicity and DNA capacity repair.

Methods: Seventy-two urban traffic policemen working in Catania’s metropolitan area were enrolled in the study. Two spot urine samples were collected from each subject during the whole working cycle as follows: sample 1 (S1), pre-shift on day 1; sample 2 (S2) post-shift on day 6. 1-hydroxypyrene (1-OHP) was measured to serve as an indirect exposure indicator. Urinary mutagenic activity was assessed through the plate incorporation pre-incubation technique with S9, using YG1024 Salmonella typhimurium strain over-sensitive to PAH metabolite. Concentrations of urinary 8-oxodG were measured using liquid chromatography tandem mass spectrometry.

Results: As regards the exposure to PAHs, results highlighted a statistically significant difference (p < 0.001) between pre-shift on day 1 and post-shift on day 6 levels. Mutagenic activity was detected in 38 (66%) workers on S1 and in 47 (81%) on S2. Also 8-oxodG analysis showed a statistically significant difference between S1 and S2 sampling.

Conclusions: This study demonstrated that occupational exposure to pollutants from traffic emission, assessed via 1-OHP measurements in urine, may lead to DNA repair and mutagenic activity, in line with other studies.
experiments. The level of evidence for a relationship between olfactory dysfunction and workplace exposure to other substances is relatively weak.

Title Risk of injury by unionization: survival analysis of a large industrial cohort
Author/s Alatassan, K A et al
Source Journal of occupational and environmental medicine September 2018 60 9 827–831 doi: 10.1097/JOM.0000000000001347
Abstract Objective: To investigate the effect of union status on injury risk among a large industrial cohort.
Methods: The cohort included hourly employees at 19 US plants between 2000 and 2007. Plants were classified by union status, and injuries were classified by severity. Cox-proportional hazard shared frailty model was used to determine time to first reportable injury.
Results: A total of 26,462 workers were included: 18,955 (72%) unionized and 7507 (28%) non-unionized. Union workers incurred 3194 injuries (16.9%) compared with 618 injuries for non-union workers (8.2%). After adjusting for multiple covariates, union workers had a 51% higher risk of reportable injury.
Conclusions: Our results provide evidence for higher risk of reportable injuries in union workers; explanations for this increased risk remain unclear.

Title To what extent does body height affect the use and satisfaction of electrically-assisted bicycles for postal purpose?
Author/s Vansteenkiste, Pieter et al
Source International journal of industrial ergonomics September 2018 67 159-170 12 DOI: 10.1016/j.ergon.2018.05.003.
Abstract To investigate to what extent body height affects the use and satisfaction of electrically-assisted bicycles (EB) among postal workers, 1115 EB users filled in a questionnaire and 28 postal workers were observed during their distribution round. We aimed to provide a framework to estimate the possible effects of providing multiple frame sizes to postal workers. Although the body height of postal workers affected how they reached for mail and delivered it, it hardly affected their satisfaction with the current EB. Accessibility of the front carrier seemed to be the main issue that could be coped with by providing different frames. Ironically, postal workers for whom the front carrier was most accessible (tallest group) reported the highest physical load. The relevance of these results with respect to the availability of multiple frame sizes and other changes to the EB that might be beneficial from an ergonomic point of view is discussed.

Title Best practices for preventing firefighter cancer: 11 actions to mitigate the risk of cancer: Lavender ribbon report
Source International Fire Chiefs Association: & Combination Officers Section, National Volunteer Fire Council
Abstract This report provides information for members of the response community on the actions necessary to protect ourselves from occupational cancer

Title Safety Leadership: Autopsy of an injury: uncovering 18 million exposures in one activity
Author/s Groover, D
Source  Safety + health August 2018

Abstract  We know that safety does not truly improve unless exposure is identified and then controlled, reduced or eliminated. Shrink the pool of exposure and incidents go down. Injury rates can give insight into what’s happening in the organization’s pool of exposure, but the number and severity of incidents are influenced by luck.

Title  Productivity estimation in economic evaluations of occupational health and safety interventions: a systematic review

Author/s  Steel, J et al

Source  Scandinavian journal of work environment & health 2018 44 5

Abstract  Objectives Occupational health and safety (OHS) interventions’ effect on worker productivity is an essential, but complex element of the value of these programs. The trustworthiness of economic evaluation studies, aiming to provide guidance to decision-makers in the field of OHS, depends at least partly on how accurately productivity changes are measured. We aim to review the methods used to estimate productivity changes in recently published economic evaluations of OHS interventions.

Methods  We performed systematic searches of economic evaluations of OHS programs published between 2007 and 2017 and reviewed these studies’ methods to quantify the programs’ impact on worker productivity.

Results  Of the 90 identified studies, 44 used a human capital approach, 17 a friction cost approach, 13 stated productivity in natural units (e.g., a cost-per-absence-day-avoided), 7 made use of compensation expenses, 4 used output-based methods, 4 an “ad hoc” approach, and 1 study did not state its method. Different approaches were combined in 19 studies. Within these methods, we observed a wide diversity in their precise implementation, especially regarding the measurement and valuation of absenteeism and presenteeism.

Conclusions  Productivity is a key element of the economic attractiveness of investing in OHS. Economic evaluation studies of OHS would benefit from more methodological standardization in their approach to quantifying productivity change. Future research should better account for the methodological uncertainty that occurs in estimating it in order to demonstrate the impact that particular choices and approaches to productivity estimation can have on cost-effectiveness results.

WORK STRESS

Title  Clustering of job strain, effort–reward imbalance, and organizational injustice and the risk of work disability: a cohort study

Author/s  Juvani, A

Source  Scandinavian journal of work environment & health 2018 44 5 485-495
doi:10.5271/sjweh.3736

Abstract  Objectives  The aim of this study was to examine the association between co-occurring work stressors and risk of disability pension.

Methods  The work stressors job strain, effort–reward imbalance (ERI), and organizational injustice were measured by a survey in 2008 of 41,862 employees linked to national records of all-cause and cause-specific disability pensions until 2011. Co-occurring work stressors were examined as risk factors of work disability using Cox regression marginal models.

Results  Work stressors were clustered: 50.8% had no work stressors [observed-to-expected ratio (O/E)=1.2], 27.4% were exposed to one stressor (O/E=0.61–0.81), 17.7% to two stressors (O/E=0.91–1.73) and 6.4% to all three stressors (O/E=2.59). During a mean follow-up of 3.1 years, 976 disability pensions were granted. Compared to employees with no work...
stressors, those with (i) co-occurring strain and ERI or (ii) strain, ERI and injustice had a 1.9–2.1-fold [95% confidence interval (CI) 1.7–2.6] increased risk of disability retirement. The corresponding hazard ratios were 1.2 and 1.5 (95% CI 1.0–1.8) for strain and ERI alone. Risk of disability pension from depressive disorders was 4.4–4.7-fold (95% CI 2.4–8.0) for combinations of strain+ERI and strain+ERI+injustice, and 1.9–2.5-fold (95% CI 1.1–4.0) for strain and ERI alone. For musculoskeletal disorders, disability risk was 1.6–1.9-fold (95% CI 1.3–2.3) for strain+ERI and ERI+injustice combinations, and 1.3-fold (95% CI 1.0–1.7) for strain alone. Supplementary analyses with work stressors determined using work-unit aggregates supported these findings.

Conclusions Work stressors tend to cluster in the same individuals. The highest risk of disability pension was observed among those with work stressor combinations strain+ERI or strain+ERI+injustice, rather than for those with single stressors.

Title An interview study of the experiences of firefighters in regard to psychological contract and stressors.

Author/s Duran, Fazeelat et al


Abstract As the first qualitative study of its kind, this study explored firefighters’ beliefs and experiences about the psychological contract between themselves as employees and their employer, workplace stress, stress-management strategies, and their wellbeing. Eleven interviews were conducted with active firefighters from multiple fire stations in the UK. The interviews were recorded and transcribed verbatim. The transcripts were analysed using framework analysis. Five superordinate themes were identified and labelled as ‘Motives’, ‘Mutual obligations’, ‘Stressors and their effects’, ‘Moderators’, and ‘Retention factors’, each of which contained lower level sub-themes. Psychological contract (PC) is a useful construct to measure firefighters’ perceived obligations as their responses reflected multiple facets of PC theory. The current climate of austerity measures appears to be negatively impacting on firefighters in terms of reducing numbers and placing higher task demands on those remaining. Thus, making it very difficult for the UK Fire and Rescue Service (UKFRS) to meet the perceived obligations of their employees. The findings have implications for human resource departments within UKFRS trying to manage the impact of funding cuts and they highlight the potential value of the PC as a construct around which such issues can be explored.

Title Employees’ financial insecurity and health: the underlying role of stress and work–family conflict appraisals

Author/s Odle - Dusseau et al


Abstract Data from two longitudinal samples were utilized to elucidate underlying mechanisms of the well-established relationship between financial insecurity and health outcomes, stemming from the theoretical rationale of conservation of resources and cognitive appraisal theories. Study 1 (n = 80) consisted of low-wage food manufacturing employees working full time, while Study 2 (n = 331) was consisted of a larger, heterogeneous sample of full-time workers representing multiple occupations. Respondents were surveyed on financial insecurity, work-to-family conflict (WFC), stress, and health outcomes at two time periods, 3 months apart. Results across our studies provided support for the direct effects of financial insecurity on WFC and stress. In addition, appraisals of WFC and stress serve as significant mediators of the relationship between financial insecurity and health outcomes, including a significant overall lagged effect across time, and perceived stress accounting for the largest proportion of variance in the lagged relationship among Time 1 financial insecurity and Time 2 health outcomes. Besides support for conservation of resources and cognitive appraisal theories,
practically, our studies suggest that workplace initiatives to reduce financial insecurity could positively influence employees' work–family, stress, and health experiences. Practitioner points: When workers experience financial insecurity, it can have detrimental effects on their health. The effect of financial insecurity on worker health appears to occur because of increased work–family conflict and stress associated with financial insecurity. Direct interventions related to addressing financial insecurity may be challenging, but data suggest there may be a meaningful return-on investment.

**Title**
The role of occupational self-efficacy in mediating the effect of job insecurity on work engagement, satisfaction and general health.

**Author/s**
Guarnaccia, Cinzia et al

**Source**
Current psychology September 2018 37 3 488-497 10 3 4 DOI: 10.1007/s12144-016-9525-0

**Abstract**
This study explores the associations among job insecurity, occupational self-efficacy, work engagement, job satisfaction and health and the mediation role of occupational self-efficacy. Two hundred and forty-one workers, were asked to fill in the Occupational Self-Efficacy Scale, the Utrecht Work Engagement Scale, the Satisfaction Scale of Occupational Stress Inventory and the General Health Questionnaire. Mediation analysis was performed using the bootstrapping method. Job insecurity was negatively related to work engagement, job satisfaction and general health. Occupational self-efficacy mediated the relationship between job insecurity, work engagement, job satisfaction and health on employees in the private and public sectors. The originality of this work is that it shows the effect of job insecurity on engagement, satisfaction and health, and the mediational role of occupational self-efficacy. In a time of economic crisis, when it is not possible to guarantee permanent contracts, Human Resource managers might consider occupational self-efficacy as a resource when planning interventions.

**Title**
Using smart offices to predict occupational stress

**Author/s**
Alberdi, Ane et al

**Source**

**Abstract**
Occupational stress is increasingly present in our society. Usually, it is detected too late, resulting in physical and mental health problems for the worker, as well as economic losses for the companies due to the consequent absenteeism, presenteeism, reduced motivation or staff turnover. Therefore, the development of early stress detection systems that allow individuals to take timely action and prevent irreversible damage is required. To address this need, we investigate a method to analyze changes in physiological and behavioral patterns using unobtrusively and ubiquitously gathered smart office data. The goal of this paper is to build models that predict self-assessed stress and mental workload scores, as well as models that predict workload conditions based on physiological and behavior data. Regression models were built for the prediction of the self-reported stress and mental workload scores from data based on real office work settings. Similarly, classification models were employed to detect workload conditions and change in these conditions. Specific algorithms to deal with class-imbalance (SMOTEBoost and RUSBoost) were also tested. Results confirm the predictability of behavioral changes for stress and mental workload levels, as well as for change in workload conditions. Results also suggest that computer-use patterns together with body posture and movements are the best predictors for this purpose. Moreover, the importance of self-reported scores' standardization and the suitability of the NASA Task Load Index test for workload assessment is noticed. This work contributes significantly towards the development of an unobtrusive and ubiquitous early stress detection system in smart office environments, whose implementation in the industrial environment would make a great beneficial impact on workers’ health status and on the economy of companies.
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**Title** Gallup at work

**Abstract** The growing gig economy presents unique challenges for HR leaders and competitive opportunities for new talent entering the workforce. Discover how your company can put the gig economy to work for you in this edition of Gallup at Work.

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**Abstract** An overview of the latest national work-related injury, disease and fatality statistics.