



Emerging Evidence Alert

March 2019

This Emerging Evidence Alert supports Comcare's strategic focus of working with employees and employers to minimise the impact of harm in the workplace, improve recovery at and return to work, and promote the health benefits of work through good work design. It also provides the latest research evidence to support Comcare's Strategic Research and Innovation group's five areas of importance to Comcare's strategic direction.

- Enabling healthy and safe workplaces
- Enhancing employer capability
- Guiding and supporting mental health
- Fostering work participation
- Adapting to the future of work

The following topics support these areas of strategic importance.

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. Check with your library to see if you have access or may ask for an interlibrary loan.

Emerging Evidence Topics

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BULLYING AND VIOLENCE IN THE WORKPLACE

The [National Day of Action against Bullying and Violence](#) was on Friday 15 March, so this month's theme looks at bullying and violence in the workplace. Workplace aggression directly affects a worker's psychological and physical health, which can impose significant economic and social costs for workers, their family, their organisation and the wider community.

[Safe Work Australia](#) data notes that 37% of workers report being sworn or yelled at in the workplace. Workers in the [emergency sector and healthcare](#) can routinely experience bullying and violence at work.

Bullying and harassment is often under-reported. The publication [Physical and verbal violence against health care workers](#) helps organisations identify and acknowledge workplace violence directed against health care workers from patients and visitors, better prepare staff to handle violence, and more effectively address the consequences. A [Canadian](#) gender-based study on the risk of workplace violence showed women were at an elevated risk to men for almost all types of violence.

A Danish [study](#) showed individuals who had experienced workplace violence had an increased risk of long-term adverse health outcomes such as high number of visits to the general practitioner, outpatient treatment, hospital admittance, antidepressant use, and/or having a mental disorder. These findings call for more attention to implementing preventive as well as rehabilitative strategies to help victims of physical workplace violence to reduce adverse long-term health consequences.

Recognising and addressing bullying or incivility is critical. Management is particularly important in curbing bullying, harassment and violence in the workplace. [Laissez-faire leadership](#) appears to represent a condition where the bullying process can endure and progress. A short article titled; [What if you're the bully?](#) suggests taking a short survey and reflecting on how you can change your behaviour.

The [APSC](#) notes that managers play a key role in [creating a respectful workplace](#) which in turn sets the culture of the organisation. Comcare has a range of resources on [creating mentally healthy workplaces](#) and addressing [bullying in the workplace](#).

Comcare is hosting its next Mental Health Community of Practice event on 30 May 2019. The speakers will discuss the importance of culture and civility in the workplace and how they impact on mental health. Registrations open on 8 April 2019.

Title **Creating a respectful workplace**

Author/s **Australian Public Service Commission**

Source APSC - <https://www.apsc.gov.au/4-creating-respectful-workplace>

Abstract Managers play a key role in setting the culture of the workplace and the team through the behaviours they model, and those they expect of their employees. Positive workplaces are built by consistently respectful behaviour and clear expectations of employees. In APS workplaces, core values and expected conduct at work are codified in the APS Values, Employment Principles and Code of Conduct. [1](#) The Values, Employment Principles and Code define the culture of the APS and codify the attitudes and behaviours that employees are expected to display in their work in order to achieve business outcomes and meet the expectations of government and the community. The Values, Employment Principles and Code influence performance and decisions in everyday work, and define 'the way we do business'.

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Title **Experiencing external workplace violence: differences in indicators between three types of emergency responders**

Author/s van Reemst, Lisa; Fischer, Tamar F. C.

Source *Journal of interpersonal violence* May 2019 34 9 1864-1889. (26p)
DOI: <http://dx.doi.org/10.1177/0886260516657913>

Abstract Police officers, firefighters, and emergency medical workers are at a relatively high risk of experiencing external workplace violence (EWPV), that is, violence initiated by people outside the organization. Based on criminal opportunities theories, the aim of this research was to study to what extent socio-demographic and work characteristics are related to experiencing EWPV. In addition, the aim was to explore how these relations differ between the three types of emergency responders. Data from a workplace violence survey of the Ministry of the Interior and Kingdom Relations of the Netherlands was used, from which emergency medical workers (n = 264), firefighters (n = 255), and police officers (n = 296) were selected. Results indicated that police officers experienced most and firefighters experienced least EWPV. Younger professionals and professionals who have more frequent and risky contact experienced more EWPV. The expectations that males and those with less skills or experience to avoid EWPV experience more EWPV were not convincingly supported. The relationships between characteristics and EWPV, and the explanatory power of the models, differed between types of emergency responders. The studied characteristics best explained variations in EWPV of police officers, and therefore prevention of EWPV by addressing these characteristics will be most successful for police officers. The prediction of EWPV should be improved, for example, by studying the relationship with "attractiveness" or "vulnerability" of the possible victim, such as psychological characteristics of professionals. The study showed that research about indicators and prevention of EWPV should be aimed at separate professions.

Title **Managing bullying in Swedish workplace settings: A concealed and only partially acknowledged problem**

Author/s Strandmark K., Margaretha; Rahm, GullBritt; Rystedt, Ingrid; Nordström, Gun; Wilde-Larsson, Bodil;

Source *Journal of nursing management*, March 2019; 27 2 339-346. (8p)
<http://dx.doi.org/10.1111/jonm.12668>

Abstract Aim: The purpose of this article was to explore workplace routines and strategies for preventing and managing bullying in the context of health and elderly care.
Background: Bullying is a serious problem in workplaces with consequences for the individual, the organisation and the quality of care.
Method: Open-ended interviews were conducted with 12 participants, including managers and specialists within one hospital and three municipalities. The interviews were analysed with qualitative content analysis.
Results: Bullying was often concealed, due to avoidance, unclear definition and lack of direct strategies against bullying. No preventative work focusing on bullying existed. Psychosocial issues were not prioritized at workplace meetings. The supervisor had the formal responsibility to identify, manage and solve the bullying problem. The most common decision to solve the problem was to split the group.
Conclusions: The findings showed that bullying was a concealed problem and was first acknowledged when the problem was acute. Implications for Nursing Management: Crucial strategies to prevent and combat bullying consist of acknowledgement of the problem, transformational leadership, prioritization of psycho-social issues, support of a humanistic value system and work through bullying problems to achieve long-term changes.

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Title **Workplace bullying, the development of job insecurity and the role of laissez-faire leadership: A two-wave moderated mediation study**

Author/s Glambek, Mats; Skogstad, Anders; Einarsen, Ståle

Source *Work & stress* Jul-Sep 2018; 32 3 297-312. (16p)
<http://dx.doi.org/10.1080/02678373.2018.1427815>

Abstract Workplace bullying is increasingly recognised as a risk factor for job loss and exclusion from working life. Consequently, bullying may represent an antecedent of job insecurity, but this notion has not been sufficiently tested using prospective, representative data. In the present study, the association between workplace bullying and job insecurity was therefore investigated using a two-year time lag and a representative sample of Norwegian employees (N = 1775). Employing regression analysis, support for a cross-lagged effect of bullying on stability adjusted job insecurity was found. With respect to explanatory mechanisms, a moderated mediation analysis also revealed that this relationship is mediated by continued exposure to bullying behaviours at T2, and, that the relationship between baseline bullying and continued victimisation at T2 is moderated by laissez-faire leadership (i.e. the enactment of passive-avoidant and non-responsive leadership behaviour). Thus, laissez-faire leadership appears to represent a condition under which the bullying process can endure and progress, and the bullying behaviours associated with such sustained and escalated scenarios seem to be particularly relevant antecedents of job insecurity. These results represent novel contributions to our understanding of workplace bullying and job insecurity, holding important implications for prevention of workplace bullying and alleviation of its negative consequences.

Title **Long-term adverse health outcomes of physical workplace violence: a 7-year population-based follow-up study**

Author/s Friis, Karina; Pihl-Thingvad, Jesper; Larsen, Finn Breinholt; Christiansen, Julie; Lasgaard, Mathias

Source *European journal of work & organizational psychology*. February 2019 28 1101-109. 9p.
DOI:10.1080/1359432X.2018.1548437

Abstract The aim of the present study was to analyse whether physical workplace violence increases the risk of long-term adverse health outcomes (i.e., high number of visits to the general practitioner, outpatient treatment, hospital admittance, antidepressant use, and/or having a mental disorder). The study was based on representative survey data from 2006 and 2010 (entitled "How are you?") merged with register data for a 7-year follow-up period (N = 30,812). To examine if physical workplace violence was a predictor of adverse health outcomes, logistic regression models were conducted for the total follow-up period and for each follow-up year with the different outcome measures as the dependent variables. In the follow-up period, individuals who were exposed to physical workplace violence had a higher number of visits to the general practitioner, had more often received outpatient treatment, and had more often been admitted to hospital than their non-exposed counterparts. Moreover, exposed individuals had higher odds of using antidepressants in the last three follow-up years than did non-exposed individuals. The findings call for heightened attention to securing preventive as well as rehabilitative strategies to help victims of physical workplace violence with the aim of avoiding adverse long-term health consequences.

Title **Examining risk of workplace violence in Canada: A sex/gender-based analysis**

Author/s Lanthier, Stephanie; Bielecky, Amber; Smith, Peter M

Source Annals of work exposures & health, 2018 62 8 1012-1020. (9p)
<https://doi.org/10.1093/annweh/wxy066>

Abstract Objectives Workplace violence (WPV) is a serious issue, resulting in significant negative health outcomes. Understanding sex/gender differences in risk of WPV has important implications for primary prevention activities.
Methods Utilizing two waves of the Canadian General Social Survey on Victimization (N = 27,643), we examined the likelihood of WPV, and sub-categories of WPV, for women relative to men. Using a sex/gender analytical approach, a series of logistic regression models examined how the associations between being a woman and each of the outcomes changed upon adjustment for work and socio-demographic characteristics.
Results After adjustment for work hours, women were at more than twice the risk of WPV compared to men (odds ratio = 2.12, 95% confidence interval 1.52–2.95). Adjustment for work characteristics attenuated, but did not eliminate this risk. Differences in associations were observed across sub-categories of violence, with adjustment for work characteristics attenuating sex/gender differences in physical WPV, but having minimal impact on sex/gender differences in sexual WPV.
Conclusions Work characteristics explain a substantial proportion of the sex/gender differences in risk of physical WPV. However, even after adjustment for work characteristics, women still showed an elevated risk relative to men for almost all types of **violence** (as defined by nature of the violence, sex of the perpetrator, and relationship to the perpetrator) examined in this study. Future investigations should examine why these differences between women and men remain, even within similar occupational contexts.

Title **What if you're the bully? Self-awareness and honest feedback can help you make a change**

Author/s Thompson, Renee

Source *American nurse today* January 2019 14 1 22-25 4p
<https://www.americannursetoday.com/what-if-youre-the-bully/>

Abstract The goal is for each staff member to recognise their disruptive behaviour and change it. This article provides a short survey of some bullying behaviours and suggests self reflection.

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Title **What we know, what we do not know, and what we should and could have known about workplace bullying: An overview of the literature and agenda for future research**

Author/s Nielsen, Morten Birkeland; Einarsen, Ståle Valvatne

Source *Aggression & violent behavior*, September 2018; 42 71-83. (13p)

Abstract Over the last three decades, the scientific and social interest in workplace bullying has accelerated and our understanding of this pervasive and detrimental social problem has advanced considerably in a relatively short amount of time. Workplace bullying is now a phenomenon of global interest, new topics are steadily emerging within the field, and the methodological quality of the studies has become more sophisticated. Building on findings from the ever increasing number of systematic reviews and meta-analyses in this field, the aim of this literature overview was two-folded. In the first part, the aim was to provide a basic overview of what we already know with regard to the nature and content of the bullying phenomenon, its risk-factors and causes, its consequences, and its potential measures and interventions. In the second part, the aim was to address what we do not know and to put forward an agenda for future research within the field. Here, six major knowledge challenges are discussed: a) construct clarification, b) the need for theoretical models, c) causality, d) bullying as a process, e) mediators and moderators, and f) intervention and rehabilitation of victims, perpetrators, and work environments.
Highlights • Narrative review that summarizes the research literature on workplace bullying • Reviews concepts, research topics, and main findings within the field • Discusses the knowledge gaps and important topics for future research • Important methodological issues in research on workplace bullying are highlighted.

Title **Beyond one work day? A daily diary study on causal and reverse effects between experienced workplace incivility and behaving rude towards others**

Author/s Vahle-Hinz, Tim Baethge, Anja Van Dick, Rolf

Source *European journal of work and organizational psychology* 2019 28 2, 272-285, DOI: 10.1080/1359432X.2019.1576633

Abstract In this diary study with $N = 348$ employees, we examine whether the contagion effect of workplace incivility transfers beyond one work day that is whether the experience of workplace incivility is related to showing rude behaviours towards others the next day. Additionally, we examine whether ruminating in the evening of a work day and building an intention for revenge behaviour mediate this relationship, and explore whether a serial mediation process exists where experienced incivility triggers ruminative thoughts, which, in turn, increase the likelihood of intending to act, which transfers into actual rude behaviour the next day. Using a multilevel path analysis, our results confirmed a lagged relationship between workplace incivility one day and rude behaviours towards others the next day. Between-persons' workplace incivility was also related to showing rude behaviour towards others. Neither rumination nor revenge behaviour intent proved to be mediators of this relationship. Additionally, the serial mediation process was not confirmed; however, parts of the process—namely the relationship between experienced workplace incivility and ruminating about work in the evening—received support. Importantly, the reverse relationship (i.e., showing rude behaviour one day leads to experiencing workplace incivility the next) was not supported in our analysis. By adding a new, daily time perspective, our study suggests that participants do not intentionally provoke episodes of incivility, but rather react to others' incivility.

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Title **How long does it last? Prior victimization from workplace bullying moderates the relationship between daily exposure to negative acts and subsequent depressed mood,**

Author/s Øystein Løvik Hoprekstad, Jørn Hetland, Arnold B. Bakker, Olav Kjellevold Olsen, Roar Espevik, Martin Wessel & Ståle Valvatne Einarsen

Source *European journal of work and organizational psychology* 2019 28 2 164-178, DOI: 10.1080/1359432X.2018.1564279

Abstract The aim of the present study was to examine the relationships between daily exposure to negative acts and depressed mood on the same day and on the days following the exposure, and to test the hypothesis that these relationships would be stronger among those who have recently gone through a process of victimization from workplace bullying. The sample comprised 110 naval cadets participating in two different eleven-week tall ship voyages from Northern Europe to North America. Victimization from workplace bullying the last six months was measured one day prior to the voyages. Exposure to negative acts and depressed mood was measured daily during the first 33 consecutive days of the voyages. The results of multilevel modelling indicated that exposure to negative acts was related to higher levels of depressed mood on the same day as the exposure among all cadets, regardless of victimization status. However, exposure to negative acts predicted higher levels of depressed mood one and two days following the exposure among victims only. The theoretical and practical implications of these findings are discussed.

Title **Measuring bullying at work with the short-negative acts questionnaire: identification of targets and criterion validity**

Author/s Guy Notelaers, Beatrice Van der Heijden, Helge Hoel & Ståle Einarsen

Source *Work & stress* 2019 33 1 58-75 DOI: 10.1080/02678373.2018.1457736

Abstract The current study aims to investigate the psychometric properties of the abbreviated version of the Negative Acts Questionnaire, also known as the SNAQ (Short Negative Acts Questionnaire). A Latent Class analysis of 7,790 observation from 38 Belgian organizations demonstrated that four latent classes of respondents can be distinguished in our data: 'not bullied', 'work-related criticism', 'occasionally bullied', and 'severe targets'. Like with the original full version, both occasionally bullied and the severe targets align with the theoretical definition of workplace bullying as exposure to repeated and systematic negative behavior. The extent to which these clusters report bullying does not only account for their difference, yet also the type of behavior sets the two categories apart. Whereas severe targets had a high probability to report social isolation, this type of social behaviors was more likely to be absent among the occasionally bullied group. The results from the HSD post-hoc test demonstrated that both occasionally bullied and severe targets experienced deteriorating health, more sickness absenteeism and lower for job satisfaction than the two other latent class clusters. Hence, the SNAQ seems to be a psychometrically sound and easy to use instrument to identify targets exposed to varying degrees of workplace bullying.

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AGEING WORKFORCE

Title **Adult-life occupational exposures: enriched environment or a stressor for the aging brain?**

Author/s Burzynska, AZ Jiao, Y Ganster, DC

Source *Work, aging and retirement* January 2019 5 1 18 3–23, <https://doi.org/10.1093/workar/way007>

Abstract Demographic changes and economic demands of aging populations are raising the age of retirement. It is common knowledge that one's occupation is associated with socioeconomic status, and also has a significant impact on physical and mental health. However, research on the long-term effects of employment on cognition and brain health in old age is still rare. Understanding occupational factors shaping our brains is necessary to develop interventions at the workplace, aimed at optimizing neurocognitive outcomes in old age. This review outlines the emerging empirical research on the relationships between occupational characteristics and cognitive and brain aging. We propose the "brain aging: occupational stimulation and stress" (BOSS) model that outlines the long-term interplay of antiaging (occupational stimulation or environmental enrichment) and proaging factors (occupational stress) on the development and aging of the adult mind and brain. The BOSS model outlines the mechanisms of the employment–brain relationships that include immune system, cortisol responsivity, neurotrophins, hypertension, and sleep quality. Existing at the intersection of organizational psychology, developmental sciences, and neuroscience, the BOSS model offers a framework for future "occupational neuroscience" research. We argue that decisions on retirement age should be viewed not only from an economic, but also from a public health perspective. We conclude that occupational activities need to be acknowledged as an important factor in lifespan cognitive and brain development.

Title **Is there a relationship between working hours and hypertension? Evidence from the United States**

Author/s Guner, Umit

Source *Work* 2019 62 2 279-285, 2019 DOI: 10.3233/WOR-192862

Abstract Background: Previous studies find conflicted results on the relationship between long working hours and hypertension. Establishing a consensus for the direction of the relationship, more research is needed.

Objectives: Although the European Union's Working Time Directive limits weekly working hours, no such similar restriction exists in the United States. This leads to the important question of which is a better policy. This study bridges a gap in the literature by examining the relationship between working hours and having hypertension among older workers in the United States. METHODS: We applied the Cox regression and probit methods to panel data taken from the Health and Retirement Survey (HRS.)

Weblink Results: We found that an increase in a person's working hours reduces the probability of having high blood pressure for male and female workers.

Conclusion: This study's findings may raise questions about the need for initiatives in the European Union and other countries that regulate the length of work schedules.

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Title **Using the Work Ability Index to identify workplace hazards**

Author/s Rothmore, P Gray

Source *Work*, 2019 62 2 251-259, 2019 DOI: 10.3233/WOR-192860

Abstract Background: The workforce is ageing. While those in relatively sedentary occupations may be largely unaffected, for those employed in more physically demanding occupations, and the organizations who employ them, this poses a challenge.
Objective: In this cross-sectional survey of outdoor council workers in South Australia we sought to address the challenge of an ageing workforce demographic by examining the association between a range of workplace risks and hazards with work ability scores.
Participants: 155 workers from five groups of outdoor workers in a large metropolitan council participated in the research.
Methods: Questionnaires were administered during staff meetings. The survey instrument included questions on demographic and employment characteristics, physical and psychosocial risk factors and the Work Ability Index.
Results: Those with excellent or good work ability scores comprised 43% of workers each. Those categorized as having moderate work ability scores comprised 14% of workers. There were no workers with poor work ability scores. Associations with work ability scores were found for age, pain and discomfort, perceptions of health and safety at work, as well as a range of psychosocial and physical risk factors.
Conclusions: The results confirm a link between work ability and a range of physical and psychosocial risk factors, which if addressed, may improve the longevity of the workforce

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CASE MANAGEMENT

Title **Acute care and workers' compensation case managers: A necessary alliance**

Author/s Fraser, K

Source *Professional case management*: [March/April 2019 24 2 90–92](#) doi: 10.1097/NCM.0000000000000352

Abstract As professional case managers, we know that there are essential skills case managers must have in order to have successful transitions of care. Some of those requirements include the case manager's ability to:

- Coordinate medical and behavioral interventions;
- Have a professional, yet empathic demeanor;
- Collaborate and advocate with all stakeholders to develop a care plan;
- Focus on patient-centered autonomy and assist the patient in defining goals; and
- Have meaningful communication with all stakeholders

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CHRONIC HEALTH ISSUES

- Title** **Relations between psychosocial job characteristics and work ability in employees with chronic headaches**
- Author/s** van der Doef, M.P. & Schelvis, R.M.C.
- Source** *Journal of occupational rehabilitation* 2019 29: 119. <https://doi.org/10.1007/s10926-018-9769-7>
- Abstract** Purpose The aim of the study was to determine (a) to which extent job demands and job resources predict work ability in employees with chronic headaches, and (b) whether work ability in these employees is more hampered by high demands and more enhanced by resources than in employees without chronic disease.
Methods All employees with chronic headaches (n = 593) and without chronic disease (n = 13,742) were selected from The Netherlands Working Conditions Survey conducted in 2013. This survey assessed amongst others job characteristics and various indicators of work ability, i.e. sick leave, employability, work engagement, and emotional exhaustion. Hierarchical regression analyses were conducted for employees with chronic headaches and compared to employees without chronic disease, controlling for age, gender and educational level.
Results In employees with chronic headaches higher quantitative and emotional demands contributed to higher emotional exhaustion, and higher emotional demands to higher sick leave. Higher cognitive demands were however associated with higher work engagement. Higher autonomy was related to higher employability and lower emotional exhaustion. Higher supervisor and colleague support was associated with higher employability, higher engagement and lower emotional exhaustion. Higher supervisor support was associated with lower sick leave. Supervisor support emerged as a stronger predictor for emotional exhaustion in the employees with chronic headaches than in the employees without chronic disease.
Conclusions Job demands and job resources are important for work ability in employees with chronic headaches. Furthermore, results suggest that these employees benefit more strongly from supervisor support than employees without chronic disease.
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HEALTH AND WELLBEING

- Title** **Occupational health & wellbeing : workplace wellbeing news and guidance from Personnel Today**
- Source** *Occupational health & wellbeing : workplace wellbeing news and guidance* March 2019
- Abstract** This issue looks at chronic illness, prevention is better than cure, mental health, fit for work and sickness absence.
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Title **The job demands-resources model: A meta-analytic review of longitudinal studies**

Author/s Lesener, T Gusy, B Wolter, C

Source *Work & stress* 2019 33 1 76-103 DOI: 10.1080/02678373.2018.1529065

Abstract The job demands-resources (JD-R) model is an influential framework to understand how job characteristics foster employee well-being. Differing from the cross-sectional focus of most JD-R model reviews, this meta-analytic review uses longitudinal evidence to validate the essential assumptions within the JD-R model. We highlight two aspects: (1) The assessment of the methodological quality of the available longitudinal studies, and (2) the examination of the essential assumptions – the impact of job characteristics on well-being, and vice-versa – with meta-analytic structural equation modelling (metaSEM). We included 74 studies and evaluated their quality. Eighteen studies suffered from serious methodological shortcomings, whereas 29 studies (39%) were considered high-quality studies. Our meta-analytic structural equation models confirmed the essential assumptions simultaneously. The quality of the studies also had an influence on the goodness-of-fit indices. The models with reciprocal assumptions between job characteristics and well-being fitted the data best. The findings of this meta-analytic review suggest that the JD-R model is an excellent theoretical basis to assess employee well-being for a broad range of organisations. However, more research is needed to clarify the reciprocal relationships between job characteristics and employee well-being, as well as the different influences of challenging and hindering job demands on work engagement.

Title **Increasing employees' health by workplace physical activity counseling: the mediating role of step-based physical activity behavior change**

Author/s Arrogi, A et al

Source *Journal of physical activity and health* March 2019 16 3 205-213
<https://doi.org/10.1123/jpah.2018-0148>

Abstract Background: This study evaluated the effects of a 3-month workplace physical activity (PA) intervention on employees' health-related fitness and well-being. Moreover, mediational pathways were examined.
Methods: A longitudinal, quasi-experimental trial was evaluated in Belgian employees. The intervention group (IG: n = 246) received 3-months individualized, tailored PA counseling, consisting of face-to-face counseling and follow-up e-mail and telephone contacts. The reference group (n = 54) received no PA counseling. Outcome measures (assessed at baseline, 3 mo [short term], and 9 mo [long term]) included body composition, cardiorespiratory fitness, well-being, and step-based PA. Results: With no changes in the reference group, the IG showed short-term improvements in body mass index (-0.24 kg/m², *P* < .001), body fat (-0.88%, *P* < .001), waist circumference (-1.47 cm, *P* < .001), and muscle percentage (+0.47%, *P* < .001). Moreover, with respect to cardiorespiratory fitness, IG participants improved on perceived exertion, both in the short term (-0.91, *P* < .001) and long term (-0.83, *P* < .001). Furthermore, perceived physical well-being increased in the IG, both in the short term (+0.57, *P* < .001) and long term (+0.57, *P* < .001). The observed intervention effects on body composition, perceived exertion, and well-being were mediated by (increases in) step-based PA.
Conclusions: Workplace PA counseling programs have the potential to enhance employees' health-related fitness and well-being. Importantly, step-based PA behavior change was found to contribute to the postintervention improvements.

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MANAGEMENT AND LEADERSHIP

Title **Proactive personality and proactive behaviour: Perspectives on person–situation interactions**

Author/s McCormick, BW et al

Source *Journal of occupational & organizational psychology* March 2019 92 1 30-51 <https://doi.org/10.1111/joop.12234>

Abstract We conducted a field survey of leaders and their followers to examine factors that moderate the relationship between employee proactive personality and proactive behaviour. As hypothesized, random coefficient modelling analysis showed that two situational factors – transformational leadership and a climate of innovation and flexibility – moderated the relationship between employee proactive personality and proactive behaviour. Conceptually, we draw from situational strength theory to predict the pattern of these interactions. Our findings indicated that organizations desiring proactive employee behaviour would be well advised to take one of three courses of action: select employees with proactive personality who will generally behave proactively regardless of the situation; develop transformational leaders who will motivate, inspire, and support proactive employee behaviour; or cultivate a climate of innovation and flexibility which will create a strong situation that fosters proactivity regardless of employee individual differences.

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Practitioner points:

The modern workplace often demands that employees behave proactively, and our research shows that there are multiple strategies organizations can implement to facilitate employee proactive behaviour.

In particular, our study reveals three ways for organizations to facilitate proactive employee behaviour: (1) recruit and select employees who are high in proactive personality, who will be more apt to naturally engage in proactive behaviour; (2) hire or train leaders to be transformational since transformational leaders will bring about proactive employee behaviour; or (3) create a climate that rewards innovation and flexibility as such a climate will encourage proactive employee behaviour.

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Title **Strengthening personal growth: The effects of a strengths intervention on personal growth initiative**

Author/s Van Woerkom, M Meyers, MC

Source *Journal of occupational & organizational psychology* March 2019 92 1 30 98-121
<https://doi.org/10.1111/joop.12240>

Abstract Personal growth is not only a central individual need but also a key requirement for organizational success. Nevertheless, workplace interventions aimed at stimulating the personal growth of employees are still scarce. In this study, we investigated the effectiveness of an intervention that aimed at the identification, development, and use of employee strengths in stimulating personal growth initiative. We conducted a field experiment with a sample of 84 educational professionals who were either assigned to a strengths intervention or a wait-list control group. In a 1-month follow-up study, we found that the intervention had a direct effect on general self-efficacy (GSE) and an indirect effect on personal growth initiative. Moreover, in line with plasticity theory we found that the intervention was especially effective for participants with low to medium initial levels of GSE. We conclude that a strengths intervention may provide a brief and effective tool for organizations that aim for self-directed learning among their staff, in particular when offered to employees who lack confidence in their own abilities.

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Practitioner points:

In a 1 month follow-up study, we found that a strengths intervention had a positive direct effect on general self-efficacy and an indirect effect on personal growth initiative.

In line with plasticity theory, we found that the strengths intervention was especially effective for participants with low to medium initial levels of general self-efficacy.

MUSCULOSKELETAL ISSUES

Title **Correlations between pain in the back and neck/upper limb in the European Working Conditions Survey**

Author/s Rizzello, E Ntani, G Coggon, D

Source *BMC musculoskeletal disorders* 2019 20:38 <https://doi.org/10.1186/s12891-019-2404-8>

Abstract

Background: Recent research has suggested that wide international variation in the prevalence of disabling regional pain among working populations is driven largely by factors predisposing to musculoskeletal pain in general and not specific to individual anatomical sites. We sought to confirm this finding, using data from an independent source.

Methods: Using data from the fifth (2010) and sixth (2015) European Working Conditions Surveys, we explored correlations between the one-year prevalence of pain in the back and neck/upper limb among people of working age across 33 European countries, and between changes in pain prevalence at the two anatomical sites from 2010 to 2015.

Results: Each survey recruited ≥ 1000 participants per country, response rates ranging from 11 to 78%. In 2010, the estimated one-year population prevalence of back pain ranged from 23% in Ireland to 66% in Portugal, and that of pain in the neck/upper limb from 25% in Ireland to 69% in Finland, the prevalence of pain at the two anatomical sites being correlated across the 33 countries ($r = 0.42$). A similar pattern was apparent in 2015. For back pain, the percentage change in prevalence from 2010 to 2015 varied from -41.4% (Hungary) to $+29.6\%$ (Ireland), with a mean across countries of -3.0% . For neck/upper limb pain, the variation was from -41.0% (Hungary) to $+44.1\%$ (Romania), with an average of -0.1% . There was a strong correlation across countries in the change in pain prevalence at the two anatomical sites ($r = 0.85$).

Conclusions: Our findings accord with the hypothesis that international variation in common pain complaints is importantly driven by factors that predispose to musculoskeletal pain in general.

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Title **Development of prediction models for sick leave due to musculoskeletal disorder**

Author/s Bosman, L.C., Roelen, C.A.M., Twisk, J.W.R. et al.

Source *Journal of occupational rehabilitation* January 2019 1-8 <https://doi.org/10.1007/s10926-018-09825-y>

Abstract Purpose The aim of this study was to develop prediction models to determine the risk of sick leave due to musculoskeletal disorders (MSD) in non-sick listed employees and to compare models for short-term (i.e., 3 months) and long-term (i.e., 12 months) predictions. Methods Cohort study including 49,158 Dutch employees who participated in occupational health checks between 2009 and 2015 and sick leave data recorded during 12 months follow-up. Prediction models for MSD sick leave within 3 and 12 months after the health check were developed with logistic regression analysis using routinely assessed health check variables. The performance of the prediction models was evaluated with explained variance (Nagelkerke's R-square), calibration (Hosmer–Lemeshow test) and discrimination (area under the receiver operating characteristic curve, AUC) measures. Results A total of 376 (0.8%) and 1193 (2.4%) employees had MSD sick leave within 3 and 12 months after the health check. The prediction models included similar predictor variables (educational level, musculoskeletal complaints, distress, supervisor social support, work-home interference, intrinsic motivation, development opportunities, and work pace). The explained variances were 7.6% and 8.8% for the model with 3 and 12 months follow-up, respectively. Both prediction models showed adequate calibration and discriminated between employees with and without MSD sick leave 3 months (AUC = 0.761; Interquartile range [IQR] 0.759–0.763) and 12 months (AUC = 0.740; IQR 0.738–0.741) after the health check. Conclusion The prediction models could be used to determine the risk of MSD sick leave in non-sick listed employees and invite them to preventive consultations with occupational health providers.

Title **Functional limitations and employment among disability benefit recipients with musculoskeletal conditions: A mediation analysis**

Author/s Morris, ZA Rennane, S

Source *Journal of vocational rehabilitation* 2019 50 1 49-59, 2019 DOI: 10.3233/JVR-180987

Abstract Background: There is a growing interest among policymakers in improving the delivery of vocational rehabilitation programs to Social Security Disability (SSD) beneficiaries. To advance these efforts, policy makers must understand what prevents beneficiaries from returning to work. Objective: This paper investigates the relationship between functional limitations and employment among SSD beneficiaries with musculoskeletal (MSK) conditions. Drawing from the ICF model of disability, we hypothesize that functional limitations mediate the pathway between the musculoskeletal condition and employment. Methods: We use a nationally representative sample of SSD beneficiaries from the National Beneficiary Survey. We explore the relationships between health conditions, functional limitations, and employment in a multivariate mediation analysis. Results: Mediation effects are statistically significant at the 5 percent level. We estimate that pain mediates over 50 percent of the direct effect of an MSK condition. Lower body, mobility, and upper body limitations mediate 22, 18, and 10 percent of the direct effect of an MSK condition, respectively. Conclusions: Functional limitations, in particular experiencing moderate to severe pain, mediate the relationship between the MSK condition and employment among SSD beneficiaries. Addressing these functional limitations may be of first order importance in enabling employment for the MSK population

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Title **Injuries in Australian Army full-time and part-time personnel undertaking basic training**

Author/s Schram, Ben Pope Rodney Orr, Robin

Source *BMC musculoskeletal disorders* 2019 20:6
<https://doi.org/10.1186/s12891-018-2390-2>

Abstract

Background: Musculoskeletal injuries are a problem in military personnel as they detract from force readiness and may prevent deployment. Injuries occur during basic training at three times the rate observed in post-training military service and more commonly in part time (PT) when compared to full time (FT) army personnel. The purpose of this study was to examine differences in rates and patterns of reported injuries between full time (FT) and part time (PT) personnel undertaking army basic training.

Methods: A retrospective cohort study was conducted to determine and compare rates and patterns of injuries which occurred during basic training in PT and FT personnel. Injury data from the period 01 July 2012 to 30 June 2014 was obtained in a non-identifiable format from the Workplace Health, Safety, Compensation and Reporting (WHSCAR) database of the Australian Department of Defence. Analysis included descriptive statistics and the calculation of injury rates and injury rate ratios.

Results: A total of 1385 injuries were reported across FT and PT cohorts, with an injury rate ratio for FT:PT of 1.06 [0.80–1.40], when accounting for exposure. In FT personnel, 1192 (90%) were Minor Personal Injuries (MPIs) and 43 (3.2%) Serious Personal Injuries (SPIs). In PT personnel, 147 (94.8%) were MPIs and three (1.9%) SPIs. In both FT and PT personnel, injuries most commonly: occurred during Physical Training (41.7% FT, 515 MPIs, 10 SPIs, 32% PT. 48 MPIs, 1 SPI); affected the knee (FT 41.7% 159 MPIs, 7 SPIs, PT 36.0%, 22 MPIs, 0 SPIs); involved soft tissue damage (FT 60.9%, 744 MPIs, 8 SPIs, PT 69.3%, 103 MPIs, 1 SPI); and were due to muscular stress (FT 41.7%, 509 MPIs, 6 SPIs, PT 36%, 54 MPIs, 0 SPIs).

Conclusions: FT and PT recruits exhibited similar injury profiles, with mechanisms, sites and types of injuries in agreement with other research. Given these similarities, effective interventions that reduce injury risks in either population will likely benefit both.

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Title **Integrating Mobile-health, health coaching, and physical activity to reduce the burden of chronic low back pain trial (IMPACT): a pilot randomised controlled trial**

Author/s Amorin, AB et al

Source *BMC musculoskeletal disorders* February 2019 20 71 <https://doi.org/10.1186/s12891-019-2454-y>

Abstract Background: Low back pain is one of the most prevalent musculoskeletal conditions and the highest contributor to disability in the world. It is characterized by frequent relapses leading to additional care-seeking. Engagement in leisure physical activity is associated with lower recurrences and better prognosis and potentially reduced care-seeking. Our aim was to investigate the feasibility and preliminary efficacy of a patient-centred physical activity intervention, supported by health coaching and mobile health, to reduce care-seeking, pain and disability in patients with chronic low back pain after treatment discharge.

Methods: We conducted a pilot randomised controlled trial with blinded outcome assessment. Sixty-eight participants were recruited from four public outpatient physiotherapy departments and the general community in Sydney. The intervention group received a physical activity information booklet, plus one face-to-face and 12 telephone-based health coaching sessions. The intervention was supported by an internet-based application and an activity tracker (*Fitbit*). Control group (standard care) received the physical activity information booklet and advice to stay active. Feasibility measures included recruitment rate, intervention compliance, data completeness, and participant satisfaction. Primary outcomes were care-seeking, pain levels and activity limitation. Outcomes were assessed at baseline, 6-month follow-up and weekly for 6 months.

Results: Ninety potential participants were invited over 15 months, with 68 agreeing to take part (75%). Overall, 903 weekly questionnaires were answered by participants from a total of 1107 sent (89%). Participants were largely satisfied with the intervention (mean = 8.7 out of 10 on satisfaction scale). Intervention group participants had a 38% reduced rate of care-seeking (Incidence Rate Ratio (IRR): 0.62, 95% CI: 0.32 to 1.18, $p = 0.14$, using multilevel mixed-effects Poisson regression analysis) compared to standard care, although none of the estimates was statistically significant. No between groups differences were found for pain levels or activity limitation.

Conclusion: The health coaching physical activity approach trialed here is feasible and well accepted by participants and may reduce care-seeking in patients with low back pain after treatment discharge, although further evaluation with an adequately powered trial is needed.

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Title **Musculoskeletal conditions and comorbidity in Australia**

Author/s AIHW

Source AIHW February 2019

Abstract Most people with a musculoskeletal condition, such as arthritis or back pain, also have at least one other chronic disease. This report shows that almost 4 in 5 (79%) people with arthritis and 2 in 3 (65%) people with back pain and problems had at least 1 other chronic condition. More than half (54%) the hospitalisations for musculoskeletal conditions involved at least 1 other chronic condition.

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Title **Test–retest reliability, agreement and responsiveness of productivity loss (iPCQ-VR) and healthcare utilization (TiCP-VR) questionnaires for sick workers with chronic musculoskeletal pain**

Author/s Beemster, T.T., van Velzen, J.M., van Bennekom, C.A.M. et al.

Source *Journal of occupational rehabilitation* 2019 29 91. <https://doi.org/10.1007/s10926-018-9767-9>

Abstract Purpose: The purpose of this study was to assess test–retest reliability, agreement, and responsiveness of questionnaires on productivity loss (iPCQ-VR) and healthcare utilization (TiCP-VR) for sick-listed workers with chronic musculoskeletal pain who were referred to vocational rehabilitation. Methods Test–retest reliability and agreement was assessed with a 2-week interval. Responsiveness was assessed at discharge after a 15-week vocational rehabilitation (VR) program. Data was obtained from six Dutch VR centers. Test–retest reliability was determined with intraclass correlation coefficient (ICC) and Cohen’s kappa. Agreement was determined by Standard Error of Measurement (SEM), smallest detectable changes (on group and individual level), and percentage observed, positive and negative agreement. Responsiveness was determined with area under the curve (AUC) obtained from receiver operation characteristic (ROC). Results A sample of 52 participants on test–retest reliability and agreement, and a sample of 223 on responsiveness were included in the analysis. Productivity loss (iPCQ-VR): ICCs ranged from 0.52 to 0.90, kappa ranged from 0.42 to 0.96, and AUC ranged from 0.55 to 0.86. Healthcare utilization (TiCP-VR): ICC was 0.81, and kappa values of the single healthcare utilization items ranged from 0.11 to 1.00. Conclusions The iPCQ-VR showed good measurement properties on working status, number of hours working per week and long-term sick leave, and low measurement properties on short-term sick leave and presenteeism. The TiCP-VR showed adequate reliability on all healthcare utilization items together and medication use, but showed low measurement properties on the single healthcare utilization items.

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OCCUPATIONAL ISSUES

Title **Affecting patients with work-related problems by educational training of their GPs: a cost-effectiveness study**

Author/s de Kock, C et al

Source *BMC family practice* 2019 20 38 <https://doi.org/10.1186/s12875-019-0924-9>

Abstract

Background: Assessing the cost effectiveness of training aimed at increasing general practitioners' (GP) work awareness and patients' work-related self-efficacy and quality of life. **Methods:** A cluster randomized controlled trial in twenty-six GP practices in the southeast of the Netherlands with 32 participating GPs. GPs working in an intervention group practice received training and GPs working in a control group practice delivered usual care. The training intervention consisted of lectures and workshops aimed at increasing GPs' work awareness and more proactive counseling for patients with work-related problems (WRP). Subjects were working age patients with paid work for at least 12 h per week, who visited one of the participating GPs during the study period. As outcome measures we used the Return to Work Self Efficacy scale to assess patients' work-related self-efficacy and the Euroqol to assess quality of life. We also measured health care costs and productivity costs. With a 4-item questionnaire we asked patients to assess their GPs' work awareness. Data were collected at baseline, after 6 and 12 months.

Results: Data of 280 patients could be analyzed. The patient related outcomes did not improve after GP training. The change in GP work awareness and the overall mean cost difference (of €770) in favor of the intervention group were not significant.

Conclusions: The training intervention presented in this paper was not cost-effective. Training which is further personalized and targeted at high risk groups with respect to WRP, is more likely to be cost effective.

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Title **Complementary variable- and person-centred approaches to the dimensionality of work engagement: a longitudinal investigation**

Nicolas Gillet, Gaëtane Caesens, Alexandre J. S. Morin & Florence Stinglhamber

Author/s

Source *European journal of work and organizational psychology* 2019 28 2 239-258, DOI: 10.1080/1359432X.2019.1575364

Abstract

This study illustrates complementary variable- and person-centred approaches to the investigation of the underlying dimensionality of the work engagement construct. A sample of 730 participants completed a questionnaire twice across a four-month period. The results showed that employees' ratings of their work engagement simultaneously reflected a global overarching work engagement construct, which co-existed with three specific dimensions (vigour, dedication, and absorption). Relying on factor scores from this initial measurement model, the present study examined latent profiles of employees defined based on their global (work engagement) and specific (vigour, dedication, and absorption) levels of work engagement. The results revealed five distinct work engagement profiles, which proved to be fully identical, and highly stable, across the two time points. These profiles characterized disengaged-vigorous, normative, totally disengaged, vigorously absorbed, and engaged yet distanced employees. These profiles were also showed to be meaningfully related to employees' levels of stress, intentions to leave the organization, health, and job satisfaction.

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Title **Development and test of a model of interdisciplinary competencies**

Author/s Claus, AM Wiese, BS

Source *European journal of work and organizational psychology* 2019 28 2 191-205 DOI: 10.1080/1359432X.2019.1567491

Abstract Interdisciplinary work offers both innovative potential and challenges in collaboration. The present paper summarizes three studies intended to foster a psychological, competency-focused understanding of interdisciplinary work. In a qualitative interview study (Study 1) with expert practitioners of interdisciplinarity, we used the critical incident technique to explore which individual competencies support interdisciplinary collaborations and improve innovative outcomes. Focusing on competencies specific to interdisciplinarity, we derived a four-dimensional model. In Study 2, we tested the model dimensions (1) *initiative for exchange*, (2) *target group-specific communication*, (3) *knowledge integration*, and (4) *reflection* in a quantitative survey study among $N = 315$ employees who were experienced in interdisciplinary work using exploratory structural equation modelling. Finally, in Study 3, we studied the convergent and divergent validity of interdisciplinary competencies as well as their role in predicting team outcomes. Here, a dyadic sample of $N = 448$ target persons and $N = 153$ interdisciplinary colleagues were surveyed. We discuss possible applications for the new model of interdisciplinary competencies and the developed self-report instrument.

Title **Frequent attenders in occupational health primary care: A cross-sectional study**

Author/s Reho, TTM et al

Source *Scandinavian journal of public health* 2019 47 1 28-36
<https://doi.org/10.1177/1403494818777436>

Abstract **Aims:** This study characterizes frequent attenders in primary care provided by occupational health services (OHS) in Finland.
Methods: This is a nationwide cross-sectional study using medical record data from an OHS provider in 2015. Frequent attenders were defined as persons who were within the top decile of annual visits to healthcare professionals (frequent attender 10%, FA10) at any of the OHS's 37 stations. FA10s within this study consulted the OHS primary care unit eight or more times during 2015. We used logistic regression to analyse factors associated with frequent attendance in OHS primary care. The independent variables were age, gender, employer size and industry, health professionals visited and diagnoses given during visits to the OHS. The dependent variable was belonging to the FA10 group.
Results: Altogether 31,960 patients met the inclusion criteria and were included in the study. The FA10 group included 3617 patients, who conducted 36% of visits to healthcare professionals. The findings indicate that working within the manufacturing industry, health and social services, or public administration, and being employed in medium or large companies, are associated with frequent attendance. Frequent attendance was also associated with being female, diagnoses of the musculoskeletal system, or mental and behavioral disorders. In particular, depressive episodes and anxiety were associated with FA10s.
Conclusions: This research characterized FA10 clients at a Finnish OHS. Illnesses of the musculoskeletal system and mental and behavioral disorders were accentuated among FA10s. The stability of the FA10 group, along with their sickness absences and work disabilities, should be investigated further.

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Title **Organizational change and employee mental health: A prospective multilevel study of the associations between organizational changes and clinically relevant mental distress**

Author/s Flovik, L Knardahl, S Christensen, JO

Source *Scandinavian journal of work and environmental health* 2019 45 2_134-145 doi: 10.5271/sjweh.3777

Abstract **Objective** The aim of the present paper was to elucidate the relationship between exposure to separate, multiple or repeated organizational change at both individual- and work-unit level and subsequent clinically relevant mental distress amongst employees two years after change had taken place.
Methods A full panel, prospective design was utilized. Data were collected at two time-points two years apart, by self-administered, online questionnaires. Organizational change was measured by six items pertaining to separate types of change. Mental distress was measured using HSCL-10, with cut-off set to ≥ 1.85 to identify clinically relevant distress. Baseline sample consisted of 7985 respondents, of whom 5297 participated at follow-up. A multilevel analytic strategy was chosen as data were nested within work-units. Effects associated with exposure to organizational change at both individual- and work-unit level were estimated.
Results Separate change: At the individual level, company reorganization [odds ratio (OR) 1.29, 95% confidence interval (CI) 1.01–1.65], downsizing (1.51, 95% CI 1.12–2.03) and layoffs (OR 1.46, 95% CI 1.01–2.12) were prospectively associated with mental distress. At work-unit level, company reorganization (OR 1.46, 95% CI 1.04–2.04) was associated with mental distress, but the statistically significant association diminished when adjusting for the work factors job control, job demands and support. Multiple changes: At the individual level, exposure to multiple organizational changes at baseline were associated with mental distress at follow-up (OR 1.75, 95% CI 1.28–2.38). Repeated change: At the individual level, exposure to repeated organizational change was associated with mental distress at follow-up (OR 1.84, 95% CI 1.29–2.63).
Conclusions Exposure to organizational changes at the individual level indicated an elevated risk of subsequent clinically relevant mental distress following both separate, multiple and repeated organizational changes. These associations were also present at work-unit level, but diminished when adjusting for certain work factors, indicating a possible mediating effect.

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Title **Professionals without a profession: Occupational safety and health professionals in Denmark**

Author/s Uhrenholdt Madsen, et al

Source *Safety science* March 2019 113 356-361 <https://doi.org/10.1016/j.ssci.2018.12.010>

Abstract **Highlights :**

- There is not a single health and safety profession in Denmark.
- The field of professional actors are characterized by multidisciplinary and heterogeneity.
- There is a distinction between 'institutionally close' and 'institutionally distant' actors.
- The tasks of the professionals are either 'operational', 'systematizing' or 'processual'.

In this essay we describe the development of health and safety professionals in Denmark. We show how the historical particularities of the so-called 'Danish model', compromises between various health and safety stakeholders, and a lack of pure health and safety educations led to the establishment of an occupational group of professionals characterized by heterogeneity in backgrounds and multidisciplinary in approaches and methods. Then we discuss how recent tendencies to the mainstreaming of enterprises' health and safety efforts have challenged the composition of the health and safety professionals, and made other types of professionals competitors in terms of solving health and safety issues. In the essay we propose a conceptual model that combines insights from new institutional theory on fields and knowledge on the tasks of health and safety professionals. In this way the model helps us illustrate the relationship between health and safety professionals and their competitors in the health and safety work within Danish enterprises. Finally we discuss if and how a further professionalization could take place in the Danish context.

Title **What is it like for a middle manager to take safety into account? Practices and challenges**

Author/s Callari, TC

Source *Safety science* March 2019 113 19-29 <https://doi.org/10.1016/j.ssci.2018.10.025>

Abstract

Highlights

- Middle managers (MMs) play an important role in aviation safety.
- MMs' safety-related practices involve influencing others, making decisions and managing information.
- Influencing others includes regular collaboration and exchanges with stakeholders.
- For their decision making, MMs tend to involve people from different horizons and background.
- MMs rely on a variety of sources and types of information

Aviation today is seen as a very safe industry, yet recent accidents have shown that vulnerabilities still exist. The literature has often drawn attention to the role played by top managers/CEO in running their businesses profitably, and at the same time keeping them safe from threats. Research has also investigated the way people at the sharp-end of organisations are 'mindful' of the possible threats that can occur in their day-to-day activities, and how they can anticipate (most of) them. But what about the role played by middle managers in ensuring safety in every organisational operation? Even if researchers now agree that middle managers' actions are a valuable asset for organisations and central to pursuing key organisational outcomes, very little is known about how middle managers take safety into account in their daily operations, and the challenges they face. This paper reports on the safety-related practices and challenges of middle managers of the civil aviation industry. Within the Future Sky Safety project, over a two-year research activity, 48 middle managers from a range of aviation organisations agreed to talk about the strategies and actions they put in place on a routine basis, to embed safety in the daily operations. Methodologically, semi-structured interviews were conducted and the qualitative content analysis (QCA) method was used to make sense of the raw material, through a data-driven coding frame. The findings of this research suggest that the practices middle managers identify as central in relation to their role in the management of safety can be grouped into three high-level categories: (1) making decisions, (2) influencing key stakeholders to get the job done, and (3) managing information. This research adds knowledge in relation to the middle managers' role in the management of safety, in particular shedding light on the competency that middle managers from the civil aviation industry rely on to get the job done when it comes to contributing to safety.

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Title **When patients' invisible work becomes visible: non-adherence and the routine task of pill-taking**

Author/s Huyard, C et al

Source *Sociology of health & illness* 2019 41 1 5-19 <https://doi.org/10.1111/1467-9566.12806>

Abstract

While the biographical dimensions of chronic illness have been well researched, the concrete dimensions of patients' work have not been as thoroughly investigated as yet. With the growing concern for self-management, such research would be timely. This study aims to better understand patients' invisible work by highlighting the causes of unintentional non-adherence as well as strategies for adherence. For this purpose, it defines medical treatment adherence as the repetition of the pattern of tasks through which a patient succeeds, in a technical sense, in taking the right medication at the right time, in the right amount, for the right duration. Applying a failure modes and effects analysis approach to 48 semi-structured interviews with Dutch patients, it shows the negative impact of schedule changes, pressure, positioning changes, lack of backup pills and lack of verification tools. Symmetrically, it highlights the role of anchoring, sequencing, positioning, cueing, correcting and verifying. This result points to the need for an analytical approach of patients' work and treatment adherence that would build on the role of routines in organisations and in the workplace.

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PSYCHOSOCIAL ISSUES

Title **Cochrane Review Summary: Interventions to improve return to work in depressed people**

Author/s Trivedi, Daksha

Source *Primary health care research & development* 2019 19 2 107-109
<https://doi.org/10.1017/S1463423617000482>

Abstract Summary of key evidence: Nine studies were of low risk of bias and 14 were high risk. The quality of evidence was judged using GRADE (The Grading of Recommendations Assessment, Development and Evaluation). Outcomes were reported in the medium term (last follow-up assessment between one and 12 months after inclusion) and long term (last follow-up assessment more than 12 months after inclusion). Primary outcome was mean days of sickness absence and secondary outcomes included depression, work functioning and employment status after a period. Significant effect sizes are reported as standardised mean difference (SMD) for continuous data with 95% confidence intervals (CI). Data were pooled in a meta-analysis where appropriate

Title **Complex systems approaches to understand drivers of mental health and inform mental health policy: a systematic review**

Author/s Langellier, B.A., Yang, Y., Purtle, J. et al.

Source *Administration and policy in mental health and mental health services research* 2019 46 128. <https://doi.org/10.1007/s10488-018-0887-5>

Abstract We conducted a systematic review of studies employing complex systems approaches (i.e., agent based and system dynamics models) to understand drivers of mental health and inform mental health policy. We extracted key data (e.g., purpose, design, data) for each study and provide a narrative synthesis of insights generated across studies. The studies investigated drivers and policy intervention strategies across a diversity of mental health outcomes. Based on these studies and the extant literature, we propose a typology of mental health research and policy areas that may benefit from complex systems approaches.

Title **Creating psychological safety in the workplace**

Author/s Edmondson, Amy

Source *Harvard business review* January 2019

Abstract This article states trusting workplace perform better. Psychological safety isn't about being nice. It's about giving candid feedback, and learning from each other, inviting engagement and responding productively. This kind of organizational culture is increasingly important in the modern economy.

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Title **Depression literacy and help-seeking in Australian police**

Author/s Reavley, N J et al

Source *Australian & New Zealand journal of psychiatry* 2019 52 11 1063-1074
<https://doi.org/10.1177/0004867417753550>

Abstract Objective: To assess depression literacy, help-seeking and help-offering to others in members of the police force in the state of Victoria, Australia.
Methods: All staff in police stations involved in a cluster randomised controlled trial of an integrated workplace mental health intervention were invited to participate. Survey questions covered sociodemographic and employment information, recognition of depression in a vignette, stigma, treatment beliefs, willingness to assist co-workers with mental health problems, help-giving and help-seeking behaviours, and intentions to seek help. Using the baseline dataset associated with the trial, the paper presents a descriptive analysis of mental health literacy and helping behaviours, comparing police station leaders and lower ranks. Results: Respondents were 806 staff, comprising 618 lower-ranked staff and 188 leaders. Almost 84% of respondents were able to correctly label the problem described in the vignette. Among those who had helped someone with a mental health problem, both lower ranks and leaders most commonly reported 'talking to the person' although leaders were more likely to facilitate professional help. Leaders' willingness to assist the person and confidence in doing so was very high, and over 80% of leaders appropriately rated police psychologists, general practitioners, psychologists, talking to a peer and contacting welfare as helpful. However, among both leaders and lower ranks with mental health problems, the proportion of those unlikely to seek professional help was greater than those who were likely to seek it.
Conclusion: Knowledge about evidence-based interventions for depression was lower in this police sample than surveys in the general population, pointing to the need for education and training to improve mental health literacy. Such education should also aim to overcome barriers to professional help-seeking. Interventions that aim to improve mental health literacy and help-seeking behaviour appear to be suitable targets for better protecting police member mental health

Title **Intensive suicide prevention: provide intensive contact and start 2 antidepressants**

Author/s Horgan, D Malhl, GS

Source *Australian and New Zealand journal of psychiatry* 2019 52 i 11 1023-1025
<https://doi.org/10.1177/0004867418805563>

Abstract *No other branch of medicine would tell a patient with a life-threatening illness to come back in a week*. This is a quote from Patient A, a doctor who recovered and returned to practice after 15 years of suicidal depression, reflecting on her treatment by multiple colleagues. It prompts the question – could daily contact with suicidal patients significantly reduce the main cause of death and injury to Australians in their prime of life? This paper discusses intensive crisis intervention in acute life-threatening situations, designed to keep moribund patients alive, while simultaneous aggressive psychopharmacology is used to combat the underlying illness. Analogous to the use of two antibiotics or two anti-asthma medications simultaneously in life-threatening physical illnesses, why not begin with two antidepressants from the start of treatment in high-risk suicidal patients?

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Title **A longitudinal study of work-related psychosocial factors and injuries: Implications for the aging United States workforce**

Author/s Baidwan, NK et al

Source *American journal of industrial medicine* March 2019 212-221
<https://doi.org/10.1002/ajim.22945>

Abstract Introduction: This study aimed to identify psychosocial work factors that may individually or, in combination, influence injury outcomes among aging United States (U.S.) workers.
Methods: Data from the U.S. Health and Retirement Study (HRS) of 3305 working adults, aged 50 years and above, were used to identify associations between work-related psychosocial factors and injury incidence from 2006 to 2014, using adjusted incidence rate ratios.
Results: Employees perceiving their work as high in psychological and physical demands/efforts, low in support, and rewards, compared to those in workplaces with low demands, high support, and high rewards, had a risk of injury two times greater. Males, compared with females, had a greater risk for injuries when interactions among several psychosocial work-related factors were modeled.
Conclusions: The fact that important gender-based differences emerged when interactions among the psychosocial factors and injury were modeled, suggests opportunities for further research and potential interventions to enhance the working environment.

Title **Long-term occupational trajectories and suicide: a 22-year follow-up of the GAZEL cohort study**

Author/s Da Silva, A et al

Source *Scandinavian journal of work and environmental health* 2019 45 2_158-165
[doi:10.5271/sjweh.3767](https://doi.org/10.5271/sjweh.3767)

Abstract Objective Most suicides occur among individuals of working age. Risk is elevated in some occupational groups, however relations between long-term occupational trajectories and suicide are not well known. We describe career-long occupational trajectories and examine their influence on suicide.
Methods Data come from GAZEL, a French cohort study set among employees of a large national utilities company. Occupational grade was obtained from company records from the time of hiring (1953–1988). Group-based trajectory models were used to define occupational trajectories over a mean time period of 25.0 (standard deviation 6.5) years. Causes of mortality, coded using the International Classification of Diseases, were recorded from 1993–2014 and studied using Cox regression models.
Results Of the 20 452 participants included in the study, 73 died by suicide between 1993–2014. Results suggested an increased risk of suicide [hazard ratio (HR) 2.57, 95% confidence interval (CI) 1.08–6.15] among participants with persistently low occupational grade compared to those with higher occupational grade and career development. After adjustment for all covariates, especially psychological factors, this association was reduced and no longer statistically significant (HR 2.02, 95% CI 0.82–4.95).
Conclusions Persistently low occupational grade could be related to an elevated risk of suicide. This association partly reflects psychological and health characteristics, which can influence occupational trajectories and be reinforced by unfavorable work conditions.

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Title **Predicting the effectiveness of work-focused CBT for common mental disorders: the influence of baseline self-efficacy, depression and anxiety**

Author/s Brenninkmeijer, V., Lagerveld, S.E., Blonk, R.W.B. et al.

Source *Journal of occupational rehabilitation* 2019 29: 31. <https://doi.org/10.1007/s10926-018-9760-3>

Abstract Purpose This study examined who benefits most from a cognitive behavioural therapy (CBT)-based intervention that aims to enhance return to work (RTW) among employees who are absent due to common mental disorders (CMDs) (e.g., depression, anxiety, or adjustment disorder). We researched the influence of baseline work-related self-efficacy and mental health (depressive complaints and anxiety) on treatment outcomes of two psychotherapeutic interventions.

Methods Using a quasi-experimental design, 12-month follow-up data of 168 employees were collected. Participants either received work-focused cognitive behavioural therapy (W-CBT) that integrated work aspects early into the treatment (n = 89) or regular cognitive behavioural therapy (R-CBT) without a focus on work (n = 79).

Results Compared with R-CBT, W-CBT resulted in a faster partial RTW, irrespective of baseline self-efficacy. Among individuals with high self-efficacy, W-CBT also resulted in faster full RTW. The effectiveness of W-CBT on RTW did not depend on baseline depressive complaints or anxiety. The decline of mental health complaints did not differ between the two interventions, nor depended on baseline self-efficacy or mental health.

Conclusions Considering the benefits of W-CBT for partial RTW, we recommend this intervention as a preferred method for employees with CMDs, irrespective of baseline self-efficacy, depression and anxiety. For individuals with high baseline self-efficacy, this intervention also results in higher full RTW. For those with low self-efficacy, extra exercises or components may be needed to promote full RTW.

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Title **Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for the treatment of panic disorder, social anxiety disorder and generalised anxiety disorder**

Author/s Andrews, G et al

Source *Australian and New Zealand journal of psychiatry* 2019 52 12 1109-1172
<https://doi.org/10.1177/0004867418799453>

Abstract **Objective:** To provide practical clinical guidance for the treatment of adults with panic disorder, social anxiety disorder and generalised anxiety disorder in Australia and New Zealand.
Method: Relevant systematic reviews and meta-analyses of clinical trials were identified by searching PsycINFO, Medline, Embase and Cochrane databases. Additional relevant studies were identified from reference lists of identified articles, grey literature and literature known to the working group. Evidence-based and consensus-based recommendations were formulated by synthesising the evidence from efficacy studies, considering effectiveness in routine practice, accessibility and availability of treatment options in Australia and New Zealand, fidelity, acceptability to patients, safety and costs. The draft guidelines were reviewed by expert and clinical advisors, key stakeholders, professional bodies, and specialist groups with interest and expertise in anxiety disorders.
Results: The guidelines recommend a pragmatic approach beginning with psychoeducation and advice on lifestyle factors, followed by initial treatment selected in collaboration with the patient from evidence-based options, taking into account symptom severity, patient preference, accessibility and cost. Recommended initial treatment options for all three anxiety disorders are cognitive-behavioural therapy (face-to-face or delivered by computer, tablet or smartphone application), pharmacotherapy (a selective serotonin reuptake inhibitor or serotonin and noradrenaline reuptake inhibitor together with advice about graded exposure to anxiety triggers), or the combination of cognitive-behavioural therapy and pharmacotherapy.
Conclusion: The Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for the treatment of panic disorder, social anxiety disorder and generalised anxiety disorder provide up-to-date guidance and advice on the management of these disorders for use by health professionals in Australia and New Zealand

Title **The state of mental health in America 2019**

Author/s Hellebuyck, M et al

Source Mental Health America

Abstract Provides a snapshot of the mental health status among youth and adults by states, together with trends since the release of the first report 4 years ago.... More Americans are also reporting poor mental health, with frequent mental distress now affecting nearly one in eight adults, according to the report. When looking at the country's ability to address these issues, the report finds that mental health providers increased 8% and primary care physicians increased 5% nationwide, over the past year. Despite these increases at a national level, geographical variation continues to persist, warn the authors of the report.

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PUBLIC HEALTH

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| Title | The health burden of preventable disease in Australia: a systematic review |
| Author/s | Crosland P et al |
| Source | <i>Australian and New Zealand journal of public health</i> March 2019 https://doi.org/10.1111/1753-6405.12882 |
| Abstract | <p>Objective: A systematic review was conducted to determine the health burden of preventable disease in Australia.</p> <p>Methods: The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement guidelines were followed to identify, screen and describe the protocols used in the systematic review.</p> <p>Results: Eleven studies were included in the review. Data on the health burden associated with lifestyle-related risk factors were extracted by disease with outcomes reported in attributable number and proportion of deaths, years of life lost, years lived with disability and disability-adjusted life years (DALYs). Around one-third of DALYs was attributed to all modifiable risk factors. The range of estimates of DALYs attributable to each prioritised risk factor was: combined dietary risk factors, 7.2% to 9.7%; tobacco, 7.9% to 9.0%; alcohol, 5.1% to 12.2%; high body mass, 5.5% to 8.3%; and physical inactivity, 1.2% to 5.5%.</p> <p>Conclusions: Although the methods used to estimate preventable health burden varied greatly between studies, all found that a substantial amount of death and disability was attributable to lifestyle-related risk factors.</p> <p>Implications for public health: There is a large health burden in Australia caused by modifiable risk factors and further action is warranted to address this burden.</p> |
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Public Service

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| Title | New warning on outsourced advice |
| Author/s | O'Keefe, Darragh |
| Source | <i>Government news</i> February 2019 |
| Abstract | <p>Governments' heavy reliance on reports from commercial consultants can have "pernicious effects" on policy making, a new analysis says.</p> <p>The public service should recruit additional staff skilled in applied policy analysis while legislation should require departments to obtain a second opinion on the advice provided by commercial consultancies.</p> |
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Title **Policy-based evidence making in local government: The New South Wales' municipal merger program, 2011 to 2017**

Author/s Dollery, B

Source *Economic papers* December 2018 37 4 367-373 <https://doi.org/10.1111/1759-3441.12231>

Abstract Contemporary public policymaking relies heavily on commercial consultants for specialised advice. In this paper, we examine the problematic nature of this phenomenon by considering the controversial forced amalgamation programme in New South Wales (NSW) local government over the period 2011 to 2017. By way of a critical examination of two key consultant reports underlying the NSW municipal mergers, we show that the failure of this programme to achieve its intended aims is due in large measure to the nature of the externalised advice on which it was based and the manner in which that advice was solicited from commercial consultants.

[RETURN TO WORK](#)

Title **Adaptation of a guide to equip employers to manage the gradual return to work of individuals with a musculoskeletal disorder**

Author/s Bouffard, J., Durand, MJ. & Coutu, MF.

Source *Journal of occupational rehabilitation* 2019 1-11 <https://doi.org/10.1007/s10926-019-09827-4>

Abstract Purpose The gradual return to work (GRTW) of injured workers poses numerous challenges for workplaces. The aim of this study was to provide employers with an adapted tool to support them in managing GRTWs following a musculoskeletal disorder (MSD), by adapting the *Guide for estimation of margin of manoeuvre* (Durand et al. in 7th international scientific conference on prevention of work-related musculoskeletal disorders, 2010) and then evaluating the acceptability of the adapted version.

Methods A mixed methods design was used. Content experts were surveyed about the content and form of a first version of the adapted tool. Proposed modifications were then discussed in a group meeting until consensus was reached on the changes to be made. The acceptability of the new version was determined by conducting semi-structured interviews of potential users. A thematic analysis of the verbatim transcript was performed.

Results Nine experts reached a consensus on 20 modifications, which yielded a tool comprising an instruction guide and a planning worksheet. The eight companies consulted found the tool acceptable, useful, and pertinent, but also identified a few changes to be made.

Conclusion The use of original methods made it possible to adapt the content of the tool while taking evidence-based data and user needs into account, all of which contributed to its acceptance. The tool will support employers and standardize management of GRTWs following MSD-related sick leaves. Possible avenues for future research emerged from this study: evaluate the acceptability of new formats and a transdiagnostic version of the tool, and consult workers.

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Title **Apping up”: prospects for information technology innovation in return to work communication**

Author/s Singh, R. & O’Hagan, F.

Source *Journal of occupational rehabilitation* 2019 29: 104. <https://doi.org/10.1007/s10926-018-9768-8>

Abstract Purpose During return to work (RTW), communication between health care providers and employers largely takes place through standardize paper-based forms. Information technology (IT) platforms may provide advantages in enabling information exchange and decision-making through sharing of guidelines and resources. We investigated stakeholder perspectives on the prospect of IT use for RTW communication in Ontario, Canada. Methods Consistent with the exploratory nature of the questions, qualitative methods were used. Primary data were interviews with health care providers (HCPs), employers, and workers with experience in RTW. The first portion of initial interviews elicited general perspectives and experiences related to RTW communication. Participants were then exposed to a prototype IT communication platform and elicited their feedback. Follow-up interviews with HCP’s and EMP’s were used to allow further reflection and clarification of data. We used progressive, thematic coding to analyze data. Results 12 HCPs, 7 employers, and 5 workers participated in the study. Five inter-related themes were obtained. Participants expressed no absolute objection to the use of IT for RTW communication but varying degrees of support. Participants revealed how media change depended on a prospective IT innovation’s perceived usefulness, fit with current practices, capacity to gain buy-in from other stakeholders, and ability to demonstrate positive performance in actual practice. Conclusions Findings suggest that a transition to an IT-mediated tool for RTW communication is supported in principle; however, major caveats exist in relation to perceived value and fit with stakeholder practice. System support and stakeholder cooperation are likely necessary to adopt the change, yet IT-mediated communication has yet to demonstrate value. To avoid circularity, proof of principal needs to be established through an implementation trial of such technology.

Title **Interventions developed with the intervention mapping protocol in work disability prevention: a systematic review of the literature**

Author/s Fassier, JB

Source *Journal of occupational rehabilitation* March 2019 29 1 11-24 <https://doi.org/10.1007/s10926-018-9776-8>

Abstract Purposes Intervention mapping (IM) is a protocol for developing effective behavior change interventions. It has been used for 10 years to develop work disability prevention (WDP) interventions, but it is not known to what extent and with what success. The main objective of this study was to review the effectiveness of these interventions. Secondary objectives were to review their fidelity to the IM protocol, their theoretical frameworks and their content. Methods A search strategy was conducted in MEDLINE, Web of Science, PsycINFO, Pascal, Francis, and BDSP. All titles and abstracts were reviewed. A standardized extraction form was developed. All included studies were reviewed by two reviewers blinded to each other. Results Eight WDP interventions were identified aimed at return to work (RTW; n = 6) and self-management at work (n = 2). RTW interventions targeted workers with stress-related mental disorders (n = 1), low back pain (n = 1), musculoskeletal disorders (n = 1), cancer (n = 2) and gynecological surgery (n = 1). The fidelity to the IM protocol was weaker for the participatory planning group. Matrices of change, change methods, and applications were systematically reported. The main theoretical frameworks used were the attitude-social influence-self efficacy model (n = 4) and the theory of planned behavior (n = 2). Half of the interventions included a workplace component (n = 4). Two interventions were reported as effective, and one partially effective. Conclusion The IM protocol is used in WDP since 2007. The participative dimension appears underused. Few theoretical frameworks were used. Implications are to better consider the stakeholders involvement, and mobilize theoretical frameworks with greater attempts to intervene on the work environment

Title **Sustainable return to work: a systematic review focusing on personal and social factors**

Author/s Etuknwa, A Daniels, K Eib, C

Source *Journal of occupational rehabilitation* February 2019 1-22 <https://doi.org/10.1007/s10926-019-09832-7>

Abstract Purpose A systematic review was conducted to evaluate the impact of important personal and social factors on sustainable return to work (RTW) after ill-health due musculoskeletal disorders (MSDs) and common mental disorders (CMDs) and to compare the effects of these personal and social factors across both conditions. Sustainable RTW is defined as a stable full-time or part-time RTW to either original or modified job for a period of at least 3 months without relapse or sickness absence re-occurrence. Methods A literature search was conducted in 13 databases and 79 studies were selected for the review, of which the methodological design was graded as very high, high and low quality. Results The most consistent evidence for achieving sustainable RTW for both MSDs and CMDs was from support from line managers or supervisors and co-workers, positive attitude, self-efficacy, young age and higher education levels. Job crafting, economic status, length of absence and job contract/security showed promising results, but too few studies exist to draw definite conclusions. Results regarding gender were inconsistent. Conclusions This review demonstrates that a variety of personal and social factors have positive and negative influences on sustainable RTW. We suggest that the social environment and how it interrelates with personal factors like attitudes and self-efficacy should be studied in more detail in the future as the inter-relationship between these factors appears to impact positively on sustainable RTW outcomes. Areas for future research include more high-quality studies on job crafting, economic status/income, length of absence, job contract/security and gender.

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VOCATIONAL REHABILITATION

Title **Acceptability of a vocational advice service for patients consulting in primary care with musculoskeletal pain: A qualitative exploration of the experiences of general practitioners, vocational advisers and patients**

Author/s Sanders, T et al

Source *Scandinavian journal of public health* 2019 47 1 78-85
<https://doi.org/10.1177/1403494817723194>

Abstract Aims: Using qualitative interviews, this study explored the experiences of GPs, vocational advisers and patients towards a new vocational advice (VA) service in primary care. Methods: This study was nested within the Study of Work and Pain (SWAP) cluster randomised controlled trial. The SWAP trial located a VA service within three general practices in Staffordshire. Interviews took place with 10 GPs 12 months after the introduction of the VA service, four vocational advisers whilst the VA service was running and 20 patients on discharge from the VA service. The data were analysed using the constant comparative method, which is a variation of grounded theory. Results: The key factors determining the acceptability and perceived effectiveness of the VA service from the perspective of the three groups of stakeholders were (1) the timing of referrals to the VA, (2) the perceived lack of patient demand for the service and (3) role uncertainty experienced by VAs. Conclusions: Early vocational intervention may not be appropriate for all musculoskeletal patients with work difficulties. Indeed, many patients felt they did not require the support of a VA, either because they had self-limiting work difficulties and/or already had support mechanisms in place to return to work. Future VA interventions may be better implemented in a targeted way so that appropriate patients are identified with characteristics which can best be addressed by the VA service.

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Title **Engaging employers in vocational rehabilitation: Understanding the new significance of knowledge brokers**

Author/s Aksnes, SY

Source *Journal of vocational rehabilitation*, 2019 50 1 73-84 DOI: 10.3233/JVR-180989

Abstract Background: Policymakers have a growing interest in the role played by employers in promoting labour market participation for jobseekers with support needs. This is reflected in the development of demand-led approaches which adopt employers' hiring requirements as a starting point for labour market intervention.
Objective: The article examines the work of job agents, who promote the matching of jobseekers and employers in a Norwegian demand-led approach called Ripples in the Water (RiW). The aim is to understand job agents' strategic and brokering work of employer engagement.
Methods: Explorative, qualitative study based on interviews and field notes from formal and informal meetings with job agents, employers and jobseekers in RiW. RESULTS: Job agents function as knowledge brokers who connect the discourses of welfare and market.
Conclusions: RiW represents one possible approach to increasing employer engagement in vocational rehabilitation. Job agents in RiW build relations with employers by reframing vocational rehabilitation

WORK ABILITY

Title **The development of an instrument to measure the work capability of people with limited work capacity (LWC)**

Author/s van Ruitenbeek, G.M.C., Zijlstra, F.R.H. & Hülshager, U.R.

Source *Journal of occupational rehabilitation* 2019 29 163. <https://doi.org/10.1007/s10926-018-9774-x>

Abstract Purpose Participation in regular paid jobs positively affects mental and physical health of all people, including people with limited work capacities (LWC), people that are limited in their work capacity as a consequence of their disability, such as chronic mental illness, psychological or developmental disorder. For successful participation, a good fit between on one hand persons' capacities and on the other hand well-suited individual support and a suitable work environment is necessary in order to meet the demands of work. However, to date there is a striking paucity of validated measures that indicate the capability to work of people with LWC and that outline directions for support that facilitate the fit. Goal of the present study was therefore to develop such an instrument. Specifically, we adjusted measures of mental ability, conscientiousness, self-efficacy, and coping by simplifying the language level of these measures to make the scales accessible for people with low literacy. In order to validate these adjusted self-report and observer measures we conducted two studies, using multi-source, longitudinal data.
Method Study 1 was a longitudinal multi-source study in which the newly developed instrument was administered twice to people with LWC and their significant other. We statistically tested the psychometric properties with respect to dimensionality and reliability. In Study 2, we collected new multi-source data and conducted a confirmatory factor analysis (CFA).
Results Studies yielded a congruous factor structure in both samples, internally consistent measures with adequate content validity of scales and subscales, and high test-retest reliability. The CFA confirmed the factorial validity of the scales.
Conclusion The adjusted self-report and the observer scales of mental ability, conscientiousness, self-efficacy, and coping are reliable measures that are well-suited to assess the work capability of people with LWC. Further research is needed to examine criterion-related validity with respect to the work demands such as work-behaviour and task performance.

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Title **Work functioning among firefighters: a comparison between self-reported limitations and functional task performance**

Author/s MacDermid, J.C., Tang, K., Sinden, K.E. et al.

Source *Journal of occupational rehabilitation* 2019 29 194. <https://doi.org/10.1007/s10926-018-9778-6>

Abstract Purpose Performance-based and disease indicators have been widely studied in firefighters; self-reported work role limitations have not. The aim of this study was to describe the distributions and correlations of a generic self-reported Work Limitations Questionnaire (WLQ-26) and firefighting-specific task performance-based tests. Methods Active firefighters from the City of Hamilton Fire Services ($n = 293$) were recruited. Participants completed the WLQ-26 to quantify on-the-job difficulties over five work domains: *work scheduling* (4 items), *output demands* (7 items), *physical demands* (8 items), *mental demands* (4 items), and *social demands* (3 items). A subset of participants ($n = 149$) were also assessed on hose drag and stair climb with a high-rise pack performance-based tests. Descriptive statistics and correlations were used to compare item/subscale performance; and to describe the inter-relationships between tests. Results The mean WLQ-26 item scores ($/5$) ranged from 4.1 to 4.4 (median = 5 for all items); most firefighters (54.5–80.5%) selected “difficult none of the time” response option on all items. A substantial ceiling effect was observed across all five WLQ-26 subscales as 44.0–55.6% were in the highest category. Subscale means ranged from 61.8 (social demands) to 78.7 (output demands and physical demands). Internal consistency exceeded 0.90 on all subscales. For the hose drag task, the mean time-to-completion was 48.0 s (SD = 14.5; range 20.4–95.0). For the stair climb task, the mean time-to-completion was 76.7 s (SD = 37.2; range 21.0–218.0). There were no significant correlations between self-report work limitations and performance of firefighting tasks. Conclusions The WLQ-26 measured five domains, but had ceiling effects in firefighters. Performance-based testing showed wider score range, lacked ceiling effects and did not correlate to the WLQ-26. A firefighter-specific, self-report role functioning scale may be needed to identify compromised work role capabilities in firefighters.

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WORK DISABILITY

Title **Work disability in Australia: An overview of prevalence, expenditure, support systems and services**

Author/s Collie, A., Di Donato, M. & Iles, R. J

Source *Journal of occupational rehabilitation* 2018 1-14 <https://doi.org/10.1007/s10926-018-9816-4>

Abstract Purpose This study sought to describe Australian systems of income support for people with work disability. Specific aims were to summarise and compare the features of the income support systems, including the rehabilitation and employment services funded or provided by those systems, and factors affecting transition between systems. Further objectives were to estimate the prevalence of work disability in Australia and the national expenditure on work disability income support.

Methods A mixed methods project involving collation and analysis of existing publicly available documentation and data, and interviews with 25 experts across ten major systems of income support. The prevalence of work disability and expenditure in each system, and in total, was estimated using publicly accessible data sources. System features and service models were synthesised from data sources, tabulated and compared qualitatively.

Results In Australia during the 2015/2016 financial year an estimated 786,000 people with work disability received income support from a Commonwealth, state, territory or private source. An additional 6.5 million people accessed employer provided leave entitlements for short periods of work incapacity. A total of \$37.2 billion Australian dollars was spent on income support for these people during the year. This support was provided through a complex array of government authorities, private sector insurers and employers. Service models vary substantially between systems, with case management the only service provided across all systems. Healthcare and return to work services were provided in some systems, although models differed markedly between systems. Income support ranged from 19 to 100% of earnings for a person earning the average weekly Australian wage pre-disability. There is a paucity of information relating to movement between systems of support, however it is likely that many thousands of people with long periods of work disability transition between systems annually.

Conclusions This study demonstrates the substantial financial and human impact of work disability on Australian society. Findings indicate multiple opportunities for reducing the burden of work disability, including aligning case management and healthcare service models, and engaging employers in prevention and rehabilitation. The findings suggest a need for greater interrogation and evaluation of Australian work disability support systems.

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WORK HEALTH AND SAFETY

Title **Alert and sentinel approaches for the identification of work-related diseases in the EU: European Risk Observatory Report**

Author/s Bakusic, J et al

Source EU-OSHA December 2018

Abstract

This report presents the findings of a major project on alert and sentinel approaches to identifying emerging occupational health risks and new work-related diseases. Existing approaches implemented in the European Union (and in some cases elsewhere) were explored and, following an analysis of 12 alert and sentinel systems and consultation of experts and stakeholders, recommendations are made for setting up and improving such surveillance systems.

[Weblink](#) This research will allow a better understanding of effective alert and sentinel approaches and the ways in which these can support policy-making and the evidence-based prevention of new work-related diseases

Title **At work Winter 2019**

Source

Institute for Work and Health

Abstract

[Weblink](#) This newsletter from the Institute for Work and Health, Canada reports on the Institute's latest research findings in the areas of work injury, illness and disability prevention.

Title **A data driven method for assessing and monitoring exposure to dangerous substances in EU workplaces: European Risk Observatory Report**

Author/s Basinas, I et al

Source EU-OSHA January 2019

Abstract

This report presents a summary of the methods developed and the results arising from the pursuit of the following objectives:

- for workers within European workplaces, identify the dangerous substances and related industrial sectors that are of greatest concern;
- develop a short list of the most important industries and dangerous substances within European workplaces and, from it, select and analyse those in need of more detailed evaluation to identify trends in use and exposure;
- for a limited number of dangerous substances from the short list, examine trends over time in the quantities manufactured and used, and in the levels of exposure;
- develop a scientific method that can be used as a prototype for such data-driven work in similar exercises in the future.

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Title **Evaluation of the impact of heat stress on the occurrence of occupational injuries: Meta-analysis of observational studies**

Author/s Binazzi, A et al

Source *American journal of industrial medicine* March 2019 62 3 233-243
<https://doi.org/10.1002/ajim.22946>

Abstract Background: Growing evidence indicates that the exposure to high heat levels in the workplace results in health problems in workers. A meta-analysis was carried out to summarize the epidemiological evidence of the effects of heat exposure on the risk of occupational injuries.
Methods: A search strategy was conducted to retrieve studies on the effects of climate change on occupational injury risk. Among the 406 identified, 5 time-series and 3 case-crossover studies were selected for meta-analysis.
Results: Pooled risk estimates for time-series and case-crossover studies combined, and then separated, were 1.005 (95%CI: 1.001-1.009), 1.002 (95%CI: 0.998-1.005), and 1.014 (95%CI: 1.012-1.017), respectively. Subgroup analyses found increased risks (not statistically significant) for male gender, age <25 years and agriculture.
Conclusions: The present findings can orient further research to assess the effects of heat at workplace and consequently to establish better health policies for managing such exposure in at-risk regions

Title **Impact of safety climate on hazard recognition and safety risk perception**

Author/s Pandit, B et al

Source *Safety science* March 2019 113 44-53 <https://doi.org/10.1016/j.ssci.2018.11.020>

Abstract

Highlights

- Poor hazard and the underestimation of safety risk can lead to safety incidents.
- A positive safety climate can improve hazard recognition performance.
- A positive safety climate can lead to higher levels of perceived safety risk.
- Superior hazard recognition can lead to higher levels of perceived safety risk.

Poor hazard recognition and the underestimation of safety risk can lead to catastrophic safety incidents. Unfortunately, past research has demonstrated that a large number of safety hazards remain unrecognized in construction workplaces. Likewise, evidence also suggests that the underestimation of safety risk is a widespread issue in the construction industry. Therefore, to improve safety performance, a proper understanding of workplace factors that affect hazard recognition and safety risk perception is fundamental. To begin achieving this goal, the current study evaluated the effect of safety climate – a validated leading indicator of safety performance – on hazard recognition and safety risk perception levels. This was accomplished by gathering empirical data from over 280 workers employed in 57 construction workplaces in the United States. More specifically, after gathering safety climate data from the participating workers, the workers were engaged in a hazard recognition and safety risk perception activity. The study findings revealed that workers representing workplaces with a more positive safety climate demonstrate higher levels of hazard recognition and safety risk perception. In addition, the effect of safety climate on safety risk perception was mediated by hazard recognition performance. In other words, safety climate affected hazard recognition performance, which in turn affected safety risk perception levels. Apart from the indirect effect of safety climate on safety risk perception through hazard recognition performance, safety climate also affected safety risk perception independently of hazard recognition performance. The findings of the study will be useful to practicing professionals seeking to improve safety performance in the construction industry.

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Title **The influence of the air traffic network structure on the occurrence of safety events: A data-driven approach**

Author/s Garcia-Ovies Carro, I et al

Source *Safety science* March 2019 113 161-170 <https://doi.org/10.1016/j.ssci.2018.11.026>

Abstract

Highlights

- Characterisation of an air transport network built using up to 900.000 trajectories.
- Identification of dependencies between network structure and safety events.
- Safety pattern exploration: nodes with highest probability of loss of separation.

This research presents a data-driven approach to assess the influence of the air traffic network structure in the occurrence of losses of separation within the framework of Complex Network Theory. The network is built using radar tracks of up to 900.000 flights and characterised from a topological and safety point of view, that allows the identification of nodes involved in the loss of separation during its entire duration. Safety patterns are defined based on dependency between metrics to reveal the most critical nodes.

Title **Linking safety knowledge to safety behaviours: a moderated mediation of supervisor and worker safety attitudes**

Author/s Kuo-Yang Kao, Christiane Spitzmueller, Konstantin Cigularov & Candice L. Thomas

Source *European journal of work and organizational psychology* 2019 28 2 206-220, DOI: 10.1080/1359432X.2019.1567492

Abstract

The thousands of deaths and disabilities due to workplace accidents and injuries each year emphasize the importance of safety research. Despite occupational safety research that has contributed to identifying antecedents of safety, little is known about why and how safety knowledge leads to safety behaviours and how personal and situational factors interact to promote occupational safety. Using a multilevel, multisource, and time-lagged research design, the present study investigates whether safety knowledge affects safety behaviours through safety attitudes and further tests whether supervisory safety attitudes can impact the strength of these relationships and play a role as moderators of the proposed mediated relationship. Data were collected from workers ($N = 177$) and supervisors ($N = 42$) in a construction company in the energy industry at two time points. Results indicate full support for the moderated mediation model, demonstrating that worker safety attitudes partially mediate the relationship between safety knowledge and safety behaviours. Moreover, when supervisors had positive attitudes towards safety, both the direct relationship between worker safety attitudes and safety behaviours and the indirect relationship between safety knowledge and safety behaviours were more positive compared to when supervisors had negative safety attitudes. Theoretical and practical implications for occupational safety are discussed.

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Title **New solutions: a journal of environmental and occupational health policy: Special issue Part 1: BP Oil spill and community sustainability**

Source New solutions: a journal of environmental and occupational health policy; November 2018 28 3

Abstract Special journal issue dedicated to BP Oil spill and community sustainability

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Title **New solutions: a journal of environmental and occupational health policy: Special issue Part 2: BP oil spill and community sustainability**

Source New solutions: a journal of environmental and occupational health policy: Special issue Part 2 February 28 4

Abstract Special journal issue dedicated to BP Oil spill and community sustainability

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Title **Physical employment standard for Canadian wildland fire fighters; identifying and characterising critical initial attack response tasks**

Author/s Robert J. Gumieniak, Jim Shaw, Norman Gledhill & Veronica K. Jamnik

Source *Ergonomics* 2018 61 10,1299-1310, DOI: 10.1080/00140139.2018.1464211

Abstract Physical employment standards evaluate whether a worker possesses the physical abilities to safely and efficiently perform all critical on-the-job tasks. Initial Attack (IA) wildland fire fighters (WFF) must perform such critical tasks in all terrains. Following a physical demands analysis, IA WFF ($n = 946$ out of a possible 965) from all fire jurisdictions ranked the most demanding tasks and identified mountains, muskeg and rolling hills as the most challenging terrains. Experimental trials found the oxygen cost while performing the hose pack back carry to be 40 ± 7 in steep mountains, 34 ± 5 in muskeg and 34 ± 2 in rolling hills ($n = 168$). Back-carrying and hand-carrying a 28.5 kg pump, back-carrying a 25 kg hose pack and advancing charged hose were the most demanding tasks. Performing the same emergency IA WFF tasks was significantly more demanding in mountains ($p \leq 0.05$), and these higher demands must be taken into account when developing a physical employment standard for Canadian wildland fire fighters.

Practitioner Summary: Physical employment standards evaluate whether an applicant or incumbent possesses the physical and physiological abilities to safely and efficiently perform the *critical* on-the-job tasks. This paper details the process used to undertake a physical demands analysis and characterise tasks for the development of a circuit test and fitness employment standard for IA WFF.

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Title **Physical employment standard for Canadian wildland fire fighters; developing and validating the test protocol**

Author/s Robert J. Gumieniak, Norman Gledhill & Veronica K.

Source *Ergonomics* 2018 61 10, 1311-1323 DOI: 10.1080/00140139.2018.1462408

Abstract

Developing the Canadian initial attack (IA) wildland fire fighter (WFF) physical employment standard (WFX-FIT) began in a previous investigation with a physical demands analysis in which hand and back carrying a 28.5 kg pump, back carrying a 25 kg hose pack and advancing charged hose were identified as the *critical* IA emergency tasks. In the present study, a circuit was created incorporating simulations of the *critical* tasks with faster completion times required for provinces with more arduous terrains. The oxygen cost (mean \pm SD $\text{VO}_2 \text{ mL}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$) of performing IA WFF tasks sequentially on the job was 37 ± 6 compared to 37 ± 4 when performing the WFX-FIT, indicating strong construct validity. Content validation ratings comparing the likeness of on-the-job tasks to simulated tasks in the WFX-FIT provided strong agreement. These validations confirm that the physical demands involved in performing the WFX-FIT are the same as IA wildland fire fighting.

Practitioner Summary: This paper details the process used to develop and validate the physical employment standard for jurisdictional employment and national exchange of IA WFF. The range of cut-scores reflects the differences in jurisdictional physical demands due to terrain difficulty, fire management policy on fire risk and forest value index.

Title **Physical employment standard for Canadian wildland firefighters: examining test–retest reliability and the impact of familiarisation and physical fitness training**

Author/s Robert J. Gumieniak, Norman Gledhill & Veronica K. Jamnik

Source *Ergonomics* 2018 61:10, 1324-1333, DOI: 10.1080/00140139.2018.1464213

Abstract

To assess the impact of repeat performances (familiarisation) plus exercise training on completion time for the Ontario Wildland Firefighter (WFF) Fitness Test circuit (WFX-FIT), normally active general population participants ($n = 145$) were familiarised to the protocol then randomised into (i) exercise training, (ii) circuit only weekly performances or (iii) controls. At Baseline, the WFX-FIT pass rate for all groups combined was 11% for females and 73% for males, indicating that the Ontario WFX-FIT standard had a possible adverse impact on females. Following test familiarisation, mean circuit completion times improved by 11.9% and 10.2% for females and males, respectively. There were significant improvements in completion time for females (19.8%) and males (16.9%) who trained, plus females (12.2%) and males (9.8%) who performed the circuit only, while control participants were unchanged. Post training, the pass rate of the training group was 80% for females and 100% for males.

Practitioner Summary: This paper details the impact of familiarisation plus exercise training as accommodation to mitigate potential adverse impact on initial attack wildland firefighter test performance. The results underscore the importance of test familiarisation opportunities and physical fitness training programmes that are specific to the demands of the job.

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Title **Comparison of the effect of typical firefighting activities, live fire drills and rescue operations at height on firefighters' physiological responses and cognitive function**

Author/s Sajad Zare, Rasoul Hemmatjo, Teimour Allahyari, Mohammad Hajaghadzadeh, Abdollah Hajivandi, Mandana Aghabeigi & Reza Kazemi

Source *Ergonomics* 2018 61:10, 1334-1344, DOI: 10.1080/00140139.2018.1484524

Abstract

This study examined the impact of various types of firefighting activities on firefighters' physiological responses and cognitive function. Each firefighter was engaged in three conditions: (1) Live-fire activities (LFA), (2) Typical firefighting activities (TFA), and (3) Rescue operations at height (ROH). The effects of various types of firefighting activities on the physiological responses and cognitive function were evaluated by heart rate (HR), temporal artery temperature (TT), and the correct response (CR) on a cognitive test. The results indicated that, compared to the baseline, physiological response increased, while information processing performance decreased after the activity. Furthermore, HR and TT were significantly lower at the end of the firefighting activity in the LFA (149.33 bpm; 38.08 °C) compared with the TFA (152.22 bpm; 38.17 °C) and ROH (159.28 bpm; 38.24 °C) conditions. Also, CR was significantly higher at the end of the activity in the LFA and TFA compared with the ROH condition. The results showed that rescue at height was more intensive than the other firefighting tasks in decreasing physiological and cognitive function capacity after the experiment.

Practitioner Summary: We assumed that various types of firefighting activities would have different effects on physiological and cognitive functions during firefighting activities. The Findings suggest that rescue at height operations, performed without the use of special protective equipment, was more influential than other firefighting duties in changing firefighters' physiological and cognitive capacity.

Title **The power of a photograph to capture many truths in occupational health: editorial**

Author/s Quinn, MM Seixas, NS Smith, PM

Source *Annals of work exposures and health* February 2019 63 2 16 131–132, <https://doi.org/10.1093/annweh/wxy109>

Abstract

The truth of the saying that “a picture says a thousand words” has become evident again with the circumstances related to the cover photograph on the May 2018 *Annals of Work Exposures and Health* (AWEH) special issue on gender, work, and health. Sometimes the same photograph can evoke profound, yet different meanings. The cover photo was taken by renowned labor and occupational health photographer, Mr Earl Dotter, who has chronicled the lives of workers in the USA for more than 50 years (Dotter, 2018). The AWEH May 2018 issue was developed to evaluate what we know currently about gender roles and their impact on workers.

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Title Proactivity towards workplace safety improvement: an investigation of its motivational drivers and organizational outcomes

Author/s Matteo Curcuruto, Sharon K. Parker & Mark A. Griffin

Source *European journal of work and organizational psychology* 2019 28 2 221-238, DOI: 10.1080/1359432X.2019.1572115

Abstract Initiating a safety oriented change—or *safety initiative*—is conceptually distinct from other forms of safety participation and safety citizenship behaviour, yet little attention has been given to its performance outcomes or its motivational antecedents. An initial study with a sample composed of middle managers ($N = 86$) showed that safety initiative predicted objective improvement actions 6 months later, whereas, showing differential validity, safety compliance predicted the implementation of monitoring actions. Two subsequent studies focused on motivational antecedents. First, using a sample of team leaders ($N = 295$), we tested a higher-order structure of proactive motivation that incorporates three domains: “can do”, “reason to” and future orientation. Second, in a longitudinal study of chemical work operators ($N = 188$), after checking for the influence of potential confounders (past behaviours; accidents experience; perceived risk), we showed that safety initiative was predicted only by proactive motivation. Instead, *safety compliance* was found to be associated with affective commitment and scrupulousness, whereas *safety helping* was found to be associated with affective commitment. Self-reported behaviours were validated against rater assessments. This study supports the importance of distinguishing safety initiative from other safety behaviours, indicating how to create an organizational context supporting a proactive management of workplace safety.

Title Silicosis prevalence and incidence among Medicare beneficiaries

Author/s Casey.ML Mazurek, JM

Source *American journal of industrial medicine* March 2019 62 3 183-191
<https://doi.org/10.1002/ajim.22944>

Abstract Introduction: Existing epidemiologic information on silicosis relies on mortality data. Methods: We analyzed health insurance claims and enrollment information from 49 923 987 fee-for-service (FFS) Medicare beneficiaries aged ≥ 65 from 1999 to 2014. Three different definitions were developed to identify silicosis cases and results are presented as ranges of values for the three definitions. Results: Among FFS beneficiaries, 10 026-19 696 fit the silicosis case definitions (16-year prevalence: 20.1-39.5 per 100 000) with the highest prevalence among North American Natives (87.2-213.6 per 100 000) and those in New Mexico (83.9-203.4 per 100 000). The annual average prevalence had a significant ($P < 0.05$) 2-5% annual decline from 2005 to 2014. The average annual number of incident cases had a significant 3-16% annual decline from 2007 to 2014. Conclusions: Silicosis is a prevalent disease among Medicare beneficiaries aged ≥ 65 , with variation across the country. Morbidity data from health insurance claims can provide a more complete picture of silicosis burden.

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Title **Systematic literature review on the effects of occupational safety and health (OSH) interventions at the workplace**

Author/s Andersen, JH et al

Source *Scandinavian journal of work and environmental health* 2019;45(2):103-113
doi:10.5271/sjweh.3775

Abstract Objectives The aim of this review was to assess the evidence that occupational safety and health (OSH) legislative and regulatory policy could improve the working environment in terms of reduced levels of industrial injuries and fatalities, musculoskeletal disorders, worker complaints, sick leave and adverse occupational exposures.

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Methods A systematic literature review covering the years 1966–2017 (February) was undertaken to capture both published and gray literature studies of OSH work environment interventions with quantitative measures of intervention effects. Studies that met specified in- and exclusion criteria went through an assessment of methodological quality. Included studies were grouped into five thematic domains: (i) introduction of OHS legislation, (ii) inspection/enforcement activity, (iii) training, such as improving knowledge, (iv), campaigns, and (v) introduction of technical device, such as mechanical lifting aids. The evidence synthesis was based on meta-analysis and a modified Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach.

Results The search for peer-reviewed literature identified 14 743 journal articles of which 45 fulfilled the inclusion criteria and were eligible for meta-analysis. We identified 5181 articles and reports in the gray literature, of which 16 were evaluated qualitatively. There was moderately strong evidence for improvement by OHS legislation and inspections with respect to injuries and compliance.

Conclusions This review indicates that legislative and regulatory policy may reduce injuries and fatalities and improve compliance with OHS regulation. A major research gap was identified with respect to the effects of OSH regulation targeting psychological and musculoskeletal disorders.

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Title **With a little help from our friends: Collaborative research partnerships in three workplace-based occupational disease research projects**

Author/s Haynes, E et al

Source *Work* 2019 62 2 261-278, 2019 DOI: 10.3233/WOR-192861

Abstract Background: Research conducted in collaboration between academic and non-academic partners (known as integrated knowledge translation [iKT]) in the field of occupational health and safety needs to be evaluated.

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Objective: This study examined three collaborative workplace-based intervention projects that focused on reducing exposure to occupational carcinogens. Practice, policy and advocacy intermediary organizations partnered with multidisciplinary groups of researchers. This evaluation study sought to understand the characteristics of successful and unsuccessful iKT partnerships from the perspective of the intermediaries.

Methods: Researchers conducted face-to-face interviews with 21 intermediaries and used a thematic-driven “framework analysis” method to analyze the interviews, based upon an evolving conceptual framework.

Results: Seven enablers and barriers of collaboration were identified. Enablers included having: adequate capacity; defined project roles; the right partners; an inclusive project leader; mutual respect; good communication; and shared values and priorities. Lacking these was considered a barrier. Seven outcomes were identified as: improved relevance and quality of the research; learning about each others’ “world”; building contacts; improved use of research in practice and policy; dissemination of the research; development of trust and goodwill; and continued collaborations. Conclusions: Recommendations for future collaborative studies include: spend time defining roles, responsibilities, and expectations; ensure practitioners have the time and resources, and the commitment to the project; and choose representatives from the organizations with the necessary skills or decision-making mandate

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WORK STRESS

Title **Subjective symptoms and physiological measures of fatigue in air traffic controllers**

Author/s Chen, M_L

Source Ergonomics March 2019 70 1-8 <https://doi.org/10.1016/j.ergon.2018.12.004>

Abstract

Highlights

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- Fatigue questionnaire and physiological measurement before and after work were examined on 102 air traffic controllers.
- Recommendations are proposed with respect to potentially viable countermeasures to reduce fatigue in ATC operations.
- The findings are expected to improve the awareness of the work and health conditions of ATCs.

This study measured the correlation between fatigue and physiological stress symptoms in 102 air traffic controllers (ATCs) in Taiwan. The subjects were asked to complete a fatigue questionnaire and physiological measurement before and after work. The study results showed that nearly 50% of the subjects felt tired and weary after work. However, according to the results of the critical flicker frequency test, all ATCs performed better after work, and the strength of masculine index fingers improved. The systolic and diastolic blood pressure decreased after work. In addition, the levels of urinary 17-hydroxycorticosteroids (17-OHCS) at the pre-shift and post-shift stages were 1.91 ± 1.01 mg/g cr. and 1.50 ± 0.95 mg/g cr., respectively. This study indicated that, while the ATCs' subjective ratings showed possible work-induced fatigue, it did not affect their physiological response. The findings suggested that ATC is a stressful job, and that complaints regarding excess work stress should be taken seriously. Subsequently the study proposed appropriate intervention strategies to address the identified problems.

Relevance to industry: This paper presents the subjective and objective measures of fatigue in ATCs. Recommendations are proposed with respect to potentially viable countermeasures to reduce the impact of fatigue in ATC operations, and achieve a broader understanding of the causal factors for fatigue in ATC.

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WORKERS' COMPENSATION

Title **Do health service use and return-to-work outcomes differ with GPs' injured-worker caseload?**

Author/s Mazza, D., Brijnath, B., O'Hare, M.A. et al.

Source *Journal of occupational rehabilitation* 2019 29 64. <https://doi.org/10.1007/s10926-018-9765-y>

Abstract Purpose To determine whether healthcare use and return-to-work (RTW) outcomes differ with GPs' injured-worker caseload. Methods Retrospective analyses of the Compensation Research Database, which captures approximately 85% of all injured worker claims in Victoria, Australia was conducted. Four injured-worker caseload groups were examined that represented the 25th, 50th, 75th, and 100th percentiles of claimants seen per GP over the 8-year study period (2003-2010): (i) 1-13 claimants; (ii) 14-26 claimants; (iii) 27-48 claimants; and (iv) 49+ claimants (total claims, n = 124,342; total GPs, n = 9748). The characteristics of claimants in each caseload group, as well as the influence of caseload on three outcomes relevant to RTW (weekly compensation paid, work incapacity days, medical-and-like costs), were examined. Results Distinct profiles for high versus low caseload groups emerged. High caseload GPs treated significantly more men in blue collar occupations and issued significantly more 'alternate duties' certificates. Conversely, low caseload GPs treated significantly more women in white collar occupations, predominantly for mental health injuries, and issued significantly more 'unfit-for-work' certificates. Few significant differences were found between the two intermediate GP caseload groups. High caseload was associated with significantly greater medical-and-like costs, however, no caseload group differences were detected for weekly compensation paid or duration of time-off-work. Conclusions Training GPs who have a low injured-worker caseload in workers' compensation processes, utilising high caseload GPs in initiatives involving peer-to-peer support, or system changes where employers are encouraged to provide preventive or rehabilitative support in the workplace may improve RTW outcomes for injured workers.

Title **Factors associated with employer support for injured workers during a workers' compensation claim**

Author/s Sheehan, L.R., Lane, T.J., Gray, S.E. et al

Source *Journal of occupational rehabilitation* 2019 <https://doi.org/10.1007/s10926-019-09834-5>

Abstract Purpose The employer/worker relationship can be an important catalyst for—or obstacle to—successful return to work (RTW). An understanding of factors associated with an injured worker's relationship with their employer, and employer involvement in RTW planning, is warranted. Methods Analysis of n = 8808 cross-sectional survey responses from injured workers in nine Australian workers' compensation (WC) jurisdictions. Workers completed a telephone survey between 6 and 24 months post-WC claim acceptance. Factors associated with the worker's perception of employer support were examined using ordinal regression. Factors associated with employer provision of RTW plans were examined using logistic regression. Results Factors associated with employer support included being aged over 50 years, not having a mental health condition, better self-rated health and less time between injury and claim. Factors associated with having a RTW plan included being female, not having a mental health condition and working for a self-insurer. Factors associated with having a written RTW plan included being female and being under 50 years. There was wide variation in the provision of RTW plans between WC jurisdictions. Conclusions There are strong associations between worker, claim and injury-related factors and the injured worker's experience of employer support. Identification of workers at risk of receiving inadequate support during the RTW process may enable interventions to improve support and RTW outcomes.

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Title **Recovery within injury compensation schemes: a system mapping study**

Author/s Collie, A., Newnam, S., Keleher, H. et al.

Source *Journal of occupational rehabilitation* 2019 29 52 <https://doi.org/10.1007/s10926-018-9764-z>

Abstract Purpose Many industrialised nations have systems of injury compensation and rehabilitation that are designed to support injury recovery and return to work. Despite their intention, there is now substantial evidence that injured people, employers and healthcare providers can experience those systems as difficult to navigate, and that this can affect injury recovery. This study sought to characterise the relationships and interactions occurring between actors in three Australian injury compensation systems, to identify the range of factors that impact on injury recovery, and the interactions and inter-relationships between these factors. Methods This study uses data collected directly from injured workers and their family members via qualitative interviews, analysed for major themes and interactions between themes, and then mapped to a system level model. Results Multiple factors across multiple system levels were reported by participants as influencing injury recovery. Factors at the level of the injured person's immediate environment, the organisations and personnel involved in rehabilitation and compensation processes were more commonly cited than governmental or societal factors as influencing physical function, psychological function and work participation. Conclusions The study demonstrates that injury recovery is a complex process influenced by the decisions and actions of organisations and individuals operating across multiple levels of the compensation system. Changes occurring 'upstream', for instance at the level of governmental or organisational policy, can impact injury recovery through both direct and diffuse pathways.

WORKPLACE REHABILITATION

Title **Acceptability and feasibility of a shared decision-making model in work rehabilitation: a mixed-methods study of stakeholders' perspectives**

Author/s Coutu, MF., Légaré, F., Durand, MJ. et al.

Source *Journal of occupational rehabilitation* 2019 29: 128. <https://doi.org/10.1007/s10926-018-9770-1>

Abstract Purpose To establish the acceptability and feasibility of implementing a shared decision-making (SDM) model in work rehabilitation. Methods We used a sequential mixed-methods design with diverse stakeholder groups (representatives of private and public employers, insurers, and unions, as well as workers having participated in a work rehabilitation program). First, a survey using a self-administered questionnaire enabled stakeholders to rate their level of agreement with the model's acceptability and feasibility and propose modifications, if necessary. Second, eight focus groups representing key stakeholders (n = 34) and four one-on-one interviews with workers were conducted, based on the questionnaire results. For each stakeholder group, we computed the percentage of agreement with the model's acceptability and feasibility and performed thematic analyses of the transcripts. Results Less than 50% of each stakeholder group initially agreed with the overall acceptability and feasibility of the model. Stakeholders proposed 37 modifications to the objectives, 17 to the activities, and 39 to improve the model's feasibility. Based on in-depth analysis of the transcripts, indicators were added to one objective, an interview guide was added as proposed by insurers to ensure compliance of the SDM process with insurance contract requirements, and one objective was reformulated. Conclusion Despite initially low agreement with the model's acceptability on the survey, subsequent discussions led to three minor changes and contributed to the model's ultimate acceptability and feasibility. Later steps will involve assessing the extent of implementation of the model in real rehabilitation settings to see if other modifications are necessary before assessing its impact.

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Title **Sense of coherence, disability, and health-related quality of life: a cross-sectional study of rehabilitation patients in Norway**

Author/s Moen, VP et al

Source *Archives of physical medicine and rehabilitation* March 2019 100 3 448-457 DOI: <https://doi.org/10.1016/j.apmr.2018.06.009>

Abstract Objective: To study relations between sense of coherence (SOC), disability, and mental and physical components of health-related quality of life (HRQOL) among rehabilitation patients. Main Outcome Measures: SOC was measured with the sense of coherence questionnaire (13-item SOC scale [SOC-13]), disability with the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0), and HRQOL with the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36). Results: Mean scores \pm SD were 62.9 \pm 12.3 for SOC-13, 30.8 \pm 16.2 for WHODAS 2.0, 32.8 \pm 9.6 for SF-36 physical component score, and 43.6 \pm 11.8 for SF-36 mental component score. Linear regression analysis showed that increased SOC score was associated with reduced disability scores in the following domains with estimated regression coefficients (95% confidence interval) cognition -0.20 (-0.32 to -0.08), getting along -0.36 (-0.52 to -0.25), and participation -0.23 (-0.36 to -0.11). The fit of 2 structural models with the association from SOC to HRQOL and disability or with disability as a mediator was better for the mental versus the physical component of HRQOL. High SOC increased the mental component of HRQOL, consistent for all diagnostic groups. For both models, good fit was reported for circulatory and less good fit for musculoskeletal diseases. Conclusions: The results indicate that higher SOC decreases disability in mental domains. The effect of SOC on disability and HRQOL might vary between diagnostic groups. SOC could be a target in rehabilitation, especially among patients with circulatory diseases, but prospective studies are needed.

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Title **Workplace-based rehabilitation of upper limb conditions: a systematic review**

Author/s Hoosain, M., de Klerk, S. & Burger, M.

Source *Journal of occupational rehabilitation* 2019 29: 175. <https://doi.org/10.1007/s10926-018-9777-7>

Abstract Purpose The objective of this systematic review was to identify, collate and analyse the current available evidence on the effectiveness of workplace-based rehabilitative interventions in workers with upper limb conditions on work performance, pain, absenteeism, productivity and other outcomes. Methods We searched Medline, Cochrane Library, Scopus, Web of Science, Academic Search Premier, Africa-Wide Information, CINAHL, OTSeeker and PEDro with search terms in four broad areas: upper limb, intervention, workplace and clinical trial (no date limits). Studies including neck pain only or musculoskeletal pain in other areas were not included. Results Initial search located 1071 articles, of which 80 were full text reviewed. Twenty-eight articles were included, reporting on various outcomes relating to a total of seventeen studies. Nine studies were of high methodological quality, seven of medium quality, and one of low quality. Studies were sorted into intervention categories: Ergonomic controls (n = 3), ergonomic training and workstation adjustments (n = 4), exercise and resistance training (n = 6), clinic-based versus workplace-based work hardening (n = 1), nurse case manager training (n = 1), physiotherapy versus Feldenkrais (n = 1), and ambulant myofeedback training (n = 1). The largest body of evidence supported workplace exercise programs, with positive effects for ergonomic training and workstation adjustments, and mixed effects for ergonomic controls. Ambulant myofeedback training had no effect. The remaining three categories had positive effects in the single study on each intervention. Conclusion While there is substantial evidence for workplace exercise programs, other workplace-based interventions require further high quality research.

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