Good work is good for health and wellbeing

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

The emerging evidence alert

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

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

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

Supporting people with disability to reach their full potential

In this month’s Emerging Evidence Alert we look at the barriers to workplace inclusion and increasing participation for people of all abilities. In Australia there are 2.1 million people of working age with a disability. Of these, just over 1 million are employed with another 114,900 looking for work, leaving them disconnected from the benefits that work brings.

December 3 is International Day of People with Disability and this year’s theme is transformation towards sustainable and resilient society for all. The overarching principle of this theme is to ‘leave no one behind’ and empowers people with disability to be active contributors of society. It is based on transformative changes envisaged in the 2030 agenda for sustainable development.

This global framework aims to strengthen the resilience of people with disability by providing full access to justice, health care services, infrastructure and accessible communities. It is focuses on inclusive education, lifelong learning, and sustainable economic growth through employment.

More action is required in creating workplaces that reflect our workforce as a whole - where employers have the skills and confidence to support people with a disability, to manage an ageing workforce and the increase in chronic disease in order to keep people in good work for longer

One article suggests that there is still a gap between intent and reality in workplace inclusion and further strategies are needed to improve the opportunities for employees with disability.

The UK recently released Improving Lives: The Work, Health and Disability Green Paper which looks at why people with a disability or those experiencing ill-health find themselves out of work and unable to obtain employment. The Green Paper marks the start of real innovative action and wide spread national debate, asking ‘What will it take to transform the employment prospects of disabled people and people with long-term health conditions?’

Former senior vice president of US retailer Walgreens Randy Lewis has demonstrated how businesses can become truly inclusive workplaces and thrive. Randy pioneered a disability employment model that resulted in over 35 percent of its workforce consisting of people with disabilities. It also led to a significant reduction in turnover of staff and absenteeism.

Comcare has developed guidance on how to support participation and become a disability confident organisation including case studies that showcase managers who have enabled individuals to actively participate and reach their full potential.
The Job Accommodation Network (JAN) is the leading source of free, expert, and confidential guidance on workplace accommodations and disability employment issues. Working toward practical solutions that benefit both employer and employee, JAN helps people with disabilities enhance their employability, and shows employers how to capitalize on the value and talent that people with disabilities add to the workplace.

Emerging Evidence Topics

- Absenteeism and presenteeism
- Asbestos and mesothelioma
- Bullying
- Chronic health issues
- Disability
- Ergonomics
- Management and leadership
- Musculoskeletal issues
- Occupational issues
- Psychosocial issues
- Rehabilitation
- Return to work
- Shift work
- Vocational rehabilitation
- Work ability
- Work health and safety
- Work stress
- Websites

PEOPLE WITH A DISABILITY AND EMPLOYMENT

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<th>Title</th>
<th>Australian National disability strategy 2010-2020: an initiative of the Council of Australian Governments</th>
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<td>Source</td>
<td>Department of Social Security 2011</td>
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<tr>
<td>Abstract</td>
<td>The strategy sets out a ten year national plan for improving life for Australians with disability</td>
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<th>Title</th>
<th>2030 agenda: the inclusion of persons with disabilities: comprehensive guide</th>
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<tr>
<td>Source</td>
<td>International Disability Alliance; International Disability and Development Consortium. 2016</td>
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<tr>
<td>Abstract</td>
<td>A Comprehensive Guide and an Introductory Toolkit on the 2030 Agenda – The Inclusion of Persons with Disabilities. This global framework aims to strengthen the resilience of people with disability by providing full access to justice, health care services, infrastructure and accessible communities. It is focuses on inclusive education, lifelong learning, and sustainable economic growth through employment</td>
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<th>Title</th>
<th>U.S. National disability employment awareness month 2017</th>
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<tr>
<td>Source</td>
<td>Office of Disability Employment Policy 2017</td>
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<tr>
<td>Abstract</td>
<td>Held each October, National Disability Employment Awareness Month (NDEAM) is a national campaign that raises awareness about disability employment issues and celebrates the many</td>
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www.comcare.gov.au        Ph: 1300 366 979
and varied contributions of America's workers with disabilities. The theme for 2017 is "Inclusion Drives Innovation"

**Weblink**

**Title** Graphic support resources for workers with intellectual disability engaged in office tasks: a comparison with verbal instructions from a work mate

**Author/s** Becerra, María-Teresa; Montanero, Manuel; Lucero, Manuel.

**Source** *Disability & rehabilitation* February 2018 40 4 435-443  DOI: 10.1080/09638288.2016.1258739

**Abstract** Implications for Rehabilitation: We studied the use of various types of natural support for people with intellectual disability in their workplace. The findings suggest that, with some brief training, the simple use in the workplace of graphic help on a card can increase between 20 and 30% the quality of performance of certain work tasks carried out by workers with intellectual disability. This advantage contrasts with the high cost or lower "manageability" of other material resources of natural support based on the use of technology.

**Weblink**

**Title** Challenges for females with high functioning autism in the workplace: a systematic review.

**Author/s** Hayward, Susan M. McVilly, Keith R. Stokes, Mark A.

**Source** *Disability & rehabilitation* February 2018 40 3 249-258 DOI: 10.1080/09638288.2016.1254284

**Abstract** Purpose: Individuals with High Functioning Autism (HFA) experience high levels of underemployment and unemployment, resulting in negative economic, social, and health outcomes. Given what is known about labor market participation difficulties experienced by women generally, and the paucity of research concerning women with HFA, this systematic review synthesized what is known about the labor market experiences of women with HFA. Conclusion: These results should be interpreted with caution. Of the studies found, 73% were qualitative and based on small samples. Only one paper differentiated female data in analyses. These factors combined suggest large-scale mixed method research focused on females with HFA is required to gain an accurate insight into the challenges faced in the workplace, to in turn inform intervention and support. However, implications for rehabilitation based on what is known are discussed. Implication for Rehabilitation Unemployment and underemployment of persons with High Functioning Autism (HFA) poses social, health and economic issues for both individuals and the wider community. Those with HFA have the intellectual capacity to make a substantial contribution to the workplace. Based on what is known, some of the challenges for females with HFA might be similar to those experienced by men with HFA, however it is possible that there are gender-based differences (in both type and severity of challenges) that require attention.

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**Title** An exploratory study of barriers to inclusion in the European workplace

**Author/s** Moody, Louise et al

**Source** *Disability & rehabilitation* October 2017 39 21 2047-2054 DOI: 10.1080/09638288.2016.

**Abstract** Background: The European Disability Strategy (2010–2020) seeks to significantly raise the proportion of people with disabilities working in the open labour market. The ERGO WORK project is a collaboration of academic and industrial partners in six European countries, focused on understanding and tackling barriers to workplace inclusion for workers with disabilities. Methods: This study sought to explore the perceptions and needs of stakeholders in terms of workplace adaptation to the needs of employees with disabilities. An exploratory online survey
Results: The analysis suggests that workplaces could be further improved to meet the needs of employees with considerable scope for training within companies to raise awareness about employees’ needs, employers’ obligations and workplace adaptation.

Conclusions: This snapshot suggests there is still a gap between intent and reality in workplace inclusion and further strategies are needed to improve the opportunities for employees with disabilities. The paper argues that ergonomics may have a key role to play in tackling these challenges and adapting the workplace environment and job design to suit the needs of individual employees.

Implications for rehabilitation This study suggests there is considerable scope for workplace adaptation and improvements to meet the needs of employees with disabilities. Employers need and want further specialist practitioner guidance to facilitate workplace inclusion and support adaptation to individual needs. Organisations would benefit from training to raise awareness about potential solutions and approaches that would support more widespread employment of people with disabilities.

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<th>Title</th>
<th>Workplace accommodations for persons with physical disabilities: evidence synthesis of the peer-reviewed literature</th>
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<tr>
<td>Author/s</td>
<td>Padkapayeva, Kathy et al</td>
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<td>Source</td>
<td>Disability &amp; rehabilitation October 2017 39 21 2134-2147 14 DOI: 10.1080/09638288.2016.1224276</td>
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<td>Abstract</td>
<td>There is a substantial peer-reviewed literature that provides insights into the barriers for persons with physical disabilities and the workplace accommodation practices to address them, though rigorous evaluations of effectiveness and cost-effectiveness are uncommon. Attitudinal and social barriers stemming from stereotypes, ignorance and lack of knowledge are as important as physical barriers to employment for persons with physical disabilities. In addition to physical/technological modifications, accommodations to enhance workplace flexibility and autonomy of a worker, as well as strategies to promote workplace inclusion and integration may facilitate successful employment of persons with physical disabilities.</td>
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<th>Title</th>
<th>Perspectives of unemployed workers with mental health problems: barriers to and solutions for return to work</th>
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<tr>
<td>Author/s</td>
<td>Audhoe, Selwin S et al</td>
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<tr>
<td>Abstract</td>
<td>Purpose: To evaluate the barriers to and solutions for return to work (RTW) from the perspective of unemployed workers who were sick-listed due to mental health problems. Results: All workers experienced multiple problems in different domains of life related to their disease, personal circumstances (e.g., divorced, debts) and their environment (e.g., labour market problems, issues with the Social Security Agency). Workers differed in the way they perceived their RTW process and in the extent to which they were able to envision and implement the solutions for RTW, thus resulting in three types of workers’ attitudes towards their own RTW process: (1) “frozen”; (2) “insightful though passive”; and (3) “action mode”. Conclusions: We conclude that the sick-listed unemployed workers with mental health problems have to deal with multiple problems, of which medical problems are only a part. These workers need help aimed at their coping methods according to one of the three types of workers’ characteristics. Moreover, they need specific help organising and structuring their problems, getting their life back on track, and finding employment. Implications for Rehabilitation Unemployed workers with mental health problems face considerable challenges which impede their return to work. Evaluating the workers’ attitude may provide useful information on their own return-to-work process. In many cases, workers indicate a need for coaching to help them with problem-solving, planning, gaining structure, getting their life back on track, and finding employment. Rehabilitation professionals should tailor RTW interventions to the needs of these workers, aimed at their specific problems and taking into account the workers’ coping methods according to one of three types of workers’ attitudes towards their own RTW process.</td>
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Integrating disability: boomerang effects when using positive media exemplars to reduce disability prejudice

**Title**

Integrating disability: boomerang effects when using positive media exemplars to reduce disability prejudice

**Author/s**

Kallman, Davis.

**Source**

*International journal of disability, development & education* November 2017  64 6 644-662
DOI: 10.1080/1034912X.2017.1316012

**Abstract**

Individuals with disabilities comprise the largest minority group in the world, yet they are the most underrepresented minority group in higher education, the job market and entertainment media such as literature. This population is often underrepresented because of the overlapping physical, attitudinal and policy barriers that prevent them from participating fully in society. Despite their large numbers, individuals with disabilities not only encounter personalised prejudice, but also experience institutionalised prejudice. In an effort to reduce negative attitudes toward individuals with disabilities, this study examined the effects of positive disability exemplars on people’s attitudes. A comparison between implicit and explicit measures of prejudice found that implicit bias of able-bodied students was more entrenched than explicit biases.

Ending reassessment for employment and support allowance for some disabled people in the UK

**Title**

Ending reassessment for employment and support allowance for some disabled people in the UK

**Author/s**

Grover, Chris

**Source**

*Disability & society* September 2017 32 8 1269-1274
DOI: 10.1080/09687599.2017.1333565

**Abstract**

In October 2016 the newly appointed UK Secretary of State for Work and Pensions, Damian Green, announced that some disabled people receiving Employment and Support Allowance would not face reassessment for their financial support to continue. This article critically engages with this announcement in the context of the publication of Improving Lives. The Work, Health and Disability Green Paper shortly afterwards.

Work, health and disability green paper: improving lives

**Title**

Work, health and disability green paper: improving lives

**Source**

Department Work and Pensions; Department of Health 2016

**Abstract**

Employment rates amongst disabled people reveal one of the most significant inequalities in the UK today: less than half (48%) of disabled people are in employment compared to 80% of the non disabled population. Despite a record-breaking labour market, 4.6 million disabled people and people with long-term health conditions are out of work leaving individuals, and some large parts of communities, disconnected from the benefits that work brings. People who are unemployed have higher rates of mortality and a lower quality of life. This is an injustice that we must address.

This green paper sets out the nature of the problem and why change is needed by employers, the welfare system, health and care providers, and all of us. We consider the relationship between health, work and disability. We recognise that health is important for all of us, that it can be a subjective issue and not everyone with a long-term health condition will see themselves as disabled. We set out some proposed solutions and ask for your views on whether we are doing the right things to ensure that we are allowing everyone the opportunity to fulfil their potential.
The transition to employment: the perspectives of students and graduates with disabilities

Nolan, Clodagh; Gleeson, Claire Irene.

Scandinavian journal of disability research September 2017 19 3 230-244 15 DOI: 10.1080/15017419.2016.1240102

Abstract Education and employment are basic human rights and during the past decade in Ireland, the number of students with disabilities progressing through universities has dramatically increased as a result of improved support (AHEAD 2012.Survey on the Participation Rates of Students with Disabilities in Higher Education for the Academic Year 2011/2012. AHEAD). However, embarking on the transition from college to employment can be fraught with challenges (Fichten, S. Jorgensen, A. Havel, M. Barile, V. Ferraro, M. E. Landry, D. Fiset, et al. 2012, “What happens after graduation? Outcomes, employment, and recommendations of recent junior/community college graduates with and without disabilities.”. Disability and Rehabilitation34 (11): 917-924). Therefore, this qualitative study aimed to explore the perspectives and needs of students and graduates with disabilities as they transition from college to employment. Semi-structured interviews were employed to hear the voices of thirteen students and nine graduates. Content analysis guided data analysis. Five themes were identified in the student group and four in the graduate group. This study concluded that students and graduates with disabilities need support in transitioning into the world of work and higher education institutions need to listen to the voices of students in developing and refining career-related resources.

Cooperation of return-to-work professionals: the challenges of multi-actor work disability management

Liukko, Jyri; Kuuva, Niina.

Disability & rehabilitation July 2017 39 15 1466-1473 8 DOI: 10.1080/09638288.2016.1198428

Abstract Purpose: This article explores which concrete factors hinder or facilitate the cooperation of return-to-work (RTW) professionals in a complex system of multiple stakeholders. Implications for Rehabilitation Cooperation between RTW professionals in public employment offices and other organizations involved in work disability management was considered inadequate. In order to improve the cooperation of RTW professionals, the stakeholders need to create more systematic ways of communication and networking with professionals in other organizations. There is a need to expand the expertise in work disability management and rehabilitation, partly by increasing the role of other professionals than physicians.

Policies to change attitudes to people with disabilities

Fisher, Karen R. Purcal, Christiane

Scandinavian journal of disability research June 2017 19 2 161-174 14 DOI: 10.1080/15017419.2016.1222303

Abstract Negative attitudes are a major barrier to the equality of people with disabilities. Governments and other organizations have implemented numerous programmes to change attitudes towards people with disabilities. We analyse published evidence about the effectiveness of such programmes using a framework of the interrelationship among three levels of policy intervention to change attitudes: personal level – directed at changing the attitudes of individuals; organizational level – concerning attitudinal barriers in domains such as employment, education and health; and government level – legally mandating behaviour change. The analysis finds that the following policy types can be effective if used together: policies that involve direct contact with people with disability; information and awareness campaigns; education and training about disability; and antidiscrimination enforcement. Policy characteristics that contribute to
effectiveness include a positive programme experience for participants; multifaceted and prolonged interventions; and adequate programme resources. Policy effectiveness to change attitudes relies on corresponding reinforcement at all three policy levels.

Title: Developing a model of disability that focuses on the actions of disabled people
Author/s: Levitt, Jonathan M.
Source: Disability & society June 2017 32 5 735-747 DOI: 10.1080/09687599.2017.1324764
Abstract: Disabled people, writers on disability and disability activists stress the importance of disabled people being included in all aspects of society. I argue that a major omission from this inclusiveness is that no current model of disability focuses on the impact of the actions of disabled people on disability. Disabled people are not passive bystanders, powerless to reduce the restrictions of disability. On the contrary, we are central to actively limiting its constraints. I develop a model of disability, called ‘active’, which focuses on the effects on disability of the individual and collective actions of disabled people. I describe published findings which indicate that engaging in self-help, using support groups and deploying assistive technology can all reduce the limitations of disability. Recent increases in the number of disability support groups and developments in assistive technology have substantially augmented the potential for disabled people to combat the effects of disability.

Title: Psychosocial factors related to functional restoration treatment completion and return-to-function for patients with chronic disabling occupational musculoskeletal disorders
Author/s: Howard, Krista J.
Source: Journal of occupational & environmental medicine March 2017 59 3 320-326 DOI: 10.1097/JOM.0000000000000953
Abstract: Objective: The aim of this study was to identify demographic and psychosocial variables associated with successful completion of a functional restoration program and return-to-function within 3 months of treatment completion. Methods: Three hundred seven patients admitted to the functional restoration program were evaluated for completion status and 200 patients with valid data were assessed for 3-month return-to-function status following completion. Psychosocial and functional status was assessed at baseline. Results: Key factors associated with program completion included lower perceived disability, lower pain, lower functional impairment, and lower fear avoidance. Factors associated with 3-month return-to-function included lower perceived disability, lower depression, greater belief that pain is not associated with impairment, and higher quality of life. Conclusions: Psychosocial and functional factors contribute to both functional restoration completion and 3-month return-to-function outcomes.

Title: An analysis of private long-term disability insurance access, cost, and trends
Author/s: Anand, Priyanka; Wittenburg, David
Source: Monthly labor review March 2017 1-17 1 8
Abstract: The article focuses on the trend and proposed changes to the cost of the private long-term disability insurance (LTDI) in the U.S. Discussion of the important role played by LTDI in promoting employment and influencing Social Security Disability Insurance (SSDI) participation among employees is offered. However, the impact on any type of expansion in LTDI on lower
Impact of working time mismatch on job satisfaction: evidence for German workers with disabilities

Pagan, Ricardo

Journal of happiness studies February 2017 18 1 125-149 DOI: 10.1007/s10902-016-9721-5

This study examines the impact of working time mismatch (i.e. the discrepancy between actual and desired working hours) on individuals' job satisfaction by disability status in Germany. Our particular interest is in testing the assumption that working time mismatch is a more serious problem among workers with disabilities as compared to workers without disabilities, especially concerning the presence of overemployment. Using longitudinal data from the German Socio-Economic Panel (1985-2011), we estimate a 'Probit Adapted OLS' model which allows us to identify the factors affecting job satisfaction for people without and with disabilities. The results indicate that all workers suffering from working time mismatch are more likely to report lower levels of job satisfaction compared to those who actually work their desired hours. In addition, all selected groups of females with disabilities prefer lower hours of work per week compared to females without disabilities. Although overemployment is clearly more harmful in terms of job satisfaction than underemployment for all workers, its impact is even higher for females with disabilities as compared to their non-disabled counterparts. From a public policy perspective, these findings show the importance of reducing working time mismatch in general and overemployment in particular among females with disabilities in order to increase their levels of job satisfaction.

Predictors of employment status among adults with autism spectrum disorder.

Ohl, Alisha

Work 2017 56 2 345-355 DOI: 10.3233/WOR-172492

Background: In the United States, adults with Autism Spectrum Disorder (ASD) experience high rates of unemployment and underemployment in relation to adults with other disabilities and the general population. Yet there is little research examining their employment experiences and the predictors of employment status.

Objective: The purpose of this study was to examine the employment characteristics and histories of both employed and unemployed adults with ASD, and the factors that contributed to their employment status.

Methods: This cross-sectional study used an online survey and the Short Effort Reward Imbalance (ERI) Scale to gather data. Multivariate logistic regression analyses were used to examine predictors of employment status and self-reported health.

Results: Of the 254 adults with ASD who participated in this study, 61.42% were employed and 38.58% were unemployed. Over half of the participants reported job imbalance on the Short ERI Scale and the vast majority did not receive any job assistance. Participants who disclosed their ASD diagnosis to their employer were more than three times as likely to be employed than those who did not disclose. Education level was also a significant predictor of employment status.

Conclusions: This study suggests disability disclosure and education level are factors that contribute to employment status.

You don't have to lose your job if you lose your sight.
The article looks at the potential of technological innovations to improve the lives and employment opportunities of people with disabilities. The author, a journalist who is gradually becoming blind due to retinitis pigmentosa, recounts how technologies such as computers and electronic book readers have enabled him to continue traveling and reporting even as his vision has deteriorated. He notes that some employers do not recognize that disabled employees can be very productive.
The relation of combined aerobic and muscle-strengthening physical activities with presenteeism

Walker, T et al

Journal of physical activity and health November 2017 14 11 893-898

Background: There is a need to understand physical activity types associated with health-related work limitations (also known as presenteeism). This study tests whether additive effects between physical activity types are associated with health-related work limitations among employees from a public university system.

Methods: A cross-sectional study using health assessment data (n = 10,791) was used to examine aims. Analysis of covariance models tested differences in work limitations between physical activity groups based on combinations of stretching behavior, aerobic, and muscle-strengthening physical activities. Planned contrasts compared differences between selected groups.

Results: There were significant group differences (P < .001) in reported work limitations after controlling for demographic, season, and health-related variables. Employees who reported participating in aerobic physical activity had significantly lower work limitation levels compared with inactive employees (P = .027). Employees who reported participating in both aerobic and muscle-strengthening physical activities had the lowest work limitation levels compared with all groups and significantly lower work limitation levels compared with employees who participated in aerobic physical activity only (P = .026).

Conclusions: Results provide evidence of an additive effect where participating in a combination of aerobic and muscle-strengthening physical activities may be most beneficial when targeting health-related work limitations.

The longitudinal association between multiple job holding and long-term sickness absence among Danish employees: an explorative study using register-based data

Bouwhuis, S et al.

International archives of occupational and environmental health November 2017 90: 799-807

Purpose: Multiple job holding (MJH) is common in many countries, but little is known about its (health) consequences. Our aim is to explore the longitudinal association between MJH and long-term sickness absence (LTSA) among Danish employees.

Methods: We included employees (N = 8968) who participated in the Danish Work Environment Cohort Study (DWECS), based on a representative sample of the Danish working population. Three dichotomous independent variables were created: MJH in general, combination MJH (i.e. second job as employee) and hybrid MJH (i.e. self-employed in second job). LTSA (≥5 weeks) was measured using the Danish Register for Evaluation of Marginalization during 78 weeks of follow-up. Potential confounders included demographics, health, and work characteristics. Logistic regression analyses were performed to study whether LTSA was associated with MJH in general, combination MJH, and hybrid MJH. Interaction effects for gender, age, total working hours per week (≤37 or >37 h a week), and shift work were tested.

Results: In total, 11.7% (N = 1048) of the respondents reported having multiple jobs and 7.6% (N = 678) experienced LTSA during follow-up. After adjustment for confounders, no significant association between LTSA and MJH in general (OR = 0.82), combination MJH (OR = 0.81), or hybrid MJH (OR = 0.83) was found. Among employees working more than 37 h per week, combination MJH was associated with a higher likelihood of LTSA (OR = 1.50).

Conclusions: We did not find evidence for an increased likelihood of LTSA among multiple job holders. Future research should study the likelihood of LTSA among subgroups of multiple job holders, e.g. those working long hours.
ASBESTOS AND MESOTHELIOMA

**Title**
Diffuse peritoneal mesothelioma: a case series of 62 patients including paraoccupational exposures to chrysotile asbestos

**Author/s**
Kradin, R et al

**Source**
*American journal of industrial medicine* November 2017 60 11 963-967 DOI: 10.1002/ajim.22768

**Abstract**
Background: Diffuse peritoneal malignant mesothelioma (DPM) is caused by exposure to asbestos. The medical literature has linked DPM primarily to high levels of asbestos exposure, in particular amosite. Controversy persists as to whether chrysotile is capable of causing DPM, especially when exposures are paraoccupational.

Methods: Sixty-two subjects (51 men, 11 women) with DPM were reviewed in medical-legal consultation with deposition and product identification evidence.

Results: All had pathologically confirmed DPM. Most were exposed to both amphibole and chrysotile, but chrysotile alone was documented in 14/62 (26%) cases. A total of 7/14 (50%) cases of the paraoccupational exposures were to chrysotile alone. Women were younger than men as were those with paraoccupational versus those with occupational exposure. The mean duration of exposure for all cases was 17.9 ± 10 years and latency from time of first exposure was 45.9 ± 11.6 years.

Conclusions: DPM occurs with both occupational and paraoccupational exposures to asbestos and may be seen in paraoccupational exposures to chrysotile asbestos.

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**Title**
Experimental asbestos studies in the UK: 1912-1950

**Author/s**
Greenberg, M

**Source**
*American journal of industrial medicine* November 2017 60 11 956-962 DOI: 10.1002/ajim.22762

**Abstract**
The asbestos industry originated in the UK in the 1870s. By 1898, asbestos had many applications and was reported to be one of the four leading causes of severe occupational disease. In 1912, the UK government sponsored an experimental study that reported that exposure to asbestos produced no more than a modicum of pulmonary fibrosis in guinea pigs. In the 1930s, the newly established Medical Research Council, with assistance from industry, sponsored a study of the effects of exposing animals to asbestos by injection (intratracheal and subcutaneous) and by inhalation in the factory environment. Government reports, publications, and contemporary records obtained by legal discovery have been reviewed in the context of the stage of scientific development and the history of the times. Experimenters were engaged in a learning process during the 1912–1950 period, and their reports of the effects of asbestos were inconsistent. Pathologists who studied the effects of asbestos experimentally, at whole animal, tissue and cellular levels, advanced experimental methodology and mechanistic knowledge. In the hands of public relations experts, however, research was exploited to preserve an industry and perpetuate preventable diseases, a practice that continues to this day.

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**Title**
The economic burden of lung cancer and mesothelioma due to occupational and para-occupational asbestos exposure

**Author/s**
Tompa, E et al
Abstract

Objectives To estimate the economic burden of lung cancer and mesothelioma due to occupational and para-occupational asbestos exposure in Canada.

Methods We estimate the lifetime cost of newly diagnosed lung cancer and mesothelioma cases associated with occupational and para-occupational asbestos exposure for calendar year 2011 based on the societal perspective. The key cost components considered are healthcare costs, productivity and output costs, and quality of life costs.

Results There were 427 cases of newly diagnosed mesothelioma cases and 1904 lung cancer cases attributable to asbestos exposure in 2011 for a total of 2331 cases. Our estimate of the economic burden is $C831 million in direct and indirect costs for newly identified cases of mesothelioma and lung cancer and $C1.5 billion in quality of life costs based on a value of $C100 000 per quality-adjusted life year. This amounts to $C356 429 and $C652 369 per case, respectively.

Conclusions The economic burden of lung cancer and mesothelioma associated with occupational and para-occupational asbestos exposure is substantial. The estimate identified is for 2331 newly diagnosed, occupational and para-occupational exposure cases in 2011, so it is only a portion of the burden of existing cases in that year. Our findings provide important information for policy decision makers for priority setting, in particular the merits of banning the mining of asbestos and use of products containing asbestos in countries where they are still allowed and also the merits of asbestos removal in older buildings with asbestos insulation.
asbestos but also the presence of asbestos in the environment. Epidemiological surveillance of asbestos-related diseases is a fundamental tool for monitoring the health profile in NPCS.

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Title Migrating pleural plaque in a patient with asbestos induced pleural disease: a case report
Author/s Eisenhawer Christian et al
Source *Journal of occupational medicine & toxicology* August 2017 12 1 1-6 6 4 2 DOI: 10.1186/s12995-017-0171-8
Abstract Background: Health surveillance of formerly asbestos exposed individuals focus on early detection of asbestos related diseases, such as lung fibrosis (asbestosis), pleural plaques, mesothelioma and lung cancer in particular. One main concern is the early and clear identification of lesions with a high risk of malignant changes and their undelayed clinical work-up. False positive results may lead to unnecessary and often painful diagnostic interventions, which create high costs when applied to a large cohort and also may discredit the whole program. We describe an unusual presentation of a common lesion among asbestos exposed individuals, which has to our knowledge never been described before. Being aware of this pathological pathway may prevent inadequate clinical decisions with disadvantages for the patient. Underlying implications regarding health surveillance and the reading of CT-scans of the thorax are important for the management of formerly asbestos exposed individuals.
Case presentation: During follow-up of an asbestos exposed 72 year old former power plant worker with known pleural changes, a nodule located next to the left costophrenic angle was newly discovered on CT-scan. As the previous scan 1 year before did not show any changes in that area, a fast growing tumour was suspected and an immediate biopsy performed. The tissue showed the characteristics of a pleural plaque with no signs of malignancy. After carefully reviewing all previous radiographs a rounded opacity attached to the mediastinal pleura close to the oesophagus and slightly cranial to the position of the removed nodule could be discerned. That nodule had increased in size over several years and was no longer visible on the latest scan. It appeared that the originally slow growing plaque had migrated to the costophrenic angle some time before it was discovered in the latest scan thus imposing as a fast growing tumour.
Conclusions: We concluded that asbestos related pleural plaques can under special circumstances get separated from the pleura and migrate to another position in the pleural cavity. The case provides new insights in the development and properties of pleural lesions and may offer new options for the management of formerly asbestos exposed patients.

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Title Non-occupational exposure to asbestos and risk of pleural mesothelioma: review and meta-analysis
Author/s Marsh, GM Riordan et al
Source *Occupational & environmental medicine* November 2017 74 11 http://dx.doi.org/10.1136/oemed-2017-104383
Abstract Objective To conduct an updated literature review and meta-analysis of studies of pleural malignant mesothelioma (PMM) risk among persons exposed to asbestos non-occupationally (household and neighbourhood).
Methods We performed a literature search for articles available in the National Center for Biotechnology Information’s PubMed database published between 1967 and 2016. Meta-analyses were conducted to calculate pooled PMM risk estimates, stratifying for household or neighbourhood exposure to asbestos and/or predominant asbestos fibre type (chrysotile, amphibole or mixed).
Results Eighteen studies in 12 countries comprising 665 cases met the meta-analysis inclusion criteria. We identified 13 estimates of PMM risk from neighbourhood exposures, 10 from household and one from mixed exposure, and combined the estimates using random-effects models. The overall meta-relative risk (meta-RR) was 5.9 (95% CI 4.4 to 8.7). The meta-RRs for household and neighbourhood exposures were 5.4 (95% CI 2.6 to 11.2) and 6.9 (95% CI 4.2 to 11.4), respectively. We observed trends in risk in relation to fibre type for both household and...
For chrysotile, mixed and amphibole fibres, respectively, meta-RRs for household studies were 3.8 (95% CI 0.4 to 38.4), 8.4 (95% CI 4.7 to 14.9) and 21.1 (95% CI 5.3 to 84.5) and meta-RRs for household studies were 4.0 (95% CI 0.8 to 18.8), 5.3 (95% CI 1.9 to 15.0) and 21.1 (95% CI 2.8 to 156.0).

Conclusions PMM risks from non-occupational asbestos exposure are consistent with the fibre-type potency response observed in occupational settings. By relating our findings to knowledge of exposure-response relationships in occupational settings, we can better evaluate PMM risks in communities with ambient asbestos exposures from industrial or other sources.

BULLYING

Title Psychosocial safety climate (PSC) and enacted PSC for workplace bullying and psychological health problem reduction

Author/s Dollard, M F Dormann, C Tuckey, M Escartin, J

Source European journal of work and organizational psychology 2017 26 6 844-857

Abstract Bullying at work has profound effects on both the individual and organization. We aimed to determine if organizational psychosocial safety climate (PSC; a climate specific to worker psychological health) could reduce workplace bullying and associated psychological health problems (i.e., distress, emotional exhaustion, depression) if specific procedures were implemented (PSC enactment). We theorized that the PSC enactment mechanism works via psychosocial processes such as bullying mistreatment climate (anti-bullying procedures), work design (procedures reduce stress through work redesign), and conflict resolution (procedures to resolve conflict). We used two-wave national longitudinal interview data from 1,062 Australian employees (Australian Workplace Barometer project) and structural equation modelling to explore relationships over 4 years. PSC Time 1 predicted enacted PSC and reduced bullying 4 years later. PSC Time 1 was indirectly negatively related to poor psychological health Time 2 through enacted PSC and bullying. Bullying Time 1 also gave rise to procedures which in turn reduced bullying Time 2. Our findings suggest a multi-component approach to prevent or reduce bullying. Procedures (to reduce psychosocial hazards) that emerge in a high PSC context are more comprehensive than those triggered by bullying (reactive procedures), and can therefore be more effective in reducing worker mistreatment. Building PSC and a strong climate for psychological health, and enacting PSC is fundamental to bullying prevention.

Title Towards a conceptual and empirical differentiation between workplace bullying and interpersonal conflict

Author/s Baillien, E Escartin, J Gross, C Zapf, D

Source European journal of work and organizational psychology 2017 26 6 870-881

Abstract This study investigates the defining features that distinguish workplace bullying from interpersonal conflict – being frequency, negative social behaviour, power imbalance, length and perceived intent – by contrasting the characteristics of conflict incidents in a group of workplace bullying victims versus a group of non-victims. A group of 47 victims and 62 non-victims were identified based on a questionnaire time 1 and time 2 (time lag of 6 months). The conflict incidents were assessed between time 1 and time 2 using an event-based diary study that was filled out for a period of two times 20 working days with a break of 4 months in between. Hierarchical linear modelling (HLM) showed that conflict incidents differed for victims versus non-victims, in line with the defining aspects of workplace bullying: victims’ conflict incidents related more to the work context and included more personal and work-related negative social
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CHRONIC HEALTH ISSUES

Title Setting strategy for system change: using concept mapping to prioritise national action for chronic disease prevention
Author/s Wutzke, S et al
Source Health research policy and systems 2017 15 69 https://doi.org/10.1186/s12961-017-0231-7
Abstract Background: Chronic diseases are a serious and urgent problem, requiring at-scale, multi-component, multi-stakeholder action and cooperation. Despite numerous national frameworks and agenda-setting documents to coordinate prevention efforts, Australia, like many countries internationally, is yet to substantively impact the burden from chronic disease. Improved evidence on effective strategies for the prevention of chronic disease is required. This research sought to articulate a priority set of important and feasible action domains to inform future discussion and debate regarding priority areas for chronic disease prevention policy and strategy.
Methods: Using concept mapping, a mixed-methods approach to making use of the best available tacit knowledge of recognised, diverse and well-experienced actors, and national actions to improve the prevention of chronic disease in Australia were identified and then mapped. Participants (ranging from 58 to 78 in the various stages of the research) included a national sample of academics, policymakers and practitioners. Data collection involved the generation and sorting of statements by participants. A series of visual representations of the data were then developed.
Results: A total of 95 statements were distilled into 12 clusters for action, namely Inter-Sectoral Partnerships; Systems Perspective/Action; Governance; Roles and Responsibilities; Evidence, Feedback and Learning; Funding and Incentive; Creating Demand; Primary Prevention; Social Determinants and Equity; Healthy Environments; Food and Nutrition; and Regulation and Policy. Specific areas for more immediate national action included refocusing the health system to prevention over cure, raising the profile of public health with health decision-makers, funding policy- and practice-relevant research, improving communication about prevention, learning from both global best-practice and domestic successes and failures, increasing the focus on primary prevention, and developing a long-term prevention strategy with an explicit funding commitment.
Conclusions: Preventing chronic diseases and their risk factors will require at-scale, multi-component, multi-stakeholder action and cooperation. The concept mapping procedures used in this research have enabled the synthesis of views across different stakeholders, bringing both divergent and convergent perspectives to light, and collectively creating signals for where to prioritise national action. Previous national strategies for chronic disease prevention have not collated the tacit knowledge of diverse actors in the prevention of chronic disease in this structured way.

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Title The nature and burden of occupational injury among first responder occupations: a retrospective cohort study in Australian workers
Author/s Gray, Collie A
Abstract Introduction: Workers in first responder (FR) occupations are at heightened risk for workplace
injury given their exposure to physical/psychological hazards. This study sought to (1) characterise the occupational risk of injury; (2) determine factors associated with injury; and (3) characterise the burden of injury-related disability in police, ambulance officers, fire/emergency workers, compared with other occupations.

Methods: A retrospective cohort of 2,439,624 claims occurring between July 2003 and June 2012 was extracted from the Australian National Dataset for Compensation-Based Statistics. Cases aged 16–75 years working 1–100 pre-injury hours per week were included. Regression models estimated risk of making a workers’ compensation (WC) claim by age, gender, occupation and injury type. Injury burden was calculated using count and time loss, and statistically compared between groups.

Results: The risk of making a WC claim among FR occupations was more than 3 times higher than other occupations. Risk of claiming was highest among female FRs and those aged 35–44 years. Ambulance officers had the greatest risk of upper-body MSK injuries and fire and emergency workers the greatest risk of lower-body MSK injuries. The risk of mental health conditions was elevated for all FR occupations but highest among police officers. The total burden of injury (expressed as working weeks lost per 1000 workers) differed significantly between groups and was highest amongst police.

Discussion and conclusions: First responders record significantly higher rates of occupational injury claims than other occupations. Using a national population based dataset, this study demonstrates that not only are first responders exposed to significantly higher rates of occupational injury than all other occupations combined, but they experience differential injury patterns depending on their occupation. This suggests that among FR occupations injury prevention efforts should reflect these differences and be targeted to occupation-specific patterns of injury.

Title
Causes and consequences of occupational fatigue: meta-analysis and systems model.

Author/s
Techera U, Hallowell M, Stambaugh N, Littlejohn R.

Source
J Occup environ med 2016 58 10 961-73

Abstract
Sleep loss and poor working conditions are the most important causes of occupational fatigue—which can impair mental and physical performance with the potential for serious errors and injuries, reports a review and update in the October Journal of Occupational and Environmental Medicine, official publication of the American College of Occupational and Environmental Medicine (ACOEM).

Matthew Hallowell, PhD, and colleagues of University of Colorado at Boulder analyzed previous research to develop a "comprehensive systems model" of the interrelated causes and consequences of occupational fatigue. Fatigue, which may be acute or chronic, is defined as "a decreased ability to perform activities at the desired level due to lassitude or exhaustion of mental and/or physical strength. "Based on available data, the "major drivers" of fatigue were sleep deprivation and factors in the work environment—such as noise, vibration, and temperature. These causes could all interact with other factors, such as increased work load and long work hours. The most significant consequences of fatigue were short-term degradation in cognitive (thinking) and physical functioning. Illnesses, human error, and injuries also occurred to a lesser extent. Evidence suggested that some consequences of fatigue can make other outcomes worse, reinforcing fatigue and leading to a "downward cycle." Occupational fatigue affects more than 20 percent of the US working population, resulting in more than $136 billion in lost productivity and health care costs each year. Unfortunately, the problem of fatigue may draw attention only after major accidents—the researchers cite the Three Mile Island, Chernobyl, and Exxon Valdez disasters. Although there has been considerable research on occupational fatigue, fewer studies have been done to replicate and validate those findings. Dr. Hallowell and colleagues hope their model will help occupational health professionals and researchers to better understand the interrelated causes and consequence of fatigue. They point to some key areas for further research, including the association between work relationships and fatigue.
Title: Adverse events associated with medium- and long-term use of opioids for chronic non-cancer pain: an overview of cochrane reviews

Author/s: Els C

Source: Cochrane database of systematic reviews October 2017 DOI: 10.1002/14651858.CD012509.pub2

Abstract: Plain language summary: There is good-quality evidence showing that side effects can occur in people with chronic non-cancer pain who use opioid medicines for longer than two weeks.

Background: Opioids are a type of pain medicine related to opium. We conducted an overview of Cochrane Reviews, which are a type of scientific paper, to learn what these papers said about the side effects of opioid drugs. We were interested in the medium- and long-term side effects with this treatment for pain in adults who use opioid medicines who have chronic pain that is not due to cancer. We studied opioid medications compared to pills that do not contain any medicine (placebos) and opioid medications compared to other treatments.

Key results: In March 2017, we found 16 Cochrane Reviews of 14 different opioid medicines, including codeine, morphine, and oxycodone. These papers included 61 studies with more than 18,000 participants. We found that people who take opioids have a higher risk of having any side effect, such as constipation, dizziness, and nausea, as well as having a serious side effect. We did not find any information in the Cochrane Reviews about many of the known and sometimes serious side effects of opioids, such as addiction, depression, and sleep problems. Quality of the reviews and the evidence: We rated the quality of the included reviews out of 10 points. As all of the reviews scored 9 or 10 out of 10, we are confident that the quality of the included reviews is very good. We also rated the quality of the evidence from studies using four levels: very low, low, moderate, or high; these ratings showed how sure we could be about our results for the side effects of opioids. Very low-quality evidence meant that we are very unsure about the results. High-quality evidence meant that we are very sure of the results. All of our ratings were between very low and high.

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Title: Fostering needs assessment and access to medical rehabilitation for patients with chronic disease and endangered work ability: protocol of a multilevel evaluation on the effectiveness and efficacy of a CME intervention for general practitioners

Author/s: Fuchs, Stephan et al

Source: Journal of occupational medicine & toxicology April 2017 12 1-8 DOI: 10.1186/s12995-017-0168-3

Abstract: Background: Studies show that endangered work ability (EWA) can be maintained or restored through medical rehabilitation (MR). For patients, general practitioners (GP) represent an important point of access to MR in outpatient care. However, many different barriers and shortcomings hinder GPs in both timely detection of the need for MR and the recognition of its potentials for their EWA-patients. These are necessary if GPs are to adequately inform patients about MR options and successfully support applications for MR. This study describes the evaluation of a continuing medical education (CME) module designed to improve rehabilitation-related practical performance of GPs regarding a) subjective satisfaction of GPs with the CME module, b) stability of attitudes and knowledge over time regarding rehabilitation, and c) subjective and objective changes in MR-related competencies needed to support MR applications. Methods: This study is an open, non-randomised, pre-post-intervention study. The intervention involves a CME module for GPs (n = 1365) in the German state of Saxony-Anhalt on the topic of medical rehabilitation in connection with the federal German pension fund (Deutsche Rentenversicherung). The module will be initially held as regularly scheduled meetings in moderated GP quality circles (QC), and then offered as a written self-study unit. At the end it will be evaluated by the GPs. The study's primary focus is on the organizational practice as measured by the number of approved MR applications supported by medical reports submitted by the participating GPs in the 6 months before and 6 months after the CME module. Other study aims involve measuring self-perceived competencies of GPs, as well as their attitudes towards and knowledge of rehabilitation (both upon completing the CME and 6 months later). In addition, the level of satisfaction with the CME module will be analysed amongst
participating GPs and QC moderators (as CME facilitators). Discussion: Implementing targeted CME on complex topics such as those involving barriers is possible, even promising, when using QCs and their moderators. Of particular importance is how aware moderating physicians are of the relevance of MR need detection and access. Ethics and dissemination: The ethics committee of the Martin-Luther-Universität Halle-Wittenberg has registered this study under the number 2014-13. The study will be reported on in peer-reviewed journals and at national and international conferences. The results will be available to current and future initiatives aiming to improve detection of MR need and making MR accessible to EWEC patients needing such support to minimize the effects of chronic disease on their lives.

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<th>Title</th>
<th>Multiple chronic conditions in the United States</th>
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<td>Author/s</td>
<td>Buttorff, C Ruder, T Bauman, M</td>
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<td>Source</td>
<td>RAND Health 2017</td>
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<tr>
<td>Abstract</td>
<td>This chartbook updates previous versions with more recent data on the prevalence of multiple chronic conditions (2008–2014) and associated health care utilization and spending. It also analyzes functional and other limitations for those with multiple chronic conditions. In 2014, 60 percent of Americans had at least one chronic condition, and 42 percent had multiple chronic conditions. These proportions have held steady since 2008. Americans with chronic conditions utilize more — and spend more on — health care services and may have reduced physical and social functioning</td>
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<th>Title</th>
<th>Correlates of employment status in individuals with asthma: a cross-sectional survey</th>
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<tr>
<td>Author/s</td>
<td>Taponen, Saara et al</td>
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<td>Source</td>
<td>Journal of occupational medicine &amp; toxicology July 2017 12 1-7 7 3 DOI: 10.1186/s12995-017-0165-6</td>
</tr>
<tr>
<td>Abstract</td>
<td>Background: This study aims to elucidate factors that among adults with asthma are associated with working full-time. Methods: This cross-sectional survey of 2613 working-age adults with asthma included questions on asthma history, symptoms and use of asthma medication, socioeconomic factors and health behavior. Full-time workers were compared to groups according to employment status: unemployed, work disability and retired due to age. Results: Adults with asthma working full time were younger and more often nonmanual workers, experienced less asthma symptoms, used less asthma medication and smoked less than subjects with work disability. After adjusting for age, gender, smoking and professional status, having frequent symptoms of asthma during last month was associated with an increase in the risk of unemployment (OR 2.3, 95% CI 1.3-4.2) and with an increase in the risk of work disability (OR 4.4, 95% CI 2.3-8.2). Conclusions: Among adults with asthma, full-time work was associated with younger age, less symptomatic asthma despite of less medication, nonmanual work and less smoking. Having more severe symptoms of asthma was associated with undesirable employment status such as unemployment or work disability. Possibilities to change from manual to nonmanual work may be important in preventing work disability and early exit from work.</td>
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<th>Title</th>
<th>Health utilities for chronic low back pain</th>
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<td>Author/s</td>
<td>Seidler, Anna et al</td>
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Source: Journal of occupational medicine & toxicology 2017 12 1 1-8 4 2 DOI: 10.1186/s12995-017-0172-7

Abstract

Background: Chronic low back pain (LBP) is a common health problem, with a large potential for primary prevention. Health utilities (HU) reflect which proportion of their expected remaining life time individuals would hypothetically trade to be alleviated of a health condition of interest. A value of 0 means 'prefer to die immediately', a value of 1 means 'not willing to trade any life time'. The aim of this cross-sectional study was to assess HU for LBP patients and for healthy participants and to examine whether HU for LBP are useful indicators to substantiate preventive and therapeutic decision making.

Methods: Healthy participants (n = 126) and LBP patients (n = 32) were recruited mainly among the employees of a tertiary care hospital in Germany. Standardized LBP scenarios were presented to all participants and HU values were assessed using the time-trade-off method.

Results: Median HU for LBP were 0.90 (IQR 0.31) for participants and 0.93 (IQR 0.10) for LBP patients. Measurements were consistent across illness severity ratings with HU and with a visual analogue scale (VAS); in the healthy sample the intraclass correlation coefficient (ICC) was 0.61 (95% CI 0.23-1.00, F(1125) = 190, p < .001), in the patient sample the ICC was 0.66 (95% CI = 0.24-1.00, F(1,31) = 62, p < .001). 8% of participants reported HU of 1. There was no statistically significant relation between HU and age, income, or gender.

Conclusion: On average, participants chose a 7 to 10% shorter life expectancy to avoid LBP, but almost 1 in 10 participants were not willing to trade any life years. The results indicate a certain stability of HU due to the comparability of HU ratings across patients and healthy participants, the measurement consistency when comparing VAS and HU ratings, and the lack of association between demographic variables and HU. This underlines the usefulness of HU for measuring illness severity in comparative health economics evaluations of preventive and therapeutic measures that address chronic LBP or other pain-characterized diseases. Future studies should focus on different LBP intensities and derive stratified HU that reflect the distribution of pain intensity in the population.

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DISABILITY

Title: Disability Employment Services reform 2018: industry information paper
Source: Department of Social Services 2017

Abstract: Disability Employment Services (DES) is the Australian Government's specialised employment service for people whose disability is assessed as the main impediment to them gaining employment. It plays an important role in improving the social and economic participation of people with disability. The Government has been working with the sector to find ways to improve the performance of DES so that more people with disability achieve the social, emotional and financial benefits that work brings. The Department of Social Services (DSS) has released this industry information paper to provide information about future arrangements for the DES program, including establishment of a new Panel of DES Providers to commence on 1 July 2018. Existing supports provided through DES, including the National Panel of Assessors (NPA), the Supported Wage System (SWS), Wage Subsidies and the National Disability Recruitment Coordinator (NDRC) will continue under the new program.

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Title: Reactivate: employment opportunities for economically inactive people
Author/s: Ludwinek, A Dubois, H Anderson, R
Source: Eurofound 2017

Abstract: Employment policies tend to focus on unemployed people, but evidence indicates that many
people who are economically inactive also have labour market potential. This report examines
groups within the inactive population that find it difficult to enter or re-enter the labour market
and explores the reasons why. It maps the characteristics and living conditions of these groups,
discusses their willingness to work and examines the barriers that prevent them from doing so.
The report also looks at strategies being implemented by Member States to promote the
inclusion of those outside the labour market. It highlights that many inactive people would like to
work in some capacity, particularly students and homemakers. Stressing the importance of
focusing on the specific needs of the inactive population in designing and implementing effective
strategies for their labour market integration, the report argues that Member States should fully
implement the 2008 European Commission Recommendation on the active inclusion of people
excluded from the labour market.

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ERGONOMICS

Title  Validity of the microsoft kinect for measurement of neck angle: comparison with
electrogoniometry
Author/s  Allahyari, T Sahraneshin, S Khalkhali, H-R
Source  International journal of occupational safety and ergonomics  November 2017 23 4 524-532
http://dx.doi.org/10.1080/10803548.2016.1219148

Abstract  Introduction. Considering the importance of evaluating working postures, many techniques and
tools have been developed to identify and eliminate awkward postures and prevent
musculoskeletal disorders (MSDs). The introduction of the Microsoft Kinect sensor, which is a
low-cost, easy to set up and markerless motion capture system, offers promising possibilities for
postural studies.
Objectives. Considering the Kinect's special ability in head-pose and facial-expression tracking
and complexity of cervical spine movements, this study aimed to assess concurrent validity of
the Microsoft Kinect against an electrogoniometer for neck angle measurements.
Methods. A special software program was developed to calculate the neck angle based on
Kinect skeleton tracking data. Neck angles were measured simultaneously by electrogoniometer
and the developed software program in 10 volunteers. The results were recorded in degrees
and the time required for each method was also measured.
Results. The Kinect's ability to identify body joints was reliable and precise. There was moderate
to excellent agreement between the Kinect-based method and the electrogoniometer (paired-
sample t test, p ≥ 0.25; intraclass correlation for test–retest reliability, ≥0.75).
Conclusion. Kinect-based measurement was much faster and required less equipment, but
accurate measurement with Microsoft Kinect was only possible if the participant was in its field
of view.

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MANAGEMENT AND LEADERSHIP

Title  Are you taking the wrong approach to digital transformation?
Author/s  Kane, GC
Source  MIT Sloan management review  November 2017

Abstract  In our 2017 report on digital business, we asked respondents how their companies were driving
digital transformation. The report groups companies into three different stages of digital maturity
— early, developing, and maturing — and we found that each has a different approach to
leading digital change. While the distinctions between how early and developing companies

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approach digital transformation are nuanced, the difference between these less advanced organizations and the companies that have advanced the farthest toward digital maturity is far more striking.

Digital continuity 2020

Source: National Archives of Australia
Department of Finance's Digital Records Transformation Team

Abstract: The Digital Continuity 2020 Records Management strategy aims to support Efficiency, Innovation, Interoperability, Information re-use and accountability by Integrating robust digital information management into all government business Processes. Development of a Whole-of-Government Digital Records Platform is being led by the Department of Finance in consultation with the National Archives of Australia. The Platform will automate the records management function, with rollout due to commence in 2020.

Introduction – work and life balance – better choice, flexibility and policy opportunities

Abstract: There is evidence that many people feel under pressure during the hectic “rush hour of life,” when children, education, and work lay competing claims on limited time. All too often, these tensions bring stress to an appreciable segment of the population. In some cases, they lead to increased absenteeism, missed opportunities for advancement, mental health problems, even withdrawal from the labour market. Part of the problem lies in our institutional arrangements, which were designed to accommodate the traditional family and life-cycle pattern: education for the young, then working careers (especially for men), followed by retirement. It may be necessary to review these institutional arrangements carefully so they better reflect the “new” contemporary Canadian society, to address successfully the new economic, social, and demographic challenges.

State of the global workplace

Source: Gallup

Abstract: Gallup’s 2017 State of the Global Workplace offers analytics and advice for organizational leaders in countries and regions around the globe who are trying to manage amid this rapid change. Grounded in decades of Gallup research and consulting worldwide -- and millions of interviews -- the report advises that leaders improve productivity by becoming far more employee-centered; build strengths-based organizations to unleash workers’ potential; and hire great managers to implement the positive change their organizations need not only to survive – but to thrive.

10 workplace trends you’ll see in 2018

Author/s: Schawbel, Dan

Source: Forbes November 2017
Abstract  This forecast is to help prepare organizations for the future by collecting, assessing and reporting the trends that will most impact them. These trends are based on hundreds of conversations with executives and workers, a series of national and global online surveys and secondary research from more than 450 different research sources, including colleges, consulting firms, non-profits, the government and trade associations

Title  Work and information which workplace models still work in modern digital workplaces?
Author/s  Bystrom, K Ruthven, I Hemstrom, J
Source  Information research 22 1 colis paper 1651 http://hdl.handle.net/10642/5135
Abstract  Introduction. In this paper, we outline some theoretical background for workplace studies in Information Science to facilitate an understanding of what is new in the phenomena and how early frameworks may inform us about the modern digital workplaces.
Method. We first characterise modern workplaces and discuss why new digital workplaces raise important questions in relation to information-related activities in the workplace. We then explore significant, earlier frameworks on workplace information issues to question their utility in researching digital workplaces.
Analysis. Our approach is to analytically examine the major trends and themes in early frameworks to present a discussion of which features may still be relevant to studying modern workplaces. Results. We see the continuance of this broad understanding of workplace information as a fruitful base for present and future studies of digital workplaces. This richness of views on workplace information leads to different understandings of information-related activities, which can create deep understandings but also conceptual confusion.
Conclusion. Our workplaces have changed radically since the early frameworks; whilst some aspects may provide the underpinning for research in modern workplaces there is a need for further conceptual analyses and clarifications to facilitate future research and compile their findings

Title  Authority or community? a relational models theory of group-level leadership emergence.
Author/s  Wellman, Ned
Source  Academy of management review  October 2017 42 4 596-617 22
Abstract  In this article I develop relational models leadership theory, which explains how shared cognition produces group-level leadership emergence effects. I propose that contextual features present early in a group's life can cause members to quickly converge on one of two cognitive relational models for leadership. Some groups adopt an authority ranking model, in which leadership influence is consolidated in the hands of a few high-status members. Others adopt a communal sharing model, in which leadership is the collective responsibility of all members. A positive feedback loop develops between group members' relational model convergence and leadership emergence such that members enact leadership in a manner consistent with their shared relational model, and these interactions reinforce the model. I also identify two types of "jolt" events that can radically shift group members' cognitions and actions related to leadership.

Title  The board's new innovation imperative: directors need to rethink their roles and their attitude to risk
Author/s  Hill, Linda A Davis, George.
Source  Harvard business review November /December 2017  95 6 102-109 8 3
Abstract  As firms scramble for competitive advantage, boards—once the cautious voices urging management to mitigate risk—are now calling for breakthrough innovation. Indeed, avoiding risk is now seen as the riskiest proposition of all. In speaking with CEOs and board members from a range of industries, the authors identified four common obstacles most boards face in governing innovation: an outdated risk agenda, insufficient time, lack of expertise, and a relationship with management that needs retuning. Embracing innovation and its inherent risks requires that boards and senior management develop new ways of working together. To bolster out-of-the-box thinking at their companies, boards should promote diversity among members. They should foster “creative abrasion” to keep ideas flowing and rethink traditional methods of governing. And they must learn to embrace and encourage risk.

Title  Turning potential into success: the missing link in leadership development
Author/s  Fernandez-Araoz, Claudio; Roscoe, Andrew; Aramaki, Kentaro.
Source  Harvard business review November/December 2017 95 6 86-93. 8 1 2 1
Abstract  Most leadership development programs aren’t working. Only 24% of senior executives at firms that have them consider them to be a success. Companies must take a more scientific approach to turning their raw talent into leaders, say three authors from Egon Zehnder, which has been measuring executive potential for 30 years. Begin by identifying which of seven key leadership competencies (results orientation, strategic orientation, collaboration and influence, team leadership, developing organizational capabilities, change leadership, and market understanding) are critical to your top roles. Next, assess employees’ potential by looking at five predictors of strong competencies (motivation, curiosity, insight, engagement, and determination) and then map people’s potential to role requirements to see how far they can go. Last, to help them get there, provide the right coaching and development opportunities

Title  What everyone gets wrong about change management
Author/s  Anand, N.; Barsoux, Jean-Louis
Source  Harvard business review November/December 2017 95 6 78-85 8
Abstract  Corporate transformations still have a miserable success rate: About three-quarters of change efforts either fail to deliver the anticipated benefits or are abandoned entirely. And because flawed implementation is most often blamed for such failures, organizations have focused on improving execution. But poor execution is only part of the problem; the authors’ four-year study of 62 corporate transformations suggests that misdiagnosis is equally to blame. Before worrying about how to change, they write, executive teams need to figure out what to change—in particular, what to change first. They can do this by fully understanding three things: the catalyst for transformation, the organization’s underlying quest (is it global presence, customer focus, nimbleness, innovation, or sustainability?), and the leadership capabilities needed to see it through. J.C. Penney, Norske Skog, Acer, and other classic cases illustrate the authors’ points, and the article includes a “quest audit” to help companies identify their transformation priorities.

Title  What managers need to know about social tools: avoid the common pitfalls so that your organization can collaborate, learn, and innovate
Author/s  Leonardi, Paul; Neeley, Tsedal
Source  Harvard business review November/December 2017 95 6 118-126 9 1 1
Abstract To identify the value that social tools can bring to companies, the authors split employees at a large financial services firm into two groups, only one of which used an internal social platform, and observed them for six months. Those who had used the tool became 31% more likely to find coworkers with relevant expertise and 88% more likely to discover who had useful connections. Internal social tools can help employees make faster decisions, develop more innovative ideas for products and services, and become more engaged in their work and their companies. But companies that try to “go social” often fall into four traps: They (1) assume that Millennials will embrace social tools at work; (2) struggle to foster personal interaction that builds trust and promotes knowledge sharing; (3) fail to recognize how learning occurs on social tools; and (4) focus on the wrong data. The authors offer advice on how to avoid these traps.
Abstract

Purpose: Computer work has been identified as a risk factor for upper extremity musculoskeletal problems (UEMSP). But few studies have investigated how psychosocial and organizational work factors affect this relation. Nor have gender differences in the relation between UEMSP and these work factors been studied. We sought to estimate: (1) the association between UEMSP and a range of physical, psychosocial and organizational work exposures, including the duration of computer work, and (2) the moderating effect of psychosocial work exposures on the relation between computer work and UEMSP.

Methods Using 2007–2008 Québec survey data on 2478 workers, we carried out gender-stratified multivariable logistic regression modeling and two-way interaction analyses.

Results: In both genders, odds of UEMSP were higher with exposure to high physical work demands and emotionally demanding work. Additionally among women, UEMSP were associated with duration of occupational computer exposure, sexual harassment, tense situations when dealing with clients, high quantitative demands and lack of prospects for promotion, and among men, with low coworker support, episodes of unemployment, low job security and contradictory work demands. Among women, the effect of computer work on UEMSP was considerably increased in the presence of emotionally demanding work, and may also be moderated by low recognition at work, contradictory work demands, and low supervisor support.

Conclusions These results suggest that the relations between UEMSP and computer work are moderated by psychosocial work exposures and that the relations between working conditions and UEMSP are somewhat different for each gender, highlighting the complexity of these relations and the importance of considering gender.
Objectives: To determine the effectiveness of early multidisciplinary interventions in promoting work participation and reducing work absence in adults with regional musculoskeletal pain. Data sources: Seven databases (CENTRAL, CINAHL, EMBASE, MEDLINE, Scopus, OT Seeker, PEDro; 1990 to December 2016) were searched for eligible studies. Review methods: Trials were included if they reported on work-based outcomes for participants experiencing difficulties at work or ≤ three month's sick leave. Interventions had to include two or more elements of the biopsychosocial model delivered as a coordinated programme. Quality was assessed using the GRADE criteria. Results were analysed by hazard ratios for return to work data; continuous outcomes were analysed as standardised mean difference with 95% confidence intervals. Results: A total of 20 randomized controlled trials, with 16,319 participants were included; the interventions were grouped according to their main components for meta-analyses. At 12-months follow-up, moderate quality evidence suggests that programmes involving a stepped care approach (four studies) were more effective than the comparisons in promoting return to work (hazard ratio (HR) 1.29 (95% confidence interval (CI) 1.03 to 1.61), p = 0.03), whereas case management (two studies) was not (HR 0.92 (95% CI 0.69 to 1.24), p = 0.59). Analyses suggested limited effectiveness in reducing sickness absences, in pain reduction or functional improvement across the intervention categories. Conclusion: There is uncertainty as to the effectiveness of early multicomponent interventions owing to the clinical heterogeneity and varying health and social insurance systems across the trials.
tools can generate significant vibration at frequencies below 25 Hz. It is not clear whether such vibration can be effectively transmitted to the upper arm, shoulder, neck, and head and cause adverse effects in these substructures. The objective of this study is to investigate the vibration transmission from the human hands to these substructures. Eight human subjects participated in the experiment, which was conducted on a 1-D vibration test system. Unlike many vibration transmission studies, both the right and left hand-arm systems were simultaneously exposed to the vibration to simulate a working posture in the experiment. A laser vibrometer and three accelerometers were used to measure the vibration transmitted to the substructures. The apparent mass at the palm of each hand was also measured to help in understanding the transmitted vibration and biodynamic response. This study found that the upper arm resonance frequency was 7–12 Hz, the shoulder resonance was 7–9 Hz, and the back and neck resonances were 6–7 Hz. The responses were affected by the hand-arm posture, applied hand force, and vibration magnitude. The transmissibility measured on the upper arm had a trend similar to that of the apparent mass measured at the palm in their major resonant frequency ranges. The implications of the results are discussed.

Relevance to industry: Musculoskeletal disorders (MSDs) of the shoulder and neck are important issues among many workers. Many of these workers use heavy-duty powered hand tools. The combined mechanical loads and vibration exposures are among the major factors contributing to the development of MSDs. The vibration characteristics of the body segments examined in this study can be used to help understand MSDs and to help develop more effective intervention methods.

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**Weblink**

**Title**

Work participation of patients with musculoskeletal disorders: is this addressed in physical therapy practice?

**Author/s**

Oswald, w et al

**Source**


**Abstract**

Background: Musculoskeletal disorders are the main complaints for visiting a physical therapist (PT) in primary health care; they have a negative effect on an individual’s quality of life and result in a major cost to society. Qualitative research has shown that physical therapists (PTs) treating patients with these disorders experience barriers in the integration of occupational factors within their practice, and also revealed a lack of cooperation between PTs and (other) occupational healthcare providers. The aim of this study is to quantitatively investigate how generalist PTs in the Netherlands, who treat patients with musculoskeletal disorders, currently integrate occupational factors within their practice, and to identify their opinions and needs with regard to enhancing the integration of the patient’s work within physical therapy practice.

Methods: A cross-sectional survey was conducted among generalist PTs who treat working-age (18–67 years) patients with musculoskeletal disorders. Generalist PTs were contacted for participation via digital news-mails and asked to fill out an online survey which was developed based on the results of a recent qualitative study. The survey consisted of: i) demographics of the participants, ii) questions on how generalist PTs currently integrate occupational factors within their practice, and iii) asked their opinion about the integration of occupational factors within physical therapy. The PTs were also asked about their needs with regard to the integration of occupational factors and with regard to cooperation with other (occupational) health professionals. All answers (using Likert scales) are presented as the number and percentage of the respondents reporting those specific answers, whereas all other answers are presented as means and standard deviations.

Results: Of the 142 respondents, 64% indicated that occupational factors should be addressed to a greater extent within physical therapy. To have the possibility to bill for a workplace assessment (60.6%) and more knowledge about laws and regulations (50%) were identified as needs of the respondents. Only 14.8% of the respondents indicated that they communicate with or consult a PT specialized in occupational health. Only 12.7% of the participants who do not have a specialized PT within their practice sometimes/regularly refer patients to a specialized PT.

Conclusions: Although generalist PTs address occupational factors within their practice, there is room for improvement. This study also identified a lack of cooperation between generalist PTs.
# OCCUPATIONAL ISSUES

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<tr>
<th>Title</th>
<th>Non-standard forms of employment: recent trends and future prospects</th>
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<tr>
<td>Author/s</td>
<td>Storrie, Donald</td>
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<td>Source</td>
<td>Eurofound  September 2017</td>
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<tr>
<td>Abstract</td>
<td>The main focus of this paper is the growth of non-standard employment over the last decade. It finds that, apart from part-time work, there has not been an increase in non-standard employment during this time. However, both temporary contracts and self-employment grew, quite strongly in some Member States, in the long economic boom from the mid-1990s and up to the onset of the recession in 2007. It is, of course, primarily when times are bad that the need for employment and social protection is made manifest.</td>
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<tr>
<th>Title</th>
<th>Indicators of a thriving: workplace survey – a work in progress</th>
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<tr>
<td>Source</td>
<td>SuperFriend 2017</td>
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<td>Abstract</td>
<td>This report measures the current state of workplace mental health and wellbeing in Australia. The results provide a snapshot of the state of workplace mental health and wellbeing in Australia and have uncovered new insights which are presented in the following key domains: Leadership, connectedness, policies and practices, and organisational culture and capabilities. This year the report will also provide a set of evidence based actions for each of these key domains to help you build a thriving workplace.</td>
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<th>Title</th>
<th>Rethinking working time in Europe</th>
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<tr>
<td>Author/s</td>
<td>Cabrita, Jorge</td>
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<tr>
<td>Source</td>
<td>Eurofound</td>
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<tr>
<td>Abstract</td>
<td>The results of recent research on working time patterns in the EU constitute a strong plea for working time policies that clearly acknowledge the life course perspective. This means that working time must not only be thought and organised in daily, weekly, monthly and/or yearly terms but also take into full consideration the different stages of our lives.</td>
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<th>Title</th>
<th>Night work, long work weeks, and risk of accidental injuries. a register-based study</th>
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<td>Author/s</td>
<td>Larsen, AD et al</td>
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<td>Abstract</td>
<td>Objectives The aims of this study were to (i) investigate the association between night work or long work weeks and the risk of accidental injuries and (ii) test if the association is affected by</td>
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Methods
The study population was drawn from the Danish version of the European Labour Force Survey from 1999–2013. The current study was based on 150,438 participants (53% men and 47% women). Data on accidental injuries were obtained at individual level from national health registers. We included all 20–59-year-old employees working ≥32 hours a week at the time of the interview. We used Poisson regression to estimate the relative rates (RR) of accidental injuries as a function of night work or long work weeks (>40 hours per week) adjusted for year of interview, sex, age, socioeconomic status (SES), industry, and weekly working hours or night work. Age, sex and SES were included as two-way interactions.

Results
We observed 23,495 cases of accidental injuries based on 273,700 person years at risk. Exposure to night work was statistically significantly associated with accidental injuries (RR 1.11, 99% CI 1.06–1.17) compared to participants with no recent night work. No associations were found between long work weeks (>40 hours) and accidental injuries.

Conclusion
We found a modest increased risk of accidental injuries when reporting night work. No associations between long work weeks and risk of accidental injuries were observed. Age, sex and SES showed no trends when included as two-way interactions.
Taking account of gender differences when designing interventions in occupational health?

Author/s: Sultan-Taieb, H et al


Abstract: The literature shows substantial differences in occupational exposures between men and women, both between and within occupations, but remains very sparse on whether interventions are tailored to gender differences in the workplace. Our objective was to determine whether gender differences are taken into account when designing prevention interventions. This study is part of a project on the evaluation of interventions implemented in the framework of the “Healthy Enterprise” standard in Quebec organizations. Three sets of quantitative and qualitative data were collected in seven organizations and triangulated. Our results show that in the process of elaborating and implementing activities, the main objectives were to reach a maximum number of workers and meet the needs identified in a health and risk diagnosis. Activities were not tailored to the needs of specific subgroups of employees, such as gender or age. Not distinguishing men’s and women’s situations in this diagnosis may play a role in intervention design.

Women’s occupational health: resisting when we can

Author/s: Riel, J Saint-Charles, J Messing, K


Abstract: The continuing worldwide struggle for decent working conditions is under intense economic, social, and political pressures. Women are particularly affected by these pressures because of their still-tenuous position in the service sector, in low prestige, low-paid occupations. In addition, their occupational health issues are often overlooked or minimized. Nevertheless, women continue to struggle, as individuals and collectively. This issue describes a number of instances where women in the Québec labor movement have attempted to reconcile equality concerns with protecting their own health. There are successes, failures, and puzzles.

Changing directions, changing lives

Source: Mental Health Commission of Canada

Abstract: This strategy draws on the experience, knowledge and advice of thousands of people across the country. It provides an opportunity for everyone’s efforts — large and small, both inside and outside the mental health system — to help bring about change.

How to facilitate the adoption of organizational interventions to prevent mental health problems in the workplace?
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<tr>
<td>Abstract</td>
<td>There is increasing scientific evidence that psychosocial risk (PSR) factors, such as high psychological demands, low decisional latitude, weak social support and an imbalance between effort and recognition received at work contribute to the development of mental health problems, musculoskeletal disorders, and cardiovascular disease. These health problems are among the main causes of absence from work due to illness. The literature on preventive actions regarding mental health focuses mainly on measures to change certain individual characteristics (such as workers’ lifestyles), instead of organizational characteristics (for example, employment conditions and organization). Organizational interventions are complex and include multiple activities that simultaneously affect many psychosocial risk factors. Although a number of studies have shown that such measures can effectively improve mental health in the workplace, very few of them have attempted to delve into the factors that may help or hinder their implementation. Managers play a key role in the establishment of preventive measures in the workplace. This report documents the existing approaches to preventing mental health problems in the workplace and provides managers with psychosocial management tools (e.g., guides, examples of best practices) that will support the current health intervention in their organization; and discovers which factors facilitate or hinder the organizational interventions designed to prevent mental health problems, and the adoption of management practices that foster good mental health.</td>
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<th>Mental health services in Australia</th>
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<td>Source</td>
<td>AIHW 2017</td>
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<td>Abstract</td>
<td>Mental illness comprises a wide range of disorders and varies in its severity. The effect of mental illness can be severe on the individuals and families concerned and its influence is far-reaching for society as a whole. Social problems commonly associated with mental illness include poverty, unemployment or reduced productivity and homelessness. Those with mental illness often experience problems such as isolation, discrimination and stigma.</td>
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<th>Title</th>
<th>Mindfulness-based stress reduction (MBSR) for improving health, quality of life and social functioning in adults</th>
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<tr>
<td>Author/s</td>
<td>De Vibe et al</td>
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<td>Source</td>
<td>Campbell Collaboration November 2017</td>
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<td>Abstract</td>
<td>There is an increasing focus on mind-body interventions for relieving stress, and improving health and quality of life, accompanied by a growing body of research trying to evaluate such interventions. One of the most well-known Programs is Mindfulness-Based Stress Reduction (MBSR), which was developed by Kabat-Zinn in 1979. Mindfulness is paying attention to the present moment in a non-judgmental way. The Program is based on old contemplative traditions and involves regular meditation practice. A number of reviews and meta-analyses have been carried out to evaluate the effects of meditation and mindfulness training, but few have adhered to the meta-analytic protocol set out by the Cochrane Collaboration and Campbell Collaboration, or focused on MBSR only. The first edition of this review was published in 2012 with a literature search done in 2010, comprising 31 studies. As the field is rapidly developing, an update is called for.</td>
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| Title | Mental health services research in Australia |
The article discusses mental health services research in Australia. Topics discussed include establishment of psychiatric hospital for treating people with mental disabilities in the country; an account of community treatment of mental illness; and rising knowledge of the epidemiological need across the country.

The benefits of paid employment among persons with common mental health problems: evidence for the selection and causation mechanism

Schuring, M Robroek, SJW Burdorf, A

Scandinavian journal of work environment and health 2017 43 6 540-549
doi:10.5271/sjweh.3675

Objectives The aims of this study were to (i) investigate the impact of paid employment on self-rated health, self-esteem, mastery, and happiness among previously unemployed persons with common mental health problems, and (ii) determine whether there are educational inequalities in these effects.

Methods A quasi-experimental study was performed with a two-year follow-up period among unemployed persons with mental health problems. Eligible participants were identified at the social services departments of five cities in The Netherlands when being diagnosed with a common mental disorder, primarily depression and anxiety disorders, in the past 12 months by a physician (N=749). Employment status (defined as paid employment for ≥12 hours/week), mental health [Short Form 12 (SF-12)], physical health (SF-12), self-esteem, mastery, and happiness were measured at baseline, after 12 months and 24 months. The repeated-measurement longitudinal data were analyzed using a hybrid method, combining fixed and random effects. The regression coefficient was decomposed into between- and within-individual associations, respectively.

Results The between-individuals associations showed that persons working ≥12 hours per week reported better mental health (b=26.7, SE 5.1), mastery (b=2.7, SE 0.6), self-esteem (b=5.7, SE 1.1), physical health (b=14.6, SE 5.6) and happiness (OR 7.7, 95% CI 2.3–26.4). The within-individuals associations showed that entering paid employment for ≥12 hours per week resulted in better mental health (b=16.3, SE 3.4), mastery (b=1.7, SE 0.4), self-esteem (b=3.4, SE 0.7), physical health (b=9.8, SE 2.9), and happiness (OR 3.1, 95% CI 1.4–6.9). Among intermediate- and high-educated persons, entering paid employment had significantly larger effect on mental health than among low-educated persons.

Conclusions This study provides evidence that entering paid employment has a positive impact on self-reported health; thus work should be considered as an important part of health promotion programs among unemployed persons.

Changes in working conditions and major weight gain among normal- and overweight midlife employees

Niskanen, R et al

Scandinavian journal of work environment and health 2017 43 6 587-594
doi:10.5271/sjweh.3678

Objectives We aimed to examine the association between changes in psychosocial working conditions and major weight gain among midlife women and men. Furthermore, we examined the associations separately among normal- and overweight participants.

Methods We used survey data among employees of the City of Helsinki, Finland, from 2000–2002 (phase 1, N=8960), 2007 (phase 2, N=7332), and 2012 (phase 3, N=6814), with a final
study sample of 4369 participants. We examined changes in job strain, job demands, and job control from phase 1 to 2. We defined major weight gain as ≥10% weight gain between phases 1 and 3 based on self-reported weight (kg). We performed logistic regression analysis adjusting for baseline age, marital status, and occupational class, stratifying by gender and by baseline body mass index.

Results Job demands among both genders and job strain among women was associated with major weight gain. Furthermore, increased job demands [odds ratio (OR) 1.52, 95% CI 1.05–2.20] or increased job strain (OR 1.53, 95% CI 1.11–2.11) was associated with major weight gain among overweight women. Normal-weight men reporting decreased job demands (OR 4.11, 95% CI 1.48–11.40) and overweight men reporting increasing job demands (OR 2.93, 95% CI 1.26–6.82) exhibited higher odds of major weight gain.

Conclusions Associations between working conditions and weight gain appeared primarily weak. Our study suggests that overweight individuals might be at a higher risk of weight gain when facing psychosocial strain in the workplace.

Title Functional limitations and associated psychological factors in military personnel with chronic nonspecific neck pain with higher levels of kinesiophobia

Author/s Lopez-de-Uraide-Villanueva, I et al

Source Work 58 3 287-297 2017 DOI: 10.3233/WOR-172634

Abstract Background: Neck pain is one of the largest health problems in the military sector. Objective: To assess differences in the strength and endurance of the cervical muscles between military personnel with chronic nonspecific neck pain (CNSNP) with higher level of kinesiophobia (CNSNP-K) and individuals with lower levels of kinesiophobia (CNSNP-NK). Methods: We used kinesiophobia as a classification method: (1) CNSNP-K and (2) CNSNP-NK. The variables measured were endurance and strength of cervical muscles; range of motion (ROM), disability, pain intensity and psychological factors.

Results: Eighty-three military personnel (26 CNSNP-K; 20 CNSNP-NK and 37 asymptomatic). Statistically significant differences in endurance and ROM were only found between the CNSNP-K group and the control group. In strength and disability differences were revealed between both symptomatic groups and the control group [CNSNP-K vs. control (flex-ext p < 0.001); CNSNP-NK vs. control (flex p =0.003) and (ext p < 0.001)]. For psychological variables, the CNSNP-K group showed differences compared with the CNSNP-NK (pain catastrophizing, p =0.007; anxiety and depression, p < 0.001) and with the asymptomatic group (pain catastrophizing, p =0.008; anxiety and depression, p < 0.001).

Conclusions: Military personnel with CNSNP-K have functional limitations and associated psychosocial factors compared with asymptomatic subjects, and showed greater associated psychological factors than CNSNP-NK group. Military personnel with CNSNP-NK only showed decreased strength with respect to those who were asymptomatic.

Title Mental health and insurance : green paper

Author/s Atkins, G Freeman, S

Source Actuaries Institute October 2017 https://actuaries.asn.au/microsites/see-what-we-see/in-action/case-mental-health

Abstract This Green Paper aims to stimulate discussion about a pressing problem. The way the insurance sector and insurance products interact with people with mental health conditions is just one part of the social context of mental health. It is an aspect, though, where actuaries hope to contribute to improving outcomes and experiences for insured people and improving the way insurance products respond to their needs.

Mental health problems are very common in the community. One in five Australians will be affected by a mental health condition in any 12-month period, most commonly anxiety and depression. Mental health conditions also limit the participation of people in the workforce, which
is directly relevant to insurance products.
This paper explores some of the difficult problems faced by insurers as they try to balance the competing objectives of maintaining an affordable and sustainable product while meeting the expectations of their customers and the community in relation to mental health conditions.

**Title**
A modified job demand, control, support model for active duty police

**Author/s**
Elgmark, Andersson, E Larsen. LB Ramstrand, N

**Source**
Work 58 3 361-370 2017 DOI: 10.3233/WOR-172621

**Abstract**
Background: The Job Demand Control Support model (JDCS) is one of the most widely used theoretical models relating job characteristics to health and wellbeing.

Objective: This study aimed to assess the predictive power of the JDCS model for determining job satisfaction and fatigue in uniformed Swedish police. An additional aim was to determine if predictive power of the model would be improved with the addition of two occupation specific items.

Methods: Questionnaire data, based upon the Swedish Work Environment Survey were collected from Swedish police (n =4244). A hierarchical multiple regression analysis was run to explore the predictive value of the model and to determine if the additional variables improved predictive power with respect to job satisfaction and fatigue.

Results: Regression analysis demonstrated that the JDSC model had high predictive power in relation to job satisfaction and fatigue. Job demands was the strongest predictor of fatigue (14%), while support was the strongest predictor of job satisfaction (12%). The addition of exposure to threats significantly improved predictive power for both job satisfaction and fatigue, while addition of shift work did not significantly affect predictive power of the model.

Conclusions: Workplace interventions to address issues related to job satisfaction and fatigue in police should focus on maintaining a bearable level of job demands and provision of adequate support.

**Title**
Monitoring of need for recovery and prolonged fatigue within the working population: evaluation of reliability and agreement over time

**Author/s**
Hoofs, H Jansen, NWH Jansen, MWJ Kant, IJ

**Source**
Work 58 3 399-412 2017 DOI: 10.3233/WOR-172624

**Abstract**
Background: Need for recovery (NFR) and prolonged fatigue are two important concepts for monitoring short- and long-term outcomes of psychological job demands within employees. For effective monitoring it is, however, important to gain insight in the reproducibility of the instruments that are used.

Objective: The objective was to assess reproducibility of the NFR scale and Checklist Individual Strength (CIS), measuring NFR and prolonged fatigue respectively, in the working population.

Methods: Longitudinal data from the Maastricht Cohort Study (MCS) study was used, capturing 12,140 employees from 45 different companies at baseline. A ‘working’ and ‘returning to work’ sample was conceived for different intervals; 4-month, 1-year, and 2-year.

Results: Reliability, assessed with the interclass correlation, was high within employees with a stable work environment for the NFR scale (0.78) and CIS (0.75). The smallest detectable change, assessing the agreement, was 41.20 for the NFR scale and 31.10 for the CIS.

Conclusions: Reliability was satisfactory for both the NFR scale and CIS. The agreement of both scales to detect a changes within employees was, however, less optimal. It is, therefore, suggested that, ideally, both instruments are placed within a broader range of instruments to effectively monitor the outcomes of psychological job demands.

www.comcare.gov.au Ph: 1300 366 979
An occupational portrait of emotional labor requirements and their health consequences for workers

Singh, K Glavin, P

Work and occupations 2017 44 4 https://doi.org/10.1177/0730888417726835

Weblink

Scholarship has revealed inconsistent evidence on the issue of whether emotional labor represents an occupational health risk. Drawing from emotion regulation theory, the conservation of resources model and the interactive service work literature, we examine the association between occupational emotional labor requirements and worker well-being. Analyses of a national sample of American workers merged with occupational information from the O*NET database reveal no evidence that these requirements are associated with psychological distress or high blood pressure; in contrast, emotional labor requirements are associated with a reduced likelihood of self-rated poor health. Consistent with the conservation of resources model, however, we find health penalties for individuals with emotional labor requirements in resource-deprived work contexts. Our findings suggest that for individuals with limited job autonomy and little access to civil interpersonal relationships with coworkers, emotional labor requirements may impede successful emotion regulation in ways that contribute to negative occupational outcomes and strain.

The Portuguese long version of the Copenhagen psychosocial questionnaire II (COPSOQ II) - a validation study

Rosário, Susel

Journal of occupational medicine & toxicology September 2017 12 1-17 17 1 11 DOI: 10.1186/s12995-017-0170-9

Weblink

Background: Psychosocial risks are now widely recognised as one of the biggest challenges for occupational safety and health (OSH) and a major public health concern. The aim of this paper is to investigate the Portuguese long version of the Copenhagen Psychosocial Questionnaire II (COPSOQ II), in order to analyse the psychometric properties of the instrument and to validate it. Methods: The Portuguese COPSOQ II was issued to a total of 745 Portuguese employees from both private and public organisations across several economic sectors at a baseline and then 2 weeks later. Methodological quality appraisal was based on CONsensus-based Standards for the selection of health Measurement INstruments (COSMIN) recommendations. An analysis of the psychometric properties of the long version of COPSOQ II (internal consistency, intraclass correlation coefficient, floor and ceiling effects, response rate, missing values, mean and standard deviation, exploratory factor analysis) was performed to determine the validity and reliability of the instrument. Results: The COPSOQ II had a response rate of 60.6% (test) and a follow-up response rate of 59.5% (retest). In general, a Cronbach's alpha of the COPSOQ scales (test and retest) was above the conventional threshold of 0.7. The test-retest reliability estimated by the intraclass correlation coefficient (ICC) showed a higher reliability for most of the scales, above the conventional 0.7, except for eight scales. The proportion of the missing values was less than 1.3%, except for two scales. The average scores and standard deviations showed similar results to the original Danish study, except for eight scales. All of the scales had low floor and ceiling effects, with one exception. Overall, the exploratory factor analysis presented good results in 27 scales assuming a reflective measurement model. The hypothesized factor structure under a reflective model was not supported in 14 scales and for some but not all of these scales the explanation may be a formative measurement model. Conclusion: The Portuguese long version of COPSOQ II is a reliable and valid instrument for assessing psychosocial risks in the workplace. Although the results are good for most of the scales, there are those that should be evaluated in greater depth in future studies. This instrument may contribute to the promotion of a healthy working environment and workforce, providing clear benefits for companies and employees.
The study on mental health at work: design and sampling

Rose, U et al

Scandinavian journal of public health 2017 45 6 584-594

Weblink

Trajectories of job demands and control: risk for subsequent symptoms of major depression in the nationally representative Swedish longitudinal occupational survey of health (SLOSH)

Ahlin, JK

International archives of occupational and environmental health November 21017 1-10
https://link.springer.com/article/10.1007/s00420-017-1277-0

Purpose: Depression is a global health concern. High job demands, low job control, and the combination (high strain) are associated with depression. However, few longitudinal studies have investigated changed or repeated exposure to demands and control related to depression. We investigated how trajectories of exposure to job demands and control jointly influence subsequent depression.

Methods: We included 7949 subjects from the Swedish Longitudinal Occupational Survey of Health, who completed questionnaires of perceived job demands and control, and depressive symptoms from 2006 to 2014. None of them were depressed between 2006 and 2012. Univariate and joint group-based trajectory models identified groups with similar development of demands and control across 2006–2012. Logistic regression estimated the risk for symptoms of major depression in 2014 according to joint trajectory groups.

Results: The joint trajectory model included seven groups, all with fairly stable levels of demands and control over time. Subjects in the high strain and active (high demands and high control) trajectories were significantly more likely to have subsequent major depressive symptoms compared to those having low strain, controlling for demographic covariates (OR 2.15; 95% CI 1.24–3.74 and OR 2.04; 95% CI 1.23–3.40, respectively). The associations did not remain statistically significant after adjusting for previous depressive symptoms in addition to demographic covariates.

Conclusions: The results indicate that the levels of job demands and control were relatively unchanged across 6 years and suggest that long-term exposure to a high strain or active job
**REHABILITATION**

**Title**
Optimizing cooperation between general practitioners, occupational health and rehabilitation physicians in Germany: a qualitative study

**Author/s**
Stratil J et al

**Source**
*International archives of occupational and environmental health* November 2017 90 8 809-821
https://doi.org/10.1007/s00420-017-1239-6

**Abstract**
Purpose: To achieve successful medical rehabilitation and timely return to work, general practitioners, occupational health and rehabilitation physicians need to cooperate effectively. This cooperation, however, can be hampered by organizational, interpersonal, and structural barriers. In this article, we present and discuss suggestions proposed by physicians and patients on how these barriers can be overcome.

Methods: We conducted eight qualitative focus group discussions with general practitioners (GPs), occupational health physicians (OPs), rehabilitation physicians (RPs) and rehabilitation patients, which we analyzed with qualitative content analysis methods.

Results: Room for improvement exists with regard to (1) regulation (e.g. formalized role and obligatory input of occupational physicians), (2) finance (e.g. financial incentives for physicians based on the quality of the application), (3) technology (e.g. communication by email), (4) organizational procedures (e.g. provision of workplace descriptions to RPs on a routine basis), (5) education and information (e.g. joint educational programs, measures to improve the image of OPs), and (6) promotion of cooperation (e.g. between OPs and GPs in regards to the application process).

Conclusions: Many suggestions are practical and could be implemented into the daily routine of physicians, while others demand multi-level, multi-stakeholder approaches. Our findings are supported by numerous international studies (especially from Western Europe). Future quantitative research could assess the relative weight of these findings. Feasibility and effectiveness of the proposed suggestions should be tested in controlled interventional studies.

**RETURN TO WORK**

**Title**
Return to work in psychological injury claims

**Author/s**
Wyatt, M Cotton, P Lane, T

**Source**
Safe Work Australia 2017

**Abstract**
The report says the findings indicate there are major opportunities for employers to improve RTW outcomes for psychologically injured workers. Contacting workers with psychological injuries in the days after they make a workers’ comp claim can speed up their return to work…. 77 per cent of workers who made a psychological injury workers’ comp claim in the two years prior to the interview period, whose employers contacted them within three days of lodging the claim, were back at work when the survey was conducted.

**Title**
Return to work: a comparison of psychological and physical injury claims: analysis of the return to work survey results
**Shift Work and the Incidence of Prostate Cancer: A 10-Year Follow-Up of a German Population-Based Cohort Study**

**Title**
Shift work and the incidence of prostate cancer: a 10-year follow-up of a German population-based cohort study

**Author/s**
Behrens, T et al

**Source**
Scandinavian Journal of Work and Environmental Health 2017 43 6 560-568
doi:10.5271/sjweh.3666

**Abstract**
Objectives: We investigated the association of shift and night work with the incidence of prostate cancer using data of the population-based prospective Heinz Nixdorf Recall Study from the highly industrialized Ruhr area in Germany.

Methods: Participants of the baseline survey were recruited between 2000–2003. A follow-up survey including, a detailed interview on shift and night work, was conducted from 2011–2014. We included 1757 men who did not report a history of prostate cancer at baseline. We assessed shift- and night-work exposure up to time of the baseline interview. Incident prostate cancers were recorded from baseline through September 2014. We calculated hazard ratios (HR) of shift- and night-work exposure using Cox proportional hazards regression with age at event as timescale, adjusting for smoking status, family history of prostate cancer, education (≤13, 14–17, ≥18 years), and equivalent income (low, medium, high).

Results: We observed a twofold increased HR for prostate cancer among shift and night workers. Ever employment in shift work was associated with HR 2.29, 95% confidence interval (CI) 1.43–3.67 and night work with HR 2.27, 95% CI 1.42–3.64. HR increased steadily with duration of employment in shift or night work. Stratifying analyses by preferred midpoint of sleep, yielded strongly elevated HR among subjects with early sleep preference, although these analyses were limited by small number of cases.

Conclusions: We identified increased risks for prostate cancer among men with employment in shift or night work. HR were strongly elevated among long-term employed shift workers and men.
with early preferred midpoint of sleep.

**Title**
Shift work, long working hours, and later risk of dementia: a long-term follow-up of the Copenhagen Male Study

**Author/s**
Nabe-Nielsen, K et al

**Source**
Scandinavian journal of work and environmental health 2017 43 6 569-577
doi:10.5271/sjweh.3660

**Abstract**
Objectives
The aim of this study was to investigate the effect of shift work and long working hours in midlife on the risk of dementia in old age.

Methods
The present study comprised 4766 participants from the Copenhagen Male Study. We used information on shift work (collected in 1970–1971 and 1985–1986), long working hours defined as >45 hours per week (collected in 1970–1971), socioeconomic status, sleep, stress, and cardiovascular risk factors. Information about dementia diagnoses was obtained from registers. Participants were followed until 2014 (mean length of follow-up was 17.8 years). We employed Poisson regression for the survival analyses and estimated incidence rate ratios (IRR) and their 95% confidence intervals (CI).

Results
We found no statistically significant association between shift work (IRR 0.86, 95% CI 0.70–1.05) or long working hours (IRR 0.97, 95% CI 0.79–1.19) and dementia. Adjustment for potential confounders and mediators did not change the estimates. Working shifts at both time points of exposure assessment was not associated with a higher incidence of dementia compared with non-shift workers at both time points (IRR 0.99, 95% CI 0.69–1.42). The lowest incidence of dementia was observed among participants who reported shift work at one time point (only in 1985–1986: IRR 0.44, 95% CI 0.16–1.23 and only in 1970–1971: IRR 0.58, 95% CI 0.31–1.11).

Conclusion
We did not find positive evidence of an association between shift work or long working hours and the incidence of dementia, but the negative findings may reflect the crude assessment of shift work and long working hours, which is a major limitation of the present study.

**VOCATIONAL REHABILITATION**

**Title**
Risk factors for failure to enter vocational rehabilitation services among individuals with disabilities

**Author/s**
Langi, FLF Langi, G Balcazar, F E

**Source**
Disability and rehabilitation 2017 39 26 2657-2662

**Abstract**
Purpose: To investigate the risk factors for failure of individuals with disabilities to enter the vocational rehabilitation (VR) programme, including the cases where they had been formally accepted but were yet to receive any service.

Methods: We used prospective cohort data from a Midwestern US state, and analysed 126,251 and 94,517 individuals, respectively, for acceptance and admission into VR services. Statistical analysis was conducted using Poisson regression models with robust variance estimator.

Results: Individuals with blind/visual disability, had prior history of employment, and who received public support tended to have lower risks of non-acceptance and non-admission. Being non-White, at higher education, ever/currently married, and with physical/orthopedic disability appeared to increase the risks of both outcomes. The adjusted relative risk of non-acceptance was 0.58 (95% confidence interval: 0.52, 0.64) if the individuals had 4 or more functional limitations as compared with those with fewer limitations. This factor was not significant for VR admission.

Conclusion: Disability factors, demographic determinants, and certain miscellaneous characteristics were associated with the risks of non-acceptance and non-admission into VR.
Implications for Rehabilitation
Individuals with disabilities are more likely to be unemployed than the population without disabilities, and they are thus more prone to adverse health effects of unemployment. Vocational rehabilitation (VR) is a proven intervention to improve employment outcomes among individuals with disabilities. Our study indicates that the complexity of the selection process for entering VR and various factors beyond disability may prevent individuals to benefit from the VR programme. Rehabilitation programme authorities need to monitor and simplify the selection process into VR services and, together with rehabilitation practitioners, promote a selection process that pays careful attention on the factors that are related to individual risk of failure for entering VR.

WORK ABILITY

Title
Fighting against a shortage of truck drivers in logistics: measures that employers can take to promote drivers' work ability and health

Author/s
Staats, U et al

Source
Work 58 3 383-397 2017 DOI: 10.3233/WOR-172626

Abstract
Background: For several years, the transportation industry has been concerned about a severe shortage of professional truck drivers. Studies investigating the reasons found that poor working conditions and stresses and strains resulting from physiological and psychological job demands have had a negative impact on drivers' health and ability to work. Nevertheless, until now, most employers have refrained from offering measures to support the work ability and well-being of drivers, mainly due to financial pressures in the industry.
Objective: The present study was aimed at designing adequate and affordable measures to support drivers' health.
Method: With reference …to the Work Ability Index and the house of work ability (Ilmarinen & Tuomi, 2004), 56 truck drivers participated in guided interviews about their working conditions and health-related problems as well as their attitudes, experiences, and desires with respect to being offered supportive measures by their employers.
Results: The measures derived are specific and realizable and expected to be widely accepted by professional drivers. They are designed to elicit a positive attitude in the drivers toward exercising and to help them overcome related psychological barriers.
Conclusion: The implementation of the recommended measures can be expected to support drivers' work ability and help reduce the frictional costs of their employers

The work role functioning questionnaire v2.0 showed consistent factor structure across six working samples

Author/s
Abma, FI et al

Source
Journal of occupational rehabilitation 2017 1-10 DOI: 10.1007/s10926-017-9722-1

Abstract
Objective The Work Role Functioning Questionnaire v2.0 (WRFQ) is an outcome measure linking a persons' health to the ability to meet work demands in the twenty-first century. We aimed to examine the construct validity of the WRFQ in a heterogeneous set of working samples in the Netherlands with mixed clinical conditions and job types to evaluate the comparability of the scale structure.
Methods Confirmatory factor and multi-group analyses were conducted in six cross-sectional working samples (total N = 2433) to evaluate and compare a five-factor model structure of the WRFQ (work scheduling demands, output demands, physical demands, mental and social demands, and flexibility demands). Model fit indices were calculated based on RMSEA ≤ 0.08 and CFI ≥ 0.95. After fitting the five-factor model, the multidimensional structure of the instrument was evaluated across samples using a second order factor model.
Results The factor structure was robust across samples and a multi-group model had adequate fit (RMSEA = 0.63, CFI = 0.972). In sample specific analyses, minor modifications were necessary in three samples (final RMSEA 0.055-0.080, final CFI between 0.955 and 0.989).
Applying the previous first order specifications, a second order factor model had adequate fit in all samples. Conclusion A five-factor model of the WRFQ showed consistent structural validity across samples. A second order factor model showed adequate fit, but the second order factor loadings varied across samples. Therefore subscale scores are recommended to compare across different clinical and working samples.

Title
Overweight and obesity are progressively associated with lower work ability in the general working population: cross-sectional study among 10,000 adults

Author/s
Andersen, LL Izquierdo, M Sundstrup, E

Source
International archives of occupational and environmental health November 2017 90 8 779-787
https://doi.org/10.1007/s00420-017-1240-0

Abstract
Purpose: Obesity is associated with many diseases and functional limitations. Workplaces are not always designed to accommodate this challenge. This study investigated the association between body mass index (BMI) and work ability in the general working population.

Methods: Currently employed wage earners (N = 10,427) from the 2010 round of the Danish Work Environment Cohort Study (DWECS) replied to questions about work and health. Cumulative logistic regression analyses controlling for age, gender, physical and psychosocial work factors, lifestyle, and chronic diseases modeled the associations between BMI and work ability.

Results: BMIs above the normal range were progressively associated with lower work ability in relation to the physical demands of the job. Odds ratios for having lower work ability were 1.11 (95% CI 1.01–1.22), 1.17 (95% CI 1.01–1.34), 1.43 (95% CI 1.09–1.88), 1.69 (95% CI 1.10–2.62) for overweight and obesity classes I, II, and III, respectively. In subgroup analyses, the associations between BMI and work ability were more pronounced among individuals with mainly sedentary work than among those with physically active work. BMI was not associated with work ability in relation to the mental demands of the work.

Conclusions: BMIs above the normal range are progressively associated with lower work ability in relation to the physical demands of the job, especially among individuals with mainly sedentary work. Ergonomic research on how to optimally design workstations for workers with obesity are needed.
Conclusions The Work Ability Index is a potential tool for following up workers who already have an increased risk of permanent work disability due to previous long-term sickness absence.

**WORK HEALTH AND SAFETY**

**Title**
Are the warning icons more attentional?

**Author/s**
Tao, Jin; Yafeng, Niu; Lei, Zhou

**Source**
*Applied ergonomics* November 2017 65 51-60 10 DOI: 10.1016/j.apergo.2017.05.012

**Abstract**
The rapid growth of attention to visual warnings is a representation of the adaptive behavior of humans. However, the ways warning icons attract attention in the cognition context has yet to be clarified. This research aims to investigate cognitive mechanism of warning icons under various perceptual loads. The results of Experiment A, whose average attentional capture effect of the warning icons (69 ms) was significantly higher than that of the ordinary icons (35 ms), show that compared with ordinary icons, warning icons are prioritized in processing under both high and low perceptual loads. Besides, the attention capturing abilities of non-target warning icons are the same under high and low perceptual loads. To isolate the effects of salient visual features and semantics, warning icons in Experiment B are replaced with transposed icons with saliency but no semantics. The attentional capture effect of warning icons is found to be significantly smaller under high load than under low load, so the effect in Experiment A can be attributed to the semantics of warning icons. In Experiment C the icons of negative and neutral semantics without salient frames are used as interfering stimuli, and the RT to the negative icons (823 ms) was longer than both the RT to the neutral icons (780 ms) and to the no interference icons (743 ms) (P < 0.001), which show that negative icons have stronger attention capturing ability than neutral icons. This research verifies that the semantics of icons is vital, and icons with salient visual features and negative semantics can enhance attentional capture effect.

**Title**
Changes in trunk sway of quay crane operators during work shift: a possible marker for fatigue?

**Author/s**
Leban, Bruno et al

**Source**
*Applied ergonomics* November 2017 65 105-111 7

**Abstract**
This study investigated changes in task-induced trunk sway of quay crane operators during a four-hour shift performed in a dedicated simulator as an indicator of postural control system effectiveness. Using a pressure sensitive mat placed on the seat pan, center-of-pressure (COP) time series were acquired and processed to calculate sway area, path length and COP displacements and velocities. The results show a well-defined linear trend for sway path and area, with significant increases starting from 65 to 155 min of work respectively. This indicates non-optimized trunk control most likely originated by the combination of physical and cognitive workload and suggests a possible role of long-term monitoring of trunk sway of crane operators as a useful tool in detecting non-optimized movements potentially associated with deteriorating performance. [ABSTRACT FROM AUTHOR] DOI: 10.1016/j.apergo.2017.06.007

**Title**
A data-driven approach to modeling physical fatigue in the workplace using wearable sensor
Author/s: Sedighi Maman, Zahra et al


Abstract: Wearable sensors are currently being used to manage fatigue in professional athletics, transportation and mining industries. In manufacturing, physical fatigue is a challenging ergonomic/safety "issue" since it lowers productivity and increases the incidence of accidents. Therefore, physical fatigue must be managed. There are two main goals for this study. First, we examine the use of wearable sensors to detect physical fatigue occurrence in simulated manufacturing tasks. The second goal is to estimate the physical fatigue level over time. In order to achieve these goals, sensory data were recorded for eight healthy participants. Penalized logistic and multiple linear regression models were used for physical fatigue detection and level estimation, respectively. Important features from the five sensors locations were selected using Least Absolute Shrinkage and Selection Operator (LASSO), a popular variable selection methodology. The results show that the LASSO model performed well for both physical fatigue detection and modeling. The modeling approach is not participant and/or workload regime specific and thus can be adopted for other applications.

Weblink

Title: Improving long term driving comfort by taking breaks - how break activity affects effectiveness.

Author/s: Sammonds, George M. Mansfield, Neil J. Fray, Mike

Source: Applied ergonomics November 2017 65 81-89 9 DOI: 10.1016/j.apergo.2017.05.008

Abstract: During long duration journeys, drivers are encouraged to take regular breaks. The benefits of breaks have been documented for safety; breaks may also be beneficial for comfort. The activity undertaken during a break may influence its effectiveness. Volunteers completed 3 journeys on a driving simulator. Each 130 min journey included a 10 min break after the first hour. During the break volunteers either stayed seated, left the simulator and sat in an adjacent room, or took a walk on a treadmill. The results show a reduction in driver discomfort during the break for all 3 conditions, but the effectiveness of the break was dependent on activity undertaken. Remaining seated in the vehicle provided some improvement in comfort, but more was experienced after leaving the simulator and sitting in an adjacent room. The most effective break occurred when the driver walked for 10 min on a treadmill. The benefits from taking a break continued until the end of the study (after a further hour of driving), such that comfort remained the best after taking a walk and worst for those who remained seated. It is concluded that taking a break and taking a walk is an effective method for relieving driving discomfort.

Weblink

Title: Using systematic review in occupational safety and health: commentary

Author/s: Howard, J et al

Source: American journal of industrial medicine November 2017 60 11 921-919 DOI: 10.1002/ajim.22771

Abstract: Evaluation of scientific evidence is critical in developing recommendations to reduce risk. Healthcare was the first scientific field to employ a systematic review approach for synthesizing research findings to support evidence-based decision-making and it is still the largest producer and consumer of systematic reviews. Systematic reviews in the field of occupational safety and health are being conducted, but more widespread use and adoption would strengthen assessments. In 2016, NIOSH asked RAND to develop a framework for applying the traditional systematic review elements to the field of occupational safety and health. This paper describes how essential systematic review elements can be adapted for use in occupational systematic reviews to enhance their scientific quality, objectivity, transparency, reliability, utility, and acceptability.
Assessing and preventing serious incidents with behavioral science: enhancing heinrich’s triangle for the 21st century

McSween, Terry; Moran, Daniel J.


The rate of occupational injuries has been declining annually, but the rate of decline for fatalities has not kept a similar pace. Behavior-based safety (BBS) contributes to reducing personal injuries, and can be applied to preventing serious incidents. To address serious injuries with greater confidence requires a change in perspective on the causes of fatalities and serious injuries. Heinrich’s safety triangle helps describe the ratio between minor incidents and major incidents, but is not adequate in helping to predict serious incidents. Adding a special subset to the safety triangle can assist safety practitioners in predicting and influencing such events. Extending the triangle to include more foundational root causes, such as leadership shortcomings and system failures, will expand the scope of the behavior analysis, and including greater specificity about the precursors to serious incidents will help the precision of the behavior analysis. The implications of the expanded triangle for amplifying the effectiveness of BBS for reducing serious incidents are discussed.

Behavioral perspectives on variability in human behavior as part of process safety.

Lebbon, Angela R.; Sigurdsson, Sigurdur O.


Process safety involves worker decisions at various points in an extended process, and much remains unknown regarding sources of variability in worker behavior at these decision points. This paper seeks to explain why some workers may be deviating from sanctioned policies and procedures. Risky choice is analyzed through discussion of positive and negative reinforcement, habituation in terms of respondent and operant behavior, risk discounting, and consequence dimensions that include a review of prospect theory, heuristics, and behavioral decision theory. Recommendations are made for improving our understanding of sources of variability in process safety by conducting systematic research on the perspectives reviewed.

A cohort mortality study of lead-exposed workers in the USA, Finland and the UK

Steenland, K et al

Occupational & environmental medicine 2017 74 11 http://dx.doi.org/10.1136/oemed-2017-104311

Objectives To investigate further whether inorganic lead is a carcinogen among adults, or associated with increased blood pressure and kidney damage, via a large mortality study. Methods We conducted internal analyses via Cox regression of mortality in three cohorts of lead-exposed workers with blood lead (BL) data (USA, Finland, UK), including over 88,000 workers and over 14,000 deaths. Our exposure metric was maximum BL. We also conducted external analyses using country-specific background rates. Results The combined cohort had a median BL of 26 µg/dL, a mean first-year BL test of 1990 and was 96% male. Fifty per cent had more than one BL test (mean 7). Significant (p<0.05)
positive trends, using the log of each worker’s maximum BL, were found for lung cancer, chronic obstructive pulmonary disease (COPD), stroke and heart disease, while borderline significant trends (0.05≤p≤0.10) were found for bladder cancer, brain cancer and larynx cancer. Most results were consistent across all three cohorts. In external comparisons, we found significantly elevated SMRs for those with BLs>40 µg/dL; for bladder, lung and larynx cancer; and for COPD. In a small subsample of the US cohort (n=115) who were interviewed, we found no association between smoking and BL.

Conclusions We found strong positive mortality trends, with increasing BL level, for several outcomes in internal analysis. Many of these outcomes are associated with smoking, for which we had no data. A borderline trend was found for brain cancer, not associated with smoking.

Title Complacency in process safety: a behavior analysis toward prevention strategies: discussion
Author/s Hyten, C Ludwig, TD
Source Journal of organizational behavior management 2017 37 3-4 240-260
http://dx.doi.org/10.1080/01608061.2017.1341860
Abstract Complacency inhibits safe behaviors of workers and managers. This is of concern to industries where process safety is needed to reduce the chance of catastrophic events such as fires and explosions. A behavioral definition of complacency is offered as trending behavioral variation that eventually exceeds safety boundaries. Behavioral processes that contribute to these patterns of variability are discussed and analyzed, including habituation, extinction, unprogrammed reinforcement, the avoidance paradox, rule-governed behavior, and competing contingencies of production. Solution strategies are suggested that address this analysis of behavioral variance, including pinpointing behavioral variation related to safety, changing training design, strengthening positive reinforcement for process-related behaviors of workers and management, reducing sources of unprogrammed reinforcement for dangerous variation, strengthening rule-governed behavior, and changing contingencies for managers and executives whose decisions affect behavior and process safety at many levels in the company.

Title Design and application of a tool for structuring, capitalizing and making more accessible information and lessons learned from accidents involving machinery
Author/s Sadeghi, S et al
Source International journal of occupational safety and ergonomics November 2017 23 4 457-471
Abstract Accident reports are published in order to communicate the information and lessons learned from accidents. An efficient accident recording and analysis system is a necessary step towards improvement of safety. However, currently there is a shortage of efficient tools to support such recording and analysis. In this study we introduce a flexible and customizable tool that allows structuring and analysis of this information. This tool has been implemented under TEEXMA®. We named our prototype TEEXMA®SAFETY. This tool provides an information management system to facilitate data collection, organization, query, analysis and reporting of accidents. A predefined information retrieval module provides ready access to data which allows the user to quickly identify the possible hazards for specific machines and provides information on the source of hazards. The main target audience for this tool includes safety personnel, accident reporters and designers. The proposed data model has been developed by analyzing different accident reports.

Title Inguinal hernia repair among men in relation to occupational mechanical exposures and lifestyle
Objectives To evaluate exposure–response relationships between occupational mechanical exposures and first-time lateral and medial inguinal hernia repair and effects of lifestyle factors. To estimate if occupational mechanical exposures advance the repairs.

Methods This longitudinal study was based on a cohort of men aged 18–65 years with questionnaire data from the Musculoskeletal Research Database at the Danish Ramazzini Centre. We estimated occupational mechanical exposures using a job exposure matrix. First-time inguinal hernia repairs from 1998 to 2014 were identified in the Danish Hernia Database. We used Cox regression analyses and calculated excess fractions among the exposed and rate advancement periods (RAPs).

Results Among 17,967 men, we identified 382 lateral and 314 medial repairs. The risk of lateral repairs increased with time spent standing/walking with an HR of 1.45 (95% CI 1.12 to 1.88) for ≥6 hours/day versus <4 hours/day, corresponding to an excess fraction of cases of 31% in the group with ≥6 hours/day. This group had a RAP of 6.7 (95% CI 2.6 to 10.8) years. Medial repairs were not associated with occupational mechanical exposures. A body mass index ≥30 kg/m² showed lower HRs for both repair types. Leisure-time physical activity and smoking status were not related to any of the outcomes.

Conclusions Assuming a causal relationship, the results suggest that around 30% of all first-time lateral inguinal hernia repairs in the highest exposure category would be preventable if the time spent standing/walking could be reduced from ≥6 to <4 hours/day. The repairs might even be postponed by 6–7 years.
Activity, heart rate, and perceived exertion in a repetitive manual task

Luger, T

IISE transactions on occupational ergonomics and human factors 2017 5 2 47-64

In repetitive work, more physical variation is believed to reduce the risk of eventually developing musculoskeletal disorders. We investigated the extent to which workstation designs leading to more variation in upper arm postures during a pick-and-place task influenced outcomes of relevance to musculoskeletal disorder risk, including muscle activity, cardiovascular response, and perceived exertion, measured through the maximal acceptable work pace. Posture variation to the extent obtained in our experiment had only minor effects on these outcomes, and considerably less impact than a moderate change in working height. Apparently, substantial manipulations of the workstation or of the work task will be needed to accomplish variation to an extent that can significantly change outcomes of relevance to occupational musculoskeletal disorders and, thus, represent a potential for reduction in musculoskeletal disorder risk.

A classification-based framework for trustworthiness assessment of quantitative risk analysis.

Zeng, Zhiguo; Zio, Enrico


In this paper, we develop a classification-based method for the assessment of the trustworthiness of Quantitative Risk Analysis (QRA). The QRA trustworthiness is assumed to be determined by the quality of the QRA process. Six quality criteria, i.e., completeness of documentations, understanding of problem settings, coverage of accident scenarios, appropriateness of analysis methods, quality of input data, accuracy of risk calculation, are identified as the factors most influencing the trustworthiness. The assessment is, then, formulated as a classification problem, solved by a Naive Bayes Classifier (NBC) constructed based on a set of training data, whose trustworthiness is given by experts. NBC learns the expert's assessment from the training data: therefore, once constructed, the NBC can be used to assess the trustworthiness of QRAs other than the training data. Leave-one-out cross validation is applied to validate the accuracy of the developed classifier. A stochastic hypothesis testing-based approach is also developed to check the consistency of the training data. The performance of the developed methods is tested for ten artificially generated scenarios. The results demonstrate that the developed framework is able to accurately mimic a variety of expert behaviors in assessing the trustworthiness of QRA.[ABSTRACT FROM AUTHOR] DOI: 10.1016/j.ssci.2017.04.001.

Developing a concept for external audits of psychosocial risks in certified occupational health and safety management systems

Jespersen, Anne Helbo; Hasle, Peter

Safety science November 2017 part B 99 227-234 8 DOI: 10.1016/j.ssci.2016.11.023

Psychosocial risks are closely related to work organization, management and organizational context. Therefore, the nature of psychosocial risks is complex and differs from more traditional OHS risks. The OHSAS 18001 standard explicitly claims to deal with all OHS risks, including psychosocial risks, and the audit is a key element in OHS management systems. However, the literature indicates that audits of psychosocial risk management are difficult and multifaceted, and the available practice excludes psychosocial risks from audits. Based on an analysis of the
literature and available methodological approaches, we propose a new conceptual model for audits of psychosocial risk management. The model is grounded in the British “Guidance on the management of psychosocial risks in the workplace” (BSI, 2011), which has recently been developed to remedy the shortcomings of the OHSAS standard. The model builds on an interpretation of audit evidence that includes an integration of general scientific knowledge regarding psychosocial risks with local contextual knowledge. A key tool for the application of the integration is realistic evaluation, which provides the opportunity to assess the link between psychosocial risk management measures and expected outcomes. Another important tool is the qualitative interview, which is the primary method for data collection. The concept has important implications for the dominant audit practice and auditor competencies. It leads to an expanded knowledge base and a broader concept of audit evidence that further presupposes considerable auditor resources, and changes the required knowledge base and skills of auditors.

Weblink

Title The development of the schema-action-world (SAW) taxonomy for understanding decision making in aeronautical critical incidents
Author/s Plant, Katherine L.; Stanton, Neville A
Source Safety science November 2017 part A 99 23-35 13 DOI: 10.1016/j.ssci.2016.08.014
Abstract The perceptual cycle model (PCM) offers a process-orientated approach to understanding decision making. This approach is distributed in nature as it considers how internally held schemata and external environmental information interact to produce actions and behaviour. This an essential component of any incident reporting system, although it is often lacking. In its current form the PCM only provides a very high-level of explanation. This research utilised data from critical decision making interviews to deconstruct the three high-level categories of the PCM into a 28 item taxonomy. In doing so, we were able to provide a more detailed description of aeronautical critical decision making (ACDM) by demonstrating the relevance of different concepts in different phases of dealing with an incident. The data were used to model the ACDM process. The taxonomy can be used for gaining a comprehensive understanding of both the contextual and cognitive components of decision making, something that existing taxonomies and models often fail to do.

Weblink

Title Forecasts or fortune-telling: when are expert judgements of safety risk valid?
Author/s Rae, Andrew; Alexander, Rob
Source Safety science November 2017 part B 99 156-165 10 DOI: 10.1016/j.ssci.2017.02.018
Abstract Safety analysis frequently relies on human estimates of the likelihood of specific events. For this purpose, the opinions of experts are given greater weight than the opinions of non-experts. Combinations of individual judgements are given greater weight than judgements made by a lone expert. Various authors advocate specific techniques for eliciting and combining these judgements. All of these factors – the use of experts, the use of multiple opinions, and the use of elicitation and combination techniques – serve to increase subjective confidence in the safety analysis. But is this confidence justified? Do the factors increase the actual validity of the analysis in proportion to the increase in subjective confidence? In this paper, by means of a critical synthesis of evidence from multiple disciplines, we argue that it is plausible that expert judgement deserves special standing, but only for well understood local causal mechanisms. We also conclude that expert judgements can be improved by using appropriate elicitation techniques, including by combining judgement from multiple experts. There is, however, no evidence to suggest that fuzzy, neural network, or any other form of complicated processing of expert judgement has any advantage over simple combination mechanisms.

Weblink
Leadership’s role in process safety: an understanding of behavioral science among managers and executives is needed.

Gravina, Nicole; Cummins, Bob; Austin, John

Journal of organizational behavior management July-December 2017 37 ¾ 316-331 16

A recent prevalence of high visibility catastrophic events has garnered increased attention to process safety issues. While the use of Behavior-Based Safety interventions demonstrate a reduction in workplace injuries by targeting employee behavior, we believe that process safety requires a greater focus on the behavior of leaders (e.g., creating and executing strategy). One effective method to begin targeting leader behavior for the improvement of process safety is to teach leaders about the principles of behavior, including ways by which the science may be applied within their own organizational models.

Learning from accidents: interactions between human factors, technology and organisations as a central element to validate risk studies.

Moura, Raphael et al

Safety science November 2017 part B 99 196-214 19 DOI: 10.1016/j.ssci.2017.05.001

Many industries are subjected to major hazards, which are of great concern to stakeholders groups. Accordingly, efforts to control these hazards and manage risks are increasingly made, supported by improved computational capabilities and the application of sophisticated safety and reliability models. Recent events, however, have revealed that apparently rare or seemingly unforeseen scenarios, involving complex interactions between human factors, technologies and organisations, are capable of triggering major catastrophes. The purpose of this work is to enhance stakeholders’ trust in risk management by developing a framework to verify if tendencies and patterns observed in major accidents were appropriately contemplated by risk studies. This paper first discusses the main accident theories underpinning major catastrophes. Then, an accident dataset containing contributing factors from major events occurred in high-technology industrial domains serves as basis for the application of a clustering and data mining technique (self-organising maps – SOM), allowing the exploration of accident information gathered from in-depth investigations. Results enabled the disclosure of common patterns in major accidents, leading to the development of an attribute list to validate risk assessment studies to ensure that the influence of human factors, technological issues and organisational aspects was properly taken into account.

Learning from Incidents questionnaire (LFIQ): the validation of an instrument designed to measure the quality of learning from incidents in organisations

Littlejohn, Allison et al

Safety science November 2017 part A 99 80-93 14 DOI: 10.1016/j.ssci.2017.02.005

Effective learning is essential for a safe workplace. Through learning from incidents (LFI), knowledge is applied and embedded within the work environment in ways that can prevent future incidents. In order to improve their LFI processes, such as incident reporting and analysis, or the dissemination of investigation outputs, organisations need an instrument that allows them to diagnose the quality and effectiveness of their LFI processes, making sure that LFI leads to positive safety outcomes. This paper outlines an instrument that measures the quality of LFI processes and practices: the Learning from Incident Questionnaire (LFIQ). The LFIQ identifies employees’ perceptions and experiences of LFI processes and practices. This paper describes the validation of the LFIQ instrument via a pilot study conducted at two energy companies involving 781 participants. Through factor analysis the instrument was shown to have sufficient validity to become a useful tool for industry; by gaining insight into employees’ perspectives on LFI, frontline managers and supervisors can have evidence on which to base improvements to the local work environment and prioritise areas for improvement.
Learning from major accidents: graphical representation and analysis of multi-attribute events to enhance risk communication

Moura, Raphael et al

Safety science November 2017 part A 99 58-70 13 DOI: 10.1016/j.ssci.2017.03.005

Major accidents are complex, multi-attribute events, originated from the interactions between intricate systems, cutting-edge technologies and human factors. Usually, these interactions trigger very particular accident sequences, which are hard to predict but capable of producing exacerbated societal reactions and impair communication channels among stakeholders. Thus, the purpose of this work is to convert high-dimensional accident data into a convenient graphical alternative, in order to overcome barriers to communicate risk and enable stakeholders to fully understand and learn from major accidents. This paper first discusses contemporary views and biases related to human errors in major accidents. The second part applies an artificial neural network approach to a major accident dataset, to disclose common patterns and significant features. The complex data will be then translated into 2-D maps, generating graphical interfaces which will produce further insight into the conditions leading to accidents and support a novel and comprehensive “learning from accidents” experience.

Merchant shipping’s reliance on learning from incidents – a habit that needs to change for a challenging future

Pomeroy, R. Vaughan; Earthy, Jonathan V.

Safety science November 2017 part A 99 45-57 13 DOI: 10.1016/j.ssci.2017.01.014

The safety record of the international merchant shipping industry has shown a continual improvement for a prolonged period due to its ability to learn from incidents and prevent recurrence; through training, education, technology development and regulatory change. However, the annual rate of ship losses has remained relatively unchanged in recent years. The industry has become accustomed to a safety regulatory regime based heavily on embedding lessons from incidents. That regime has served it well for more than a century but the industry is experiencing rapid change, which presents a challenge to this approach. This paper reviews the development of the maritime safety regulatory regime and the ‘proof of need’ attitude to new regulations that has been created. Regulators face challenges with changes in both technology and the operational model and the paper discusses these in the context of the desire to prevent future casualties without waiting for incidents. As future societal demands lead to the introduction of novel technology in order to solve massive challenges such as climate change the risks of incidents are likely to increase. The conclusion reached is that the industry has a strong culture based on a backward-facing approach to learning from incidents but to maintain a continual improvement in safety it has to adopt a forward-facing approach of similar rigour, using some form of ‘learning without the incidents’. A way forward is postulated where ‘synthetic lessons’ from simulated incidents that have not actually happened are ‘learned’ and accepted as justification within the safety regulatory regime.

Organizational practices for learning with work accidents throughout their information cycle

Silva, Sílvia A et al


Research has acknowledged the relevance of accident information for prevention and learning and the need for companies to develop a reporting and learning culture. Few studies have
approached this issue by comparing the different learning strategies used by companies. The aim of this study is to explore how companies use accident information and to develop strategies for learning from accidents, which cover all the learning cycle phases by: (a) identifying learning patterns across company and activity sectors, (b) checking for potential differences among certified and non-certified companies. Seventeen case studies were conducted with organizations operating in different sectors in Portugal. Data was collected from extensive, semi-structured interviews with key stakeholders and an analysis of relevant documentation. All data was subjected to a descriptive analysis, followed by multivariate analysis using Multiple Correspondence Analysis (MCA). The main MCA results showed two dimensions corresponding to the technical and social learning and four patterns were found, each corresponding to different levels of learning practices ranging from the minimal practices used to a higher degree of learning, combining practices of a technical and social nature. Additionally, the results revealed that companies in the same activity sector may have very different practices, independently of OHSAS certification. The results allow us to conclude that organizations with good safety practices tend to follow the complete learning cycle. Overall, these organizations have established procedures to report accidents and to collect information on them but there are organizations that still do not maximize their means of learning from work accidents.

Weblink

Title
Planned foresight study of new and emerging occupational safety and health risks associated with information and communications technologies and work locations by 2025

Source
OSH WIKI
EU-OSHA

Abstract
The foresight will produce a set of scenarios to 2025 to consider the potential impacts that developments in information communication technologies (ICT) and changes in work location (including the development of the EU Digital Single Market) may have on workers’ safety and health. The aim of the project is to inform EU decision makers, Member States’ Governments, trade unions and employers, so that they can take decisions to shape the future of occupational safety and health (OSH) towards safer and healthier workplaces

Weblink

Title
Randomised controlled trial of the efficacy of a blue-enriched light intervention to improve alertness and performance in night shift workers

Author/s
Sletten, TL et al

Source
Occupational & environmental medicine 2017 74 11 http://dx.doi.org/10.1136/oemed-2016-103818

Abstract
Objectives Night workers often experience high levels of sleepiness due to misalignment of the sleep-wake cycle from the circadian pacemaker, in addition to acute and chronic sleep loss. Exposure to light, in particular short wavelength light, can improve alertness and neurobehavioral performance. This randomized controlled trial examined the efficacy of blue-enriched polychromatic light to improve alertness and neurobehavioral performance in night workers.

Design Participants were 71 night shift workers (42 males; 32.8±10.5 years) who worked at least 6 hours between 22:00 and 08:00 hours. Sleep-wake logs and wrist actigraphy were collected for 1–3 weeks, followed by 48-hour urine collection to measure the circadian 6-sulphatoxymelatonin (aMT6s) rhythm. On the night following at least two consecutive night shifts, workers attended a simulated night shift in the laboratory which included subjective and objective assessments of sleepiness and performance. Workers were randomly assigned for exposure to one of two treatment conditions from 23:00 hours to 07:00 hours: blue-enriched white light (17 000 K, 89 lux; n=36) or standard white light (4000 K, 84 lux; n=35).

Results Subjective and objective sleepiness increased during the night shift in both light conditions (p<0.05, ηp 2=0.06–0.31), but no significant effects of light condition were observed. The 17 000 K light, however, did improve subjective sleepiness relative to the 4000 K condition when light exposure coincided with the time of the aMT6s peak (p<0.05, d=0.41–0.60).
**Conclusion**

This study suggests that, while blue-enriched light has potential to improve subjective sleepiness in night shift workers, further research is needed in the selection of light properties to maximise the benefits.

**Title**

Redefining the incidents to learn from: safety science insights acquired on the journey from black boxes to flight data monitoring.

**Author/s**

Walker, Guy.

**Source**

*Safety science* November 2017 part A 99 14-22 9 DOI: 10.1016/j.ssci.2017.05.010

**Abstract**

The reason Flight Data and Cockpit Voice Recorders (FDRs and CVRs) exist is to learn from incidents. Probably no other single invention has yielded such significant improvements in aviation safety. Indeed, they have been so effective that we now need to redefine what is meant by the term 'incident' and the uses to which data recording technologies are now put. The paradox is that at no previous point in history have we collected so much data, yet safety performance is such that it is rarely used for its original purpose: as a lagging indicator of problems following an accident. In this paper the history of black boxes is briefly surveyed and connected to the underlying safety science knowledge base. Flight Data Monitoring (FDM) is then presented as an exemplar of the paradigm shift from lagging to leading indicators needed in order to continue learning from incidents. In many industries the pre-requisites for comparable Data Monitoring processes are already in place. The benefits to be accrued by following the example set by the aviation industry are considerable.

**Title**

Research and development agenda for learning from incidents

**Author/s**

Margaryan, Anoush; Littlejohn, Allison; Stanton, Neville A.

**Source**

*Safety science* November 2017 part A 99 5-13 9 DOI: 10.1016/j.ssci.2016.09.004

**Abstract**

This paper outlines a research and development agenda for the nascent field of Learning from Incidents (LFI). Effective, deep and lasting learning from incidents is critical for the safety of employees, the general public and environmental protection. The paper is an output of an international seminar series ‘Interdisciplinary Perspectives on Learning from Incidents’ funded by the UK Economic and Social Research Council (ESRC) in 2013–2016 http://lfiseminars.ning.com/ . The seminar series brought together academics, practitioners and policymakers from a range of disciplines and sectors to advance the theory, methodology, organisational practice and policy in LFI. Drawing on a range of disciplinary and sectoral perspectives, as well as on input from practitioners and policymakers, this paper lays out four key research and development challenges: defining LFI; measuring LFI; levels and factors of LFI; and strengthening research-practice nexus in LFI.

**Title**

Risk assessment: what is it worth? shall we just do away with it, or can it do a better job?

**Author/s**

Pasman, Hans J.; Rogers, William J.; Mannan, M. Sam.

**Source**


**Abstract**

Much has been written about the value of risk assessment, in particular the quantified version, QRA, here considered in the context of industrial processing oil, gas, and chemicals. It is plagued by mistrust due in part because estimated uncertainties are generally not included. QRA is done for predictive purpose, to design risk reducing measures, and to base safety decisions on, but many major accidents occur according to scenarios not foreseen in the
Yet, QRA forces us to think. Predicting what can happen under specified conditions is the most elementary step in better safety. So, we must improve the methods and in particular to model sensitive uncertainties and establish confidence limits about our predictions. The present paper will review in short the state of affairs, and it will summarize recent contributions shedding light of what is currently wrong with QRA. The paper will further present for the various aspects and steps to be done in a QRA directions, in which progress is being made and where promising possibilities may appear. The latter are according to the opinion and the scope of the authors, so hopefully there is much more! Anyhow, due to complexities of socio-technical systems a QRA will require more effort, so to keep it practical large scale application of computerization will be a must. And, to improve trust in QRA we must acknowledge variability and quantify the uncertainties as we see them; in addition, there will be hidden uncertainties, which gives reason to think in resilience terms too.

A systems approach to risk analysis validation for risk management

Lathrop, John; Ezell, Barry


This paper presents a logical structure to address the topic of this special issue: Risk Analysis Validation and Trust in Risk Management. We do that by presenting a systems approach that links all four of those concepts. The underlying logic: Validation should test how effectively a risk analysis supports actual, real-world implemented risk management. Our approach is based on a flowchart linking all of the elements from inputs through risk analysis, risk reporting and transparency, then how that reporting-transparency support the risk management decision making process and associated third party and stakeholder reviews (formal or informal), which in turn determine the trust and acceptance necessary for the real-world implementation of risk management actions. We take that flowchart and identify within it sixteen critical elements, then specify a validation test for each of those elements. Validation, then, consists of subjecting the risk analysis to those sixteen tests. Those tests, together, test the risk analysis for how effectively it supports implemented risk management. Another key feature: We divide the flowchart into Analysts' Domain, Users' Domain, and Analysis Community Domain. The Analysts' Domain is where the risk analysts work, then the Users' Domain stands between their work and implementation. The Analysis Community Domain is comprised of the communities of risk analysts and commissioners of risk analyses. Those two communities are where we would, as part of building our systems approach to risk analysis validation, build a “Culture of Analysis Quality,” where the sixteen validation tests would be enforced by both of those communities.

Theoretical framework for the new and emerging occupational risk modeling and its monitoring through technology lifecycle of industrial processes

Brocal, F.; Sebastián, M.A.; González, C.


Besides traditional occupational risks (TR), industrial processes can generate other risks described by the European Agency for Safety and Health at Work (EU-OSHA) as “new and emerging risks” (NER). The basic definition of NER is that of “any occupational risk that is both new and increasing”, existing several studies carried out by the EU-OSHA where the set of the above mentioned risks is identified and analyzed, both general and specific. However, as demonstrated in recent studies, the direct use of this set of NER in risk assessment techniques, generally applied in industrial processes and in particular those characterized by advanced technology, may result in the identification of TR instead of NER, mainly due to the fact that they have been defined without following a risk reference model. In order to solve this problem, a risk model that improves and complements the EU-OSHA’s NER definition has been developed with the abovementioned investigations. However, this model has two limitations. First, the model does not contemplate the possibility of considering independently the new risks (NR) and
increasing risks (IR). Second, this model does not allow monitoring NER evolution over time, therefore it is not currently possible to determine, in general, the temporary validity of such risks. Thus, the main objective of this work is to develop a theoretical framework for the modeling of the NER that allows its monitoring through the technology lifecycle (TLC), especially in industrial processes. To develop this framework, first it has been carried out an analysis of the limitations previously mentioned as well as the related literature. In this way, a theoretical context that allows justifying and arguing properly the development of three new models for the NER, NR and IR has been set up. These named models allow, on the one hand, characterizing and differentiating the new qualities associated to risk. On the other hand, these models allow defining a set of risk typologies. These typologies have been associated with risk evolutionary phases likely to be integrated into the TLC, especially of a given industrial process, allowing monitoring over time of its NER.

**Title**
Towards increased reliability by objectification of hazard analysis and risk assessment (hara) of automated automotive systems

**Author/s**
Khastgir, Siddartha et al

**Source**
Safety science November 2017 part B 99 166-177 12 DOI: 10.1016/j.ssci.2017.03.024.

**Abstract**
Hazard Analysis and Risk Assessment (HARA) in various domains like automotive, aviation, and process industry suffers from the issues of validity and reliability. While there has been an increasing appreciation of this subject, there have been limited approaches to overcome these issues. In the automotive domain, HARA is influenced by the ISO 26262 international standard which details functional safety of road vehicles. While ISO 26262 was a major step towards analysing hazards and risks, like other domains, it is also plagued by the issues of reliability. In this paper, the authors discuss the automotive HARA process. While exposing the reliability challenges of the HARA process detailed by the standard, the authors present an approach to overcome the reliability issues. The approach is obtained by creating a rule-set for automotive HARA to determine the Automotive Safety Integrity Level (ASIL) by parametrizing the individual components of an automotive HARA, i.e., severity, exposure and controllability. The initial rule-set was put to test by conducting a workshop involving international functional safety experts as participants in an experiment where rules were provided for severity and controllability ratings. Based on the qualitative results of the experiments, the rule-set was re-calibrated. The proposed HARA approach by the creation of a rule-set demonstrated reduction in variation. However, the caveat lies in the fact that the rule-set needs to be exhaustive or sufficiently explained in order to avoid any degree of subjective interpretation which is a source of variation and unreliability.

**Title**
Validity and validation of safety-related quantitative risk analysis: a review

**Author/s**
Goerlandt, Floris; Khakzad, Nima; Reniers, Genserik

**Source**
Safety science November 2017 part B 99 127-139 13 DOI: 10.1016/j.ssci.2016.08.023

**Abstract**
Quantitative risk analysis (QRA) is widely applied in several industries as a tool to improve safety, as part of design, licensing or operational processes. Nevertheless, there is much less academic research on the validity and validation of QRA, despite their importance both for the science of risk analysis and with respect to its practical implication for decision-making and improving system safety. In light of this, this paper presents a review focusing on the validity and validation of QRA in a safety context. Theoretical, methodological and empirical contributions in the scientific literature are reviewed, focusing on three questions. Which theoretical views on validity and validation of QRA can be found? Which features of QRA are useful to validate a particular QRA, and which frameworks are proposed to this effect? What kinds of claims are made about QRA, and what evidence is available for QRA being valid for the stated purposes? A discussion follows the review, focusing on the available evidence for the validity of QRA and the effectiveness of validation methods.
WORK STRESS

Title: Prolonged perceived stress and saliva cortisol in a large cohort of Danish public service employees: cross-sectional and longitudinal associations

Author/s: Mikkelsen, S et al

Source: International archives of occupational and environmental health, November 2017, 90 (8) 835-848

Abstract:
Purpose: It is well known that acute stress can lead to a transient increase in cortisol secretion, but the effects of prolonged stress on cortisol secretion are uncertain. This study examines the cross-sectional and longitudinal associations between prolonged perceived stress and salivary cortisol.
Methods: In 2007, 4467 Danish public service employees participated in a study of stress and mental health, and 3217 participated in a follow-up in 2009. Perceived stress during the past 4 weeks was assessed by Cohen's four item perceived stress scale. Participants were asked to collect saliva 30 min after awakening and at approximately 20:00 in the evening. The cortisol dependence on perceived stress was examined in regression analyses adjusted for effects of potential confounders. We adjusted for a large variation in saliva sampling times by modelling the time trajectory of cortisol concentrations in the morning and in the evening and examined if they were influenced by perceived stress.
Results: Perceived stress had no statistically significant effects on the level or time trajectory of morning or evening cortisol, neither cross-sectionally nor longitudinally. The 1 month prevalence of frequently perceived stress was low, approximately 2.5%.
Conclusion: Our results did not support the hypothesis that prolonged perceived stress is associated with the level or time trajectory of morning or evening salivary cortisol.

Title: Mindset matters: the role of employees’ stress mindset for day-specific reactions to workload anticipation

Author/s: Casper, A Sonnentag, S Tremmel, S

Source: European journal of work and organizational psychology

Abstract:
In this diary study, we extended knowledge on the role of employees’ stress mindset in the anticipatory phase of the stress process. We examined how workload anticipation is related to approach-coping efforts throughout the workday and how employees’ stress mindset moderates this relationship. Moreover, we investigated how approach-coping efforts are related to vigour and task performance at the end of the workday. Finally, we proposed conditional indirect effects of workload anticipation on vigour and task performance that are moderated by employees’ stress mindset. We conducted a daily diary study over five workdays with 171 employees. Results of multilevel path analysis showed that employees with a more positive stress mindset made more approach-coping efforts when anticipating high workload. Approach-coping efforts were positively related to vigour and task performance. For employees with a more positive stress mindset, workload anticipation had a positive conditional indirect effect on vigour and task performance. Our results suggest that employees react differently to workload anticipation depending on their stress mindset. Moreover, approach-coping efforts may be a cognitive-behavioural mechanism that explains how workload relates to vigour and task performance for employees with a more positive stress mindset.
Work-anxiety coping intervention improves work-coping perception while a recreational intervention leads to deterioration: results from a randomized controlled trial

Muschalla, B

European journal of work and organizational psychology 2017 26 6 858-869

Work-anxieties are costly and need early intervention. The perception of being able to cope with work is a basic requirement for work ability. This randomized controlled trial investigates whether a cognitive behavioural, work-anxiety-coping group (WAG) intervention leads to better work-coping perception than an unspecific recreational group (RG). Heterogeneous people in medical rehabilitation, who were due to return to work, were interviewed concerning their work-anxieties, and either randomly assigned to a WAG (n = 85) or a RG (n = 95). The participants (with an average of 50 years old [range 23–64]; 51% women; 70% workers or employees, 25% academics, 5% unskilled) followed the group intervention for four or six sessions. The perceived work-coping was assessed by self-rating (Inventory for Job-Coping and Return Intention JoCoRi) after each group session. Although participants had a slight temporary decrease in work-coping after group session two (from M1 = 2.47 to M2 = 2.28, dCohen = −.22), the WAG led to the improvement of perceived work-coping over the intervention course (from M1 = 2.47 to M6 = 2.65, dCohen = .18). In contrast, participants from the RG reported lower work-coping after six group sessions (from M1 = 2.26 to M6 = 2.02, dCohen = −.18). It is considered that people with work-anxieties need training in work-coping. By focusing on recreation only, this may lead to deterioration of work-coping. Indeed, intervention designers should be aware of temporary deterioration (side effects) when confronting participants with work-coping

Chronic pain

American Chronic Pain Association

Facilitates peer support and education for individuals with chronic pain and their families so that these individuals may live more fully in spite of their pain.

Raises awareness among the health care community, policy makers, and the public at large about issues of living with chronic pain.

Taking a systems approach to prevention

Australian Prevention Partnership Centre

The causes of chronic diseases are complex and varied. Many interconnected factors contribute to the decisions people make about their behaviour, including their background, their environment and their ability to make healthy choices. This complexity means we need a new way to tackle the problem of chronic disease. To effectively prevent complex chronic health problems in the long term, we need to recognise the role of social, economic and environmental factors and how each of these interacts. This requires a systems approach.

Canadian Centre for Occupational Health and Safety
**Title**: The Importance of Healthy Workplaces  
**Source**: Canadian Centre for Occupational Health and Safety (CCOHS)  
**Abstract**: A-Z of resources covering a whole range of topics on areas relating to healthy workplaces  
**Weblink**

**Title**: Health and productivity management toolkit  
**Source**: American College of Occupational and Environmental Medicine (ACOEM)  
**Abstract**: This toolkit can be used by anyone with an interest in creating health and productivity programs in the workplace or who wants to better understand the concepts behind Health and Productivity Management  
**Weblink**

**Title**: Understanding the world of work  
**Source**: Knowledge Center  
**Abstract**: Catalyst research examines today's work environments and employees' experiences within them, and by doing so reveals gaps in women's and men's experiences at work. We document the representation of women in companies' leadership and explore the barriers and root causes of gender gaps. Through a combination of research and practical implementation, and often in partnership with others, we identify and provide solutions to overcoming these barriers and creating equitable workplaces in which all talent can thrive.  
**Weblink**

**Title**: Behavioral Health Services  
**Source**: Federal Occupational Health 2017 campaigns  
**Abstract**: FOH offers monthly behavioral health campaigns to raise awareness of various mental and emotional well-being and work-life issues. Among the campaign resources are the Solutions newsletter and a flyer with a matching theme. 2017 topics included stress prevention, time management, work/life balance. Also includes manager resources about managing change, constructive communication, bringing out the best in each other and more  
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<td>Superfriend</td>
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<td>Abstract</td>
<td>SuperFriend supports research and an evidence-based approach to improving workplace mental health. The following resources have been produced by SuperFriend in conjunction with mental health experts to provide simple, practical information to assist you to improve the mental health of your workplace</td>
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