

Issue 69 (Jul 2019)

What's Trending

3D printing and worker safety: Exploring the hazards of this emerging technology

3D printing is an additive manufacturing technology that has become more prevalent in recent years. The hazards of such technology include exposure to emissions from heated filaments, polymers or powders. In addition, these printers can also emit ultrafine particles and mixtures that may be carcinogenic or cause other adverse health effects.

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Relevance: While 3D printing has the potential to improve work processes in sectors such as construction and manufacturing, users should be aware of possible hazards to workers. Adequate precautions should be taken when using such technology.



(Source: Safety + Health, Apr 2019)

Safety at your fingertips

Technology can have a transformative impact at the workplace by providing information to workers to help them control risk and prevent incidents. For example, companies are increasingly using micro learning to



(Source: EHS Today, Jun 2019)

train their employees to enhance the safety of their workforce and workplace.

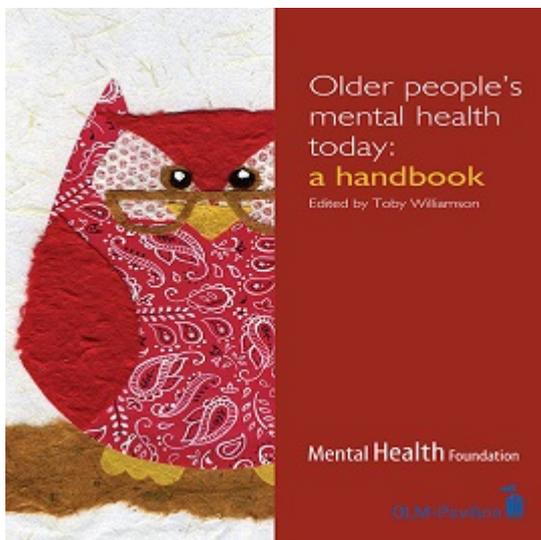
Mobile and smartphone apps have become ubiquitous at the workplace to improve worker health and safety by providing access to safety and health information at their fingertips. Wearables and environmental sensors have also become common to monitor worker safety in hazardous situations.

[Read More](#)



Relevance: With availability of mobile devices, workers can now conveniently access useful safety data at their fingertips to allow them to work safely and efficiently. Safety professionals need to be able to effectively communicate the value and return of investment of such new technologies to overcome budgetary considerations when implementing them at the workplace.

Books from the WSH Institute Collection*



TITLE:

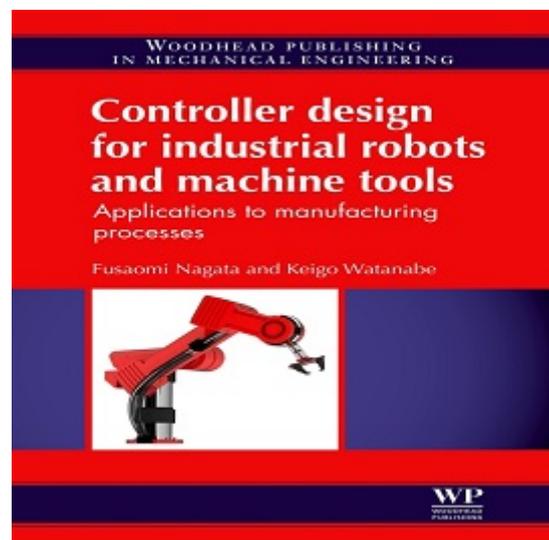
Older People's Mental Health Today: A Handbook

AUTHOR:

Toby Williamson

AREA OF INTEREST:

Psychosocial Health, Ageing Workforce



TITLE:

Controller Design for Industrial Robots and Machine Tools

AUTHOR:

F. Nagata and K. Watanabe

AREA OF INTEREST:

Technology and New Ways of Work

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OWL Highlights

Importance of hazard identification in risk management

Risk management in occupational safety and health (OSH) context involves the process of:

- i. identifying OSH hazards;
- ii. determining the risk based on likelihood and severity of work injuries, ill health and property damage;
- iii. prioritising the implementation of preventive measures to mitigate these risks; and
- iv. communicating the risk assessment to workers.

The Occupational Safety and Health Authority (OSHA) in USA identified that one of the “root causes” for workplace injuries, illnesses and incidents was failure to identify hazards.

While materials are available online as guidance material to identify relevant hazards, identification of all significant hazards requires knowledge and experience.

The article suggested that safety and health professionals should work closely with management to identify new hazards as a result of new work processes or changes in work arrangements. They should also adopt a proactive and systematic approach when identifying all relevant hazards.



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Theme: Hazard Identification
Date of Publication: 2019
Source: Industrial Health

Understanding fatigue risk: Assessment and countermeasures

Fatigue impacts productivity and can lead to injuries and fatalities. The report described a pilot study that examined causes of fatigue in the workplace, both from workplace factors and employee habits on- and off-the-job. The study involved more than 1,100 workers in the manufacturing sector in the United States.

The findings revealed four key areas of fatigue risk. There were:

- i. high prevalence of evening, night, and early morning shifts;
- ii. variance of scheduled work hours to actual work hours, where workers reported working longer shifts and many more hours per week;
- iii. a lack of fatigue risk management system (FRMS) in organisations; and
- iv. mixed opinions of workers regarding the organisation's cultural approach to fatigue.

The report recommended that companies can consider the following to reduce fatigue risk through:

- i. science-based scheduling practices (e.g. taking rest breaks, rotating tasks);
- ii. education and training (e.g. sleep health education);
- iii. monitoring and continuous improvement (e.g. evaluate shift schedules for possible fatigue risk); and
- iv. supportive workplace safety culture (e.g. communication on fatigue).



[Read More](#)

Theme: Fatigue Management
Date of Publication: 2019
Source: Campbell Institute

A review of construction-related fatal accidents in Ireland: 1989-2016

In Ireland, construction accidents represented a high proportion of all fatal work-related accidents. The report revealed that there were 338 fatal accidents in the construction sector in Ireland between 1989 and 2016. Most of the fatal accidents happened during normal working hours.

The most common cause of fatal accidents in both the construction sector and non-construction businesses engaged in construction was falling from height, which accounted for 40% of all deaths in the construction sector, and 49% in non-construction businesses engaged in construction. These included accidents where the victims themselves fell and accidents where the victim was standing on a structure that collapsed. Other significant causes of fatal accidents included losing control of a vehicle, being struck by or crushed by a vehicle and collapsing of trenches.

These relatively small number of causes were responsible for hundreds of fatal accidents, highlighting the opportunity to reduce the risk of fatality by focusing on particularly high-risk activity such as working at height.



[Read More](#)

Theme: Workplace Safety
Date of Publication: 2019
Source: Health and Safety Authority

Workplace programmes promoting good health on the rise: Study

A recent study, which examined employer-based health promotion programmes in the United States found that almost half (46.1%) of American employers



had some form of workplace health promotion programmes in place.

Workplaces with 50 or more employees offering a comprehensive workplace health promotion programmes saw a jump from 6.9% to 17%. A comprehensive programme was defined as one that included supportive social and physical environments, linkages to related programmes, health education, health screenings with appropriate follow-up and education, and integration of the programmes into an organisation's structure.

The results of the study which drew data from the [2017 Workplace Health in America survey](#), with participation from more than 2,800 employer with at least 10 workers also revealed that those who had a comprehensive programme had at least one person responsible for the programme, a budget and several years' experience with a health promotion programme.

Given that where we work, how long we work, the conditions of our work, who we work with – all of these factors impact our health. Employers have an opportunity to shape work environments and work conditions in ways that support employee health.



Read More

Theme: Total Workplace Safety and Health

Date of Publication: May 2019

Source: Safety + Health

Useful Resources

- [Occupational characteristics of semiconductor workers with cancer and rare diseases registered with a workers' compensation program in Korea](#) (Safety and Health at Work, Apr 2019)
- [Working conditions and workers' health](#) (Eurofound, May 2019)
- [Process evaluation of a tailored workplace intervention designed to promote sustainable working in a rapidly changing world](#) (Ergonomics, May 2019)
- [Evaluation of the implementation and effectiveness of the Ontario Working at Heights Training Standard: Final report](#) (Institute for Work & Health, 2019)
- [Managing ergonomic risk in the workplace to improve musculoskeletal health](#) (Health and Safety Authority, 2019)

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Vision: A Healthy Workforce in a Safe Workplace.

Mission: Provide evidence-based, insightful and practical solutions.

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