



Issue 63 (July 2018)

SPOTLIGHT

Coming soon! - National WSH Research Agenda (NWRA) for Singapore, 2018 – 2020



The NWRA for Singapore, 2018 - 2020 is a culmination of input from key stakeholders on current and emerging workplace safety and health (WSH) concerns.

The new NWRA will focus on three broad themes, namely injury prevention, ill-health arising from and impacting work, and emerging WSH concerns. There are nine priority areas covered in these three broad themes.

Do watch this space for updates on the release of the NWRA!

WHAT'S TRENDING

Workplace safety futures: The impact of emerging technologies and platforms on work health and safety and workers' compensation over the next 20 years



This report explored how six megatrends underpinned by advances in digital technologies and shifting employment patterns may affect work health and safety and workers' compensation in Australia in the future.

(Source: CSIRO)

[More...](#)



Relevance: We are also beginning to see the six megatrends shaping up in Singapore. How might we tap on the potential of them to make work safer, reduce workplace injury and at the same time address new risks to health and safety?

Kids help Volvo and Lego design the construction vehicles of the future



(Source: Digital Trends)

When Volvo Construction Equipment (Volvo CE) and Lego Technic gathered a group of children to design a new earth mover, the result was more than a new toy. The Lego Technic Volvo Concept Wheel Loader Zeux is also a digital prototype for a future Volvo autonomous machine.

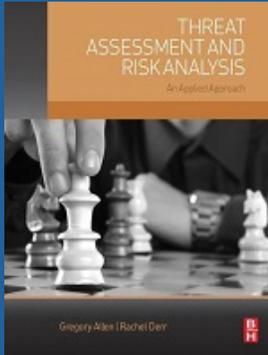
[More...](#)

Relevance: Construction vehicles of the future will have more consideration for human safety and interaction in their artificial



intelligence programme. This will allow better planning of work and a safer working environment for workers.

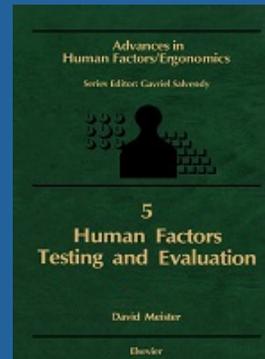
RECOMMENDED READING FROM THE WSH INSTITUTE COLLECTION*



TITLE:
Threat assessment and risk analysis: An applied approach

AUTHOR:
Gregory Allen & Rachel Derr

AREA OF INTEREST:
Threat assessment, risk analysis



TITLE:
Advances in human factors/ergonomics, Volume 5

AUTHOR:
D. Meister

AREA OF INTEREST:
Human factors, ergonomics

Click [here](#) to access WSH Institute's e-books collection.

* The WSH Institute Collection is a compilation of WSH-related resources accessible to the public through our collaboration with the National Library Board (NLB).

OWL HIGHLIGHTS

1 Occupational interventions for the prevention of back pain: Overview of systematic reviews

Theme: Ergonomics intervention

Date of publication: May 2018

Source: Journal of Safety Research

Lower back pain (LBP) is prevalent worldwide and significantly impacts productivity, work ability and quality of life. Work-related LBP accounts for an estimated 37% of LBP globally. This research evaluated the effectiveness of various LBP workplace interventions to prevent work-related LBP. It looked at 28 review articles, where six reported on primary prevention, 19 reported on secondary prevention, and three reported on mixed prevention approach. All reported interventions were categorised under three broad groups:

- devices, technologies or workplace modifications;
- educational and behavioural interventions; and
- exercise.



The results indicated that exercise alone or in combination with education was the only approach that consistently showed to be effective in the prevention of LBP. Exercise-based interventions were effective in the prevention of LBP occurrence and recurrence, leading to a reduction in lost time and disability associated with back pain. There was also evidence suggesting that 'stretch and flex' workplace exercise programmes led to improved safety culture and communication, which may minimise back injury risk. The use of assistive devices and other technologies showed no evidence of a preventive effect, and there was moderate evidence that educational interventions were also not effective in the prevention of LBP.



To read more, click [here](#)

2 Total health-related costs due to absenteeism, presenteeism, and medical and pharmaceutical expenses in Japanese employers



Theme: Economic burden on health
Date of publication: May 2018
Source: Journal of Occupational and Environmental Medicine

Poor health in the workplace can lead to health-related productivity loss due to sick-leave (absenteeism) and reduced performance while at work due to uncontrolled diseases or health risks (presenteeism). The economic burden due to absenteeism and presenteeism could be much greater than medical or pharmacy expenses. This study analysed a detailed breakdown of expenses (medical and pharmaceutical expenses and estimated monetary value due to absenteeism and presenteeism) by diseases or symptoms of employees in four pharmaceutical companies in Japan. It drew data from a self-administered questionnaire for workers in 2014 and related claims data from health insurance unions.

The symptoms with greater productivity losses were painful neck or stiff shoulders, insufficient sleep, back pain, dry eye, glaucoma, and depression. In total costs, the economic burden due to absenteeism and presenteeism was US\$520 and US\$3,055 per person per year respectively. The two health conditions with the highest total costs burdens were mental and behavioural disorders, and musculoskeletal disorders.



To read more, click [here](#)

3 What persons with chronic health conditions need to maintain or return to work: Results of an online-survey in seven European countries

Theme: Chronic health and return to work

Date of publication: March 2018

Source: International Journal of Environmental Research and Public Health

For persons with chronic health conditions, it is important for them to be able to maintain their employment and return to work for their well-being and financial independence. The study analysed data from an online survey involving 487 participants with six chronic health conditions. The most frequently identified factors having a positive and negative impact on work life were work-related aspects such as career development, stress at the workplace, work structure, schedule and workload, support of others and attitudes of others.

These highlighted the importance of attitudes and support of colleagues and supervisors at the workplace, where improving literacy on chronic health conditions might reduce stigmatisation and social exclusion often experienced by persons with chronic health conditions. The study also suggested strategies to enhance the work life of persons with chronic health conditions by modifying work-related aspects such as the adaptation of working hours, working tasks and workload.



To read more, click [here](#)

4 Micro learning: A new approach to safety training



Theme: Safety training
Date of publication: April 2018
Source: EHS Today

Micro learning is a new training technique, which is a short and focused approach that is made readily available to workers. Workers are able to access a four-minute or less module on their mobile phone or other smart device, which covers one important aspect of the training. A series of these modules can replace, or be used to reinforce, the longer classroom or computer-based training modules. Workers are also able to re-access as and when they need to refresh on the issue. Micro learning modules allow workers to learn the uses and purposes of new technologies adopted by organisations and at the same time become their user's manual and troubleshooting guide. Micro learning modules have the potential to reinforce training in the workplace and improve its effectiveness amongst workers.



To read more, click [here](#)

Other Useful Resources

- Improving the safety and health of young workers (*International Labour Organization*)
- Effect of alternating postures on cognitive performance for healthy people performing sedentary work (*Ergonomics*)
- Naturally occurring workplace facilities to increase the leisure time physical activity of workers: A propensity-score weighted population study (*Preventive Medicine Reports*)
- The combined effect of long working hours and low job control on self-rated health: An interaction analysis (*Journal of Occupational and Environmental Medicine*)
- Protecting workers during the handling of nanomaterials (*National Institute for Occupational Safety and Health*)
- Relationships among safety climate, safety behaviour, and safety outcomes for ethnic minority construction workers (*International Journal of Environmental Research and Public Health*)

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Vision: A Healthy Workforce in a Safe Workplace.
Mission: Provide evidence-based, insightful and practical solutions.

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