



**Issue 42 (January 2016)**

**SPOTLIGHT**

**Occupational Disease Surveillance and Policy Transforming Seminar**



The National Institute of Occupational Health and Poisons, China, (NIOHP) invited the WSH Institute to their Occupational Disease Surveillance and Policy Transforming seminar in Beijing on 30th November to 2nd December.

Eunice Yong, Senior Research Analyst of the WSH Institute (in the middle), shared about Singapore's study on mortality from work-related diseases, and also presented methods and considerations of these estimates. The seminar was attended by NIOHP's Director (5th from right) and various staff including their Chief Physician (4th from left), as well as other experts from related institutes.

The group had an engaging discussion on the methods and data sources, ending with an agreement to keep each other informed on similar projects and future collaborations. More information can be found [here](#).

**Online Course on Occupational Health**



**WHAT'S TRENDING**

**Biometric 'tech tattoos' could be the future of wearables**



A development firm in Austin, TX is putting a new spin on the concept of wearable tech. Combining sensors with conductive paint, Chaotic Moon Studios has begun work on "tech tattoos" that turn body art into fully-functional health monitors.

(Source: Tech Radar)

[More...](#)

**Relevance: How can the biometric tech tattoos help to monitor workers at high risk environments?**

**Welcome to the future: Virtual reality at CES**



As I slid on the new HTC Vive Pre headset, the all-encompassing commotion that is Las Vegas during CES — the world's biggest annual consumer electronics show — faded away. For the first time in several days, I have escaped.

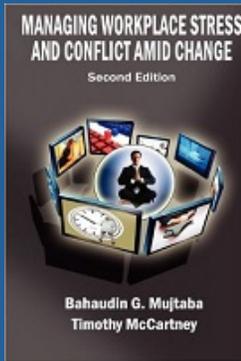
(Source: CNBC)

[More...](#)

**Relevance: With the advancement in virtual reality technology, is it time to transform how training is delivered to improve workplace safety and health?**

Do you want to learn more about occupational health and how you can prevent injuries and illnesses at work? Wait no more, register for the [free online course](#), starting on 7th March 2016!

## RECOMMENDED READING FROM THE WSH INSTITUTE COLLECTION\*



**TITLE:**  
Managing Workplace Stress and Conflict Amid Change

**AUTHOR:**  
Mujtaba, Bahaudin  
McCartney, Timothy O.

**AREA OF INTEREST:**  
Job stress management, Conflict management, Time and crisis management, Stress (Psychology)



Please use your QR code scanner to access the recommended reading titles on [Stress Management](#)

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 Surprising incentive: An instrument for promoting safety performance of construction employees

**Date of publication:** September 2015

**Source:** Hamadan University of Medical Sciences

The construction industry continues to pose the highest risk with regards to safety issues despite significant improvements made over the years. Thus, new and innovative approaches are continuously needed to address them. Some studies have shown that safety performance of employees can be enhanced by offering proper incentives. These financial and non-financial rewards can encourage workers' involvement in safety programmes, but could also be a double-edged sword if the criteria is ambiguous in the incentive system. This study seeks to examine the effectiveness of a "surprising incentive system" in improving frontline employees' safety performance. A case control study was conducted at two power-plant construction projects in Iran during 2012 and 2013. Two incentive systems were compared with 342 employees in the case project and 402 employees in the control project. The results indicate that in comparison, the surprising incentive system could significantly improve employees' safety performance. However, the performance declines after 6 months as the attractiveness and surprise value of the incentives dwindle over time. Hence, the types and amount of rewards need to be periodically evaluated and modified based on the needs and characteristics of the industry at that point, and should not be blindly implemented. This also suggests that surprising incentive system is more suitable for the construction industry





### 3 Comparing high and low performers for noise control

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**Date of publication:** 2015

**Source:** International Journal of Workplace Health Management

Exposure to loud noise may adversely impact health and safety of workers. This study examines what influences employers' behaviour in managing risks from noise and how these vary between high and low performing manufacturing companies in Great Britain. The study findings aim to assist regulators and industries to develop interventions that help organisations to effectively manage noise, particularly amongst the low performers. 215



# 4 Literature review: Barriers to the application of Ergonomics/Human Factors in engineering design

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**Date of publication:** 2015

**Source:** Health and Safety Laboratory

This literature review seeks to investigate the barriers that can prevent the effective adoption of Ergonomics/Human Factors (E/HF) information and principles in engineering design. The research findings aim to assist equipment manufacturers to improve the equipment design and to reduce risks of accidents to its users. Searches were done on the Ergonomics Abstract On-Line (EAOL) database to retrieve relevant scientific literature and 45 papers were then selected for review. The main findings are summarised into four main factors:

- (i) Financial – This is the most important barrier to the application of E/HF in the design process. Companies are generally unwilling to spend money on using E/HF information, particularly if the manager perceives that there is only marginal or no financial benefit.
- (ii) Organisational – The lack of adequate planning and time to integrate ergonomic considerations into the design is a common barrier found in the review.
- (iii) Personal – The commitment of the appropriate managers who perceive the value of using E/HF in design to the business is a key inter-personal factor.
- (iv) Knowledge-based – The lack of understanding of the ergonomic issues among the designers and engineers, coupled with the absence of specific data applicable to their design problems, and the weak influence of E/HF specialists are among the factors that prevents the application of E/HF in the product designs. They could also be unaware of how to access specialist advice if it is not readily available to them.

Some of the other constraints faced in integrating ergonomic solutions into designs include having to conform to complex safety and product regulations, as well as overcoming irrational behaviour and conflict of interest during design and production process.

To read more, click [here](#)

- Occupational health risk management in construction (*HSE*)
- Controlling dust hazards at work (*Government of Western Australia, Department of Commerce*)
- Assessment and mitigation of combustible dust hazards in the plastics industry (*AIP Conference Proceedings*)
- Guide to managing risks of exposure to diesel exhaust in the workplace (*Safe Work Australia*)
- Moving forward: Helping workers cope after they witness a serious incident (*Safety and Health Magazine*)

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**Mission:** Enhancing WSH through knowledge, innovations and solutions.

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