

# The Dread Factor

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## How Best to Train Workers: Conflicting Views

Burke, Sarpy et al. (2006):  
Meta-analysis of 95 quasi-experimental safety training studies published between 1971 and 2003.

- *Conclusion.* Training involving behavioral modeling, a substantial amount of practice, and dialogue is generally more effective than other methods of safety and health training (on knowledge gain and safety performance).

IWP/NIOSH (Robson et al., 2010): Qualitative analysis (systematic review) of 14 randomized controlled trials of 33 field experimental studies published between 1996 and 2007

- *Conclusion:* There is insufficient evidence that high engagement training is more effective than medium/low engagement training on knowledge or behaviors.

# The Dread Factor: Background

**Dread:** The realization of actual dangers associated with ominous hazards and the experienced feelings (negative affect or anxiety) associated with such events or exposures.

Dread is expected to play a primary role in motivating individuals to learn about and avoid such hazards.



# General Expectation and Method

- **Expectation:** The relationship between training engagement and outcomes (knowledge and performance) is expected to be stronger for events and exposures that are more likely to produce or inflict severe injury, illness or death in comparison to events/exposures that are less likely to produce or inflict severe injury, illness, or death.
- **Identified and coded studies :** 113 studies between 1971 and 2008 with a total sample size of 24,694 from 16 countries
- **Variables of Interest**
  - **Level of training engagement** – considered as high (e.g., simulations, hands-on) and low/moderate engagement (e.g., lecture, video-based, programmed)
  - **Hazard severity**- coded as high or low using U.S. Department of Labor's Occupational Injury and Illness Classification System (OIICS)
  - **Knowledge acquisition**- measured via objective tests within each study
  - **Safety performance** – measured via on-the-job observations and self-reports of safety-related behaviors
- Computed the effectiveness of training for knowledge gain and safety performance

# Interaction Between Level of Safety Training Engagement and Hazardous Event/exposure Severity on Safety Performance

