

NUCLEAR POWER

Perception of near-miss incidents

Risk Anal. <http://doi.org/cjpt> (2018)

Although nuclear power is an essential source of energy generation, public perception is mixed, and is particularly negative following nuclear accidents such as Fukushima. However, less is known about how the more common case, where a nuclear accident could have happened but did not, influences how people perceive the risks of nuclear power. Jinshu Cui and colleagues from the University of Southern California tested whether the cause of potential nuclear accidents influences public reactions, and whether these reactions change as the incident progresses and disaster is averted.

Participants watched three videos that simulated news broadcasts reporting on a nuclear loss-of-coolant accident as it unfolded (coolant pump failure, pump restoration, and post-accident assessment). Negative affect, risk perception, and intention to engage in avoidance behaviours (for instance, staying home or evacuating) were higher when the reported cause of the pump failure was a cyber-attack or earthquake versus a software failure. Although negative affect, risk perception, and endorsement of avoidance behaviours decreased as more information was provided with each video, the effect of incident cause persisted regardless of whether participants had partial (video 1 only) or complete (videos 1, 2 and 3) information about the event. These results suggest that whether a nuclear incident is attributed to external versus internal causes influences public reactions and perceptions of nuclear risk, even when the incident becomes a near-miss.

Jenn Richler

Published online: 5 February 2018
<https://doi.org/10.1038/s41560-018-0098-z>