

Living through a tornado does not shake optimism

1 March 2013

Even in the face of a disaster, we remain optimistic about our chances of injury compared to others, according to a new study. Residents of a town struck by a tornado thought their risk of injury from a future tornado was lower than that of peers, both a month and a year after the destructive twister. Such optimism could undermine efforts toward emergency preparedness.

After an F-2 tornado struck his town in Iowa, Jerry Suls, a psychologist at the University of Iowa who studies [social comparison](#), turned his attention to risk [perception](#). "I had dinner as a guest in a home that was destroyed by the tornado the next evening," he recalls. "It was hard not to think about future [weather disasters](#) while helping with the clean-up in the following weeks."

So Suls and colleagues set out to survey three different populations in his town about their perceptions of risk from future tornadoes. They recruited college students, local residents contacted through random-digit dialing, and residents in neighborhoods affected by the tornado and, over a period of one year, asked them questions about both "absolute" and comparative risk.

"Although risk can be framed in absolute terms, for example, a 1 in 100 chance of being injured in an [automobile accident](#), people are particularly interested in their risk relative to other people," he says. Comparative questions included "How likely is it you will be injured by a tornado in the next 10 years, compared with the average Iowan (-2 = much less likely to +2 much = more likely)?" questions of absolute risk included "How likely, from a statistical or scientific point of view, is it you would experience a tornado injury in the next ten years (0% to 100%)?"

As reported in [Personality and Social Psychology Bulletin](#), students and [community residents](#) reported being less vulnerable than their peers at 1

month, 6 months, and 1 year after the disaster, while absolute risk estimates were more optimistic with time. Surprisingly to the researchers, people who lived in neighborhoods that had directly been affected by the storm – having experienced damaged windows, roofs, automobiles, etc. – were actually more optimistic for the first 6 months than people living in neighborhoods that had no visible damage from the storm.

"We speculate that for a while, they felt 'lightning wouldn't strike twice in the same place,'" Suls says. "A year later, their optimism was comparable to the people in the undamaged neighborhoods."

Also surprising, Suls says, was that although participants reported being less likely than others to be injured in the future from tornadoes, their objective numerical estimates tended to be pessimistic compared to the estimates of weather storm experts. People believed they had approximately a 1-in-10 chance of injury from future [tornadoes](#) – which is an overestimate of the scientifically calculated risk of less than 1 in 100.

"People tend to maintain an optimistic view, particularly with regard to their fate compared to other people," Suls says. "Even the proximity of a significant weather disaster seems to do little to shake that optimism." While this may seem counterintuitive, he explains, it is the norm, and may help explain why some people are so reticent to seek shelter during natural disasters.

It is possible that living for a long period of time among the rubble from a disaster, as was the case for the Iowan residents for two years after the tornado, increases defensiveness and perhaps denial about the risks from future storms, Suls says. With weather disasters seeming to become more frequent in recent years, he says, it is also possible that there is a cumulative effect on peoples' optimism and feelings of vulnerability. More research is necessary to examine how these

attitudes influence [emergency preparedness](#).

More information: The paper, "Optimism Following a Tornado Disaster," Jerry Suls, Jason P. Rose, Paul D. Windschitl, and Andrew R. Smith, was published online on March 1, 2013, in Personality and Social Psychology Bulletin, a journal of the Society for Personality and Social Psychology (SPSP).
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