

Researchers find mass killings, school shootings are contagious

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Larkmead School. Credit: CC-BY-SA-2.5,2.0,1.0

Mass killings and school shootings in the U.S. appear to be contagious, according to a team of scientists from Arizona State University and Northeastern Illinois University.

Study author Sherry Towers, research professor in the ASU Simon A. Levin Mathematical, Computational and Modeling Sciences Center, explained, "The hallmark of contagion is observing patterns of many events that are bunched in time, rather than occurring randomly in time."

Her team examined databases on past high-profile mass killings and

school shootings in the U.S. and fit a contagion model to the data to determine if these tragedies inspired similar events in the near future.

They determined that mass killings - events with four or more deaths - and school shootings create a period of contagion that lasts an average of 13 days. Roughly 20 to 30 percent of such tragedies appear to arise from [contagion](#).

Their paper, "Contagion in Mass Killings and School Shootings," appears in the July 2 edition of *PLOS ONE*.

The analysis was inspired by actual events in Towers' life.

"In January of 2014 I was due to have a meeting with a group of researchers at Purdue University," she said. "That morning there was a tragic campus shooting and stabbing incident that left one student dead. I realized that there had been three other school shootings in the news in the week prior, and I wondered if it was just a statistical fluke, or if somehow through news media those events were sometimes planting unconscious ideation in vulnerable people for a short time after each event."

The researchers noted that previous studies have shown that suicide in youths can be contagious, where one suicide in a school appears to spark the idea in other vulnerable youths to do the same.

"It occurred to us that mass killings and school shootings that attract attention in the national news media can potentially do the same thing, but at a larger scale," Towers said. "While we can never determine which particular shootings were inspired by unconscious ideation, this analysis helps us understand aspects of the complex dynamics that can underlie these events."

On average, [mass killings](#) involving firearms occur approximately every two weeks in the U.S., and [school shootings](#) occur on average monthly. The team found that the incidence of these tragedies is significantly higher in states with a high prevalence of firearm ownership.

Provided by Arizona State University

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