

RAL/MMM JOINT SEMINAR SERIES

Tornado Sheltering Before and During the COVID-19 Pandemic: A Mixed Method Exploration of Survey Responses and Emergency Management Interviews

Christopher Williams
UNIVERSITY OF FLORIDA



Wednesday, September 29, 2021 | 1:00 PM-2:00 PM

<https://operations.ucar.edu/live-ral> | Virtual

Our study investigated how group sheltering and the novel coronavirus disease (COVID-19) pandemic intersect in relation to risk perception and intended behavior for tornado threats. When tornadoes threaten, trusted authorities encourage people living in less sturdy homes to seek shelter at designated public facilities or at sturdier homes of friends and family. As tornado season neared peak climatological frequency of occurrence across the central and eastern United States in 2020, the World Health Organization declared COVID-19 a pandemic. Medical authorities pleaded for entities to help reduce virus transmission by limiting gathering in large crowds, establishing quarantines, and isolating those diagnosed with COVID-19. In situations where the tornado and COVID-19 hazards coincide, merging the corresponding recommended protective behaviors creates a potential decision-action paradox. Therefore, we statistically analyzed responses from a twenty-state online Qualtrics survey to better understand group sheltering risk perceptions and intended behaviors of people in the compound hazard intersection. Additionally, we interviewed emergency management officials to learn whether and how the COVID-19 pandemic impacted tornado and severe weather sheltering behaviors in communities within the southeastern United States. An example key survey finding highlights how respondents perceive comprehensive risk reduction communication coming from official public channels as lacking clarity. Given the recency of the tornado and COVID-19 risk intersection, the analysis findings may offer relevant insight to trusted authorities in the weather forecast and warning system as they adapt in areas like risk communication and emergency shelter operations.