

Tornado Warning Reception, Comprehension, and Response across County Warning Areas in the Contiguous United States

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Forecasters, emergency managers, and broadcast meteorologists have many responsibilities and roles, ranging from issuing advisories and warnings during high impact weather events to providing weather advice, education, and guidance to people in their communities. Risk communication across this range of responsibilities and functions requires systematic, robust, and intimate knowledge of the community. This knowledge can be difficult and time consuming to obtain, and hard to pass on to people who are transplants in the communities they serve. One cause of this difficulty is the lack of systematic and reliable data across geographic areas in the US. In this project, we propose a methodology that uses multilevel regression and poststratification (MRP) to provide these data. Then we apply the methodology using data from the 2018 Severe Weather and Society Survey, an annual national survey that is conducted by the Center for Risk and Crisis Management at the University of Oklahoma. Doing so allows us to measure, map, and compare tornado warning reception, comprehension, and response across County Warning Areas in the contiguous United States.