

# UNDERSTANDING TORNADO WARNINGS, FALSE ALARMS, AND COMPLACENCY

Tornadoes in the Southeastern U.S. are the **most lethal** of any region, even though other regions experience more tornadoes on average.<sup>1</sup>

Scientists have long had concerns that false alarms for weather events can cause people to become complacent to future warnings and react ineffectively.

START researchers interviewed 77 people across 10 focus groups in three cities: Tuscaloosa, AL, Winston-Salem, NC, and Lexington, KY. Their findings are listed below.

## COMPREHENDING PROTECTIVE ACTIONS



People generally understand what shelter in place means, but might not take action until knowing how urgent the situation is. To encourage people to shelter in place after a tornado warning, focus group participants recommend including more directive language in warnings.

## COMMUNICATIVE BEHAVIORS

Participants indicated that they first received information which often then led to more active information seeking/sharing.



## PREFERRED INFORMATION SOURCES



There is a clear preference for local meteorologists as the primary source for information on tornadoes. Friends and family are also often cited as key sources.

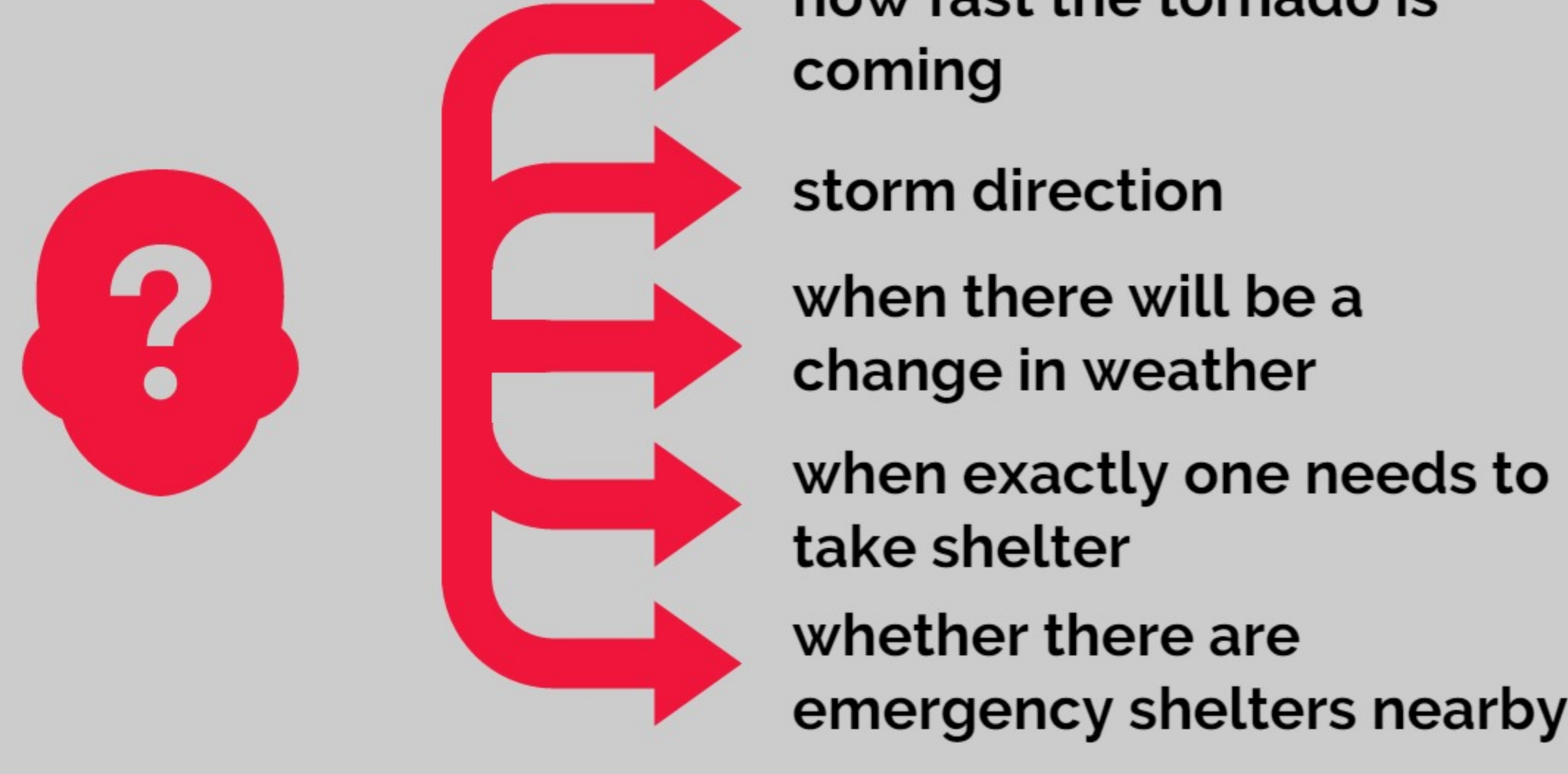
## COMMUNICATION PREFERENCES

Focus group participants indicated that they would like national agencies to give information to local sources, showing people's strong preference for local meteorologists.



## PROTECTIVE DECISION-MAKING

A wide range of information helps people decide what to do during tornado watches and warnings. These include:



## FALSE ALARMS, ACCURACY, AND COMPLACENCY

Focus group participants had a wide range of behavioral responses to false alarms.



Some would not take future warnings seriously.



Some would aim to be more prepared for next time having been notified of the risk of tornadoes.



Some would not change their behavior regardless of false alarms.

While previous studies primarily showed that people mostly feel negative emotions such as anxiety, sadness, and fright for natural disaster, people in the Southeastern U.S. also demonstrated further positive and negative emotions:



- Feeling fortunate
- Alertness
- Gratitude
- Trust for false alarms
- Sympathy
- Relief



- Annoyance
- Apathy
- Confusion
- Dissapointment about trust

## ENVIRONMENTAL CUES AND TORNADO MYTHS



There are many myths and false environmental cues that people pay attention to when it comes to weather events (e.g., animal behavior, leaves turned up or down, sky color, and joint pain). These can be obstacles to effective decision-making during a tornado.