

SOCIAL SCIENCE METHODS

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This briefing sheet summarizes some commonly used methods in social science extreme events research. This list draws upon a review chapter by [Michaels \(2003\)](#), a census of the [Social Science Extreme Events Research \(SSEER\)](#) network, and an analysis of reports submitted to the Natural Hazards Center's [Quick Response Research Program](#).

It is important to note that the following methods might be utilized independently, or in combination with one another in the case of mixed methods studies. They also may be used as part of larger multi-disciplinary or interdisciplinary studies involving those from, for example, disciplines in the social sciences and engineering. The first five methods are most often used to examine themes or relationships between respondents' responses, while survey research is often (but not always) utilized to generalize characteristics of the population under study.

- CASE STUDIES** explore a phenomenon within a specific framework (e.g., an event, an organization, a process) to demonstrate varying complexities and the significance of local context, allowing for comparisons across multiple situations.

Example: [Coles and Zhuang \(2013\)](#) used a case study of Hurricane Sandy to explore the formation and maintenance of partnerships among disaster agencies.

- OBSERVATION** entails visiting the site of the event and gathering data through direct surveillance, often either as an active participant or as a non-participant observer.

Example: [Gardner \(2008\)](#) volunteered alongside disaster relief workers after Hurricane Ike to directly observe the dynamics of grassroots disaster relief efforts.

- INTERVIEWS** are used to collect descriptive qualitative data from individuals who have direct knowledge of the phenomenon under study, giving researchers access to the thoughts, feelings, and experiences of those involved. Interviews may be **structured**—that is, adhering strictly to a list of pre-determined questions—or **informal and unstructured**, allowing conversation to flow naturally without restrictions. **Semi-structured** interviews are a mix of the two, giving the researcher an outline of questions to address, as well as the

freedom to deviate from the script as the interview reveals new, relevant information.

Example: [Niles and Contreras \(2018\)](#) interviewed healthcare professionals in Puerto Rico to discuss the difficulties of healthcare delivery following Hurricane Maria.

- FOCUS GROUPS** are moderated conversations with a small group of participants and are especially useful for examining group dynamics and interactional patterns.

Example: [James \(2014\)](#) used focus groups to examine preparedness for Hurricane Sandy among those who had also survived the 2010 Haiti earthquake.

- DOCUMENT REVIEW** qualitatively or quantitatively analyzes the content of written or visual materials—e.g., emergency plans, newspaper articles, reports, meeting minutes, photographs—for information or context surrounding an event or situation.

Example: [Beckett, Grant, and Scarisbrick-Hauser \(2009\)](#) reviewed the Ohio Department of Health's *Pandemic Influenza Preparedness & Response Plan* and *Infectious Disease Control Manual*, among other documents, to describe procedures for responding to a pandemic flu emergency.

- **SURVEYS** are questionnaires distributed to a population of interest to gather information—generally from a limited selection of responses—that can be analyzed quantitatively. Some survey data may also be open-ended, allowing researchers to analyze the data qualitatively. Questionnaires may be administered in written form via paper or electronic copy, online, or verbally through in-person or telephone formats.

Example: [Dupéy and Smith \(2019\)](#) issued a drop-off pick-up survey to 195 residents of Durango, Colorado, that was focused on wildfire mitigation behaviors before and after the 416 Fire.

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