

# Three Strategies to Strengthen Child Disaster Research

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Today's children are expected to experience two to seven times more disaster events than their grandparents (Thiery et al., 2021). Climate-related disasters such as floods, hurricanes, and wildfires are key drivers of the outsized impacts disasters will have on children. Children are at heightened risk for negative consequences following disasters. Children often have limited ability to protect themselves, and they rely on adults for support and assistance. Therefore, it is important to consider children's vulnerability and to support and protect them during and after disasters.

Addressing the intersection between climate-related disasters and children's vulnerability requires a strong research pipeline, as well as the expertise of multiple fields (e.g., psychology, public health, engineering, and planning). This commentary highlights three ways to strengthen the child disaster research pipeline.

## Priority Actions

To strengthen the child disaster research pipeline, it is suggested that the disaster research field should (1) identify and disseminate solutions to the challenges of disaster-related research with children, (2) support researchers from historically marginalized groups who conduct research with children, and (3) focus on collaborative approaches to addressing issues in the disaster research pipeline. Potential solutions for facilitating these steps and implications for practice are discussed in the sections that follow.

### Preparing for Child Disaster-Related Research

Disaster research is challenging. It is unclear when and where the next disaster will occur. As a result, disaster research is primarily designed and conducted post-disaster. This means that child disaster research data is limited in terms of: pre-disaster data; information collected during the early post-disaster and recovery periods (within 3 months post-disaster); longitudinal follow-ups; information related to children who have been displaced by disaster; and sample size, representativeness, and diversity.

Solutions to the challenges of disaster research are urgently needed. Disasters are increasing in frequency and intensity. Because more disasters are likely to occur, it is not sufficient to wait for the next disaster before designing disaster studies.

Potential solutions to disaster research challenges include evaluating children's symptoms in disaster-prone areas to obtain pre-disaster assessments; pre-registering disaster protocols for rapid deployment to obtain early information about post-disaster and recovery periods; and leveraging administrative datasets to obtain longitudinal, representative, and diverse assessments of children's responses to disasters. Further, the authors encourage researchers to register and deposit their disaster assessment protocols and data to facilitate rapid sharing of data, expedite the research design development process, and encourage large-scale data integration projects through data harmonization. Finally, researchers should consider evaluations of climate anxiety—meaning emotional, cognitive, and behavioral symptoms associated with changing climate. Emerging evidence indicates that young peoples' post-disaster mental health responses may be linked with attitudes to climate change (Hickman et al., 2021).

### Supporting Researchers from Historically Marginalized Groups

Funding disparities have been documented by funders around the world. A study by Chen et al. (2022) examined outcomes for principal investigators submitting proposals to the National Science Foundation from 1999–2019. On average, proposals from White investigators were funded at 8.5 percent above the annual overall funding rate; in contrast, proposals from Asian, Black/African American, and Native Hawaiian/Pacific Islander investigators were funded at –21.2 percent, –8.1 percent, and –11.3 percent below the annual overall funding rate, respectively (Chen et al., 2022).

Funding disparities matter because grant funding drives research. Disparities may lead to a lack of diversity in the research topics being studied and the solutions proposed

to address important problems. For example, Alisic and colleagues identified 14 international child trauma guidelines by contacting 121 experts in 94 countries (Alisic et al., 2020). Overwhelmingly, these trauma guidelines suggested the predominance of a White, Western lens. This pattern of focus does not match how potentially traumatic events like disasters affect children around the world. Further, funding disparities negatively affect the research productivity and success of scholars from historically marginalized groups, perpetuating underrepresentation and disadvantage in the field.

Addressing disparities has outstanding potential for supporting children exposed to disasters. As one example, the Bill Anderson Fund's mission is to expand the number of historically underrepresented professionals in the field of hazards and disaster research (Bill Anderson Fund, n.d.). Over the course of 10 years, the Bill Anderson Fund has supported more than 100 graduate student fellows by creating systems designed to combat challenges that undermine degree completion among students of color pursuing advanced degrees. Specifically, the Fund focuses on mentorship, peer support, and professional development. The Fund has also fostered conversations about issues of equity and justice in the research enterprise, resulting in an interdisciplinary network of 57 graduates and 44 emerging professionals developing solution-focused approaches to research involving marginalized communities. To illustrate, Bill Anderson Fund Fellows have conducted community-engaged research to better understand post-disaster recovery among Mexican immigrants and African American women (Villarreal, 2023; Ayala, 2023). Similar fellowship programs are needed across all fields that support children exposed to disasters.

### **Using Collaborative Approaches to Address Issues in the Disaster Research Pipeline**

Addressing challenges and disparities in disaster research requires collaborative approaches and solutions. Individual-level solutions will not be sufficient. As an example of solutions that are systemic rather than individual, the efforts of the National Institutes of Health to end structural racism in their funding process note, "We must practice science in a way that ensures employing the full breadth of talent and with attention to any unintended consequences of our research that might amplify health disparities" (National Institutes of Health, 2022).

A starting point for implementing these systemic solutions is for researchers to identify the structures that prevent them from being able to contribute to disaster science. For instance, continued support for funding mechanisms that allow for rapid response to disasters is needed. Traditional funding

timelines do not allow researchers to collect perishable data in the early post-disaster response and recovery periods. In addition, lengthy timelines for securing funding also make it difficult for investigators to collaborate, especially if they are working across institutions, which requires additional contracts and paperwork.

In addition to improving access to funding for historically marginalized scholars, collaborative models for research that draw on local knowledge and relationships, participatory methods, and co-creation of knowledge need to be prioritized. These collaborative approaches play an important role in creating more equitable research relationships.

As one example of the power of collaborative solutions, Orengo-Aguayo and colleagues (2022) observed the large-scale mental health needs of youth in Puerto Rico in 2017 after Hurricane Maria devastated the island. They partnered with The University of Puerto Rico, Medical Sciences Campus and Albizu University, Mayaguez through support from a Substance Abuse and Mental Health Services Administration Grant. Post-disaster intervention science guidelines suggest focusing on: (a) increasing access to basic needs (e.g., clean water, food, clothing, shelter, and medical care); (b) promoting safety and security within communities and families; (c) bolstering social support networks; and (d) teaching positive coping skills (Bonanno et al., 2010; La Greca and Silverman, 2009). Psychological First Aid (PFA) is an evidence-informed, culturally and developmentally sensitive intervention developed by disaster mental health experts aimed at providing practical assistance and promoting a sense of safety, security, calm, connectedness, hope, and self and community efficacy to survivors after a disaster (Brymer et al., 2006; Hobfoll et al., 2007). PFA is designed to reduce the initial distress caused by a disaster and to foster adaptive functioning and coping strategies among adults and children in both the short and long term. The goal of this project was to provide culturally and linguistically tailored training to psychology graduate students, community mental health providers, teachers, and school staff in evidence-based disaster mental health interventions such as PFA. A total of 9,236 individuals received training and 652 youth were identified and referred to mental health services from 2018 to 2022 (Orengo-Aguayo et al., 2022). The team developed a sustainable, long-term, comprehensive mental health awareness training program that can serve as a model to help meet the needs of youth affected by climate-related disasters.

### **Summary**

Supporting children and youth confronted by climate-related disasters is a critical public health issue. A key strategy for doing so is bolstering the disaster research

pipeline. By strengthening this pipeline, we can better understand how climate-affected disasters impact children's social vulnerability and devise more effective policies and practices to support children and their communities. To achieve this, we must take steps to address the challenges of disaster research, support researchers from historically marginalized groups, and encourage diversity in the research topics and solutions proposed to address important problems. Effective change in these areas requires the participation and leadership of multiple sectors. Funders, academic institutions, researchers, nonprofit organizations, and community stakeholders all have a role in improving the systems that support children during disaster events.

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