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# Community Disasters, Psychological Trauma, and Crisis Intervention

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## Abstract

The current issue of International Journal of Emergency Mental Health and Human Resilience is focused on community disasters, the impact of trauma exposure, and crisis intervention. The articles incorporated include studies ranging from the World Trade Center disaster to Hurricane Sandy. These studies are related to public attitudes and beliefs about disease outbreaks, the impact of volunteerism following the World Trade Center attacks, alcohol misuse among police officers after Hurricane Katrina, posttraumatic stress disorder after Hurricane Sandy among those exposed to the Trade Center disaster, compassion fatigue and burnout among trauma workers, crisis interventions in Eastern Europe, and police officers' use of stress intervention services. While this scope is broad, it reflects the knowledge that has emerged since the Buffalo Creek and Chernobyl catastrophes, to the more recent Hurricane Katrina and Sandy disasters. Given the current threat environment, psychologists, social workers, and other providers need to be aware of these developments and be prepared to mitigate the impact of psychological trauma following community disasters, whether natural or man-made.

### Keywords

Disasters; psychological trauma; crisis intervention; public health

Disasters are typically classified into several distinct categories, including: natural disasters and major disease outbreaks; mass violence and human-made disasters; and technological disasters (Neria, Galea, & Norris, 2009). All three of these disaster types have both unique and common elements that affect the impact of exposure to these events. The most common adverse outcomes observed among people following these exposures include the onset of mental health and physical health problems, substance misuse, and increased mental health service utilization (Neria et al., 2009). Nevertheless, the most common health outcome observed is positive: following disasters most persons are generally resilient and manifest few or no long-term adverse health outcomes, a finding consistently documented in numerous studies (Bonanno, 2004; Boscarino & Adams, 2009; Pietrzak et al., 2014). What predicts this psychological resistance? One of the major factors is the availability of

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psychosocial resources (Adams & Boscarino, 2006; Adams, Boscarino, & Galea, 2006). Another is the absence of preexisting vulnerabilities, including preexisting mental health disorders and genetic risk factors (Boscarino & Adams, 2009; Boscarino, Erlich, Hoffman, & Zhang, 2012). Of course, the level of trauma exposure is a major risk factor in the onset of psychopathology and the absence or low level of the latter is protective (Boscarino, Adams, & Figley, 2004; Boscarino & Adams, 2008). In addition, and perhaps most importantly, early brief psychosocial interventions appear to be effective in the reduction and/ or mitigation of adverse health consequences (Boscarino, Adams, & Figley, 2011). It is noted that while our World Trade Center Disaster (WTCD) research, funded by the National Institute of Mental Health (Grant # R01-MH-066403 and R21-MH-086317), was a source of many findings (Boscarino & Adams, 2008), the modern disaster research literature goes back at least several decades (Bromet & Dew, 1995; Freedy, Kilpatrick, & Resnick, 1993; Gleser, Green, & Winget, 1981; Rubonis & Bickman, 1991). Our recent WTCD report related to police officers and Hurricane Sandy research was built upon this preexisting body of research (Adams & Boscarino, 2011; Boscarino, Hoffman, Adams, Figley, & Solhkhah, 2014).

## Scope of Disaster Research

The current issue of the *International Journal of Emergency Mental Health and Human Resilience* includes an overview of research approaches to assess the impact of different disasters and the importance of developing crisis interventions (Boscarino and Adams, Assessing Community Reactions to Ebola Virus Disease and Other Disasters, pp. 234-238). This is followed by a study of alcohol misuse among law enforcement officers following Hurricane Katrina (Heavey et al., Law Enforcement Offcers' Involvement Level in Hurricane Katrina and Alcohol Use, pp. 267-273). Next is a study related to the impact of volunteerism following the World Trade Center disaster in New York City (Adams and Boscarino, Volunteerism and Well-Being in the Context of the World Trade Center Terrorist Attacks, pp. 274-282). This study is followed by a report related to police officers' use of stress intervention services in Pennsylvania (Tucker, Police Officer Willingness to Use Stress Intervention Services, pp. 304-314). Next is a study on the subject of “compassion fatigue” (Burnett and Wahl, The Compassion Fatigue and Resilience Connection, pp. 318-326), an increasingly important area of research related to adverse health outcomes among disaster responders (Adams, Figley, & Boscarino, 2008). Next, is research related to the impact of Hurricane Sandy among those exposed to the World Trade Center disaster (Caramanica et al., Posttraumatic Stress Disorder after Hurricane Sandy among Persons Exposed to the 9/11 Disaster, pp. 356-362), a case report related to developing a foundation for crisis intervention in eastern Europe (Parks, Building a Foundation for Crisis Intervention in Eastern Europe, pp. 352-355), and an editorial on disaster mental health (Mazumder, Disaster Mental Health and Crisis Interventions, pp. 368). Thus, the scope of studies covered in this issue includes a wide range of disasters and psychological trauma exposures and a number of different health outcomes.

Over the past decade, to examine the social and psychological aspects of the terrorist attacks in New York, we studied more than several thousand adult residents and mental health professionals (Adams, Boscarino, & Figley, 2006; Adams, Laraque, Chemtob, Jensen, &

Boscarino, 2013; Boscarino, Figley, & Adams, 2003; Boscarino et al., 2004; Boscarino, Adams, Stuber, & Galea, 2005; Boscarino, Adams, Figley, Galea, & Foa, 2006). This body of research has revealed key risk and protective factors associated with poorer health outcomes. As suggested in our community reaction paper in this issue (Boscarino and Adams, pp. 234-238), our disaster research findings are generally consistent with terror management theory, which suggests that a key to understanding peoples' reactions to serious environmental threats is understanding the fear of death (Pyszczynski, Greenberg, & Solomon, 1999; Strachan et al., 2007). Similar to stress-process theory (Adams & Boscarino, 2005; Boscarino et al., 2014), this human fear response is affected by social factors, self-esteem, and social support -- factors responsible for buffering individuals against traumatic episodes and the subsequent adverse cognitive processes associated with these event exposures (Pyszczynski et al., 1999; Strachan et al., 2007).

Given the threat to public health, community interventions should be a post-disaster priority, including community surveys, workplace education programs, and public service announcements (Engel Jr & Katon, 1999; Foa et al., 2005), as well as provider-focused interventions (Adams et al., 2013; Gershon et al., 2004). Post-event health surveillance also should be planned in the aftermath of a major disaster or disease outbreak (Engel Jr & Katon, 1999; Foa et al., 2005). It has been suggested that public education and communication can reduce or limit adverse population reactions (Covello et al., 2001; Foa et al., 2005). It has been noted that “risk communication” can have the effect of both reducing fear and also promoting self-protecting behaviors, thus preventing misinformation (Covello et al., 2001; Foa et al., 2005). Without these efforts, vulnerable persons and groups may increase the level of social disruption in the community (Boscarino et al., 2003; Boscarino et al., 2006). As we discuss below, the nature of major disasters make media coverage and communications critical, warranting special planning considerations (Foa et al., 2005; North & Pfefferbaum, 2002). As we have suggested elsewhere, our WTC disaster study indicated that simple, worksite crisis interventions offered by local employers immediately after the WTC attacks were effective in reducing a number of mental health problems post-disaster, including a significant reduction in anxiety symptoms (Boscarino et al., 2011).

## Research Approach

Much of the recent disaster research has been based on surveys of adults in the affected disaster areas (Adams & Boscarino, 2006; Boscarino et al., 2004; Boscarino et al., 2006; Galea et al., 2002). Another major category of research includes studies of trauma workers, healthcare personnel, and first responders (Adams et al., 2008; Adams et al., 2013; Gershon et al., 2004). One of the limitations of these surveys is the cost, however, since these studies are expensive to conduct (Groves et al., 2009). Consequently, other methods for data collection are used, such as focus groups and on-line internet surveys (Groves et al., 2009). The other chief methodology used in public health disaster research is the post-disaster research registry (Jordan, Miller-Archie, Cone, Morabia, & Stellman, 2011). One of the more well known of these, is the World Trade Center Disaster Registry (Institute of Medicine and US Department of Health and Human Services, 2014; Jordan et al., 2011). An example of disaster research using this approach is included in this current issue (Caramanica et al., Posttraumatic Stress Disorder after Hurricane Sandy among Persons

Exposed to the 9/11 Disaster, pp. 356-362). Regardless of the methodology used, it is extremely important for researchers to include reliable and validated research instruments (Boscarino et al., 2004; Boscarino et al., 2006; Boscarino et al., 2012; Boscarino et al., 2014; Galea et al., 2002). If not, study results may be problematic (Dohrenwend et al., 2006).

## Summary

Given current knowledge related to environmental and human-made disasters, crisis interventions should be considered post-disaster, including community and workplace programs, based on new and existing research (Boscarino et al., 2006; Boscarino et al., 2014; Engel Jr & Katon, 1999; Foa et al., 2005). Post-event health surveillance also should be contemplated in the aftermath of major incidents and the World Trade Center Disaster Registry is one of the more well known of these approaches (Institute of Medicine and US Department of Health and Human Services, 2014; Jordan et al., 2011). Drawing on past experiences, it has been suggested that public education and risk communications can reduce adverse outcomes(Covello et al., 2001; Foa et al., 2005). These communication strategies can have the effect of not only reducing fear, but also promoting self-protecting behaviors (Boscarino et al., 2006; Covello et al., 2001; Foa et al., 2005). The very nature of community disasters make media coverage, communications, and social media critical, warranting special planning considerations (Boscarino et al., 2006; Boscarino et al., 2014; Foa et al., 2005). In summary, the tools needed to mitigate the impact of post-disaster trauma are available (Boscarino et al., 2006; Boscarino et al., 2014; Engel Jr & Katon, 1999; Foa et al., 2005). Health professionals need to be aware of these developments. In this current issue of the *International Journal of Emergency Mental Health and Human Resilience,* we have included research and case studies related to a range of disaster and traumatic events that have relevance for the public, as well as for first responders and healthcare providers.

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