

Addressing mental health aftershocks from the Turkey–Syria earthquake: a call to action

Dana Rose Garfin & Roxane Cohen Silver



The mental health implications of the 2023 Turkey–Syria earthquake will probably be profound. Here we present research from prior disasters related to the potential negative mental health effects of the earthquake and its aftermath and provide suggestions for mitigating potential deleterious consequences.

On 6 February 2023, a 7.8-magnitude earthquake struck large swaths of Turkey and Syria, soon followed by a 7.5-magnitude earthquake and countless aftershocks, which left mass destruction throughout the region. Rescuers have counted over 55,700 dead, with tens of thousands injured; homes and places of work and worship have been destroyed. The region will require vast domestic resources and international assistance, and the recovery period will probably be protracted, given the extent of the destruction. This may be particularly pronounced in Syria, where aid provision from international organizations has been reduced, given the geopolitical tensions there. Assistance has been slow to arrive.

An impending mental health crisis

It is imperative to address the impending mental health crisis that will probably result from this widespread catastrophe. Prior post-disaster research has demonstrated that exposure to severe earthquakes is robustly associated with elevated mental health symptomatology. For example, in a representative sample of residents living near the epicenter of an 8.8-magnitude earthquake in Chile in 2010, the prevalence of probable post-traumatic stress disorder (PTSD) 2 months after the earthquake was nearly 20%; PTSD symptoms of intrusion, hyperarousal and re-experiencing were reported by 23%, 46% and 32% of respondents, respectively¹. Key predictors of PTSD symptoms and global distress (i.e., anxiety, depression and somatization) included low socio-economic status (education, income and employment) and greater exposure to secondary stressors (i.e., stressful events that occurred in the disaster's aftermath, including injury to self or a loved one, death of a close relation and property loss). Thirty months after a large earthquake devastated Haiti (a low-income country with limited post-disaster infrastructure), over 36% of adults reported symptoms of probable PTSD².

The mental health impacts of the Turkey–Syria earthquake will probably be higher, particularly in Turkish communities that have absorbed large numbers of war refugees and in impoverished and war-afflicted areas of Syria. Residents of Turkey have also been challenged by recent flooding and record inflation (estimated at 80%) straining the region, and decades of violent conflict have previously displaced millions of earthquake-impacted Syrians. The Turkey–Syria earthquake

begets a compounding, cascading disaster, wherein prior trauma (e.g., violence), extreme poverty, subsequent disasters and ongoing secondary stressors (e.g., temporary housing, separation from loved ones and destruction of critical community infrastructure) present a confluence of risk factors for mental health problems. Multiple disaster exposures typically prove particularly challenging for the public's mental health and overall recovery³. Moreover, prior post-disaster research has demonstrated that greater exposure to prior collective and individual-level trauma predisposes people to more-severe symptoms of acute stress, PTSD and global distress after a subsequent disaster^{4,5}. Violent events and concurrent stressors (e.g., financial difficulties) are particularly potent predictors of these adverse outcomes. Many low-income survivors of the Turkey–Syria earthquake may be particularly vulnerable, as economic challenges and a large number of secondary stressors (e.g., loss of economic opportunity and grief over lost loved ones) present exceedingly high risk factors for mental health ailments.

Children may be especially affected by the tragedy: after the Chilean earthquake, at least a quarter of the children at the epicenter reported elevated PTSD 9 months after the earthquake⁶, and earthquake exposure continued to negatively correlate with children's psychosocial outcomes (including classroom adaptation) for many years, with adverse childhood experiences (e.g., absence of a father and social isolation) compounding these relationships⁷. Moreover, research after a large Indonesian earthquake found the mental health symptoms of children and those of their parents to be linked⁸, which highlights the importance of mental health recovery in the family context. In a related way, unmet service needs of children and caregivers, which can persist for years after a disaster, exhibit reciprocal relationships with each other's distress⁹, which demonstrates the importance of long-term support for families and communities. Negative effects may also extend to children born to those pregnant during natural disasters, due to maternal psychological stress and secondary stressors (e.g., inability to access medical care). These children are also at increased risk for markers of severe post-birth mental health ailments¹⁰. Taken together, these findings illustrate the likely deleterious consequences of the short- and long-term aftermath of the earthquake for the mental health of children and adults, and the importance of incorporating multiple ecological levels (including the community, family and individual people) into disaster recovery efforts. These inter-related levels have multiple inflection points for minimizing additional risk (e.g., poverty and violence) or facilitating post-disaster recovery (e.g., building collective efficacy and maintaining social ties and relationships)¹¹.

Recommendations for addressing survivors' mental health in the aftermath

As recovery efforts unfold, it will be crucial to provide information and material resources to survivors so they may find stable housing, rebuild their communities and economy, and heal from the traumatic unexpected loss of life and livelihood¹². Securing the physical safety of

survivors is paramount to preventing additional trauma and capitalizing on the natural resilience exhibited by many after a single incident trauma. In addition, maintaining and promoting mental health through a community-engaged approach should be a public health priority for long-term individual and collective functioning. A recent systematic review found that a ‘screen and treat’ approach to addressing and preventing PTSD remains the optimal strategy, whereby survivors are screened for symptoms of acute stress disorder, and trauma-focused cognitive behavioral therapy is administered¹³. More broadly, a recent randomized controlled trial found that a World Health Organization self-help psychological intervention prevented the occurrence of mental disorders among Syrian refugees in Turkey¹⁴, and a brief behavior-based intervention administered by non-specialists in post-conflict Pakistan also showed promise for reducing anxiety and depression¹⁵. Such non-specialists should be individuals from the community who exhibit resilience or recovery and are able to draw from their lived experience to build trust and engagement with struggling community members.

It is critical to identify, scale up and ensure the use of interventions appropriate for low-resource post-disaster settings. Indeed, after the 2010 Chilean earthquake, despite the availability of mental health resources and national need, few individuals utilized the offerings available¹⁶, which highlights a critical area on which to focus public health communication and dissemination efforts. Rebuilding schools should occur urgently: schools provide essential routines for children and a hub for disseminating information and supplies throughout the community¹² and are an effective avenue for administering evidence-based mental health interventions⁶.

A call to action

As the Turkey–Syria earthquake recedes from worldwide media attention, we implore the public health community to aid in the structural recovery of the region and invest in rebuilding the region’s social and psychological capital in the years to come. Mental health promotion and resources should be a key component of these efforts.

Dana Rose Garfin¹✉ & **Roxane Cohen Silver**^{2,3,4}

¹Department of Community Health Sciences, Fielding School of Public Health, University of California, Los Angeles, Los Angeles, CA, USA.

²Department of Psychological Science, University of California, Irvine, Irvine, CA, USA. ³Department of Medicine, University of California, Irvine, Irvine, CA, USA. ⁴Program in Public Health, University of California, Irvine, Irvine, CA, USA.

✉ e-mail: dgarfin@ucla.edu

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