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Addressing Mental Health Aftershocks from the Turkey-Syria Earthquake: A Call to Action

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Summary/Abstract:

45 The mental health implications of the 2023 Turkey-Syria earthquake will likely be profound. Here we
46 present research from prior disasters regarding the potential negative mental health effects of the
47 earthquake and its aftermath and provide suggestions to mitigate potential deleterious consequences.

48 Addressing Mental Health Aftershocks from the Turkey-Syria Earthquake

49 On February 7, 2023, a 7.8 magnitude earthquake struck large swaths of Turkey and Syria, soon
50 followed by a 7.5 magnitude quake and countless aftershocks, leaving mass destruction throughout the
51 region. Rescuers count over 55,700 dead, with tens of thousands injured; homes and places of work and
52 worship have been destroyed. The region will require vast domestic resources and international
53 assistance; the recovery period will likely be protracted given the extent of the destruction. This may be
54 particularly pronounced in Syria, where aid provision from international organizations has been
55 depressed given geopolitical tensions. Assistance has been slow to arrive.

56 **An impending mental health crisis**

57 It is imperative to address the impending mental health crisis that will likely result from this
58 widespread catastrophe. Prior post-disaster research has demonstrated exposure to severe earthquakes
59 is robustly associated with elevated mental health symptomatology. For example, in a representative
60 sample of residents living near the epicenter of an 8.8 magnitude earthquake in Chile in 2010,
61 prevalence of probable posttraumatic stress disorder (PTSD) two months post-earthquake was nearly
62 20%; PTSD symptoms of intrusion, hyperarousal, and re-experiencing were reported by 23%, 45%, and
63 32% of respondents, respectively.¹ Key predictors of PTSD symptoms and global distress (i.e., anxiety,
64 depression, and somatization) included low socio-economic status (education, income, employment)
65 and greater exposure to secondary stressors (i.e., stressful events occurring in the disaster's aftermath,
66 including injury to self or a loved one, death of a close relation, and property loss). Thirty months after a
67 large earthquake devastated Haiti (a low-income country with limited post-disaster infrastructure), over
68 36% of adults had probable PTSD.²

69 The mental health impacts of the Turkey-Syria earthquake will likely be higher, particularly in
70 Turkish communities that have absorbed large numbers of war refugees and in impoverished and war-
71 afflicted areas of Syria. Residents of Turkey have also been challenged by recent flooding and record

72 inflation (80%) straining the region; decades of violent conflict have previously displaced millions of
73 earthquake-impacted Syrians. The Turkey-Syria earthquake beget a compounding, cascading disaster,
74 where prior trauma (e.g., violence), extreme poverty, subsequent disasters, and ongoing secondary
75 stressors (e.g., temporary housing, separation from loved ones, destruction of critical community
76 infrastructure) present a confluence of risk factors for mental health problems. Multiple disaster
77 exposures typically prove particularly challenging for the public's mental health and recovery.³
78 Moreover, decades of post-disaster research demonstrate that greater exposure to prior collective⁴ and
79 individual trauma predisposes more severe symptoms of PTSD and global distress following a
80 subsequent disaster.⁴ Violent events and concurrent stressors (e.g., financial difficulties) are particularly
81 potent predictors of these adverse outcomes. Many low-income survivors of the Turkey-Syria
82 earthquake may be particularly vulnerable, as economic challenges and a large number of secondary
83 stressors (e.g., loss of economic opportunity, grief over lost loved ones) present exceedingly high-risk
84 factors for mental health ailments.

85 Children may be especially impacted by the tragedy: after the Chilean earthquake,
86 approximately 26% of children in the epicenter reported elevated PTSD nine months post-earthquake;⁵
87 earthquake exposure continued to negatively correlate with children's psychosocial outcomes (including
88 classroom adaptation) for many years, with adverse childhood experiences (e.g., father absence, social
89 isolation) compounding these relationships.⁶ Moreover, research after a large Indonesian earthquake
90 found mental health symptoms of children and their parents to be linked,⁷ highlighting the importance
91 of mental health recovery in the family context. Relatedly, unmet service needs of children and
92 caregivers, which can persist for years following a disaster, exhibit reciprocal relationships with each
93 other's distress,⁸ demonstrating the importance of long-term support for families and communities.
94 Negative effects may also extend to children born to those pregnant during natural disasters due to
95 maternal psychological stress and secondary stressors (e.g., inability to access medical care). These

96 children are also at increased risk for severe post-birth mental health ailments.⁹ Taken together, findings
97 illustrate the likely deleterious consequences for children and adult mental health in the short- and long-
98 term aftermath of the earthquake and the importance of incorporating multiple ecological levels
99 (including the community, family, and individual) into disaster recovery efforts. These interrelated levels
100 have multiple inflection points to minimize additional risk (e.g., poverty, violence) or facilitate post-
101 disaster recovery (e.g., building collective efficacy, maintaining social ties and relationships).¹⁵

102 **Recommendations to address the mental health consequences of the earthquake**

103 As recovery efforts unfold, it will be crucial to provide information and material resources to
104 survivors so they may find stable housing, rebuild their communities and economy, and heal from the
105 traumatic unexpected loss of life and livelihood.¹⁰ Securing the physical safety of survivors is paramount
106 to preventing additional trauma and capitalizing on the natural resilience exhibited by many after a
107 single incident trauma. In addition, maintaining and promoting mental health using a community-
108 engaged approach should be a public health priority for long-term individual and collective functioning.
109 A recent systematic review found a “screen and treat” approach to addressing and preventing PTSD
110 remains the optimal strategy, where survivors are screened for symptoms of acute stress disorder and
111 trauma-focused cognitive behavioral therapy is administered.¹¹ More broadly, a recent randomized
112 controlled trial found a World Health Organization self-help psychological intervention prevented the
113 occurrence of mental disorders among Syrian refugees in Turkey;¹² a brief behavioral-based intervention
114 administered by non-specialists in post-conflict Pakistan also showed promise for reducing anxiety and
115 depression.¹³ Such non-specialists should be individuals from the community who exhibit resilience or
116 recovery and are able to draw from their lived experience to build trust and engagement with struggling
117 community members.

118 It is critical to identify, scale up, and ensure use of interventions appropriate for low-resource
119 post-disaster settings. Indeed, after the 2010 Chilean earthquake, despite the availability of mental

120 health resources and national need (18% of Chileans met criteria for probable-PTSD), few individuals
121 utilized available offerings,¹⁴ highlighting a critical area to focus public health communication and
122 dissemination efforts. Rebuilding schools should occur urgently: schools provide essential routines for
123 children, a hub to disseminate information and supplies throughout the community,¹⁰ and are an
124 effective avenue to administer evidence-based mental health interventions.⁵

125 **A call to action**

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

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