Trajectory of Traumatic Stress Symptoms in the Aftermath of Extreme Natural Disaster

A Study of Adult Thai Survivors of the 2004 Southeast Asian Earthquake and Tsunami

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Abstract: This study investigated the trajectory of traumatic stress symptoms in the aftermath of the 2004 Southeast Asian earthquake-tsunami. A total of 265 adult Thai survivors were assessed at 2 weeks and 6 months following the earthquake-tsunami. The percentages of survivors reporting traumatic stress symptoms were 22% at 2 weeks and 30% at 6 months postdisaster. Four trajectories of traumatic stress symptoms were identified: 12% of survivors presented with chronic stress symptoms, 18% had a delayed onset, 10% showed improvement, and the remaining 60% maintained a stable emotional equilibrium. Among survivors, the chronic group was the oldest, the delayed group reported the lowest level of perceived government support, and the resilient group experienced the fewest postdisaster psychiatric symptoms. Results pointed to the need to broaden the conceptualization of postdisaster stress responding as well as to establish disaster psychiatry and related mental health activities in the region.

Key Words: Traumatic stress symptoms, Asian natural disaster, resilient functioning.

East and Southeast Asia are situated on the Circum-Pacific Seismic Belt, which has created several devastating earthquakes over past decades. Current literature on disaster mental health in Asia is mainly focused on psychiatric sequelae of earthquakes in the relatively more affluent East Asian countries of Japan, Taiwan, and China. There is a paucity of related information from Southeast Asia. This is probably related to the economic, religious, and political instability of this region as well as to stigma attached to mental health problems in the Asian culture (Breslau, 2004; Goto and Wilson, 2003). As many Southeast Asian countries lack adequate earthquake-proof design in buildings and public works, earthquakes in this region typically result in greater destruction and death than elsewhere in the world (World Health Organization, 2005). The present study investigated the trajectory of traumatic stress symptoms among survivors of the recent Southeast Asian earthquake-tsunami to provide pertinent information in the planning of local and regional mental health intervention and public health programs following extreme natural disaster.

In Western countries, the prevalence rates of psychiatric reactions reported by earthquake survivors are as high as 85% for acute stress symptoms, range from 14% to 87% for posttraumatic stress disorder (PTSD), and vary between 27% and 85% for psychiatric morbidity (Armenian et al., 2000; Carr et al., 1995; Goenjian et al., 2000; McMillen et al., 2000; Norris et al., 2002). Earthquake-related stress reactions may decline gradually, improve over time, or surface with a delayed onset (Carr et al., 1995; Goenjian et al., 2000). Similarly, earthquake survivors in Japan and Taiwan also report acute stress symptoms, especially re-experience of the disaster and increased arousal (Chen et al., 2001; Kato, 1998). Prevalence rates for PTSD following earthquakes range from 3% to 21% in Japan (Asukai and Miyake 1998; Kokai et al., 2004; Mita et al., 1997) to 13% to 21% in Taiwan (Chen et al., 2001; Hsu et al., 2002) and 16% to 24% in China (Cao et al., 2003; Wang et al., 2000). PTSD among earthquake survivors in East Asian countries is also associated with negative physical outcomes (Inoue-Sakurai et al., 2000; Inui et al., 1998; Ogawa et al., 2000; Tsai et al., 2004) and mild to severe comorbid psychiatric disturbances such as anxiety, depression, and suicidality (Goto and Wilson, 2003). Predictors of acute stress symptoms and PTSD are largely similar to those reported in previous Western studies in natural and human-made disasters (Brewin et al., 2000; Katz et al., 2002; Ozer et al., 2003). They typically include female gender, family psychiatric history, neurotic or introverted personality, proximity to the epicenter, extent of traumatic exposure, and postearthquake life events such as disruption, loss, relocation, and inadequate social support (Chang et al., 2005; Chen et al., 2001; Goto and Wilson, 2003; Mita et al., 1997; Wang et al., 2000).

The worst natural disaster in recent history occurred in the early morning of December 26, 2004. An earthquake measuring above 9.0 on the Richter Scale in Southeast Asia