

## Post-Traumatic Stress Reactions in Children and Adults After the 1988 Spitak Earthquake in Armenia

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This presentation described the findings of evaluations at one and one-half years after the devastating earthquake in Armenia of children, younger adults and elderly from three cities at increasing distances from the epicenter. Subjects were evaluated for post-traumatic stress reactions (PTSD).

Among children, there was a strong positive correlation between dose of exposure (nearness to the epicenter) and the overall severity of post-traumatic stress reaction, as well as severity of core component symptoms of PTSD. Very high rates of chronic, severe post-traumatic stress reactions were identified among children in the two most damaged cities, Spitak and Gumri. Analyses controlling for exposure indicated that

girls reported more persistent fears as compared with boys.

Adults in Gumri, a city close to the epicenter, had significantly more severe post-traumatic stress reactions than did adults in Yerevan. Compared to previous studies of natural disasters, much higher rates of chronic severe post-traumatic stress reactions were found among the highly exposed individuals. Despite no difference in overall severity of post-traumatic stress reaction, a significant difference in symptom profile was found for the elderly in comparison with younger adults, with the elderly scoring higher on arousal and lower on intrusive symptoms. Death of a nuclear family member was associated significantly with a more severe post-traumatic stress reaction.

The severity and symptom profile of post-traumatic stress reactions of adults exposed in 1988 to political violence in Azerbaijan and/or the earthquake in Armenia were evaluated. High rates of

severe post-traumatic stress reactions were found among the most highly exposed individuals, irrespective of the type of trauma. There was no difference in symptom profile for subjects exposed to earthquake versus violence. These similarities in severity and symptom profile may be attributable to common features of the exposures, which included experiencing life-threat and witnessing injury, mutilation, and death. Prior exposure to violence contributed to the severity of reaction to the earthquake.

These findings indicate that after a catastrophic natural disaster, post-traumatic reactions in children, adults, and the elderly may reach epidemic proportions, remain high for a prolonged period and jeopardize the well-being of the population of a large region. Post-disaster systematic screening for PTSD can provide critical information for a rational, post-disaster, public, mental health program.

### Selected References

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## The Crash of United Flight 232: Rescue, Recovery, and Identification of Victims

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### Abstract

*United Flight 232 crashed on a runway at*

*the Sioux Gateway Airport, Sioux City, Iowa, USA, on 19 July, 1989, at 16:01 hours, with 185 survivors and 111 dead. Rescue operations took approximately two hours. The author described the crash, rescue efforts, body recovery, and identification of the dead. He also included comments on the media, security, critical incident stress and made recommendations to all disaster personnel.*

### The Crash

While cruising over the State of Iowa on 19 July 1989 at an altitude of 37,000 feet,

a loud bang was heard at 15:16 hours by the 296 passengers and crew on board United Airlines Flight 232. The bang was followed by a shudder that traveled through the plane. Almost immediately the captain and cockpit crew sensed a loss of control as the plane dropped 3,000 feet. The main bulk of the plane landed on its back and slid through a soybean field.

### The Rescue

Within minutes, the first fire vehicle