

ARTICLE SUMMARY

“Psychological Reactions to Terrorist Attacks: Findings from the National Study of American’s Reactions to September 11,” Schlenger et al., *Journal of the American Medical Association*, 7-August 2002

Previous research into the psychological effects of September 11 has focused either on a broad overview of the nation’s reactions without addressing potential clinical diagnosis (Schuster et al.) or on documenting clinically significant stress symptoms among those closest to the events. For example, Galea et al. studied the prevalence of probable PTSD and depression among adults living south of 110th street in Manhattan. The Galea study found that those living south of Canal Street (those closest to the events) were nearly three times as likely to have PTSD as those living further away.

The National Study of Americans’ Reactions to September 11 (N-SARS), reported in *JAMA* 7-August 2002, contributes to this knowledge base through a national survey that was designed to estimate the prevalence of probable PTSD and clinically significant distress by using screening questionnaires whose relationship to clinical diagnosis is well documented. The N-SARS study also examined the association of both direct and indirect exposures to the September 11 events with psychological symptoms. The authors also report adults’ perceptions of the reactions of children in their homes. The study assessed direct exposure by asking people whether they were near one of the crash sites or could see the crash or smoke from it first-hand. The study also assessed the involvement of family members and friends by asking if respondents knew any victims and if so, what those relationships were.

Indirect exposures included time spent watching television coverage of the events and the extent to which people viewed graphic events and images. Because U.S. military deployment to Afghanistan was imminent at the time of the survey, the study also examined the relationship of military service to PTSD and general psychological distress.

PTSD prevalence estimates were based on the PTSD Checklist, a self-report measure developed for use when a structured clinical interview is not feasible. Numerous studies have demonstrated this instrument's correspondence with results of clinical diagnostic interviews.

The N-SARS results show that the prevalence of probable PTSD during the second month following the terrorist attacks among people who were in the New York metropolitan area on September 11 was 11.2%, compared with 4.3% for the nation as a whole. Although prevalence in the Washington, DC (2.7%), and other major metropolitan areas (3.7%) was lower than the prevalence in the rest of the country, these differences were not statistically significant.

The prevalence of probable PTSD was significantly associated with the number of hours of television coverage of the attacks that participants reported watching on September 11 and the following few days, and also the number of different kinds of potentially traumatic events that participants reported seeing.

There were no statistically significant differences in prevalence among those who reported that family, friends, or coworkers were killed or injured in the attacks, and among those who reported being in the military or having close family members or loved ones in the military, compared with those who did not.

The authors also used the 18-item version of the Brief Symptom Inventory (BSI 18), which is a well-validated screening measure for identifying clinically significant psychological stress.

N-SARS findings indicate that the prevalence of clinically significant but nonspecific psychological distress was within expected limits and generally not related to specific aspects of the events of September 11, except for the number of hours of TV watched. The findings indicate that during the second month after the attacks, 11.6% of the US population was experiencing clinically significant distress. Normative data suggest,

however, that this level of distress is within the expected range for a general community sample.

Although rates of clinically significant distress were somewhat higher in the New York City (16.6%), Washington, DC (14.9%), and other major metropolitan areas (12.3%) than in the remainder of the US (11.1%), these differences were not statistically significant. Also not statistically significant: the associations of having family, friends, or coworkers injured or killed in the attacks; being in or having close family or loved ones in the military; or the TV content index. The only one of these variables with a significant association with the broader distress measure was the hours of TV coverage watched per day.

Finally, although the study focused on adults, respondents also answered questions about children in their homes, addressing three specific symptoms of stress: difficulty sleeping, irritability, and fear of separation from parents. One-half to two-thirds of the adults reported such symptoms among children, but the differences based on location were not statistically significant. “The fact that about 60% of adults nationwide perceived one or more children in their household to be upset by the attacks suggests a need for further study,” the authors said, citing significant levels of psychological problems among children in the wake of the Oklahoma City bombing of the Murrah Federal Building.

There is some evidence linking exposure to traumatic events via TV to PTSD symptoms in children and adolescents; however, there is little information about this association in adults. Although no definitive explanation can be offered for findings in this study that show a relationship between the number of hours of TV coverage watched and PTSD and psychological distress, the authors suggest that those individuals with higher levels of symptoms may have watched more TV coverage as a way of coping with their distress.

The authors describe the low prevalence of probable PTSD in the Washington, DC, area as “surprising” and speculate that it might be related to characteristics of the target in DC. “These include that the Pentagon is more geographically isolated from the city than the

WTC towers; that it is a 'military' rather than a 'civilian' target ...; and that the crash into the Pentagon was much less devastating than the crashes into and collapse of the WTC towers, which produced spectacular visual images and an order of magnitude more deaths and injuries."

REFERENCES

- Kulka RA, Schlenger WE, Fairbank JA, Hough RL, Jordan BK, Marmar C, Weiss DS. Trauma and the Vietnam war generation: Report of findings from the National Vietnam Veterans Readjustment Study. New York: Brunner/Mazel;1990. 322 p. (Brunner-Mazel Psychosocial Stress Series, No. 18).
- Schuster MA, Stein BD, Jaycox LH, et al. "A national survey of stress reactions after the September 11, 2001 terrorist attacks". *N Engl J Med*. 2001; 345:1507-1512.
- Galea S, Ahern J, Resnick H, et. al. "Psychological sequelae of the September 11 terrorist attacks in New York City." *N Engl J Med*. 2002; 346:982-987.
- Weathers FW, Litz BT, Herman DS, Huska JA, Keane TM. "The PTSD Checklist (PCL): reliability, validity, and diagnostic utility." Paper presented at: the Annual Conference of the International Society for Traumatic Stress Studies; 1993; San Antonio, TX.
- Andrykowski MA, Cordova MJ, Studts JL, Miller TW. Posttraumatic stress disorder after treatment for breast cancer: prevalence of diagnosis and use of the PTSD Checklist-Civilian Version (PCL-C) as a screening instrument. *J Consult Clin Psychol*. 1998;66:586-590.
- Blanchard EB, Jones-Alexander J, Buckley TC, Forneris CA. Psychometric properties of the PTSD checklist (PCL). *Behav Res Ther*.1996;34:669-673.
- Forbes D, Creamer M, Biddle D. The validity of the PTSD checklist as a measure of symptomatic change in combat-related PTSD. *Behav Res Ther*. 2001;39:977-986.
- Manne SL, Du Hamel K, Galleli K, Sorgen K, Redd WH. Posttraumatic stress disorder among mothers of pediatric cancer survivors: Diagnosis, comorbidity, and utility of the PTSD checklist as a screening instrument. *J Pediatr Psychol*. 1998;23:357-366.
- Derogatis LR. Brief Symptom Inventory 18: Administration, Scoring, and Procedures Manual. Minneapolis, MN: NCS Pearson, Inc; 2001.