

ACUTE STRESS DISORDER AND SUBSEQUENT POST-TRAUMATIC STRESS DISORDER IN A GROUP OF EXPOSED DISASTER WORKERS

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INTRODUCTION

The fourth edition of the Diagnostic and Statistical Manual of Mental Disorders [DSM-IV; APA, 1994] included the new diagnosis of acute stress disorder (ASD), which requires a dissociation criterion in addition to the post-traumatic symptoms of intrusion, avoidance, and arousal. Previous studies have documented acute and long-term dissociative and post-traumatic stress symptoms after natural disasters [e.g., Cardeña and Spiegel, 1993; Green, 1993; Koopman et al., 1995]. However, these studies predated the advent of ASD and are inconsistent in criteria and measures. More recent retrospective and prospective studies have reported that dissociation is a significant predictor of post-traumatic stress disorder (PTSD) (e.g., Shalev et al., 1996; Staab et al., 1996), although very few studies have evaluated the full ASD diagnosis as predictor of later PTSD [e.g., Brewin et al., 1999]. In this study, we examined the prevalence of ASD and subsequent PTSD in a group of disaster workers.

METHOD

Acute Stress Disorder was measured with the Stanford Acute Stress Questionnaire [SASRQ; Cardeña, 1996], a 30-item, self-report instrument that evaluates all criteria for ASD and has shown very good reliability and validity in various studies [Cardeña et al., in press]. On 8 September 1994, US Air Flight 427 crashed near Pittsburgh, Pennsylvania, killing all 134 people aboard. Members of an Air National Guard Unit assisted with recovery and identification of human remains. Approximately 6 months after the crash, questionnaires were sent to, and received from 116 individuals identified by their unit as participants in the body recovery effort. The questionnaires measured demographics, prior disaster experience, degree of exposure, and ASD symptoms during "the day of the crash and the week that followed." Cases of ASD were defined by the presence of three dissociative symptoms and at least one symptom each of intrusion, avoidance, and arousal. The presence of PTSD at the time of the survey was evaluated also through a multidimensional instrument [Ursano et al., 1995] that requires endorsement of all DSM PTSD

criteria and a "high" symptom level on the Impact of Events Scale [Horowitz et al., 1979]. Respondents were asked about the symptoms they had experienced during the week that they received the questionnaire.

RESULTS

Forty-five (39%) potentially exposed workers responded, of which forty-one endorsed actual exposure. Most were men (91%), with a mean age of 39.4 (SD = 8.5) years. Thirty (73.2%) had experienced at least one prior lifetime disaster. Eighty percent were married for a median of 18 years. The median exposure to body recovery/identification was 22 hr over 6 days (range 2-64 hr). Two (4.9%) respondents met criteria for ASD the week after the crash when the SASRQ was used. Both were also classified as having PTSD 6 months following the disaster. There were no cases of PTSD in workers who did not first meet the criteria of ASD. There were no significant associations between demographic or exposure data and the presence of ASD or PTSD.

Thus, the point prevalence of ASD was almost 5% at 1 week after exposure to a grotesque task involving the handling of severely mutilated human remains, and the diagnosis of ASD was prognostic of later PTSD. This prevalence of PTSD is low but similar to the 8% rate found among two National Guard units [Southwick et al., 1995]. Considering the moderate response rate, not uncommon in this type of research, the small prevalence of ASD and PTSD found may not be an exact estimate of their actual rates. These results are consistent with a previous study of emergency workers that reported that acute dissociative symptoms (they did not use the full ASD criteria) predict later PTSD [Weiss et al., 1995]. Nonetheless, the relatively small

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sample size limits the generalizability of our findings. Also, the use of retrospective reports of acute stress symptoms is of some concern; however, Norris and Kaniasty [1992] found that retrospective self-reports of disaster victims were valid within the 6 month time frame of the present study.

CONCLUSIONS

In summary, in a sample of ERWs, retrospective evaluation of ASD 1 week after participation in a gruesome body recovery task was strongly associated with PTSD 6 months later. ASD was 100% sensitive and specific in predicting later PTSD in a group with low prevalence of traumatic stress disorders. The SASRQ proved to be useful to screen trauma exposed groups.

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