tenuating posttraumatic distress (Raphael & Wilson, 2000). Critics assert that public funds must be allocated only for methods shown to work; continuing to employ methods that are either inert or harmful will prevent clinical scientists from developing and testing methods that mitigate distress and prevent long-term psychiatric impairment.

In this review, we first briefly discuss PTSD and risk factors for the disorder. We then scrutinize the evidence regarding the efficacy of psychological debriefing, focusing on prevention of psychopathology, especially PTSD. We also discuss new research on cognitive-behavioral therapy (CBT) for recent-onset PTSD. In contrast to crisis-intervention methods delivered hours or days posttrauma (e.g., psychological debriefing), these new CBT intervention methods are applied weeks or months after the trauma. They are designed not to prevent disorder, but rather to help individuals whose symptoms have failed to abate within the first few weeks posttrauma. Finally, we close by considering the controversy in its larger social context.

DEFINITION OF PTSD

PTSD was first recognized as a psychiatric disorder in the third edition of the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders* (1980). The current criteria, in the fourth edition of this manual (DSM-IV; APA, 1994), define PTSD as a syndrome comprising three clusters of signs and symptoms: (a) repeated reexperience of the trauma (e.g., intrusive recollections of the event, nightmares); (b) emotional numbing (e.g., difficulty experiencing positive emotions) and avoidance of activities and stimuli reminiscent of the trauma; and (c) heightened arousal (e.g., exaggerated startle reflex, insomnia; see Table 1). Finally, a diagnosis of PTSD requires that these symptoms still be evident at least 1 month after trauma exposure and cause impairment or clinically significant distress.

What Constitutes a Traumatic Event?

Unlike the criteria for most DSM-IV disorders, those for PTSD require a specific etiologic event: exposure to a traumatic event. Regardless of how symptomatic a person might be, if the person has not been exposed to an event that counts as "traumatic," then the diagnosis cannot be assigned.

Trauma theorists originally conceptualized PTSD as a syndrome caused by exposure to extreme stressors occurring outside the boundary of everyday life—events likely to trigger marked distress in nearly everyone. Prior to revising the DSM, the DSM-IV PTSD committee discussed the pros and cons of revising the definition of a traumatic stressor. Some members worried that a such high threshold for classifying an experience as traumatic would exclude many people from receiving the diagnosis and the treatment they deserve. Others worried that broadening the definition would create other problems, both forensic and scientific. If, for example, the definition were to certify *any* event as traumatic, as long as it was perceived as such, then the diagnosis would be prone to abuse in the courts. For example, a Michigan woman filed suit against her employer, claiming she developed PTSD as a result of repeatedly being exposed to practical jokes and foul language in the workplace (McDonald, 2003). She won, and the court awarded her $21 million. Also, scientists worried that broadening the definition of a traumatic event would make it difficult to identify psychobiological mechanisms underlying symptoms arising from extremely diverse events.

As it turns out, the definition of traumatic stressor did broaden in DSM-IV and did emphasize the subjective perception of threat. To qualify as trauma exposed, one no longer needs to be a direct victim. As long as one is confronted with a situation that involves threat to the physical integrity of one's self or others and one experiences the emotions of fear, horror, or helplessness, then the experience counts as exposure to a PTSD-qualifying stressor. For two reasons, DSM-IV dropped the earlier requirement that a traumatic stressor had to be "an event that is outside the range of usual human experience" (APA, 1987, p. 250). First, it was unclear what constitutes "usual" human experience. Stressors outside this boundary for an affluent American might well be within the boundary of usual experience of someone in an impoverished, war-torn country in the Third World. Second, many events triggering PTSD, such as automobile accidents and criminal assaults, are far from uncommon.

The Psychological Impact of the September 11 Terrorist Attacks

The broadened definition of a traumatic event is relevant to concerns about people developing PTSD symptoms following indirect exposure to the events of September 11, such as watching television footage of the attacks on the World Trade Center. Given that one no longer had to be the direct victim (or even direct witness) of trauma—having been "confronted with" a terrible event on television now qualified as a DSM-IV traumatic stressor—concerns arose about posttraumatic responses throughout the country. For example, the RAND Corporation interviewed a representative sample of 560 adults throughout the United States on the weekend after the attacks, concluding that 44% of Americans "had substantial symptoms of stress" (Schuster et al., 2001, p. 1507), and ominously warning that the psychological effects of terrorism "are unlikely to disappear soon" (p. 1511) and that "clinicians should anticipate that even people far from the attacks will have trauma-related symptoms" (p. 1512). The researchers arrived at these conclusions as follows. Respondents were asked whether they had experienced any of five symptoms "since Tuesday" (i.e., September 11, 2001) and rated each symptom on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). Respondents qualified as "substantially stressed" if they assigned a rating of

Table 1. *Diagnostic criteria for posttraumatic stress disorder*

A. The person has been exposed to a traumatic event in which both of the following were present:
   (1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
   (2) the person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganized or agitated behavior

B. The traumatic event is persistently reexperienced in one (or more) of the following ways:
   (1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
   (2) recurrent distressing dreams of the event. Note: In children, there may be frightening dreams without recognizable content.
   (3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). Note: In young children, trauma-specific reenactment may occur.
   (4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
   (5) physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
   (1) efforts to avoid thoughts, feelings, or conversations associated with the trauma
   (2) efforts to avoid activities, places, or people that arouse recollections of the trauma
   (3) inability to recall an important aspect of the trauma
   (4) markedly diminished interest or participation in significant activities
   (5) feeling of detachment or estrangement from others
   (6) restricted range of affect (e.g., unable to have loving feelings)
   (7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
   (1) difficulty falling or staying asleep
   (2) irritability or outbursts of anger
   (3) difficulty concentrating
   (4) hypervigilance
   (5) exaggerated startle response

E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:
   Acute: if duration of symptoms is less than 3 months
   Chronic: if duration of symptoms is 3 months or more

Specify if:
   With Delayed Onset: if onset of symptoms is at least 6 months after the stressor

Note. From *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, by the American Psychiatric Association, 1994, pp. 427–429.

at least 4 (*quite a bit*) to one of the five symptoms. For example, anyone who acknowledged experiencing "quite a bit" of anger at Osama bin Laden qualified as substantially stressed. Another survey conducted in November 2001 revealed that 28% of adults throughout America had been offered counseling by their employers to cope with emotional effects of September 11 (Kadet, 2002).

Some authors have questioned the validity of these kinds of studies. As Wakefield and Spitzer (2002) have argued, such surveys often classify normal, expectable emotional reactions as symptoms of mental disorder. Moreover, many psychological, emotional, and physical reactions—"symptoms"—are nonspecific and not necessarily indicative of serious psychiatric illness. For example, consider a resident of New York City who was working downtown on the day of the terrorist attacks, and who later reports difficulty falling asleep, difficulty concentrating, and irritability. Although these qualify as "symptoms of PTSD," each may arise for reasons unrelated to the attacks. Likewise, it would be misleading to refer to nonspecific medical symptoms, such as cough and fatigue, as symptoms of bacterial pneumonia in the absence of additional evidence (e.g., a culture).

Other surveys suggest that stress reactions in the wake of September 11 in many cases may have been temporary, normal reactions. For example, Galea et al. (2002) surveyed residents of New York City to gauge their response to the terrorist attacks. Five to 8 weeks after the attacks, 7.5% of a random sample of adults living south of 110th Street in Manhattan had developed PTSD, and of those living south of Canal Street (near the World Trade Center), 20% had PTSD. In February

2002, Galea's group did a follow-up study on another group of adults living south of 110th Street, and found that only 1.7% of the sample had PTSD related to the attacks (Galea, Boscarino, Resnick, & Vlahov, in press). The 7.5% rate obtained within weeks of the attacks may have reflected temporary distress rather than mental illness. This study, like many others in the field (e.g., Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995), demonstrates that most people are resilient and recover from early posttrauma symptoms. The authors of another post-September 11 survey of New Yorkers concluded that "those with severe symptoms were far fewer than what we expected, given the magnitude and amount of personal exposure to this disastrous event" (DeLisi et al., 2003, p. 782).

Exposure to Trauma and PTSD

Many therapists have conceptualized PTSD as a normal, expectable reaction to an extraordinary stressor, despite its classification as a mental disorder. The traumatic event itself has been awarded overriding causal significance in producing PTSD; personal vulnerability factors have been minimized. These assumptions have been increasingly questioned in recent years, however (Yehuda & McFarlane, 1995). Epidemiological studies have shown that many American adults have been exposed to DSM-defined traumatic stressors, such as physical assault, rape, or automobile accidents, yet few of them have developed PTSD. The National Comorbidity Survey revealed that 60.7% of randomly sampled adults reported exposure to DSM traumatic stressors (Kessler et al., 1995). But of these trauma-exposed people, only 20.4% of the women and 8.2% of the men had ever developed PTSD. Among adults living in metropolitan Detroit, 89.6% reported exposure to DSM traumatic stressors, yet only 13% of the women and 6.2% of the men had developed PTSD (Breslau, Davis, Andreski, & Peterson, 1991).

Among traumatic stressors, those involving intentional acts of violence are especially likely to produce PTSD (Yehuda, 2002b). In one epidemiological survey, PTSD developed in 11.6% of respondents who had experienced a sudden injury or accident, but in 22.6% of those who had experienced physical assault and in 80% of female rape victims (Breslau et al., 1991). In another study, the single most frequent event causing PTSD was learning about the unexpected death of a loved one; 26.5% of female cases and 38.5% of male cases of PTSD were attributed to this very common event (Breslau, Chilcoat, Kessler, Peterson, & Lucia, 1999). (Being "confronted with an event" qualifies as a PTSD-inducing traumatic stressor, according to DSM-IV; APA, 1994, p. 427. Thus, individuals who, for example, receive a phone call informing them of the unexpected death of a loved one qualify as having been exposed to a traumatic stressor.) Breslau, Chilcoat, Kessler, Peterson, and Lucia found that men are more likely to be exposed to trauma than women, but that trauma-exposed women develop PTSD at twice the rate as do trauma-exposed men, mainly because exposure to criminal violence precipitates PTSD at a much higher rate in women than in men (35.7% vs. 6%).

The Time Course of Posttrauma Symptoms

Most people recover from acute symptoms within 3 months posttrauma, even if they do not receive any treatment (e.g., Kessler et al., 1995). For example, Riggs, Rothbaum, and Foa (1995) reported that 71% of women and 50% of men met symptomatic criteria for PTSD (the requirement of 1-month duration was waived) approximately 19 days after a nonsexual assault. Four months posttrauma, the rate of PTSD had dropped to 21% for women and 0% for men. This research group also reported that 94% of rape victims interviewed an average of 2 weeks posttrauma met criteria for (acute) PTSD; 11 weeks later, the rate dropped to 47% (Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992). About half of trauma survivors who are still symptomatic at 3 months recover over the next few years (Ehlers, Mayou, & Bryant, 1998; Kessler et al., 1995; Schnyder & Moergeli, in press).

RISK FACTORS FOR PTSD

Researchers have endeavored to identify variables that heighten risk for PTSD, studying both who is most likely to be exposed to trauma and who among the trauma exposed is most likely to develop the disorder (Brewin, Andrews, & Valentine, 2000; Yehuda, 1999).

Risk Factors for Trauma Exposure

The most important risk factor for PTSD is, of course, exposure to trauma. People vary considerably in this risk. Certain occupations clearly increase risk (e.g., soldier, firefighter). Some studies suggest that the people who choose these occupations possess other characteristics (e.g., psychological hardiness) that counteract the risk of PTSD that exposure to trauma entails.

For example, North et al. (2002) assessed 176 male firefighters approximately 34 months after they had done rescue and recovery work at the site of the Oklahoma City terrorist bombing. The rate of disaster-related PTSD (13%) was significantly lower among the firefighters than among 88 male primary victims of the bombing itself (23%). Among firefighters with any psychiatric disorder after the bombing, 82% had preexisting psychopathology. Unfortunately, North et al. were unable to interview all of the firefighters, and volunteers for the study constituted less than 25% of those working at the site.

North et al. (2002) speculated that psychological preparedness for dealing with gruesome aspects of firefighting may have been one variable fostering resilience among the men who worked at the Oklahoma bombing site. Similarly, Başoğlu,