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## Posttraumatic Stress Disorder in Children

In recent years, media reports of devastating natural disasters, school shootings, and terrorist activities have drawn attention to the significant trauma that children and adults experience following such events. In fact, it has become apparent that children's exposure to traumatic events can lead to reactions that may interfere with their day-to-day functioning and cause them and their families significant distress. Specifically, exposure to natural disasters (e.g., hurricanes, tornadoes, fires, earthquakes, floods), as well as to man-made disasters (e.g., terrorist bombs, sniper shootings, plane crashes), represent traumatic events that frequently result in the emergence of a specific set of symptoms—those of posttraumatic stress disorder (PTSD). Moreover, exposure to life-threatening health conditions or medical treatments, and exposure to violence of a personal nature, such as through rape, kidnapping, physical and sexual abuse, and community violence, may also precipitate symptoms of PTSD.

### PTSD DIAGNOSTIC CRITERIA AND RELATED SYMPTOMS

The diagnostic category of PTSD was introduced in the third edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM)*. At that time, PTSD was primarily considered to be an adult disorder. However, in

recent years, there has been an increased awareness that children and adolescents also experience PTSD, and this is reflected in the fourth edition of the *DSM*, published in 1994. In *DSM-IV*, PTSD refers to a set of symptoms that develop following exposure to an unusually severe stressor or event; one that causes or is capable of causing death, injury, or threat to the physical integrity of oneself or another person. To meet criteria for a diagnosis of PTSD, a child's reaction to the traumatic event must include intense fear or helplessness; this may be expressed by agitated or disorganized behavior. Moreover, specific criteria for three additional symptom clusters must be met: reexperiencing, avoidance/numbing, and hyperarousal. *Reexperiencing* symptoms include recurrent or intrusive thoughts or dreams about the event and intense distress at cues or reminders of the event. For young children, reexperiencing may be reflected in repetitive play with traumatic themes or by reenactment of traumatic events in play, drawings, or verbalizations. *Avoidance* or *numbing* symptoms include efforts to avoid thoughts, feelings, or conversations about the traumatic event, avoiding reminders of the event, diminished interest in normal activities, and feeling detached or removed from others. *Hyperarousal* symptoms include difficulty sleeping or concentrating, irritability, angry outbursts, hypervigilance, and an exaggerated startle response; these behaviors must be newly occurring since the onset of the precipitating event. For a diagnosis of PTSD, the above symptoms must be evident for at least one month, and be accompanied by significant impairment in the child's functioning (e.g., problems in school, or in social or family relations). In addition, "types" of PTSD can be specified as follows: acute (duration of symptoms < 3 months), chronic (duration of symptoms

$\geq 3$  months), or delayed (onset of symptoms at least 6 months after the stressor).

Community studies suggest that reexperiencing symptoms are most commonly reported by child trauma victims; for example, Vernberg and colleagues found that 90 percent of children exposed to a catastrophic hurricane reported symptoms of reexperiencing 3 months after the disaster. In contrast, symptoms of avoidance and numbing are far less commonly reported by children, although Lonigan and colleagues found that their presence is a good indicator of the full PTSD diagnosis.

Diagnosing PTSD is especially difficult in very young children, such as infants, toddlers, and early preschoolers, in part due to their limited verbal capacity. With young children, generalized anxiety and fears, avoidance of certain situations that may be linked to the traumatic event, and sleep disturbances may be useful indicators of PTSD.

PTSD may be present or comorbid with other psychological difficulties. Following trauma, many children also report high levels of anxiety and/or depression. When trauma leads to the loss of loved ones, symptoms of bereavement may also be present.

## PREVALENCE AND DEVELOPMENTAL COURSE

It is difficult to estimate the prevalence of PTSD in children and adolescents. Studies have been extremely diverse with respect to the type of trauma evaluated, assessment methods and sampling procedures used, and the length of time passed since the traumatic event occurred. Community studies suggest that approximately 24–39 percent of children and adolescents exposed to trauma (e.g., community violence, a natural disaster) meet criteria for PTSD. However, when subclinical levels of PTSD are considered, up to 55 percent of the children in large community samples have reported at least moderate levels of symptoms during the first 3 months following a traumatic event. Thus, PTSD symptoms are common among children exposed to trauma, although fewer youth will meet criteria for a PTSD diagnosis.

Little is known about the developmental course of PTSD in children over time. However, PTSD symptoms may emerge in the days or weeks following a traumatic event and can take months or years to dissipate. In the absence of reexposure to trauma or of the occurrence of other traumatic events, the typical developmental course of symptoms appears to be one of lessening frequency and intensity over time. For example, 3 months after a devastating and highly destructive natural disaster (Hurricane Andrew), La Greca and associates (2002) indi-

cated that 39 percent of the children in one community sample informally met criteria for PTSD, but this was reduced to 24 percent at 7 months postdisaster, and to 18 percent by 10 months postdisaster. A subgroup of children reporting moderate to severe PTSD symptoms was followed 42 months postdisaster, revealing that 40 percent continued to report moderate or more severe symptoms, as well as impairment in functioning; yet, almost none of the children who had mild or no symptoms at 10 months postdisaster reported any symptoms later on.

These data suggested a steady reduction in the frequency and severity of PTSD symptoms over time (with no further exposure to similar disasters), although a significant minority (approximately 7–10 percent) did not “recover” and continued to report substantial difficulties almost 4 years postdisaster. These findings also suggested that it may be highly unusual for children to report significant PTSD symptoms a year or more after a traumatic event, if they did not experience or report symptoms within 3 months of the event. Although there may be a brief period of “shock” or numbing, or sometimes elation and relief at still being alive, it is unusual to find a child reporting high levels of PTSD symptoms a year after the trauma, if no signs of distress were evident within the first few months after the traumatic event occurred.

With respect to the persistence of PTSD symptoms, findings suggest that children’s reactions to disasters and other traumatic events are not merely transitory events that quickly dissipate. On the contrary, they appear to linger and persist and, thus, are likely to cause distress to children and their families for some time. One factor that contributes to the persistence of PTSD symptoms over time is the occurrence of other significant life stressors. For example, La Greca and colleagues (2002) found that children who encounter major life stressors, such as a death or illness in the family or parental divorce, in the months or first few years following a traumatic event, do not appear to recover quickly, and report persistently high levels of PTSD over time.

## DEMOGRAPHIC TRENDS

Several studies suggest that PTSD appears more frequently among girls than boys, although this has not consistently been the case. In addition, it is difficult to draw generalizations regarding children’s vulnerability to PTSD at different ages, as findings on age-related differences have been inconsistent and are probably influenced by diverse developmental manifestations of PTSD (see the report of the American Academy of Child and Adolescent Psychiatry published in 1998).

PTSD occurs across diverse ethnic and cultural groups. Community studies suggest that some minority youth exposed to severe natural disasters report more symptoms of PTSD and have a more difficult time recovering from such events than nonminority youth. It is possible that, at least in part, socioeconomic factors might account for such findings, in that children and families from minority backgrounds may have less financial resources or less adequate insurance to deal efficiently with the rebuilding process. This, in turn, could prolong the period of life disruption and loss of personal possessions that typically ensues after destructive natural disasters.

### FACTORS THAT CONTRIBUTE TO PTSD IN CHILDREN

A wide range of traumatic events has been linked to the emergence of PTSD in children. However, first and foremost of these factors is children's *exposure to the traumatic event*. Two aspects of exposure that are important are: (1) the presence or perception of *life threat*, and (2) *personal loss or disruption* of everyday events. In fact, the presence or perception of life-threat is considered to be essential for the emergence of PTSD. Children who witness or are exposed to acts of violence, such as sniper shootings or severe physical abuse, understandably may feel that their life is in danger (i.e., life-threat). It is also the case, however, that catastrophic natural disasters or personal disasters (e.g., residential fires, motor vehicle accidents) can elicit perceptions of life-threat in children, *even if no one is injured or hurt*. For example, although relatively few lives were lost in South Florida as a result of Hurricane Andrew, the extensive destruction of homes and property that occurred during the storm was terrifying to many children and adults. In a study conducted by Vernberg and colleagues, 60 percent of the children interviewed "thought they were going to die" during the storm. Thus, perceptions of life-threat can occur in the absence of actual loss of life or serious injury. In addition to life-threat, the experience of loss (of family and friends, of personal property) and disruption of everyday life (displacement from home, school, community) also contribute to PTSD in children. The life-changes that result from this aspect of exposure to trauma also predict PTSD symptoms in children.

A second factor that contributes to PTSD in children following traumatic events is the presence of prior psychological difficulties. Children with preexisting psychological problems, especially anxiety, seem to be more vulnerable to PTSD reactions following trauma. For

example, in another study conducted by La Greca and associates (2002), children's anxiety levels 15 months *before* a traumatic event were found to predict their levels of PTSD symptoms 3 and 7 months postdisaster, even when controlling for children's exposure to the event. In addition, children who had greater levels of exposure to the disaster showed an increase in anxiety symptoms following the disaster. These findings are interesting in that the current conceptualization of PTSD, as reflected in *DSM-IV*, suggests that trauma must be present for PTSD to emerge. However, anxious children may have a vulnerability to PTSD, even if their degree of exposure to a trauma is relatively low.

Other factors that predict the severity and persistence of PTSD symptoms in children following trauma are the occurrence of intervening life events and reexposure to the traumatic event. On the other hand, factors that have been found to mitigate the impact of trauma include the availability of social support and the types of coping skills children use. Following traumatic events, children with higher levels of social support from significant others (especially parents, teachers, friends, and classmates) report fewer symptoms of PTSD than those with low levels of social support. Some community studies have found that children with more negative coping strategies for dealing with stress (e.g., anger, blaming others) show greater persistence in their PTSD symptoms over time. Because of these findings, efforts to enhance the social support of children exposed to trauma, and to encourage adaptive coping skills, may be useful for strategies for interventions with children following traumatic events.

**See also:** Acute Stress Disorder; Anxiety Disorders; Child Maltreatment; Cognitive-Behavior Therapy; Eye-Movement Desensitization and Reprocessing; Specific Phobia

### Further Reading

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