27 - 31.11b Posttraumatic Stress Disorder of Infan

31.11b Posttraumatic Stress Disorder of Infancy, Childhood, and Adolescence

Kocovska E., Wilson P, Young D, Wallace AM, Gorski C. Cortisol secretion in children with symptoms of reactive attachment disorder. Psychiatr Res. 2013;209:74–77. Minnis H, Macmillan S, Pritchett R, Young D, Wallace B. Prevalence of reactive attachment disorder in a deprived population. Br J Psychiatry. 2013;202:342–346. O'Connor TG, Marvin RS, Rutter M, Olrick J, Britner PA. The ERA Study Team. Child–parent attachment following early institutional deprivation. Dev Psychopathol. 2003;15:19–38. O'Connor TG, Zeanah CH. Attachment disorders: Assessment strategies and treatment approaches. Attach Hum Dev. 2003;5:223–244. Practice parameter for the assessment and treatment of children and adolescents with reactive attachment disorder of infancy and early childhood. J Am Acad Child Adolesc Psychiatry. 2005;44:1206. Pritchett R, Pritchett J, Marshall E, Davidson C, Minnis H. Reactive attachment disorder in the general population: A hidden ESSENCE disorder. Sci World J. 2013;2013:818157. Task Force on Research Diagnostic Criteria: Infancy and preschool: Research diagnostic criteria for infants and preschool children. J Am Acad Child Adolesc Psychiatry. 2003;42:1504. Zeanah CH, Scheeringa MS, Boris NW, Heller SS, Smyke AT, Trapani J. Reactive attachment disorder in maltreated toddlers. Child Abuse Negl. 2004;28:877. Zeanah CH, Smyke T, Dumitrescu A. Attachment disturbances in young children II: Indiscriminate behavior and institutional care. J Am Acad Child Adolesc Psychiatry. 2002;41:983. Zilberstein K. Clarifying core characteristics of attachment disorders: A review of current research and theory. Am J Orthopsychiatry. 2006;76:55. 31.11b Posttraumatic Stress Disorder of Infancy, Childhood, and Adolescence Posttraumatic stress disorder (PTSD), formerly grouped with anxiety disorders, currently falls under a new chapter in the Fifth Edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5) called trauma- and stressorrelated disorders, a group comprising disorders in which exposure to a traumatic or stressful event is a diagnostic criterion. PTSD is characterized by a set of symptoms including intrusive memories of the trauma, persistent avoidance of stimuli that are reminders of the traumatic event, persistent

negative alterations in cognition and mood, and alterations in arousal, mainly seen as hyperarousal and irritability following the traumatic event. In DSM-5, the traumatic event criterion is defined as exposure to actual or threatened death, serious injury, or sexual violence, whether directly, by witnessing it, learning of a traumatic event to a family member, or experiencing repeated exposures to trauma precipitated by social or natural disasters. Exposure to trauma through electronic media, movies, television or photographs is excluded from the criteria. In children 6 years or younger, diagnostic criteria fall under the “preschool subtype,” in which either persistent avoidance of trauma-evoking stimuli or negative alterations in cognitions suffice as indications for PTSD. In the United States, the rates of children and adolescents being exposed to violence and traumatic events are extremely high. In a nationally representative sample of

children and adolescents, exposure to a traumatic event was reported to be 60.4 percent, with a lifetime rate ranging from 80 to 90 percent. A significant number of children and adolescents who are exposed to traumatic events, ranging from direct experiences with physical or sexual abuse, domestic violence, motor vehicle accidents, severe medical illnesses, or natural or human-created disasters, will develop PTSD. In children younger than the age of 6 years, spontaneous and intrusive memories may be expressed in play, or occur in frightening dreams; these intrusive thoughts may not be easily identified as related to the traumatic event. Although posttraumatic stress symptoms have been described in adults for more than a century, PTSD was first officially recognized as a psychiatric disorder in 1980 in the DSM, Third Edition (DSM-III). Recognition of the frequency of PTSD in children and adolescents has increased over the last decade. Reports indicate that up to 6 percent of youth are likely to meet full criteria for PTSD at some point in their development. Developmental factors strongly influence the manifestations of symptoms of PTSD. In children and adolescents, reexperiencing of a traumatic event is often observed through play, recurrent nightmares without recall of the traumatic events, and behaviors that reenact the traumatic situation, along with agitation, fear, or disorganization. EPIDEMIOLOGY In the United States, it is estimated that approximately 80 percent of individuals have been exposed to at least one traumatic event; however, less than 10 percent of trauma victims develop posttraumatic stress disorder. The rates of traumatic events, including assaultive violence, exposure to unexpected deaths, being a witness of trauma to others, and bodily injury, all peak sharply between the ages of 16 to 20 years. PTSD is more common in females than in males throughout the life span mainly due to their increased risk for exposure to traumatic events. In situations of natural disaster, the rates of PTSD in males and females are similar. Lifetime risk for PTSD in the United States ranges from 6.8 percent to 12.2 percent. A consistent epidemiologic finding in the United States and in other countries is that PTSD is more prevalent in women than in men. Epidemiological studies of children 9 to 17 years of age have found 3-month prevalence rates of PTSD ranging from 0.5 to 4 percent. An epidemiological survey of preschoolers aged 4 to 5 years found a rate of 1.3 percent of PTSD. Among trauma-exposed samples of persons not referred for treatment, a wide range of 25 percent to 90 percent have been reported to exhibit the full diagnosis of PTSD. Children exposed chronically to trauma, such as child abuse, or traumas resulting in a broader disruption of entire communities, such as war, have the greatest risk of developing PTSD. In addition to the staggering rate of the full-blown disorder of PTSD among youth, several studies indicate that most children exposed to severe or chronic trauma develop PTSD symptoms sufficiently severe to disrupt functioning, even in the absence of the full diagnosis. ETIOLOGY

Biological Factors Risk factors in children for developing PTSD include preexisting anxiety disorders and depressive disorders. A prospective study found that among children exposed to traumatic events, those with anxiety disorders and teacher ratings of externalizing behavior problems by the age of 6 years were at increased risk for PTSD. Furthermore, children with an IQ greater than 115 at age 6 years were at lower risk for developing PTSD. In addition, among children exposed to trauma, those who developed PTSD were also at higher risk of developing comorbid disorders such as depression. This suggests that a genetic predisposition for anxiety disorders, as well as a family history indicating increased risk of depressive disorders, may predispose a trauma-exposed child to develop PTSD. Children with PTSD have been found to exhibit increased excretion of adrenergic and dopaminergic metabolites, smaller intracranial volume and corpus callosum, memory deficits, and lower intelligence quotients (IQs) compared with agematched controls. Adults with PTSD have been found to have an overactive amygdala and decreased hippocampal volume. Whether the above findings are sequelae of PTSD or markers of vulnerability to the disorder remains a focus of investigation. Psychological Factors Although the exposure to trauma is the initial etiological factor in the development of PTSD, the enduring symptoms typical of PTSD, such as avoidance of the place where the trauma occurred, can be conceptualized, in part, as the result of both classic and operant conditioning. Extreme physiological responses may accompany fear of a given traumatic event, such as an adolescent who was terrorized by an attack by a group of students near school, who then develops an extreme negative physiological reaction each time he or she is near the school. This is an example of classic conditioning in that a neutral cue (the school) has become paired with an intensely fearful past event. Operant conditioning occurs when a child learns to avoid traumatic reminders to prevent distressing feelings from arising. For example, if a child was in a motor vehicle accident, the child may then refuse to ride in cars altogether to prevent negative physiological reactions and fear from occurring. Another mechanism in developing and maintaining symptoms of PTSD is through modeling, which is a form of learning. For example, when parents and children are exposed to traumatic events, such as natural disasters, children may emulate parental responses, such as avoidance, withdrawal, or extreme expressions of fear, and “learn” to respond to their own memories of the traumatic event in the same manner. Social Factors Family support and reactions to traumatic events in children may play a significant role in the development of PTSD, in that adverse parental emotional reactions to a child’s abuse may increase that child’s risk of developing PTSD. Lack of parental support and psychopathology among parents—especially maternal depression—have been identified

as risk factors in the development of PTSD after a child has been exposed to a traumatic event. DIAGNOSIS AND CLINICAL FEATURES For PTSD to ensue, exposure to a traumatic event consisting of either a direct personal experience or witnessing an event involving the threat of death, serious injury, or serious harm must occur. Most common traumatic exposures for children and adolescents include physical or sexual abuse; domestic, school or community violence; being kidnapped; terrorist attacks; motor vehicle or household accidents; or disasters, such as floods, hurricanes, tornadoes, fires, explosions, or airline crashes. A child with PTSD experiences either intrusive memories of the event, recurrent frightening dreams, dissociative reactions including flashbacks in which the child feels as if the traumatic event is recurring, or intense psychological distress when exposed to reminders of the trauma (Fig. 31.11b-1). FIGURE 31.11b-1 The face of a boy in Pakistan shortly after a 7.6 magnitude earthquake hit South Asia leaving millions homeless. (Courtesy of Samoon Ahmad, M.D.) Symptoms of PTSD include reexperiencing the traumatic event in at least one of the following ways. Children may have intrusive thoughts, memories, or images that

spontaneously recur, or body sensations that remind them of the event. In very young children, it is common to observe play that includes elements of the traumatic event, or behaviors, such as sexual behaviors that are not developmentally expected. Children may experience periods during which they either act or feel as though the event is taking place presently; this is a dissociative event usually described by adults as “flashbacks.” Another critical symptom cluster of PTSD is avoidance, which in childhood may be displayed by making active physical efforts to avoid the places, people, or situations that would present traumatic reminders of the event. A third cluster of diagnostic criteria for PTSD is negative alterations in cognition and mood following the trauma. In children 6 years or younger, according to DSM-5, negative alterations in cognitions may

take the form of socially withdrawn behavior, reduction of expressing positive emotions, diminished interest in play, and feelings of shame, fear, and confusion. In children older than 6 years of age, these may take the form of an inability to remember parts of a traumatic event, that is, psychological amnesia, or persistent negative feelings about oneself, including horror, anger, guilt or shame. After a traumatic event, children may experience a sense of detachment from their usual play activities (“psychological numbing”) or a diminished capacity to feel emotions. Older adolescents may express a fear that they expect to die young (sense of foreshortened future). Other typical responses to traumatic events include symptoms of hyperarousal that were not present before the traumatic exposure, such as difficulty falling asleep or staying asleep; hypervigilance regarding safety and increased checking that doors are locked; or exaggerated startle reaction. In some children, hyperarousal can present as a generalized inability to relax with increased irritability, outbursts, and impaired ability to concentrate. To meet the diagnostic criteria for PTSD, according to the DSM-5 the symptoms must be present for at least 1 month, and cause distress and impairment in important functional areas of life. When all of the diagnostic symptoms of PTSD are met following the traumatic event, persist for at least 3 days, but resolve within 1 month, acute PTSD is diagnosed. When the full syndrome of PTSD persists beyond 3 months, it is designated as chronic PTSD. In some cases, the PTSD symptoms increase over time, and it is not until more than 6 months have elapsed after the exposure to the trauma that the whole syndrome emerges; in that case, the diagnosis is PTSD, delayed onset. DSM-5 criteria for PTSD are described in Table 11.1-3. It is not uncommon for children and adolescents with PTSD to experience feelings of guilt, especially if they have survived the trauma and others in the situation did not. They may blame themselves for the demise of the others and may go on to develop a comorbid depressive episode. Childhood PTSD is also associated with increased rates of other anxiety disorders, depressive episodes, substance use disorders, and attentional difficulties. DSM-5 includes a specifier With dissociative symptoms, which can present as either Depersonalization, in which there are recurrent experiences of feeling detached, as if outside of one’s own body; or Derealization, in which the world feels unreal, dreamlike, and distant. A final specifier, With delayed expression, indicates that the full diagnostic criteria were not met until 6 months after the traumatic event, although some symptoms may present earlier. PATHOLOGY AND LABORATORY EXAMINATION Although reports indicate some alterations in both neurophysiological and neuroimaging studies of children and adolescents with PTSD, no current laboratory tests can help in making this diagnosis. DIFFERENTIAL DIAGNOSIS A number of overlapping symptoms are seen between childhood PTSD and presentations

of childhood anxiety disorders, such as separation anxiety disorder, obsessive-compulsive disorder (OCD) or social phobia, in which recurrent intrusive thoughts or avoidant behaviors occur. Children

with depressive disorders often exhibit withdrawal and a sense of isolation from peers as well as guilt about life events over which they realistically have no control. Irritability, poor concentration, sleep disturbance, and decreased interest in usual activities can also be observed in both PTSD and major depressive disorder. Children who have lost a loved one in a traumatic event may go on to experience both PTSD and a major depressive disorder when bereavement persists beyond its expected course. Children with PTSD may also be confused with children who have disruptive behavior disorders, because they often show poor concentration, inattention, and irritability. It is critical to elicit a history of traumatic exposure and evaluate the chronology of the trauma and the onset of the symptoms to make an accurate diagnosis of PTSD. COURSE AND PROGNOSIS For some children and adolescents with milder forms of PTSD, symptoms may persist for one to two years, after which they diminish and attenuate. In more severe circumstances, however, PTSD syndromes persist for many years or decades in children and adolescents, with spontaneous remission in only a portion of them. The prognosis of untreated PTSD has become an issue of growing concern for researchers and clinicians who have documented a variety of serious comorbidities and psychobiological abnormalities associated with PTSD. In one study, children and adolescents with severe PTSD were at risk for decreased intracranial volume, diminished corpus callosum area, and lower IQs compared to children without PTSD. Children and adolescents with histories of physical and sexual abuse have been found to exhibit higher rates of depression and suicidality themselves and in their offspring as well. This highlights the importance of early recognition and treatment of PTSD that may significantly improve the long-term outcome among youth. TREATMENT Trauma-Focused Cognitive-Behavior Therapy Randomized clinical trials have provided evidence for the efficacy of trauma-focused cognitive-behavior therapy (CBT) in the treatment of PTSD in children and adolescents. This treatment is generally administered over 10 to 16 treatment sessions, including nine components itemized in the acronym PRACTICE. Trauma-focused CBT as detailed by Cohen, Mannarino, and Deblinger in their text Treating Trauma and Traumatic Grief in Children and Adolescents entails the inclusion of gradual exposure to feared stimuli as a critical element. Such stimuli encompass places, people, sounds, and situations. The first component of trauma-focused CBT is psychoeducation regarding the nature of typical emotional and physiological reactions to traumatic events and PTSD. Next, Parenting

Skills involve sessions focused on guiding parents on providing praise, administering a time out, contingency reinforcement programs, and troubleshooting for specific symptoms in a given child. Component 3 is Relaxation, in which children are taught to utilize muscle relaxation, focused breathing, affective modulation, thought-stopping, and other cognitive techniques to diminish feelings of helplessness and distress. Component 4 is Affective Expression and Modulation, geared to help children and their parents to identify their feelings, interrupt disturbing thoughts with positive imagery, and teach positive self-talk and social skills building. Component 5 is Cognitive coping and processing, which deals specifically with reviewing the Cognitive Triangle, in which the relationship between thoughts, feelings, and behaviors is explored. Unhelpful thoughts are challenged with practice. In Component 6, Trauma narrative, the story of the traumatic event and its sequelae are developed over time by the child, with the therapist’s support, using a depiction of words, art, or other creative form. Eventually this is shared with the parent. Component 7, In Vivo Exposure and Mastery of Trauma Reminders, is a session that reviews with the child how to deal with situations that are a reminder of the trauma and how to maintain control over distressing feelings associated with it. Component 8 is Conjoint Child-Parent Sessions; this component may involve several sessions in which the child and parent share their understanding of the process of

the therapy and the gains that they have made. Finally, Component 10, Enhancing future safety, involves sessions that focus on the changes made in the family to ensure the safety of the child. These final sessions also promote healthy communication between the child and the parents. A variant of trauma-focused CBT for PTSD is called eye movement desensitization and reprocessing (EMDR), in which an exposure and cognitive reprocessing interventions are paired with directed eye movements. This technique is not as well accepted as the more extensive trauma-focused CBT detailed above. Cognitive Behavioral Intervention for Trauma in Schools (CBITS) CBITS is an intervention that administers treatment in the school setting for children who screen positive for PTSD and whose parents agree to treatment in school. It consists of ten weekly group sessions, one to three individual imaginal exposure sessions, two to four optional sessions with parents, and one parent education session. Similar to trauma-focused CBT (TF-CBT), CBITS incorporates psychoeducation, relaxation training, cognitive coping skills, gradual exposure to traumatic memories through a narrative, in vivo exposure, and affect modulation, cognitive restructuring, and social problem solving. In one randomized controlled trial, 86% of students in the CBITS group reported significantly decreased PTSD symptoms compared to the waitlist controls. Students who received CBITS also reported lower depression scores. Among parents whose children received CBITS treatment, 78% reported decreased psychosocial problems in their children. After CBITS treatment, the improvements in both the PTSD and depression symptoms were sustained at 6 months.

Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS) SPARCS consists of a group intervention, generally administered in 16 sessions, with a focus on the needs of adolescents between the ages of 12 and 19 years who have lived with chronic trauma and may also carry a diagnosis of PTSD. SPARCS was tested in a trial of multicultural teens and young adults with moderate or severe trauma exposure. Most of the participants were female, and comprised multiple ethnic groups: 67% African American; 12% Latino; 21% Caucasian. SPARCS demonstrated efficacy in reducing traumatic stress symptoms, mainly in the largest group, the African American group. SPARCS utilizes cognitive behavioral techniques, and also incorporates many of the components of TF-CBT. In addition, SPARCS includes mindfulness techniques and relaxation. Trauma Affect Regulation: Guide for Education and Therapy (TARGET) TARGET, an affect regulation therapy, combines CBT components, such as cognitive processing, with affect modulation. It is administered to adolescents between the ages of 13 and 19 who have been exposed to maltreatment and/or chronic traumatic exposure to such things as community violence or domestic violence. It is generally administered in 12 sessions, which focus on past or current situations. As with SPARCS treatment, gradual exposure may occur in the context of recounting past trauma but is not a core component of the treatment. A randomized trial with 59 delinquent girls aged 13 to 17 years who met full or partial criteria for PTSD found that TARGET reduced anxiety, anger, depression, and PTSD cognitions. TARGET is a promising treatment for girls with histories of delinquency, especially to reduce anger and to enhance optimism and selfefficacy. Crisis Intervention/Psychological Debriefing Crisis intervention/psychological debriefing typically consists of several sessions immediately after an exposure to a traumatic event in which a traumatized child or adolescent is encouraged to describe the traumatic event in the context of a supportive environment. Psychoeducation is provided and guidance about the management of initial emotional reactions may be provided. Anecdotal reports suggest that this intervention may be helpful, but no controlled studies have yet provided evidence that this intervention leads to a more positive outcome. Psychopharmacological Treatment Several pharmacologic agents have been

utilized to treat children and adolescents with PTSD, often focused on diminishing intrusive thoughts, hyperarousal, and avoidance, with some success and mixed results. Given the frequent comorbidity of depressive disorder, anxiety disorders, and behavioral problems associated with PTSD, a multitude

of psychopharmacological agents have been utilized to ameliorate symptoms associated with PTSD in youth. Antidepressant agents have been used as adjuncts to psychosocial treatments in youth with PTSD. Despite the fact that sertraline and paroxetine are approved by the Food and Drug Administration (FDA) in the treatment of PTSD in adults, there is scant evidence to support its use for the core symptoms of PTSD in youth. A randomized controlled trial of TF-CBT plus sertraline compared to TF-CBT plus placebo in 24 children with PTSD found that both groups had significant reduction in PTSD symptoms, with no significant difference between the groups. A multicenter study of 131 children aged 6 to 17 years with PTSD were treated with 10 weeks of sertraline or placebo. Results showed sertraline to be a safe treatment; however, it was not demonstrated to have efficacy compared to placebo. A randomized controlled trial using citalopram did not show superiority of citalopram over placebo in treatment of core PTSD symptoms. There is, however, evidence suggesting that the use of selective serotonin reuptake inhibitors (SSRIs) in traumatized children with burns may be preventive regarding the development of PTSD. Published literature demonstrates that up to 50 percent of children with moderate to severe burns develop PTSD, thus preventive strategies are important. A randomized controlled study of sertraline to prevent PTSD found that children who received sertraline, flexibly dosed between 25 mg and 150 mg per day, had a decrease in parent-reported symptoms of PTSD over 8 weeks compared to a placebo group. Among the child-reported symptoms, however, there was no significant difference between the two groups. Antiadrenergic agents have been tried to treat dysregulation of the noradrenergic system in adults and youth with PTSD. α-2-agonists such as clonidine and guanfacine, for example, have been used to decrease norepinephrine release, whereas centrally acting β-antagonists such as propranolol, and α-1-antagonists such as prazosin, are hypothesized to improve hyperarousal and intrusive thoughts through attenuation of norepinephrine postsynaptically. In adults, clonidine (Catapres) and propranolol (Inderal) have been used to treat PTSD, especially nightmares and exaggerated startle response, with evidence of improvement. Although there are some data in adults with PTSD to support the use of these agents, data in youth are limited largely to case reports. There is a suggestion that guanfacine may reduce nightmares in children with PTSD and that clonidine may diminish symptoms of reenactment of traumatic events in children. One report of propranolol treatment in 11 pediatric patients with PTSD from sexual or physical abuse with a mean age of 8.5 years, who exhibited agitation and hyperarousal, indicated some decrease in symptoms in 8 of the 11 children studied. Another open study of transdermal clonidine treatment of preschoolers with PTSD suggests that clonidine may be efficacious in this population in decreasing activation and hyperarousal. An additional open trial of oral clonidine with dosage ranges of 0.05 to 0.1 mg twice daily similarly suggests that this medication may provide some relief for the symptoms of hyperarousal, impulsivity, and agitation in young children with PTSD. Second-generation antipsychotics such as risperidone, olanzapine, quetiapine, ziprasidone, and aripiprazole have been studied in adults with PTSD with mixed results. Risperidone and aripiprazole have both been given FDA approval for use in children

and adolescents with aggression, severe behavioral dyscontrol, and severe psychiatric disorders; however, controlled trials have not been done with children with PTSD. A report of three preschool-aged children who exhibited symptoms of acute stress disorder and who had severe thermal burns

were reported to improve after being treated with risperidone. Mood-stabilizing agents including divalproex, carbamazepine, topiramate, and gabapentin have been utilized for adults with PTSD with modest improvement. In children and adolescents with PTSD, one open-label trial of carbamazepine and one trial of divalproex have been undertaken. In the carbamazepine trial, all 28 patients were reported to be either asymptomatic or improved at blood levels of the agent of 10 to 11.5 micrograms/ml. In the divalproex trial, 12 males who carried diagnoses of conduct disorder comorbid with PTSD were randomly assigned to high- or low-dose divalproex with reported improvement in those receiving the higher doses. Benzodiazepines are often prescribed to treat anxiety symptoms in patients with PTSD, although there are no controlled trials to support their use in youth with PTSD at this time. Given that many children and adolescents with PTSD have comorbid depressive and anxiety disorders, SSRIs are recommended in the treatment of these coexisting disorders. REFERENCES Breslau N. The epidemiology of trauma, PTSD, and other posttraumatic disorders. Trauma Violence Abuse. 2009;10:198– 210. Cohen JA. Posttraumatic stress disorder in children and adolescents. In: Sadock BJ, Sadock VA, Ruiz P, eds. Kaplan & Sadock's Comprehensive Textbook of Psychiatry. 9th ed. Vol 2. Philadelphia: Lippincott Williams and Wilkins; 2009:3678. Cohen JA, Mannarino AP, Deblinger E. Treating Trauma and Traumatic Grief in Children and Adolescents. New York: The Guilford Press; 2009. Cohen JA, Mannarino AP, Perel JM, Staron V. A pilot randomized controlled trial of combined trauma-focused CBT and sertraline for childhood PTSD symptoms. J Am Acad Child Adolesc Psychiatry. 2007;46:811–819. Davis TE III, May A, Whiting SE. Evidence-based treatments of anxiety and phobia in children and adolescents: Current status and effects on the emotional response. Clin Psychol Rev. 2011;31:592–602. Dorsey S, Briggs EC, Woods BA. Cognitive behavioral treatment for posttraumatic stress disorder in children and adolescents. Child Adolesc Psychiatr Clin N Am. 2011;20:255–269. Finkelhor D, Turner H, Omrod R, J, Hamby SL. Violence, abuse, and crime exposure in a national sample of children and youth. Pediatrics. 2009;124:1–13. Finkelhor D, Ormrod RK, Turner HA. The developmental epidemiology of childhood victimization. J Interpers Violence. 2009;24:711–731. Ford JD, Steinberg KL, Hawke J, Levine J, Xhang W. Randomized trial comparison of emotion regulation and relational psychotherapies for PTSD in girls involved in delinquency. J Clin Child Adolesc Psychol. 2012;41:27–37. Huemer J, Erhart F, Steiner H. Posttraumatic stress disorder in children and adolescents: A review of psychopharmacological treatment. Child Psychiatry Hum Dev. 2010;41:624–640. Jaycox LH, Cohen JA, Mannarino AP, Walker DW, Langley AK, Gegenheimer KL, Children's mental health care following Hurricane Katrina: A field trial of trauma-focused psychotherapies. J Traum Stress. 2010;23:223–231. Jaycox, LH, Langley AK, Dean KL. Support for students exposed to trauma: The SSET program: group leader training

---

Revision #1
Created 2026-01-04 19:52:15 UTC by Omar Ayman
Updated 2026-01-04 19:52:15 UTC by Omar Ayman