# Acute Stress Disorder, Posttraumatic Stress Disorder and Complex PTSD

## General considerations when working with children and adolescents

Although most principles that underpin good clinical practice apply equally across various age groups, some differences will inevitably apply when working with children and adolescents. The following considerations should inform every aspect of the way in which clinicians think about, assess, and treat posttraumatic mental health problems in children and adolescents. Many of these points will be elaborated on in the following sections.

Children and adolescents are typically dependent upon an adult to present them for treatment in the first instance and to ensure that they attend subsequent appointments. This means that it is as important to engage with, and maintain, the relevant adult's motivation to pursue treatment, as it is to do these things with the child or adolescent client.

Children and adolescents are part of a system (typically a family). Their symptoms have the potential to both influence, and be influenced by, anything that is happening within the system in which they live. Thus, the clinician needs to be continually aware of what is happening within the child's system (e.g., significant life events for other family members, emotional wellbeing of other family members, relationships within the family and with peers) and not only those between the child and their parent or caregivers.

In line with the first two considerations, common sense suggests that involving parents/caregivers in children's treatment should be helpful. The younger the child, the more critical this involvement becomes. However, as will be discussed below, there are many reasons why caregivers may be unwilling or unable to participate in their child's treatment in a helpful manner. The clinician needs to be aware of this and to manage the relationships accordingly.

Nevertheless, the child has an important voice in decisions to take up any assessment or intervention. It cannot be assumed that a child does not have capacity to consent at any specific age; this must be judged on a case-by-case basis. In general, if a child is unwilling to engage in treatment, their wishes need to be accommodated, irrespective of the caregivers' views.

The rate of agreement between parents/caregivers and children in relation to internalising symptoms (and especially posttraumatic mental health problems) is very low. In general, the clinician should seek to obtain both caregiver and child reports for assessment of a child's internalising symptoms – even if the child is of preschool age.

Infancy and adolescence are the two most change-filled periods of development in a person's entire lifespan. According to models of psychosocial development such as that proposed by Erik Erikson,[1] children and adolescents have substantially more developmental challenges and conflicts to master than adults. It is essential to keep this kind of framework in mind when assessing and treating children and adolescents with posttraumatic mental health problems. For instance, a 40-year-old who is assaulted physically is less likely than a three-year-old to develop attachment problems. In other words, children and adolescents have a much greater potential to be rendered either 'stuck' or developmentally regressed by trauma.

Depending on their age and developmental stage, children have less well-developed linguistic, affect regulation, cognitive and perceptual capacities than adults. Naturally, these developmental limitations will influence the nature of treatment and the manner in which it is delivered.

**Note**: For the purposes of this chapter, the term 'preschoolers' or 'preschool-aged children' is used to refer to children aged birth to five years (or, if referring specifically to the DSM-5 preschool subtype, birth to six years). The term 'primary school-aged children' is used to refer to children aged 6–11 years, and the term 'adolescents' is used to refer to youth aged 12–17 years. Where the term 'children and adolescents' is used, the reader can assume that this entire age span is being referred to.

## Trauma and trauma reactions

### Trauma, traumatic event and potentially traumatic event

As noted in the previous chapter, the terms *trauma*, *traumatic event*, and *potentially traumatic event* are used in a variety of ways. In the diagnostic criteria for PTSD in adults, adolescents, and children older than six years, the DSM-5 defines trauma as exposure to actual or threatened death, serious injury, or sexual violence in one or more of four ways:

- directly experiencing the event
- witnessing, in person, the event occurring to others
- learning that such an event happened to a close family member or friend
- experiencing repeated or extreme exposure to aversive details of such events, such as with first responders.

For children six years and younger, the DSM-5 explicitly provides a preschool subtype of the PTSD diagnosis for children. In that subtype, trauma is defined as exposure to actual or threatened death, serious injury, or sexual violence in one or more of three ways:

- directly experiencing the event
- witnessing, in person the events occurring to others (especially primary caregivers)
- learning that the event occurred to a parent or caregiving figure.

Children and adolescents are commonly exposed to such events, with more than two-thirds of children in the US reporting exposure to at least one traumatic event by the age of 16 years.[2] Terr[3] proposed two broad categories of childhood trauma: Type I trauma, in which a child experiences a single event (such as a physical assault, a natural or human-caused disaster, traffic accident, other accidental injury, house fire, a terrorist attack, or witnessing a single episode of violence); and Type II trauma, in which a child experiences

multiple, repeated exposures to the traumatic event (such as physical and/or sexual abuse, neglect, domestic violence, or war).

By no means do all young people exposed to such events develop significant psychological problems. More recently, use of the term *potentially traumatic events* (PTEs) has been advocated to highlight this point. Bonanno and Mancini[4] note that, "highly aversive events that typically fall outside the range of normal everyday experience are 'potentially' traumatic because not everyone experiences them as traumatic" (p. 369). In other words, not everyone develops a psychological injury as a consequence. Similar to adults, the trajectory of posttraumatic stress after a PTE reflects that the majority of children are likely to recover or sustain little impact,[5] and the minority experience ongoing effects. In the Copeland et al.[2] study, for example, 1420 children and adolescents aged 9, 11, and 13 years at intake were followed up annually until they were 16 years of age. Although trauma exposure (across the full range of potentially traumatic events) was common, the development of full PTSD (based on DSM-IV criteria) was very rare (0.5%).

Increasingly, it is being recognised that exposure to PTEs can result in the development of many forms of psychopathology. To date, most attention has been focussed on PTSD, other anxiety disorders, and affective disorders. In the field of children and adolescents, this focus is broadening to include behavioural and attentional problems (such as oppositional defiant disorder [ODD] and attention deficit hyperactivity disorder [ADHD]), somatic symptoms, and academic challenges.

## Clinical presentations in children and adolescents following potentially traumatic events

Yule[6] described the manifestation of traumatic stress responses in children and adolescents in a manner that has withstood the test of time and burgeoning research. He noted that, while the majority of children are bothered almost immediately by repetitive, intrusive thoughts about the event, dissociative flashbacks are *not* common. In the first few weeks, disturbances in sleep are often seen – including nightmares (where the content is not necessarily able to be articulated, or where it is not necessarily linked in an obvious way to the PTE), fear of the dark, fear of going to sleep and risking the possibility of a nightmare, and waking during the night. Separation anxiety is common in young children and even among adolescents. As in adults, irritability, anger, and aggression are common, often manifested as temper tantrums in preschool-aged children. Many primary school-aged children and adolescents are able to articulate a desire to talk about their experiences, but also note that they find it difficult to speak about what happened with their parents/caregivers and peers. Children and adolescents frequently report, and demonstrate, difficulties in concentration and memory. Hypervigilance to danger in their environment (including increased awareness of trauma-related reminders in the media) is typical. Primary school-aged children and adolescents often report a sense of foreshortened future, or what is perhaps more usefully viewed as a new awareness of their own mortality. The development of increased general anxiety, as well as specific fears related to aspects of their trauma experience, is common – although the link between the feared stimulus and the trauma experience is not always immediately obvious (for instance, a child who develops a fear of helicopters after being involved in a natural disaster where helicopters were used to rescue people). Some primary school-aged children and adolescents will describe feeling survivor guilt, while depression and increased substance use is often reported by adolescents exposed to PTEs. Other important aspects of clinical presentation in preschool-aged children that were not explicitly described by Yule include new oppositional behaviour; regression in, or loss of, previously mastered developmental skills

(e.g., speech, toileting); and new fears not associated with the traumatic event (e.g., fear of going to the toilet alone).[7]

## Traumatic stress syndromes

Previously, diagnostic classification systems tended to not include specific child and adolescent versions of traumatic stress syndromes. Rather, the clinician was required to apply the same criteria as those used for adults, albeit sometimes with minor adjustments.

A number of important changes have been introduced in DSM-5 in relation to PTSD in children and adolescents. In a significant restructure, the existing diagnoses of ASD and PTSD have been moved from the Anxiety Disorders section to a new category – Trauma- and Stressor-Related Disorders.[8] This new category also includes reactive attachment disorder and disinhibited social engagement disorder (analogous to the inhibited and disinhibited subtypes of DSM-IV reactive attachment disorder, and important diagnoses in understanding reactions to trauma in children with longstanding histories of maltreatment), and the age-related PTSD subtype – PTSD in preschool children – for children under the age of six years. The DSM-5 criteria for PTSD differ significantly from those in DSM-IV for children and adolescents. PTSD in the DSM-5 is more developmentally sensitive in that diagnostic thresholds have been lowered for children and adolescents.

## Acute stress disorder

The DSM-5 diagnostic criteria for ASD do not differ depending on whether the individual in question is an adult, adolescent, or child. Accordingly these criteria will not be reviewed in any detail here (see the chapter on Trauma and Trauma Reactions for the ASD diagnostic criteria). It has been suggested that the DSM-5's unidimensional structure for ASD is a poor fit for early symptoms in trauma-exposed children and young people.[9] The relationship between this diagnosis and the diagnosis of PTSD in youth – a focus of much research in the adult literature – is worthy of brief attention. The DSM-IV diagnosis of ASD requires that an individual demonstrate three or more dissociative symptoms. With the exception of the duration criteria (maximum of four weeks), the remaining diagnostic criteria for ASD are similar to those for PTSD. The presence of dissociation in an individual's acute response to trauma exposure is thought to identify those at risk for long-term PTSD, meaning that one of the key functions of ASD as a diagnosis is to assist in the prediction of which individuals experiencing distress after trauma exposure will go on to develop PTSD.[10] However, paralleling the adult research (e.g., Harvey and Bryant[11]), in a large study of youth aged 6–17 years who had survived a motor vehicle accident, dissociation (when considered in isolation – that is, separate to the other criteria of ASD) failed to account for any unique variance in predicting later PTSD.[12] As a result of this body of research across the lifespan, the requirement for dissociation in ASD was dropped in DSM-5.

## Posttraumatic stress disorder

The diagnosis of PTSD was officially extended to youth for the first time in 1987 with the advent of DSM-III-R (DSM third edition, revised). While the subsequent DSM-IV criteria for PTSD as applied to children and adolescents was identical to those used with adults (with a number of caveats), the DSM-5 includes two PTSD diagnoses: one for adults, adolescents, and children older than six years (with caveats for children), and a subtype for children six years and younger.

# Children and adolescents

The full adult-centric diagnostic criteria were reviewed in the chapter on Trauma and Trauma Reactions. As noted in that chapter, the most significant change to the PTSD criteria is to separate the previous Cluster C symptoms into Criterion C (persistent avoidance of stimuli related to the trauma) and Criterion D (negative alterations in cognitions and mood). The arousal cluster, Cluster E, now includes irritability or angry outbursts and reckless behaviours. The diagnosis of PTSD requires that the following criteria be met: one symptom from Criterion C, two symptoms from Criterion D, and two symptoms from Criterion E (alterations in arousal and physical reactivity).

In assessing children older than six years and adolescents using the DSM-5 criteria, clinicians are asked to consider the following caveats:

- B1 – "In children older than six years, repetitive play may occur in which themes or aspects of the trauma are expressed".

- B2 – "In children, there may be frightening dreams without recognisable content".

- B3 – "In children, trauma-specific re-enactment may occur".

While caregiver loss as a source of trauma is articulated in the preschool subtype, this is not made explicit in Criterion A for adolescents and children older than six years. However, this remains relevant among older children, since the loss of parents/caregivers is more associated with trauma than high-magnitude events like motor vehicle accidents. One report of children in foster care found that the most common trauma identified by children aged 6–12 to their therapists was "placement in foster care".[13]

## Preschool subtype

Debate regarding the validity and utility of the DSM-IV PTSD criteria for children and adolescents, and particularly for preschool-aged children, was ongoing from the time of their publication. This is not surprising given that the DSM-IV field trial for PTSD did not involve any participants under the age of 15 years. One of the strongest criticisms of the criteria concerned the requirement for children to report on complex internal states which are often difficult for children to understand and almost impossible for adults around a child to observe. Importantly, it was demonstrated that there is no difference in terms of distress, or social and academic impairment, between children meeting full criteria (i.e., all three of the symptom clusters) and children demonstrating what is referred to as 'partial PTSD' – that is, two of the three symptom clusters.[14]

The new PTSD subtype for preschool children recognises the unique trauma experiences and responses of children. The criteria have been designed to be more developmentally appropriate for young children by including losses and events related to the child's caregiver as a main source of trauma and focus on behaviourally expressed PTSD symptoms that are not reliant on the cognitive or linguistic complexity absent in young survivors. For example, symptoms include temper tantrums or decreased participation in play. Clinical re-experiencing can vary according to developmental stage, with preschoolers having frightening dreams in which it may not possible to ascertain whether the content relates to the traumatic event. Young children can express symptoms through play re-enactment, which may or may not appear related to the traumatic event. They may lack fearful reactions during re-experiencing phenomena.

The preschool subtype retains the three-factor model that combines avoidance and negative alterations of mood and cognition. To circumvent concerns related to children not meeting Criterion C requirements,

the developmental preschool PTSD subtype lowers the Cluster C threshold from three to one symptom, and excludes symptoms such as negative self-beliefs and blame, which are dependent on the ability to verbalise cognitive constructs and complex emotional states.

The preschool criteria were based on an algorithm by Scheeringa and colleagues derived to conceptualise and assess PTSD in children, which took into account studies on young children using modified DSM-IV PTSD criteria.[13] These studies showed that children's loss of a parent/caregiver through death, abandonment, foster care placement, and other main caregiver-related events can be experienced as traumatic events. Given young children's need for a parent/child relationship to feel safe, caregiver loss may be perceived as a serious threat to a child's own safety and psychological/physical survival, which is part of the criteria defining a traumatic event. Other work by De Young and colleagues[15] indicates that Criterion A from the DSM-IV, especially based on serious injury, lacks predictive utility. Instead, the authors suggest that more guidance is required on delineating what constitutes a useful threshold for Criterion A for preschool children and go on to argue that sensitivity of any assessment of Criterion A should be prioritised.

Table 3.1: DSM-5 diagnostic criteria (paraphrased) for Posttraumatic stress disorder for children 6 years and younger

A.   In children (younger than six years), exposure to actual or threatened death, serious injury, or sexual violence, as follows:

1. Direct exposure
2. Witnessing, in person, especially as the event occurred to primary caregivers. Note: witnessing does not include viewing events in electronic media, television, movies, or pictures
3. Indirect exposure, learning that a parent or caregiving figure was exposed.

B.   Presence of one or more intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:

1. Recurrent, involuntary, and intrusive distressing memories. Note: Spontaneous and intrusive memories may not appear distressing and may be expressed as play re-enactment

2. Recurrent nightmares in which the content and/or affect of the dream are related to the traumatic event(s). Note: It may not be possible to determine whether the frightening content is related to the traumatic event

3. Dissociative reactions (e.g., flashbacks); such trauma re-enactment may occur in play

4. Intense or prolonged distress at exposure to traumatic reminders

5. Marked psychological reactions to trauma-related stimuli.

C.   One or more of the following symptoms:

**Persistent effortful avoidance of stimuli**

1. Avoidance of activities, places, or physical reminders

2. Avoidance of people, conversations, or interpersonal situations.

**Negative alterations in cognitions**

3. Negative emotional states (e.g., fear, guilt, sadness, shame, confusion)

4. Diminished interest or participation in significant activities, including constriction of play

5. Socially withdrawn behaviour

6. Persistent reduction in expression of positive emotions.

D.   Two or more alterations in arousal and reactivity associated with the traumatic event(s):

1. Irritable behaviour and angry outbursts (including extreme temper tantrums)

2. Hypervigilance

3. Exaggerated startle response

4. Problems with concentration

5. Sleep disturbance (including restless sleep).

E.   Duration of Criterion B, C, and D is more than 1 month.

F.    The disturbance causes clinically significant distress or impairment in relationships with parents, siblings, peers, or other caregivers or with school behaviour.

Specify whether:

With dissociative symptoms: The individual's symptoms meet the criteria for posttraumatic stress disorder, and in addition, in response to the stressor, the individual experiences persistent or recurrent symptoms of either of the following:

1. Depersonalisation: persistent or recurrent experiences of feeling detached from, and as if one were an outside observer of, one's mental processes or body (e.g., feeling as though one were in a dream; feeling a sense of unreality of self or body or of time moving slowly)

2. Derealisation: persistent or recurrent experiences of unreality of surroundings (e.g., the world around the individual is experienced as unreal, dreamlike, distant, or distorted).

Note: To use this subtype, the dissociative symptoms must not be attributable to the physiological effects of a substance (e.g., blackouts) or another medical condition (e.g., complex partial seizures).

Specify if:

With delayed expression: If the full diagnostic criteria are not met until at least 6 months after the event (although the onset and expression of some symptoms may be immediate).

## Prevalence

### ASD

Few studies have examined the prevalence of ASD in children and adolescents. The studies that have been conducted have focussed on samples of youth involved in motor vehicle accidents and single assaults, with relatively low prevalence rates reported: 8%,[16] 19%,[17] and 9%.[18] In preschool-aged children, only one study has examined the prevalence of ASD to date. Meiser-Stedman et al.[19] found that 1.6% of 60 children aged two to six years met criteria for ASD following a motor vehicle accident.

### PTSD

In terms of PTSD, the prevalence rates vary widely depending on the sample under study, the type of trauma experienced, and the methodology used to make the diagnosis.[20,21] It should also be noted that there have been major changes to diagnostic criteria for both the DSM-5 and ICD-11,[22] and that those two frameworks differ substantially; both factors have the potential to affect the rates of PTSD among trauma-exposed young people. Current estimates suggest that approximately 16% of children and adolescents exposed to trauma develop PTSD,[23] with higher rates for interpersonal trauma compared to non-interpersonal trauma.

#### Preschool

Rates of PTSD in preschool children diagnosed with DSM-IV criteria have been lower than in other age groups. This was in part related to the DSM-IV requirement that a person must have an intense response to the event — intense fear, helplessness, or horror — that in children could be expressed by disorganised or agitated behaviour. With DSM-IV criteria, even in severely traumatised young children, the frequencies of

PTSD ranged only between 13% and 20%.[e.g., 24] With the new algorithm for DSM-5, Scheeringa and colleagues consider that 44% to 69% of children in the same studies would be diagnosed with PTSD.[13] In other community studies of children aged one to six years who were recruited after mixed-traumatic events, the estimate for PTSD was 0% to 1.7% using DSM-IV criteria and 10% to 26% with the proposed DSM-5 algorithm.[13] In an Australian sample of 130 preschool children, the frequency of PTSD six months after serious injury was 1% using DSM-IV criteria and 10% using the DSM-5 algorithm.[15]

### School children

There is no equivalent work to that of Scheeringa and colleagues using studies on mixed-trauma children and adolescents to estimate PTSD based on DSM-5 proposed criteria as was done for preschool children. However, one study considered PTSD rates in school children (average age of 10) three months after a traumatic brain injury, and found PTSD rates using the proposed DSM-5 algorithm[25] were 9% compared to 4% using DSM-IV criteria.[26] Further research is needed to determine how the changes to PTSD criteria will impact estimates for school children across trauma types.

Lifetime estimates of PTSD in children and adolescents in the overall population range from 6%[27] to a low 1.6% reported in a large scale (N=1035) German study of youth aged 12–17 years.[28] Other studies focussing on specific types of trauma exposure have reported on the prevalence of PTSD at short-term follow-up (generally just over one month following trauma exposure). Thus, 22.5% of children exposed to physical injury,[29] 34% of youths exposed to community violence in an urban setting,[30] and 36% of maltreated (physical and/or sexual abuse) children[31] have been reported to meet criteria for acute PTSD. Examining trauma exposure to a motor vehicle accident across studies, approximately 27% of children and adolescents meet criteria for PTSD between one and two months later,[e.g., 32,33,34] reducing to approximately 13% between three and six months later.[e.g., 32,34,35] A meta-analysis of primary school-aged children and adolescents exposed to a range of trauma events found that, overall, 36% of participants were diagnosed with PTSD.[36]

In summary, while the numbers vary widely, it is clear that only a minority of children and adolescents exposed to a PTE will go on to develop PTSD. It is equally clear that the numbers – even at the low end of the ranges – are substantial and highlight the need for effective evidence-based treatment.

## Comorbid conditions

In preschool-aged children, comorbidity is common. Clinically significant levels of depression frequently co-occur with PTSD. In terms of anxiety, Scheeringa (2014) found that 11% of those exposed to Hurricane Katrina, 18% of those exposed to other single-incident traumas, and 16% of those exposed to repeated trauma (mainly domestic violence) developed an anxiety disorder (either generalised anxiety disorder [GAD], separation anxiety disorder [SAD], or social phobia). Following Hurricane Katrina, externalising behaviour, such as ODD (61%) was also found to be comorbid, as was ADHD (33%).[37] Scheeringa et al.[38] reported similarly high levels of comorbidity. In an Australian sample of 130 preschool-aged burns victims, children with PTSD at one month were more likely to have comorbid major depressive disorder (MDD), SAD, ODD, or a specific phobia; while children with PTSD at six months were significantly more likely to meet criteria for comorbid ADHD, ODD, and SAD.[24]

In primary school-aged children, PTSD is commonly comorbid with other anxiety disorders, mood disorders (most notably depression), and ADHD.[39] In a study that included both primary school-aged children and adolescents, Kassam-Adams and colleagues found that 13% of 8- to 17-year-old participants

who received emergency department care displayed clinically significant levels of depression.[40] Anxiety and depression symptoms have been shown to co-occur with PTSD in trauma-exposed children.[(e.g., 41)] Other comorbid problems less commonly seen in primary school-aged children, but more common in adolescents, include suicidal ideation and substance dependence.[39,42]

A review paper examining depression in youth following natural disasters reported rates of depression from 2% to 69% compared to typical ranges of 1% to 9% in general population studies.[43] One of the largest studies of adolescents following a disaster centred around the survivors of the cruise ship, *Jupiter*, which sank in 1988. Of the adolescents on board, 217 agreed to participate in an assessment conducted between five and eight years after the event.[44] These young people were found to have developed a wide range of psychiatric disorders in addition to PTSD following the sinking.[45] Over 40% of the sample met criteria for 'any anxiety disorder', with specific phobia (24%), panic disorder (12%), SAD (7%), and GAD (6%) being the most common anxiety disorders. With the exception of GAD, the risk for these disorders was significantly higher in survivors compared to controls. Similarly, 38% of the sample met criteria for 'any affective disorder', with 34% meeting criteria for MDD. Again, the risk to survivors of developing any affective disorder or MDD was significantly higher when compared with controls. Most of these conditions were comorbid with PTSD. When the survivor sample was separated into those with PTSD and those without, the rates of other psychiatric diagnoses in those without PTSD were not significantly different from the rates seen in controls. Mueser and Taub[46] have also reported that adolescents with PTSD are more likely to engage in high-risk behaviours, such as running away from home, self-injury, and substance use.

Importantly, although an under-researched area, an association has been demonstrated between the development of PTSD and children's health-related quality of life (i.e., the impact of disease and therapy on a person's life situation), both in the short term and the long term. A wide range of adverse health consequences for preschoolers through to adolescents has been identified,[(e.g., 47)] including poorer adherence to medical protocols.[48] Exposure to interpersonal violence in particular has been shown to increase the risk of somatic health problems, such as eating disorders[49] and chronic pain.[50] An Australian study of 200 school-aged children with traumatic brain injury found a clear association between PTSD and health-related quality of life.[51]

## The course and prognosis of PTSD in children and adolescents

In preschool-aged children, symptoms of PTSD tend to be persistent over time.[25,52] Scheeringa et al.[53] reported that the mean severity of PTSD ratings for preschool-aged children did not reduce over a two-year period. Importantly, PTSD in very young children is also associated with a range of poor developmental outcomes,[(e.g., 54)] which in turn negatively impact upon children's developmental trajectories.

Hiller et al. (2016) conducted a meta-analysis of 27 longitudinal studies in which they estimated PTSD rates of 21% in the acute (one month) post-trauma phase, spontaneously declining to 15% at three months, to 12% at six months and to 11% at one year post-trauma. This suggests that a minority of trauma-exposed young people develop PTSD, and that many recover spontaneously over the first six months post-trauma. However, there is little evidence that natural recovery occurs beyond six months.[55]

Two very long-term follow-ups of children who experienced a landslide and bushfire disaster have been reported. McFarlane and Van Hooff[56] reported on the rates of PTSD and other mental disorders in adults who had experienced a devastating bushfire 20 years previously. This group was compared with matched

controls recruited at the time of the original study. No difference was found in the lifetime prevalence of PTSD between the group who had been impacted by the bushfire as children (mean age at time of original assessment = 8.44) and the matched control group. In fact, the only difference in terms of lifetime rates for an individual disorder was specific phobia (environmental subtype), with this being more prevalent in the disaster-impacted sample. Interestingly, however, 30% of the bushfire-impacted sample nominated the bushfire as the worst experience of their life. In stark contrast to McFarlane, Morgan et al.,[57] who conducted a 33-year follow-up of children who experienced the Aberfan landslide (children were aged 4–11 years at the time of the disaster) and reported that 29% of those adults able to be contacted continued to meet criteria for PTSD. Of the disaster-impacted sample, 46% met criteria for a lifetime history of PTSD, compared to 20% in the matched control group.

Referring back to the long-term follow-up of the *Jupiter* survivors,[44] 52% of the adolescents (mean age 14.7 years at time of disaster; mean age 21.3 years at follow-up) had developed PTSD, most commonly in the first few weeks following the disaster. There were few cases of delayed or late-onset PTSD reported. Approximately one-third of the youth had recovered spontaneously within a year of onset, but 34% still met criteria for PTSD between five and eight years after the sinking.

## Risk factors

In relation to preschool-aged children, the following risk factors have been identified for the development of PTSD in infants and young children exposed to war-related trauma: child age, maternal psychopathology, family social support, and maternal and child attachment-related behaviours.[58] It has been suggested that parental and familial factors (e.g., psychopathology, social support) may be more important for younger children in the development of PTSD, given that they are more dependent on their parents/caregivers and family system in order to have their needs met. For example, two meta-analyses have supported a relationship between parental mental health and child PTSD.[59,60] The nature of the trauma can also affect the risk of children developing PTSD; a 2014 meta-analysis by Alisic and her colleagues found that rates of PTSD among trauma-exposed children and adolescents varied according to trauma and gender, with those exposed to interpersonal trauma and girls at particular risk.[23]

The largest meta-analysis to date, of risk factors for PTSD in primary school-aged children and adolescents, was conducted by Trickey, Siddaway, Meiser-Stedman, Serpell, and Field.[61] Trickey et al. found that, across 64 studies of children and adolescents aged 6–18 years of age, factors relating to the subjective experience of the event and post-trauma variables (specifically, low social support, pre-trauma fear, perceived threat to life, social withdrawal, psychiatric comorbidity, poor family functioning, use of cognitive strategies such as distraction and thought suppression, and diagnosis of PTSD at an earlier assessment point following the trauma event) accounted for medium-to-large population effect sizes. Small-to-medium effect sizes were found for the following risk factors: being female, low intelligence, low socioeconomic status, pre- and post-trauma life events, pre-trauma low self-esteem, pre-trauma psychological problems in the youth and parent, post-trauma parental psychological problems, bereavement, time elapsed since the trauma event, trauma severity, and media exposure to the event. Small effect sizes were observed for younger age and race. Interestingly, a risk factor that has only been hypothesised to be important in the development of child PTSD, namely, parenting practices, was not able to be studied in this meta-analysis due to lack of research examining this potential risk factor.[62]

## Relational PTSD patterns: The importance of parents/caregivers

In the meta-analysis reviewed above,[61] poor family functioning was observed to have a medium-to-large population effect size, while pre- and post-trauma psychopathology were observed to have small-to-medium population effect sizes in predicting child PTSD. These factors are only a few of the many variables included in the meta-analysis – clearly, they do not account for all, or even a majority, of the variance in predicting which children and adolescents develop PTSD. Nevertheless, they are important, not least because these are among the few factors listed above that can be targeted for change. Across the age span that makes up childhood and adolescence, parents or caregivers and the family system occupy unique positions of reciprocal influence (in other words, children and adolescents influence their parents' behaviour, and vice versa). These systemic influences can be crucial in relation to seeking and receiving psychological help following traumatic exposure. Children and adolescents very rarely decide themselves that they require professional help with a psychological problem (the exception being school counselling). Even if they were to do so, it would be almost impossible for children and adolescents to independently access such outside assistance. Typically, children and adolescents require their parent or caregiver to make the decision that professional help is warranted and to access that help. When parents and caregivers do not make these decisions, children and adolescents do not receive treatment. Among the many reasons why parents and the family system are important in the assessment and treatment of children and adolescents, the single fact that parents and caregivers determine whether or not treatment is received makes them critically important.

In 2001, Scheeringa and Zeanah[63] proposed three relational PTSD patterns to describe a situation in which posttraumatic stress exists in both an adult caregiver and a young child. (The traumatic stress may be in relation to the same event or different events.) The relational patterns illustrate how the symptomatology of one member of this dyad (typically the parent or caregiver) exacerbates the symptoms of the other member. Although these patterns were proposed for cases where the caregiver also demonstrates PTSD symptomatology, there is significant overlap between these patterns and the substantial literature examining the reciprocal patterns of influence between parents and their anxiety-disordered children. It is suggested, therefore, that the patterns described below should be kept in mind when working with a child of any age with PTSD, regardless of whether or not their caregiver also demonstrates PTSD symptoms (although clearly they are more salient where the caregiver is also experiencing posttraumatic stress). It is also suggested that the second pattern in particular (overprotection) is likely to be reciprocal in nature. As is well documented in the child anxiety literature, when parents respond in an overprotective manner to a child's distress, that response contributes to the maintenance of the distress and elicits continuing overprotection. Understanding these reciprocal relationships is important to avoid falling into the trap of blaming one or other member of the dyad.

The three patterns are:

1. Withdrawn/unresponsive/unavailable
   Owing to their own trauma-induced impairments, the adult is less available to the child. Their ability to read, recognise, and respond sensitively to the child is significantly compromised.

2. Overprotective/constricting
   After a traumatic event occurs, parents and caregivers may become more protective and less granting of autonomy. Although an understandable response, often driven by fear that the child may be

traumatised again, prolonged overprotection can send negative messages to a child, including, 'the world is not safe', and 'there is still something to be frightened of'.[64]

3. Re-enacting/endangering/frightening
A traumatised adult may become preoccupied with reminders of the traumatic event and attempt to discuss the event repeatedly with their child. (Of course, it is also possible that a non-traumatised caregiver who is concerned for their child may engage in this same pattern – of talking with their child at length about the traumatic event and how they are feeling. While avoiding the topic altogether is not helpful either, it is important to find a balance and not to allow the issue to continually dominate interactions with the child).

In concluding their discussion of these relational patterns, Scheeringa and Zeanah[63] recommended that, for young children experiencing posttraumatic stress, caregiver symptomatology must be attended to first. This recommendation will be further discussed below.

## Assessment

Note that many of the screening, assessment, and diagnosis issues discussed in the previous chapter with reference to adults are relevant for children and adolescents also. Clearly, clinical judgement is required to make adjustments as necessary. This section highlights some specific issues to be considered when working with this age group.

### Who to talk to? The low rate of agreement between parents/caregivers and children

There is a long history of studies indicating a low level of agreement between parents/caregivers and children when it comes to internalising symptoms.[65] Many studies have suggested that this pattern holds true for trauma exposure and posttraumatic stress symptoms, with parents and caregivers underreporting children's and adolescent's exposure and symptomatology.[e.g., 66,67-69] Unfortunately, as noted by Stover et al.,[69] in the acute aftermath of a traumatic event, first responders typically refer questions about a child's wellbeing and responses to parents, rather than to the child. Even when children are included in their own assessment, clinicians often give priority to parent or caregiver reports, based on the assumption that parents are more accurate reporters.[70] When it comes to preschoolers, clinicians have traditionally been in the habit of relying solely on parent or caregiver reports.

Caregivers' tendency to underreport their children's trauma exposure and posttraumatic stress symptoms is troubling for a number of reasons:

- Family and social support has been found to be an important protective factor in terms of whether exposure to PTEs converts into a posttraumatic mental health problem in children and adolescents.[71,72] However, if parents or caregivers do not realise that their children have been exposed to a PTE (or that they have been distressed by it), they are not able to provide appropriate support.

- As already noted, parents and caregivers are gatekeepers for their children's access to psychological care. If they do not see that there is a problem, they are not likely to seek intervention for their children.

- Similarly, if parents or caregivers are not aware of their children's exposure to a PTE, they may not be appropriately protective (e.g., in the case of physical or sexual abuse).

The simple conclusion to be drawn from the above information is that, even in the case of preschool-aged children, it is not only important, but necessary, to seek information from the child as well as their

caregiver(s). Shemesh et al.[68] note that parental reports of their children's trauma symptomatology often offer important information about the parents' own level of posttraumatic stress.

## When to assess for trauma exposure and symptoms

In their Practice Parameters, the American Academy of Child and Adolescent Psychiatry[21] (AACAP) recommends, as a minimum standard, inclusion of questions about exposure to potentially traumatic events during any psychiatric assessment of children and adolescents. This recommendation is based on the high degree of trauma exposure experienced by children and adolescents, and the importance of identifying symptoms early. Thus, the guidelines state that *"even if trauma is not the reason for referral, clinicians should routinely ask children about exposure to commonly experienced traumatic events … and if such exposure is endorsed, the child should be screened for the presence of PTSD symptoms"* (p. 418).

Following on from this recommendation, it is important to briefly consider the place of screening in the identification of children and adolescents at risk for developing PTSD. Trauma exposure is a diagnostic requirement for PTSD. And yet, as discussed, not all children and adolescents exposed to a PTE develop PTSD. The use of screening instruments to identify at-risk youth following trauma exposure would, in principle, seem to be a good idea in that it potentially allows for the early identification and treatment of this group. Unfortunately, very few cost-effective and valid screening tools for the identification of childhood PTSD exist.[73] Commonly used screening tools include the University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index for DSM-5 (UCLA PTSD-RI-5),[74,75] the Child Trauma Screening Questionnaire (CTSQ),[76] and the PTSD subscale of the Child Behaviour Checklist (CBCL).[77] The Child Trauma Screen (CTS) is a brief and psychometric trauma screening measure in the public domain that was developed to mirror DSM-5 criteria.[78,79] Although relatively little literature examining the merits of screening children and adolescents for PTSD exists, in line with the adult literature, the developing consensus appears to be that screening of high-risk groups, as opposed to non-targeted population-wide screening (e.g., all youth in a disaster-impacted community) may be the more useful approach. While population-wide screening arguably identifies children who would not otherwise be identified, there are risks associated – including the risk of false positives, and the service/resource implications.

## How to assess for trauma exposure and symptoms

There are a number of freely available structured interviews and questionnaires available to assess post-trauma symptoms and PTSD in children and adolescents, and several have been updated to reflect DSM-5 criteria. A number of reviews of PTSD measures in children and adolescents have been published.[(e.g., 73,80)] These reviews provide useful information regarding the assessment of PTSD in children and adolescents at a level of detail beyond the scope of this chapter. Many of the most commonly used assessment tools are open to the following criticisms:

- They represent downward extensions of measures originally designed for adults and often have not undergone systematic psychometric evaluation in their revised form.

- They often fail to take developmental considerations into account, with scales typically designed for broad age ranges, such as 8–16 years.

- They lack different versions for different informants – the necessity of obtaining information from both the child and parent has already been discussed, yet many of the most commonly used measures do not have parallel versions that allow clinicians to do this.

- They may require intensive training to administer and are very lengthy (pertains to interviews only).

Table 3.1. Assessment tools for children and adolescents

| Instrument | Age range | Interview / questionnaire | Description | Psychometric properties |
|---|---|---|---|---|
| Preschool Age Psychiatric Assessment (PAPA)[81] | 2–5 years | Structured diagnostic interview completed with caregiver | Allows diagnosis of most common childhood psychiatric disorders (ODD, SAD, ADHD, MDD, and PTSD). Includes empirically validated developmental modifications to PTSD criteria. Provides measure of degree of impairment or disability caused by symptoms. | Good test-retest reliability. Adequate intraclass coefficients for the PTSD category.[82] |
| Diagnostic Infant Preschool Assessment (DIPA)[83] | 9 months to 6 years | Structured diagnostic interview completed with caregiver | First interview to be evaluated with children under the age of two years. Allows diagnosis of most childhood psychiatric disorders. Includes empirically validated developmental modifications to PTSD criteria. Provides assessment of child distress and functional impairment caused by symptoms. | Acceptable reliability and validity. Adequate to excellent test-retest reliability.[83] |
| The Trauma Exposure Symptom Inventory – Parent Report Revised (TESI-PRR)[84] | 0–6 years | Checklist completed by caregiver | Checklist of PTEs to which a child may have been exposed – for example, accidents, abuse, witnessing community and domestic violence, terrorism. Not diagnostic. Caregiver indicates the child's age when the event occurred and indicates whether the child experienced reactions to each event. | Currently no psychometric data available |

| | | | | |
|---|---|---|---|---|
| Trauma Symptom Checklist for Young Children (TSCYC)[85] | 3–12 years | Questionnaire completed by caregiver | Assesses post-trauma responses. Produces nine clinical scales and a total scale (providing tentative PTSD diagnosis). Yields several scales designed to ascertain the validity of caregiver reports. Designed specifically for traumatised children in this age range. | Established norms and clinical cut-offs based on standardisation sample (containing only a small number of three- and four-year-olds). Acceptable scale internal consistency, moderate convergent and discriminant validity on the Trauma Symptom Checklist completed by eight to twelve-year-olds.[86] Excellent concurrent validity demonstrated with other parent report measures.[87] |
| The Trauma Exposure Symptom Inventory – Parent Report (TESI-PR)[88] | 3–18 years | Checklist completed by caregiver | Original measure of trauma exposure. Caregivers indicate whether their child has experienced any of a range of trauma events (ranging from accidental injury to sexual assault). Caregivers indicate their child's age for each event endorsed, as well the child's reactions in response to the trauma. | Adequate test-retest reliability |
| Child Trauma Screen[78] | 6–18 years (a version for children <6 years is under development) | Child and caregiver reports | 10-item screening measure of trauma exposure and PTSD consistent with DSM-5 | Sound psychometric properties[79] |
| The Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA)[89] | 8–15 years | Interview completed with youth | Downward modification of the Clinician Administered PTSD Scale CAPS; [90] Assesses current and lifetime trauma exposure and frequency and intensity of | Sound psychometric properties[14,39] |

| | | | PTSD symptoms in relation to these events. | |
|---|---|---|---|---|
| The Clinician Administered PTSD Scale for DSM-5 – Child/Adolescent Version (CAPS-CA-5) | 7–17 years | Interview completed with youth | A modified version of the CAPS-5 that includes age-appropriate items and picture response options. Assesses the 20 DSM-5 PTSD symptoms. | Currently psychometrics only published for the DSM-IV version |
| The Children's PTSD Inventory (CPTSDI)[91] | 6–18 years | Interview completed with youth | Assesses presence of PTSD symptoms relative to specific events. Allows for DSM-IV diagnosis. | |
| The Anxiety Disorders Interview Schedule for Children – Child and Parent Versions (ADIS-IV-C/P)[92] | 7–16 years | Interview completed separately with youth and caregiver (i.e., parallel versions) | Caregiver and child interviewed separately. Diagnoses reached on the basis of the combined information. Allows for diagnosis of all anxiety disorders, depressive disorders and behavioural disorders following DSM-IV criteria. The PTSD module lacks specificity around symptom clusters, and frequency and duration of symptoms. Allows for identification of lifetime or present exposure to specified traumatic events. | Strong psychometric properties for the interviews in their entirety. Psychometric data on the PTSD module less well described, with existing data suggesting excellent inter-rater reliability and fair parent-child agreement.[18] |
| The Kiddie Schedule for Affective Disorders and Schizophrenia for School-Aged Children – Present and Lifetime Version (K-SADS-PL)[93] | 7–17 years | Interview completed separately with youth and caregiver (i.e., parallel versions) | Assesses broad psychopathology using DSM-IV criteria. Allows assessment for lifetime and present PTSD, trauma exposure, and distinction between full and partial PTSD. | Strong psychometric properties for the overall scale. However, the PTSD module has poor test-retest reliability.[93] |
| The Kiddie Schedule for Affective Disorders and Schizophrenia for School- | 7–17 years | Interview completed separately with youth | Revised to be compatible with DSM-5 diagnoses | |

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|---|---|---|---|---|
| Aged Children – Present and Lifetime Version (K-SADS-PL DSM-5) | | and caregiver (i.e., parallel versions) | | |
| The Trauma Symptom Checklist for Children (TSCC)[94] | 8–16 years | Questionnaire completed by youth | Typically used to assess PTSD symptoms following sexual-related trauma, although can be used more generally. Generates six clinical scales (depression, anger, anxiety, posttraumatic stress, sexual concerns, and dissociation). | One of the most thoroughly validated measures, with strong psychometric properties[95,96] |
| The Child PTSD Reaction Index (CPTSD-RI)[97] and the UCLA PTSD Index for DSM-IV (UPID)[98] | 6–18 years | Questionnaire completed by youth. UPID has parallel child, adolescent and parent versions. | The UPID is a revision of the CPTSD-RI. Both assess for frequency and duration of posttraumatic symptoms. Revision necessary because the CPTSD-RI does not address all PTSD symptoms. UPID assesses exposure to 26 different types of trauma and assesses all DSM-IV diagnostic criteria. | Original CPTSD-RI has strong psychometric properties. The UPID has similarly sound properties – see Steinberg et al (2013)[99] and Elhai et al (2013).[100] |
| UCLA Child/Adolescent PTSD Reaction Index for DSM-5 (PTSD-RI-5)[74], updated by Pynoos & Steinberg in 2015. | 7–18 years | Questionnaire (semi-structured interview) completed by youth. A DSM-5 Parent/Caregiver version is also available. | The new DSM-5 version is a semi-structured interview that assesses a child's trauma history and the full range of DSM-5 PTSD diagnostic criteria among school-age children and adolescents. | Strong psychometric properties,[75] including across cultures[101,101] |
| Child Trauma Screening Questionnaire (CTSQ)[102] | 7–16 years | Questionnaire completed by caregiver or youth | Aims to identify children at risk of developing PTSD symptomatology <6 months after an accidental injury. Assesses re-experiencing (five items) and hyperarousal symptoms (five items). | The CTSQ has demonstrated 82% sensitivity and 74% specificity in predicting PTSD among children sustaining accidental injuries at six months follow-up. |

| | | | | |
|---|---|---|---|---|
| The Child PTSD Symptom Scale (CPSS)[103] | 8–18 years | Questionnaire completed by youth | Downward modification of the adult Posttraumatic Diagnostic Scale. Assesses for presence, frequency, and severity of DSM-IV PTSD symptoms in the past month. Able to generate a diagnosis. Allows assessment of functional impairment related to PTSD symptomatology. | Strong psychometric properties |
| Child PTSD Symptom Scale for DSM-5 (CPSS-5)[104] | 8–18 years | Questionnaire completed by youth | DSM-5 revised version of the CPSS. In addition to the questionnaire, there is an interview (CPSS-5-I).[104] | Published psychometrics for the DSM-IV version only. However the CPSS-5-I (based on the DSM-5) has good published psychometric properties.[104] |
| Child and Adolescent Trauma Screen (CATS)[105,106] | 3–17 years | Questionnaire completed by youth (aged 7–17 years) or caregiver (child aged 3–6 years) | A freely accessible measure that screens for PTEs and PTSD symptoms in children and adolescents. Useful as a screening tool and for symptom monitoring. | Good psychometric properties[105] |

Table 3.1 summarises key information about the most commonly used and psychometrically strong assessment tools. Generally speaking, although many of the clinical interviews require training and are quite time-intensive, a structured interview is regarded as a better assessment measure for diagnostic purposes.[20,21] Questionnaires, on the other hand, can be very useful for repeated assessments when monitoring treatment progress over time. The Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA)[89] is arguably the most commonly used diagnostic interview, although it was best suited to research settings and could be cumbersome to use in routine clinical practice. The CAP-CA has been updated to reflect the DSM-5 criteria for children and adolescents aged seven years and above (CAPS-CA-5)[107] and has been simplified to measure symptom frequency only (and not intensity), providing a more easily administered tool for practitioners. The Diagnostic Infant Preschool Assessment (DIPA)[83] is an interview for use with preschool-aged children that includes PTSD as part of a broader assessment of different psychiatric diagnoses. Two self-report questionnaires offer a comprehensive assessment of DSM-5 PTSD symptomatology: the UCLA Child/Adolescent PTSD Reaction Index for DSM-5,[99,100] and the Child PTSD Symptom Scale (CPSS-5) which has also been adapted to an interview version.[103,104] More general measures such as the Child Behavior Checklist (CBCL),[108] which is usually completed by a parent or caregiver, are also often used to complement the more specialised assessment of trauma symptoms. The Child Trauma Screening Questionnaire is an Australian-developed instrument.

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### Considerations for practitioners

- Questions about exposure to commonly experienced potentially traumatic events should be included as standard during any psychiatric assessment of children and adolescents. If such exposure is confirmed, the child should be screened for the presence of PTSD symptoms.

- Children and adolescents are typically dependent upon an adult to present them for assistance. This means that it is just as important to engage with and maintain the relevant adults' motivation to pursue assistance as it is to engage the child or adolescent's.

- Assessment of children and adolescents should include assessment of the system (typically the family) in which they live, as their symptoms will both influence and be influenced by what else is happening within the system.

- The rate of agreement between parents/caregivers and children in relation to internalising symptoms of posttraumatic mental health problems may be very low. Practitioners should not rely solely on an adult's report of a child's internalising symptoms – even if the child is preschool-aged. Where assessment involves very young children (aged zero to three) this should include an evaluation of the behaviour of the child with particular reference to developmental stage and attachment status. Some symptoms of PTSD such as sense of foreshortened future and inability to recall some aspects of the trauma are unlikely to be usefully assessed in this age group.

- In children, the range of potential posttraumatic mental health problems includes behavioural and attentional problems (such as ODD and ADHD) as well as anxiety disorders (such as SAD) and affective disorders.

- For children and adolescents, a structured clinical interview is regarded as a better assessment measure than a questionnaire for making a diagnosis.

## Intervention planning

### Access to psychological care

Many of the issues identified in the intervention planning section of the previous chapter apply equally to working with children and adolescents. However, there are some additional considerations in working with children and adolescents outlined in this section.

Although efficacious treatments for PTSD in children and adolescents exist, only a minority of children with posttraumatic mental health problems engage in treatment. For instance, of traumatised children and adolescents living in urban settings, up to 90% are reported to terminate treatment early.[e.g., 109] It has been repeatedly noted that In the aftermath of a community-wide event, such as a natural disaster, children and families do not access existing care pathways (such as child and adolescent mental health services). One of the most promising strategies for engaging and keeping children, adolescents, and families in treatment has been found to be the delivery of services in schools.[110] This is discussed in greater detail below.

### What's different about working with children and adolescents?

Although the core principles of each of the major therapeutic approaches used is very similar when applied to either children, adolescents, or adults experiencing posttraumatic stress, there are several considerations that need to be kept in mind when working with children and adolescents.

1   Parents/caregivers need to be involved to some degree. There are many reasons for this:

   a   As previously discussed, the significant adults around children and adolescents function as gatekeepers in terms of access to and continued engagement in therapy. In order to ensure that children and adolescents return for therapy sessions, parents/caregivers need to be convinced that the work proposed is worthwhile. This is particularly true of trauma-focussed cognitive behavioural therapy (TF-CBT), where one of the core elements (the telling and retelling of the trauma narrative) often seems counter-intuitive to parents, who tend to be concerned that this will serve only to re-traumatise their child. Time spent explaining the rationale for this kind of strategy, as well as answering any questions parents might have, is essential for the successful engagement of families.

   b   The majority of children and adolescents (obviously this varies depending on the age and temperament of the child) benefit from parental 'coaching' around the use of strategies they are learning in therapy. Thus, parents or caregivers can play a crucial role in helping children and adolescents to generalise and maintain any gains they make in a therapy situation.

   c   Many of the homework tasks set in therapeutic approaches such as TF-CBT require the active participation of a parent/caregiver (e.g., *in vivo* exposure hierarchies, reward systems, and behavioural experiments).

   d   Despite the documented tendency for parents to underreport their children's trauma exposure and symptomatology, they are often able to provide important information that children may have forgotten, were not aware of, or do not consider to be important. It is also important to regularly get parents' perspectives on how the family as a whole is functioning.

   e   As discussed, parents and children influence each other. It is important for clinicians to regularly (if informally) assess how parents are functioning. (This is particularly important following exposure to a community-wide trauma such as a natural disaster, but research has also shown that a significant proportion of parents develop trauma symptomatology themselves after their child has been exposed to a PTE – such as a car accident – in which they themselves were not involved).

f   Parents are experts when it comes to their children (although, as previously discussed, this expertise may be compromised if parents themselves are struggling). An excellent example of this is the way in which parents are able to interpret or 'translate' their preschool-aged child's body language for therapists.

2   Programs need to be tailored to meet the developmental needs of an individual child. It is not usually appropriate to simply take an adult treatment protocol and try to modify it for a child or adolescent. Well-validated protocols designed specifically for children and adolescents of all ages now exist, and these should be used in preference to attempting to modify an adult program. At all times, the developmental stage and capabilities of the child should be kept in mind – remembering that chronological age does not necessarily equate to levels of cognitive functioning and developmental mastery.

3   Children tend to respond well to highly visual materials. Educationalists also recommend the use of different media in working with adolescents, who are used to being exposed on an everyday basis to a variety of media.

## The role of parents/caregivers in treatment

Somewhat unusually in the field of child and adolescent mental health, there are some types of trauma exposure resulting in PTSD (child sexual and physical abuse) where, historically, treatment has been offered to parents alone, without involving children. In other types of trauma exposure (e.g., accidental injury, natural disaster), treatment has historically focussed on the child. Thus, there are different questions to be considered depending on the type of trauma exposure examined. In the child sexual and physical abuse literature, the focus is on how three distinct types of treatment (parent-only, child-only, and parent + child) compare. In other literatures, the focus is on whether involving parents in treatment enhances outcomes for children and adolescents. Unfortunately, this area has not been well researched to date. However, early work with children who have experienced sexual abuse[e.g., 111] suggests that treating parents in isolation from their children may not be the best way to help children overcome PTSD. In this study, Deblinger et al.[111] delivered TF-CBT to parents alone, children alone, or parents plus children. These three conditions were then compared with community treatment as usual. The results indicated that the combined parent and child condition produced superior results. Runyon, Deblinger and Steer[112] compared a parent-only group cognitive behavioural therapy (CBT) treatment with a parent plus child group CBT treatment in 60 youth aged 7–13 years who had experienced physical abuse. The combined intervention was found to produce greater improvements in posttraumatic symptoms and parenting skills compared to the parent-only condition.

Studies have also indicated that parental distress is negatively related[113,114] and parental support is positively related[115] to children's outcomes (as measured by PTSD symptomatology), following TF-CBT. In these studies, the trauma exposure was to a terrorist act and sexual abuse.[114,115]

However, a 2011 study[116] found that posttraumatic symptoms in adult caregivers did not compromise treatment outcomes for children. Thus, in circumstances where the adult caregiver is also experiencing posttraumatic mental health problems, it is preferable to treat the caregiver before treating the child, but if this is not possible, the emerging evidence supports going ahead and treating the child.

## Does it matter where treatment occurs?

Increasingly, treatments for child PTSD are being offered within a school environment, often by school professionals.[117] In an important paper, Jaycox et al.[118] demonstrated the significance of location. This study

allocated non-treatment-seeking children who were experiencing posttraumatic stress 15–24 months following Hurricane Katrina to one of two active treatments: TF-CBT delivered individually in a clinic setting, versus group-based cognitive behavioural intervention for trauma in schools (CBITS). Both treatments were offered free of charge as part of Project Fleur-de-lis.[119] The average age of children was 11.6 years. Although both treatments produced comparable and significant reductions in PTSD symptoms, the crucial difference was in uptake. Within the CBITS condition, 98% and 91% of children commenced and completed treatment, respectively. Within the TF-CBT condition, only 37% of children attended the initial assessment. Of these children, 32% were found not to meet PTSD criteria on the K-SADS. Thus, 23% of allocated children commenced treatment in this condition, with 15% completing treatment. The authors noted that "CBITS was far more accessible to families who may not have been willing or able to participate in individual, clinic-based treatment" (p. 230).

Clearly, it will not always be possible or appropriate to offer treatment within the school setting, particularly where an individual traumatic event is the focus. In situations where many children in the same school were exposed, however – such as a natural disaster or terrorist attack – school-based group interventions should be considered seriously as a first-line response.

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### Considerations for practitioners

- As noted in reference to assessment, children and adolescents are typically dependent upon an adult to present them for treatment and ensure that they attend subsequent appointments. This means that it is just as important to engage with and maintain the relevant adults' motivation to pursue treatment as it is to engage with the motivation of the child or adolescent.

- For children and adolescents, treatment needs to be tailored to meet the developmental needs of the individual. Protocols that have been designed specifically for children and adolescents should be used in preference to attempting to modify an adult treatment protocol.

- When the adult caregiver of a child with PTSD is also experiencing posttraumatic mental health problems, their symptoms may exacerbate each other's. For this reason, it may be preferable to treat the caregiver first or in parallel.

- In the treatment of children and adolescents, parents/caregivers need to be involved to some degree, not only because of their gatekeeper role in terms of access to and continued engagement in therapy, but also because of their role in helping to generalise and maintain treatment gains, direct participation in homework tasks (e.g., reward systems), and providing important information that the child may have forgotten, be unaware of, or not recognise the importance of.

- The delivery of services in schools may be an effective strategy for engaging and keeping children, adolescents, and families in treatment.

- Parent/caregiver involvement in assessment and treatment is desirable for children and adolescents with ASD or PTSD.

- Practitioners who provide mental health care to children, adolescents, or adults with ASD and PTSD, regardless of professional background, must be appropriately trained to ensure adequate knowledge and competencies to deliver recommended treatments. This requires specialist training, over and above basic mental health or counselling qualifications.

## Source and contributors

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