How to Treat Children and Adolescents with Trauma-Related Disorders

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Markus A. Landolt, Marylène Cloitre, and Ulrich Schnyder

At the end of this volume, after having reviewed the basic concepts of child trauma, the currently available evidence-based or evidence-informed treatment approaches, and the various settings in which traumatized children are treated, we will summarize the current knowledge on assessment and treatment of trauma-related psychological disorders among children and adolescents. The first section of this book, specifically the chapters on epidemiology and public health issues, has clearly shown that childhood trauma and its effects are a major issue across the globe. The variety of events that can lead to trauma-related disorders in children and adolescents is large and includes all forms of child maltreatment, war, terrorism, natural disasters, accidents, and learning about the sudden death or severe injury of a loved one. Children's and adolescents' exposure to potentially traumatic events is not only much more common than has previously been believed but can also have large negative effects on development in physical, psychological, and social domains across the lifespan, especially when trauma happens in early childhood and when it is interpersonal, chronic, and the result of an accumulation of multiple different types of events.

M.A. Landolt (✉)
Department of Psychosomatics and Psychiatry, University Children's Hospital
University of Zurich, Zurich, Switzerland
e-mail: Markus.Landolt@kispi.uzh.ch

M. Cloitre
Division of Dissemination and Training, National Center for PTSD, Palo Alto, CA, USA

Psychiatry and Behavioral Sciences, Stanford University, Palo Alto, CA, USA
e-mail: Marylene.Cloitre@nyumc.org

U. Schnyder
Department of Psychiatry and Psychotherapy, University Hospital Zurich,
Zurich, Switzerland
e-mail: ulrich.schnyder@access.uzh.ch

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From a public health perspective, the most important measure to reduce exposure to trauma and ensuing morbidity is primary prevention. It is beyond the scope of this book to present and discuss the interventions that are necessary on individual, family, community, and society-at-large levels to prevent trauma in childhood. However, as clinicians, we always have to keep in mind that prevention of trauma exposure is the best "treatment." We therefore should support all measures that aim at reducing the number of children exposed to any kind of trauma. If primary prevention fails, and it sadly still very often does, identification and treatment of affected children is crucial both from an individual and a public health and economic viewpoint. In the following, we will summarize the current knowledge on how to best achieve this goal.

24.1 Assessment

Providing effective treatments that are tailored to the needs of the individual child requires a thorough prior assessment of the child. Assessment should be multi-informant and should include a detailed trauma history of the child and the family (e.g., by using the "Maltreatment and Abuse Chronology of Exposure" [MACE] Scale by Teicher and Parigger 2015). Importantly, given that comorbid symptoms are very common, especially among children with chronic interpersonal trauma, assessment should be broad and not only focused on symptoms of PTSD. As described in Chap. 4 of this book, clinicians should use empirically validated measures with good psychometric properties. Descriptions and links to instruments assessing PTSD are available through the websites of the *US National Child Traumatic Stress Network* (http://www.nctsn.org/resources/online-research/measures-review) and the *International Society for Traumatic Stress Studies* (http://www.istss.org/assessing-trauma.aspx). Many of the DSM-IV measures have now been updated to meet the new DSM-5 criteria. However, these instruments focus on PTSD in school-age children. Currently, there is no DSM-5-based empirically validated instrument available to assess acute stress disorder in children and adolescents and no measure to assess the new preschool type of PTSD. Moreover, while the formulation of ICD-11 PTSD and CPTSD symptom profiles for children and adolescents have been described within the disorders, psychometrically sound measures have yet to be developed.

24.2 Secondary Preventative Interventions After Trauma Exposure

Secondary preventative measures aim at reducing acute stress symptoms and decreasing long-term psychological morbidity through interventions in the first 4 weeks after a potentially traumatic event (see Chap. 6 for an overview). We propose that interventions in the immediate aftermath of a traumatic event (*acute* interventions) differ from those provided between day 2 and 1 month after the event (*early* interventions; see Fig. 24.1). While acute interventions aim at stabilizing the

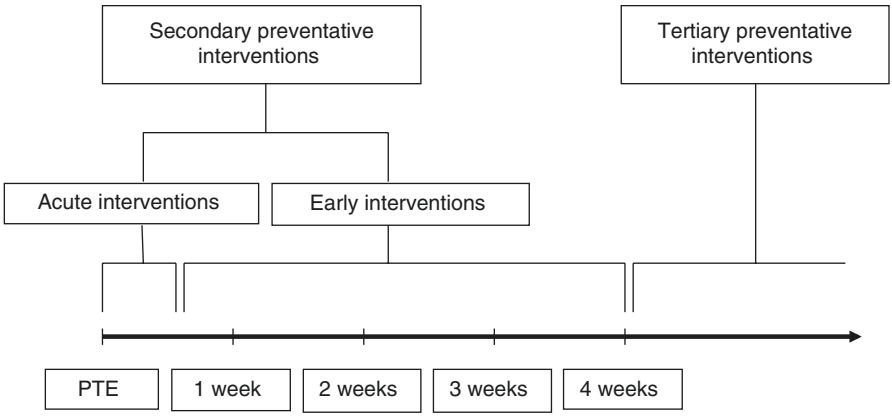

Fig. 24.1 Suggested classification of secondary preventative interventions according to time post-trauma. *PTE* potentially traumatic event

individual on-site, early interventions focus on psychoeducation, trauma processing, and coping skills to reduce acute symptoms and decrease the risk for longer-term traumatic stress symptoms.

Acute Interventions

Although there is not much evidence on interventions in the acute phase, there are currently two standardized intervention programs that are in quite wide use:

- *Psychological First Aid (PFA)* as a universal modular approach has been established for (on-site) interventions in the immediate aftermath of trauma, especially after natural disasters (Brymer et al. 2006). The PFA Field Guide has also been adapted for use in schools (Brymer et al. 2012).
- The "*D-E-F*" *protocol* (aiming to reduce *D*istress, provide *E*motional support, and remember *F*amily) which provides evidence-based guidelines for trauma-informed pediatric care during the acute phase of medical treatment (Stuber et al. 2006).

Notably, none of these interventions has been studied with regard to its effect in reducing acute distress and preventing long-term posttraumatic stress in children and adolescents. Therefore, the use of such acute on-site interventions is currently still not evidence based.

Early Interventions

As shown in Chaps. 6 and 7, current evidence with regard to early interventions suggests that a stepped procedure with so-called selected/targeted interventions might be the best approach to treat children in the early posttrauma phase (Fig. 24.2). There are nowadays empirically validated screeners available that allow early identification of children at risk. For school-age children the use of the *Child Trauma Screening Questionnaire* (CTSQ; Kenardy et al. 2006) or the *Screening Tool for*

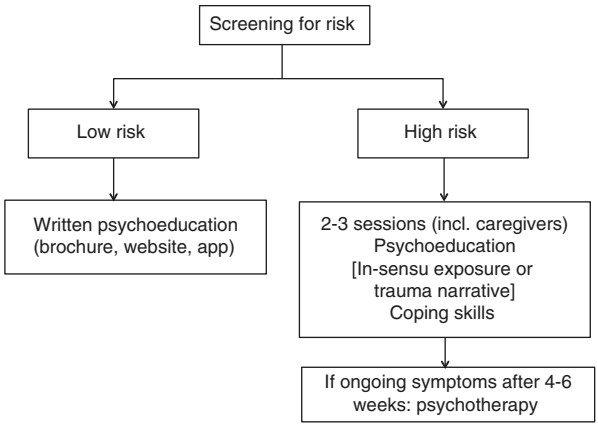

Fig. 24.2 Risk-based stepwise targeted early intervention after single trauma

Early Predictors of PTSD (STEPP; Winston et al. 2003) can be recommended. For preschoolers, the only available risk screener is the *Pediatric Emotional Distress Scale – Early Screener* (PEDS-ES; Kramer et al. 2013). Children at risk should then receive a standardized psychological intervention such as *Child and Family Traumatic Stress Intervention* (CFTSI, see Chap. 7). Importantly, based on the current findings, such an intervention should be provided to both the child and their primary caregivers and should include psychoeducation and discussion of coping skills that are targeted to the specific symptoms of the individual child (Kramer and Landolt 2011). It is unclear if a detailed in sensu exposure or reconstruction of the event (trauma narrative) needs to be part of such an intervention. For children at low risk for longer-term distress and their caregivers, written information (brochures, websites, apps) can be provided and should be sufficient. This stepped procedure takes into account the fact that many children are resilient after single trauma. Therefore, it seems reasonable to provide more intensive and expensive treatments only to individuals at risk for longer-term distress, while children at no or low risk and their parents are only provided with written psychoeducation.

Although the evidence on the effectiveness of early interventions in children and adolescents is still sparse (Kramer and Landolt 2011), such a stepped procedure with targeted interventions is currently the gold standard for school-age children. Importantly however, we do not have any evidence for preschool-age children at the moment. A stepped procedure in this age group is therefore not evidence based but still highly recommended – especially since we also have a validated screener for young children (Kramer et al. 2013).

24.3 Psychotherapy

As presented in this volume, PTSD and other trauma-related disorders in children and adolescents can be successfully treated. There are evidence-based or evidence-informed therapies available for all ages and many types of trauma, and the evidence

clearly suggests that psychotherapy is considered the first choice of treatment. Although various guidelines (e.g., NICE guidelines, AACAP practice parameters, etc.), reviews, and meta-analyses (e.g., Gillies et al. 2012; Gutermann et al. 2016; Leenarts et al. 2013; Miller-Graff and Campion 2016; Morina et al. 2016) on effectiveness of trauma therapy in childhood are available, recommendations across these documents are quite inconsistent. This is mainly due to methodological reasons such as different definitions of evidence levels and different inclusion and exclusion criteria for selected studies. One psychotherapeutic treatment that is recommended in all guidelines and that has been found to be effective in all meta-analyses is CBT, specifically trauma-focused CBT (TF-CBT; see Chap. 8). CBT showed medium (in controlled trials) to large (in uncontrolled analyses) effect sizes with regard to symptoms of PTSD in the most recent meta-analyses by Gutermann et al. (2016) and Morina et al. (2016). Moreover, CBT proved to be effective also with regard to depression and anxiety symptoms. Since cognitive therapy (see Chap. 9), prolonged exposure therapy for adolescents (see Chap. 10), and narrative exposure therapy for children (KIDNET; see Chap. 11) are based on the same or very similar theoretical concepts, they can be recommended too, although meta-analyses on RCTs are still lacking. Eye movement desensitization and reprocessing therapy (EMDR; see Chap. 13), child–parent psychotherapy (CPP; see Chap. 15), and parent–child interaction therapy (PCIT; see Chap. 15) have a weaker evidence base than TF-CBT, but empirical support is sufficient for recommendation of use in clinical practice. However, evidence at this moment is insufficient to determine the level of effectiveness of other treatments, including Skills Training in Affective and Interpersonal Regulation (STAIR) plus Narrative Therapy – Adolescent Version (SNT-A; see Chap. 12), Attachment Self-Regulation and Competency Therapy (ARC; see Chap. 14), and Trauma Systems Therapy (TST; see Chap. 17). For these treatments, preliminary support is provided from quasi-experimental comparative studies, uncontrolled pilot studies, and case reports.

Currently, there is no evidence to conclude that children and adolescents with particular types of trauma are more or less likely to respond to certain psychological therapies versus others (Gillies et al. 2012). Many different treatment approaches and techniques are used with traumatized children and adolescents. To meet the specific needs of the individual child and to consider the severity and the degree of impairment of the child's PTSD symptoms, these approaches and techniques are very often combined by practitioners (multimodal treatment approach). Most treatments that proved to be effective employ methods such as psychoeducation, behavioral and emotional regulation, coping skills training, and cognitive processing, and they all directly address the traumatic experience (mostly through exposure and/or creation of a trauma narrative). Similar to adults (Schnyder and Cloitre 2015), there is nowadays very convincing evidence for children across all ages that treatment approaches that directly address the traumatic experiences are superior to nonspecific therapies in reducing trauma-related symptoms. In addition, and again similar to adults (Schnyder et al. 2015), the following commonalities between many evidence-based treatments can be noted and therefore seen as core components of child trauma therapy (see Table 24.1):

Table 24.1 Proposed components of child trauma therapy

Phase-based treatment approach, if needed and appropriate according to assessment
Treatment has to be age appropriate and tailored to the specific family and culture of the child
Inclusion of caregivers and other relevant systems (e.g., school) to optimize the child's recovery environment
Psychoeducation of child, caregivers, and other relevant systems
Training of emotional and behavioral regulation skills
Cognitive processing of dysfunctional trauma-related thoughts
Reconstruction and/or reconsolidation of the traumatic memories through exposure and/or creation of a trauma narrative
Address the child's competencies and future

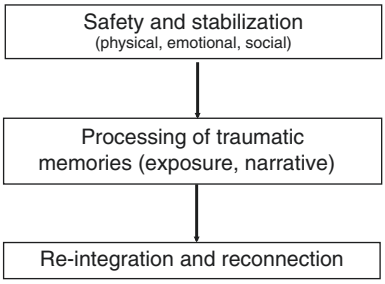

Fig. 24.3 Phase-based approach to trauma therapy

- Many therapies implicitly or explicitly use a *phase-based approach* to treat traumatized children, especially when the child has been exposed to multiple interpersonal traumatic events at a young age (Fig. 24.3). The *first step* of intervention should always be to protect the child from further exposure to traumatic events. If necessary, the child's safety needs to be ensured by implementing child protection measures. Also, if the child is emotionally very instable (e.g., acute suicidality) or severely injured (e.g., suffering great pain), appropriate stabilizing measures, including hospitalization or pharmacotherapy, need to be taken before trauma-focused treatment can begin. The *second step* of treatment includes the processing of the traumatic memories. Depending on the specific approach, this is done in a more explicit (e.g., TF-CBT, prolonged exposure, cognitive therapy, KIDNET) or more implicit way (e.g., EMDR). Finally, in a *third step*, reintegration of the child and future-related issues are the main topics of therapy. Not all treatment approaches conceptualize this last part of treatment very well.
- Trauma therapies need to consider *developmental issues*. Most treatment approaches that are currently available are specifically tailored for school-age children, and a recent meta-analysis has shown that psychological treatments are more effective in older children (Gutermann et al. 2016). There is, however, sufficient evidence showing that traumatized infants and toddlers can be successfully treated if using appropriate approaches such as child–parent psychotherapy (see Chap. 15) or parent–child interaction therapy (see Chap. 16). These treatments are quite different from the methods that are used in older children. For instance,

in CPP, the order of interventions is very flexible, and nonverbal methods such as play and physical contact are explicitly incorporated in the protocol. The fit between the therapy method and the *child's developmental stage* is very important and probably one of the most important criteria for the selection of the specific treatment method.

- Since a child, especially a younger child, is highly dependent on *caregivers*, most treatment approaches include the child's caregivers, if available. A better understanding of the child's symptoms (psychoeducation), improvement of parenting skills by helping the caregiver learn skills to manage difficult child behavior, and as a consequence improvement of the parent–child relationship are the main goals. Studies have indeed shown that inclusion of the caregivers is associated with a greater reduction of symptoms (Gutermann et al. 2016). While, for example, TF-CBT (see Chap. 8) and Trauma Systems Therapy (see Chap. 17) have conceptualized the inclusion of caregivers (and other relevant systems) into therapy in an elaborated way, other treatment approaches such as narrative exposure therapy for children (KIDNET; see Chap. 11), eye movement desensitization and reprocessing therapy (EMDR; see Chap. 13), or Skills Training in Affective and Interpersonal Regulation plus Narrative Therapy – Adolescent Version (SNT-A; see Chap. 12) are mainly provided to the individual child or youth without including the parents very much or at all.
- A crucial part of trauma therapy is *psychoeducation*. All methods presented in this volume highlight the importance of informing the child, their caregivers, and other relevant social systems about trauma and its consequences. Although different approaches provide information in a somewhat different way (based on their specific model), psychoeducation provides a map for understanding both the child's symptoms and the treatment.
- Training of the child's *emotional and behavioral regulation skills* is a fundamental part of many methods, especially the CBT approaches. As nicely shown in Chap. 17, traumatized children are often triggered by known or unknown trauma-related cues. It is important that the child becomes aware of this and learns strategies to better regulate his or her emotions and behaviors.
- As specifically highlighted by cognitive therapy, TF-CBT, and other CBT approaches, *dysfunctional cognitions* ("unhelpful thoughts") play an important role in the development and maintenance of symptoms. Children and adolescents with trauma-related disorders often have altered fundamental beliefs or schemas (e.g., seeing the world as a dangerous place, people as harmful, and oneself as helpless). It is therefore important to address these cognitions in therapy and help the child and caregivers understand how trauma has changed their views of the self, the family, the world, and the future and find new ways to think about these issues. Importantly, therapy needs to make sure that the child does not define him- or herself as a trauma victim but as a survivor with a promising future.
- Many treatment approaches focus on the *disturbance* or even *failure of the memory system* which is typical for trauma-related disorders. Reconstruction and reconsolidation of the traumatic memory are seen to be necessary parts of successful treatment. Research has shown that retrieval of traumatic memories

induces a transient and instable state during which memories can be updated, modified, or even deleted. This process is called reconsolidation (Lane et al. 2015). The need to reconstruct traumatic memories, to put them into a context, and to reinstall a sense of mastery is well founded on neuroscience research showing that in traumatized children, the amygdala is overreactive and the hippocampus and medial prefrontal cortex are downregulated (see Chap. 5). Notably, the different treatment approaches use quite different techniques to address this failure of memory and to modify reactivated traumatic memories. While creation of a trauma narrative ("to put the traumatic experience into words") and in sensu or in vivo exposure is essential for CBT approaches, it is, for example, not the case in EMDR where in sensu exposure is performed but the processing of the traumatic memories does not need to be put into words. In our view, there are probably two mechanisms that are effective in trauma treatment: (1) extinction of conditioned fear responses which is, based on learning theories, best achieved through in sensu and/or in vivo exposure (without a need to create a trauma narrative) and (2) updating of traumatic memories through a process of reconsolidation that incorporates new emotional experiences. This is probably best achieved by helping the individual create a narrative which puts the traumatic events in the correct context (place, time). As suggested by Lane et al. (2015), the essential ingredients of therapeutic change would include three steps: (a) reactivation of old memories, (b) engaging in new emotional experiences that are incorporated into these reactivated memories via the process of reconsolidation, and (c) reinforcing the integrated memory structure by practicing a new way of behaving and experiencing the world in a variety of contexts.

- Finally, although not conceptualized very well in many approaches, trauma therapy should also address the child's *competencies* and his/her *future perspectives*. Treatment approaches should not only focus on symptoms but also on enhancing daily functioning, development, and resiliency. From a patient's perspective, symptom severity may be of less interest than actual day-to-day functioning. The level of functional impairment in traumatized children may not necessarily be best captured by assessment of or change in severity of PTSD symptoms. Also, children with multiple interpersonal traumatic experiences have many negative beliefs and expectations with regard to their future. It is therefore essential to address these issues in therapy.

24.4 Pharmacotherapy

Medication may be used as second-line treatment for PTSD or other trauma-related disorders in a number of situations. In some instances, psychotherapy, and empirically supported trauma-focused psychotherapy in particular, is not available due to a lack of healthcare resources or because the child lives in a remote place or is unable to travel and see a psychotherapist for other reasons such as physical illness or handicap. Moreover, many children have comorbid psychological conditions for which safe and effective pharmacological treatments are available, for instance,

ADHD, OCD, or depression. It should be noted that there is currently no sufficient empirical support for any pharmacological compound as a treatment for pediatric PTSD. Whatever the reason may be to prescribe medication (see Chap. 18), however, this should always be done within the framework of a stable and trusting therapeutic relationship.

24.5 Treatment Contexts

This volume also addresses the fact that assessment and delivery of treatment occur in many settings other than outpatient clinics and schools. The chapters on this topic provide useful information suggesting that services in venues such as hospitals, foster care, and the judicial system require additional resources for therapies to be effective. These include the education of the support staff and the creation of "trauma-informed" environments so that the behavior of the children and youth are understood and responded to in an appropriate way. The addition of screening measures in these environments is critical as a means to identify appropriate treatments. Lastly it is important to develop procedures and devote resources to create pathways from one service to another (e.g., inpatient care to residential treatment to outpatient care) to provide a trauma-informed continuum of care that supports consistent and sustained services relevant to the child and family.

24.6 Outlook

Although many evidence-based treatments for trauma-related psychological disorders are available, there are still some significant limitations with regard to the current knowledge. First, while some promising approaches for children with complex trauma and comorbidity have been developed in the past years (e.g., ARC, SNT-A, TST), evidence regarding these treatments is still limited. Second, there is a significant lack of studies among preschool-age children, specifically below the age of 4 years. As noted in several chapters in this volume, the number of young traumatized children is very high, and the effects of trauma with regard to long-term outcomes are particularly adverse in this age group. It is therefore crucial to develop and evaluate evidence-based treatments for young children in the future. Third, as highlighted by Carrion and Kletter (2012), future treatment protocols should better integrate current findings on neurobiological mechanisms in the conceptualization of psychotherapeutic techniques. Specifically, new research on memory reconsolidation may be of particular importance (Lane et al. 2015). This may also be promising with regard to early interventions after trauma where a combination of psychological and pharmacological interventions may prove helpful in the future. Fourth, while evidence-based treatments for trauma-related disorders are available, they remain underutilized in clinical practice. Obviously, many clinicians still provide treatments that are not evidence based (e.g., pharmacotherapy as first-line treatment). Dissemination of effective treatments is therefore a crucial issue in the

future. Fifth, we need more information about how to find the right approach for the individual child with his/her specific symptoms and cultural and familial background. Studies should examine factors that are relevant for an optimal fit between the individual symptomatic child and the treatment method. Specifically, the role of culture is not studied appropriately. The relative acceptability and effectiveness of treatment delivery methods (e.g., play therapy, storytelling, role playing) and format (group versus individual) are likely to depend on cultural mores and remain to be investigated. Sixth, the use of telemedical approaches, websites, apps, games, and social media in the treatment of traumatized children might be promising and should be studied in greater detail. Significant progress has been made regarding awareness of child trauma worldwide. The current wave of recognition will hopefully continue and carry forward with it additional development and dissemination of engaging, adaptable, and effective interventions for children and youth.

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