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The Enduring Imprint of Early Adversity: Post-Traumatic Stress Disorder (PTSD) Following Childhood Maltreatment – A Comprehensive Narrative Review of Etiology, Neurobiology, Diagnosis, and Therapeutic Interventions

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Abstract :

Background: Adverse childhood experiences represent a particularly potent etiological risk factor for the development of Post-Traumatic Stress Disorder (PTSD) triggering a unique clinical syndrome with chronic developmental consequences and significant neurobiological changes.

Objective: This narrative review outlines the complex neurobiology of early life trauma-induced.

PTSD and summarizes the current literature on the etiological, neurobiological, diagnostic, and therapeutic approaches of this illness.

Methods: Scholarly work and contemporary literature regarding childhood abuse, developmental pathways, neurobiological changes, and empirical modalities were critically evaluated and integrated into a thematic narrative framework.

Results: The evidence supports marked hypothalamic-pituitary-adrenal (HPA) axis dysfunction, structural and functional changes in the amygdala, hippocampus, and prefrontal cortex, and polygenetic inheritance of the disorder. Empirically supported treatments such as Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) and Eye Movement Desensitization and Reprocessing (EMDR) show strong evidence of efficacy, whereas emerging complementary therapies have a fledgling evidence base.

Conclusion: A developmental and nuanced conceptualization of PTSD is essential for optimal clinical management. Critical lacunae include the lack of robust longitudinal studies and the compelling need for culturally congruent treatment models to minimize the enduring effects of early-life adversity.

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INTRODUCTION

In this review, the researchers concluded that childhood maltreatment, including emotional abuse and neglect, is a potent risk factor for the enduring psychological effects of Post-Traumatic Stress Disorder in adulthood. Adverse childhood experiences have physical effects on the brain, altering how key parts of the brain develop and respond to stress, fear, or challenging memories. Although there are science-backed therapies that show great promise for healing, there is no one-size-fits-all approach. Overall, this study highlights the need for individualised treatment plans and further research on culturally appropriate care for all survivors. Background Post-Traumatic Stress Disorder (PTSD) is a psychiatric aftereffect experienced by people after the occurrence or witnessing of a large traumatic event – such as armed conflict, sexual violence, catastrophic natural occurrences, childhood abuse, and much more. The clinical picture of PTSD is characterized by 4 main clusters of symptoms: persistent intrusive recollections, diligent avoidance of trauma-associated stimuli, pervasive negative alterations in cognition and mood, and marked dysregulation in arousal and reactivity (American Psychiatric Association, 2013). Neurobiologically, PTSD is closely linked with significant dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis and observable

structural changes in key neural circuits that include the amygdala, hippocampus, and prefrontal cortex (Yehuda et al., 2015). This disorder often leads to significant functional impairments in interpersonal, occupational, and social realms. In addition, there is a high degree of comorbidity of other psychiatric disorders with PTSD, including major depression, anxiety disorders, and substance use disorders (Brady et al., 2000). While the effects of trauma do not always result in the development of PTSD, the combined effect of a series of individual vulnerability factors (antecedent traumatic experiences, lack of strong social support, genetic predispositions, etc.) increases the risk of the condition developing when they all occur together (Breslau et al., 1999). Evidence-based psychotherapies, such as trauma-focused cognitive-behavioral therapy (CBT) and eye movement desensitization and reprocessing (EMDR), along with selective serotonin reuptake inhibitors (SSRIs) and other pharmacotherapeutic treatments, are all therapeutic interventions used to treat PTSD (Watts et al., 2013). Identifying the trauma and immediately effective intervention are crucial in reducing the potential severity and chronicity of PTSD. The literature indicates that childhood maltreatment is one of the most striking and impactful risk factors for the later development of PTSD, and epidemiological data indicate that approximately $\frac{1}{4}$ of all children have been physically maltreated in their childhood (World Health Organization, 2024). Empirical studies date back to a point wherein it was shown that between 30% and 50% of those who have a history of childhood abuse will go on to develop PTSD (van der Kolk, 2003). More specifically, childhood sexual abuse has been shown to double to quadruple the risk of developing PTSD (Chen et al., 2010). Gender differences are found as well, with females having about twice the rate of developing PTSD following similar traumatic exposures (Tolin & Foa, 2006). In the United States, a significant 78% of all adult females with PTSD have a history of childhood abuse, assault, or molestation, which are those events that are etiologically related to the disorder (Kessler et al., 1995). What is important is that emotional mistreatment and neglect are extremely strong predictors of adult-onset PTSD, often more potent than physical forms of maltreatment (Spinazzola et al., 2005). This is particularly true of the population of former foster care youth for whom a disturbing 25% prevalence rate for PTSD has been estimated, which is notably higher than rates of combat veteran populations (Pecora et al., 2005). These early challenges have lasting impacts in part through long-term neurobiological changes brought about by maltreatment, which have a significant effect on brain regions that play a vital role in regulating stress, including the amygdala and hippocampus (Teicher & Samson, 2016). Childhood abuse in all modalities (physical, sexual, and emotional) has significant and lasting harmful effects on an individual's mental health trajectory and wellbeing. The psychiatric morbidity suffered by survivors of such adversity is significantly increased, including but not limited to depressive disorder, anxiety disorders, PTSD, and substance use disorders (Carr et al., 2013). Emotional abuse and neglect, especially, are potent indicators of adult psychopathology and lower self-esteem (Norman et al., 2012). In addition, childhood abuse experiences are inextricably linked to attachment disruptions, marked disturbances in social relationship development and maintenance, and global problems with trust in adulthood (Cook et al., 2005). These neurodevelopmental effects are widespread, including abnormal stress responsiveness and structural and functional changes in key brain regions, such as the hippocampus and prefrontal cortex (Teicher & Samson, 2016). Therefore, the emotional regulation deficits are often seen in survivors, and

there is an increased prevalence of self-injurious activities and suicidality (Gilbert et al., 2009). Early life trauma also triggers a chain reaction of negative physical health consequences, such as a higher likelihood of developing cardiovascular disease and chronic pain syndromes, as well (Felitti et al., 1998). The negative impacts of these can have long-term effects on academic achievement, work performance, and relationships with others. Fundamental to addressing these adverse outcomes and building resilience in affected people are strong social support networks, timely and effective early interventions, and the systematic adoption of trauma-informed approaches to care. Recent studies have highlighted the importance of genes in the complex relationship between childhood maltreatment and an increased risk of developing PTSD. Large genome-wide association studies (GWAS) have been able to identify 95 different genome-wide loci associated with PTSD, greatly enhancing our understanding of the multifactorial nature of PTSD heritability (Nievergelt et al., 2024). Specifically, certain genes, such as FKBP5, are related to early traumatic events, which produce epigenetic changes that have been shown to increase one's vulnerability to PTSD (Binder et al., 2008). In addition, emerging evidence indicates that more than 50% of the heritability of childhood maltreatment is due to genes, suggesting that there may be a shared genetic basis with PTSD (Ter Kuile et al., 2023). The overall results support the potential use of genetic testing in tailored mental health treatment for trauma-exposed persons. If a child has a family history of mental illness (e.g., depression, anxiety), they are a lot more likely also to develop PTSD, especially if they have experienced trauma (Mayo Clinic, 2024). Parental psychopathology, including PTSD, is known to be a significant risk factor for the onset of PTSD in their children. At the same time, they are children and adolescents (National Center for PTSD, n.d.). In addition, parental substance use disorders (SUDs) often create a dysfunctional family environment, which makes children more vulnerable to experiencing traumatic life events and to developing PTSD. Children living in families with at least one parent with an SUD are at increased risk for several types of victimization that are known to be strong predictors of PTSD: physical abuse, neglect, and emotional abuse (Substance Abuse and Mental Health Services Administration, 2017). These converging results clearly point to the need for early and targeted interventions and strong family support to reduce the transmission of trauma and PTSD across generations for individuals with a mental health and/or substance use history. The biopsychosocial implications outlined here, especially the specific etiological factors and long-term impacts on the development of child PTSD after childhood traumatic abuse, call for a careful and important integration of current treatment approaches. Thus, the primary goal of the present review is to fully describe and critically evaluate the state of the art in the field of interventions that are specifically designed for PTSD symptoms as a result of childhood maltreatment.

Methodology and Selection Criteria

<i>Methodological Aspect</i>	Description & Approach
<i>Review Type & Objectives</i>	Comprehensive narrative review.

	Objectives: To elucidate etiology, neurobiology, diagnostic paradigms, and therapeutic interventions for PTSD originating from childhood maltreatment through critical synthesis and scholarly appraisal of extant literature.
Literature Search Strategy	Extensive, though not systematically exhaustive. Prioritized high-impact, peer-reviewed contemporary contributions (principally from the last two decades) and seminal historical works. Employed ancestral searching of reference lists from pivotal articles.
Databases & Sources Searched	Key Databases: PubMed/MEDLINE, PsycINFO, Scopus, Web of Science. Supplemental: Google Scholar. Sources: Academic journals, foundational monographs, authoritative clinical practice guidelines.
Search Terms & Refinement	Sophisticated array of terms (e.g., "Post-Traumatic Stress Disorder," "Childhood Maltreatment," "Developmental Trauma," "Neurobiology of Trauma," "TF-CBT," "EMDR"), often combined with developmental population terms and refined with Boolean operators and Medical Subject Headings (MeSH terms).
Inclusion & Selection Criteria	Stringent criteria emphasizing: 1. Thematic Pertinence: Direct relevance to etiology, phenomenology, neurobiology, diagnostics, or therapeutic management of PTSD post-childhood abuse. 2. Source Type Preference: Peer-reviewed empirical studies (quantitative, qualitative, mixed-methods), authoritative systematic reviews, meta-analyses, robust theoretical expositions, evidence-based clinical guidelines. 3. Quality Assessment: Methodological robustness of empirical studies, theoretical coherence of conceptual papers, works with substantial heuristic value or representing landmark contributions. 4. Language: Primarily English-language publications.
Information Synthesis	Predominantly qualitative, thematic, and integrative. Involved meticulous analysis to: • Identify convergent empirical findings. • Articulate divergent theoretical perspectives and scholarly debates. • Delineate prominent conceptual frameworks. • Discern critical lacunae in extant knowledge. The resulting information was organized into a coherent narrative architecture aligned with the review objectives.
Nature of Review & Limitations	Narrative review, diverging from prescriptive protocols of systematic reviews/meta-analyses. Acknowledges inherent potential for authorial selectivity in literature inclusion, interpretation, and emphasis. Synthesis is qualitative and conceptual, precluding formal quantitative data aggregation. Goal: Comprehensive, critically insightful overview, not exhaustive itemization.

Table 1: Methodological Framework for the Comprehensive Narrative Review on Post-Traumatic Stress Disorder (PTSD) Following Childhood Maltreatment



Figure 1: A conceptual model illustrating the development and progression of Post-Traumatic Stress Disorder (PTSD) following childhood abuse, from initial trauma through neurobiological changes, psychological symptoms, core PTSD symptom clusters, to associated comorbidities

Comprehensive Assessment and Diagnostic Formulation of Post-Traumatic Stress Disorder

This study examines how PTSD is diagnosed and treated using the Comprehensive Assessment and Diagnostic Formulation of PTSD. Due to the nature of the extended assessment required for Post-Traumatic Stress Disorder (PTSD), one must conduct a structured inquiry into the cognitive, affective, and behavioural symptoms with validated psychometric instruments, similar to the way that is done in somatic medicine. Assessment of optimal functional impairment, one of the key components of PTSD, requires a multi-modal approach, combining semi-structured clinical interviews with validated self-report questionnaires of psychosocial functioning (Rodriguez et al., 2012). This approach controls for potential confounders that would exist in single-method approaches, such as interpersonal issues, memory problems, cultural factors, or the clinician's orientation. It is especially important when using this method in forensic or compensation situations to provide a sound and legally defensible evaluation (Kozarić-Kovacic & Kocijan-Hercigonja, 2001). In high-volume environments, initial screening instruments are essential (Bufka & Camp, 2010). Validated questionnaires for trauma exposure include the Trauma Assessment for Adults (Gray et al., 2009), Life Events Checklist (Gray et al., 2004), Trauma Life Events Questionnaire (Kubany et al., 2000), and Brief Trauma Questionnaire (Schnurr et al., 2002). Short-form PTSD symptom screeners will determine the need for a detailed diagnostic interview, including the Primary Care PTSD Screen (PC-PTSD) (Prins et al., 2003), the Short Form PTSD Checklist-Civilian (SF-PTSD) (Lang & Stein, 2005), SPRINT (Connor & Davidson, 2001), and the Trauma Screening Questionnaire (TSQ) (Brewin et al., 2000). The Structured Clinical Interview for DSM-IV (SCID) is a clinical tool used to obtain a diagnosis consistent with the DSM-IV-TR in a semi-structured format, using both

open-ended and scripted questions (Gorgens, 2011). New nosological changes in PTSD with DSM-5 included new classifications under the umbrella of 'Trauma- and Stressor-Related Disorders,' as well as significant changes to the polythetic symptom criteria and an increased focus on dimensional symptom levels for screening and symptom monitoring throughout the course of the disorder (LeBeau et al., 2014). DSM-5 also finally included the concept of 'subthreshold presentations' that, especially in later life, are often accompanied by major functional impairment (Levin et al., 2014). The Clinician-Administered PTSD Scale (CAPS-1), a carefully crafted interview and checklist of symptom frequency and intensity using standardized prompts and behaviorally-anchored scales, meets these more advanced DSM-5 requirements and has high reliability and validity as a gold-standard PTSD assessment [69].

Table 2: Principal Instruments for the Assessment of Post-Traumatic Stress Disorder

<i>Tool/Instrument</i>	<i>Type</i>	<i>Purpose</i>
<i>SCID</i>	Clinical Interview	Diagnosis based on DSM criteria
<i>CAPS-1</i>	Clinical Interview	Frequency/intensity assessment: gold standard
<i>PC-PTSD</i>	Questionnaire	Primary care screening
<i>Life Events Checklist</i>	Questionnaire	Trauma exposure assessment
<i>Trauma Screening Questionnaire (TSQ)</i>	Questionnaire	Brief PTSD symptom screener

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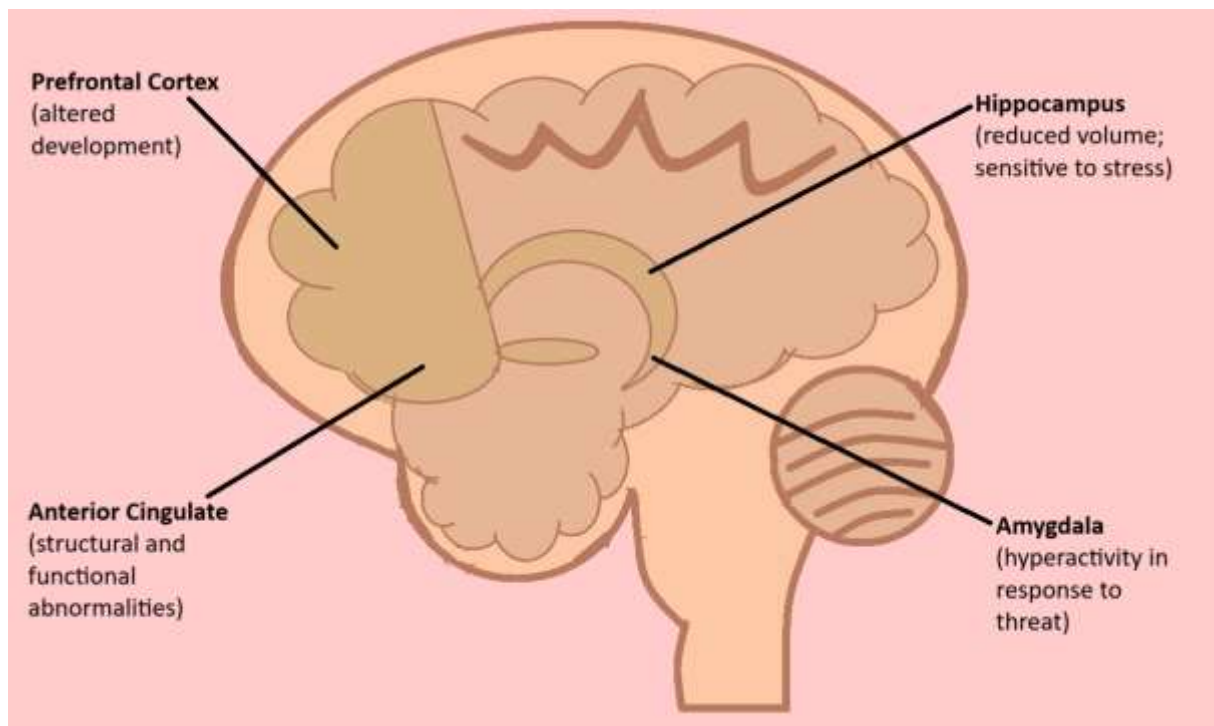


Figure 2: Neurobiological Manifestations of PTSD Following Childhood Abuse: Key Brain Regional Alterations

Therapeutic Interventions for Post-Traumatic Stress Disorder: An overview of current evidence-based interventions. Most people who have been exposed to trauma recover with a gradual decrease in symptoms over time (Morina et al., 2014; Sayed et al., 2015), but a large number also develop Post-Traumatic Stress Disorder (PTSD), a disabling disorder defined by persistent, intrusive symptoms which disrupt biological, psychological, and social functioning and lead to significant functional impairments (Vahia, 2013). To counter this, a wide range of therapeutic interventions evaluated in the empirical field have been developed. This section reviews some of the major modalities critically: Trauma Focused Cognitive Behavioral Therapy (TF-CBT), Eye Movement Desensitization and Reprocessing (EMDR), Psychodynamic

Therapy and pharmacological modalities. 1. Trauma Focused-Cognitive Behavioral Therapy (TF-CBT) TF-CBT is a well-established, well-evidenced and well-tested approach for reducing trauma-related distress in children. It was designed for survivors of child sexual abuse, but has been adapted for a wider range of traumatic experiences, such as physical and psychological maltreatment (Deblinger et al., 2011). TF-CBT is a multi-component, trauma-specific intervention that seamlessly combines core principles of CBT with trauma-specific components, delivered through the PRACTICE framework (Psychoeducation/Parenting, Relaxation, Affective Regulation, Cognitive Coping/Restructuring, Trauma Narrative, In Vivo Exposure, Conjoint Sessions, Enhancing Safety). At least 8 sessions, which are actively involving both the child and caregiver(s), are usually recommended (Thielemann et al., 2024). Rigorous comparative efficacy studies demonstrate TF-CBT's specific efficacy in reducing core PTSD symptoms and in reducing concurrent comorbid symptoms of anxiety and behavioral dysregulation (Cohen et al., 2004; Deblinger et al., 2006). A thorough meta-analysis by Thielemann et al. verified that TF-CBT was more effective than other therapeutic approaches in treating Post-Traumatic Stress Symptoms (PTSS) and psychiatric co-morbidities (Thielemann et al., 2022). Eye Movement Desensitization and Reprocessing (EMDR) EMDR is a very structured, integrative therapeutic technique that combines elements of guided imaginal exposure, resource development, cognitive restructuring, and self-regulation skills enhancement. The unique feature is the addition of bilateral sensory stimulation (such as guided eye movements) without any loss of the focus on the traumatic memory and present-moment stimulation (Shapiro et al., 2007). The main goal is to process and rework distressing memories that have become adaptive in a carefully outlined, eight-phase procedure that includes history taking, preparation, assessment, desensitization/reprocessing, installation of positive cognitions, body scan, closure, and reassessment (Shapiro et al., 2007). EMDR has been found to be effective in the treatment of pediatric PTSD, but also has been shown to be effective in cases where troubling memories play a role in symptomatology, including phobias and mood disorders (Leuning et al., 2023). Systematic reviews and meta-analyses provide compelling evidence of how effective EMDR is in the substantial reduction of symptoms of pediatric PTSD and positive results in comorbid anxiety and depression (Chen et al., 2018). It is frequently recommended that EMDR should be used in a multimodal treatment program, such as integrative family therapy for a broad-based treatment of deep-seated childhood trauma (Gold, 2000; Briere & Lanktree, 2022). TF-CBT and EMDR share techniques that target core symptoms of PTSD and often co-occurring psychiatric conditions (International Society for Traumatic Stress Studies, 2024). TF-CBT is generally the recommended first-line treatment for children who are in psychiatric treatment, the current ISTSS guidelines, with fewer primary recommendations for EMDR (International Society for Traumatic Stress Studies, 2024), and the Australian guidelines are much more cautious, highlighting the importance of further research. 3. Psychodynamic Therapy Based on the theory of the psyche, psychodynamic approaches involve uncovering unconscious conflicts, defense mechanisms, and early relational patterns in the treatment of PTSD (Schottenbauer et al., 2006). Reddemann (2009) particularly defined a psychodynamically oriented model in the context of complex PTSD which helps people to explore the embedded traumatic experiences and to understand the pervasive nature of these experiences (Abbas & Macfie, 2013). Empirical studies of psychodynamic therapy (PDT) for treating PTSD are relatively few in comparison to CBT or EMDR (Ponniah &

Hollon, 2009), but evidence indicates that it might be effective. For example, a 12-session psychodynamic therapy was shown to significantly decrease PTSD and suicidal behaviors in combat veterans in the short-term (Hendin, 2014). 4. Pharmacological Interventions Pharmacological interventions as PTSD treatment is an option that is often needed or suitable to the individual when psychotherapies are not available/practical or patients prefer a medication approach and when there are significant psychiatric comorbidities such as major depressive disorder (National Center for PTSD, n.d.). There is a large amount of clinical trial evidence to support the first-line prescription of Selective Serotonin Reuptake Inhibitors (SSRIs) (Brady et al., 2000; Marshall et al., 2001). Currently, the FDA approved only the SSRIs sertraline or paroxetine for the treatment. All decisions about pharmacotherapy, though, must be carefully made for each person, taking into account their previous responses to medication, other health issues, and personal preferences.

Table 3: Summarized Evidence-Based Interventions for PTSD Due to Childhood Abuse

<i>Intervention Type</i>	Description & Components	Strength of Evidence
<i>TF-CBT</i>	PRACTICE model; tailored for children; caregiver involvement	Strong
<i>EMDR</i>	8-phase protocol with bilateral stimulation	Moderate to Strong
<i>Psychodynamic Therapy</i>	Insight-oriented; helps process trauma narratives	Moderate
<i>Pharmacotherapy (SSRIs)</i>	Sertraline, paroxetine; FDA approved for PTSD	Moderate

Alternative and Complementary Interventions While there is clear evidence that psychotherapies such as Cognitive Behavioral Therapy (CBT) and Prolonged Exposure therapy (PE) are effective in treating Post-Traumatic Stress Disorder (PTSD) (Steenkamp et al., 2015), residual symptoms or therapy non-response is common in a large proportion of PTSD patients (Boyd et al., 2018), and high rates of early therapy drop out (Goetter et al., 2015; Kehle-Forbes et al., 2016). In addition to clinician concerns about the potential for adverse effects of some exposure-based therapies (Boyd et al., 2018; Al Jowf et al., 2023; Gapen et al., 2016), these factors highlight the urgent need for effective alternative or complementary therapies. Mindfulness-based interventions, creative art therapy, and Animal-Assisted Interventions (AAI) are promising interventions. **Mindfulness-Based Interventions** One of the most popular "present centered" therapies is mindfulness-based stress reduction (MBSR) (Lang, 2017) which utilizes formal meditation, mindful movement, stress management didactics and home practice, and has a demonstrated ability to reduce PTSD symptomatology across a variety of populations with high acceptability and low dropout rates (Banks et al., 2015; Cole et al., 2015; Earley et al., 2014; Goldsmith et al., 2014; Kearney et al., 2013; Possemato et al., 2016; Polusny et al., 2015 and Gallegos et al., 2015). Synergizing CBT with the principles of MBSR, Mindfulness-Based Cognitive Therapy (MBCT) enables metacognitive shifts, which aids in decentering from distressing thoughts and can benefit on recurrent symptoms (Boyd et al., 2018; Lang, 2017).

MBSR and MBCT reduce rumination, increase attentional control and foster acceptance, which helps to alleviate preoccupation with trauma, anxiety, hyperarousal and aversive affective states such as shame and guilt; these effects are associated with improved emotional regulation, thereby reducing PTSD symptoms (Banks et al., 2015; Lang, 2017; Frewen et al., 2015). There are specific practices, such as Metta (loving-kindness) meditation, that develop compassion and psychological flexibility (Boyd et al., 2018; Frewen et al., 2015). Other techniques, such as Mantra Repetition Practice (MRP) (Bormann et al., 2014), Transcendental Meditation and MBX (mindfulness based on exposure therapy) (King et al., 2016; King et al., 2016), have demonstrated preliminary promise and need further rigorous research (Lang, 2017). Critically, some mindfulness exercises may not be appropriate or re-traumatizing for patients with severe trauma history, and a careful, individualised approach must be taken, ensuring sensitivity to the patient's readiness and trauma sensitivities (Boyd et al., 2018). Creative Arts Therapies Recently, creative arts therapies, which comprise visual arts, music, drama, dance/movement, poetry and therapeutic writing (Malchiodi, 2020) have gained increasing interest in the field of PTSD (Wang et al., 2025). These modalities are thought to engage neural pathways involved in emotional reactivity and traumatic memory processing (Malchiodi, 2020; van der Kolk, 2015) and represent an alternative pathway to trauma resolution, especially when verbalization is limited (van der Kolk, 2015; Wang et al., 2025). Preliminary research shows potential for reducing physiological stress responses (Wang et al., 2025) and for reducing symptomatology, allowing non-verbal expression, followed by a coherent construction of a trauma narrative through verbal expression (Schouten et al., 2019; Bolwerk et al., 2014). Many investigations are based on expert opinion or case reports, however (Wang et al., 2025; Schouten et al., 2019), there is a comparatively lack of large-scale empirical studies. While promising, recent pilot studies that have shown feasibility (Schouten et al., 2019) and meta-analyses indicating symptom relief (Wang et al., 2025), there remains a critical need for more in-depth and methodologically rigorous research with standardized methodologies and PTSD-specific outcomes in order to delineate efficacy definitively.

Animal-Assisted Interventions (AAIs) The International Association of Human-Animal Interaction Organizations (2018) defines an AAI as "structured, goal-oriented activities that use animals to provide a therapeutic effect" (p. 1) and the U.S. Naval Center for Combat and Operational Stress Control (n.d.) defines it as "Goal-directed, structured activities in which animals are used to achieve a therapeutic effect" (p. 3). In terms of approaches, there are formalized Animal-Assisted Therapy (AAT) by licensed professionals and less formalized Animal-Assisted Activities (AAA), as well as service dogs (Hediger et al., 2021). Canines, although most prevalent, are not the only species of interest in interventions—equines and cetaceans are becoming increasingly popular (U. S. Naval Center for Combat and Operational Stress Control, n.d.; Hediger et al., 2021). Theorized to be effective, AAIs are guided by a professional who is trained in the dynamics of the human-animal bond, and in part are believed to be effective because animal relationships are less complex than human relationships (Cloitre et al., 1996). Meta-analyses have shown that AAIs can significantly reduce the symptoms of PTSD and comorbid depression and that the results are similar to traditional treatments (Hediger et al., 2021; O'Haire et al., 2015; and Germain et al., 2018). There are still many ethical issues about animal welfare (e.g., injury risk, lack of care, induction of stress) (U.S. Naval Center for Combat and Operational Stress Control, n.d.) and methodological problems in AAI research (e.g., small sample size, heterogeneity of

participants, research bias) (U.S. Naval Center for Combat and Operational Stress Control, n.d. and Hediger et al., 2021). So, there is a need for more methodologically sound studies to comprehensively assess effectiveness and develop strong, ethical guidelines that focus on animal welfare.

<i>Intervention Type</i>	<i>Examples / Components</i>	<i>Benefits Noted</i>
<i>Mindfulness-Based Approaches</i>	MBSR, MBCT, loving-kindness meditation	Reduces anxiety, hyperarousal, shame
<i>Creative Arts Therapy</i>	Visual arts, dance, music, poetry	Helps with emotional regulation, memory
<i>Animal-Assisted Interventions</i>	Dogs, horses, dolphins	Comfort, reduced symptoms, engagement

Table 4: Complementary and Alternative Therapies

Future Directions and Recommendations

Early intervention and strong preventive strategies have significant potential to reduce lasting neurobiological and psychological effects of traumatic experiences (van der Kolk, 2003; Teicher & Samson, 2016) and therefore proactive approaches are necessary. The principles of trauma-informed care are a cornerstone in the system-wide adoption of trauma-informed care principles. Trauma interventions that are empirically supported, such as cognitive-behavioral therapy (CBT) and psychoeducational interventions can help children control the consequences of trauma, building resilience (Spinazzola et al., 2005). Training to improve emotional skills in children and positive parenting approaches for parents can reduce child abuse and promote positive development (World Health Organization, 2024). The community level is essential, especially when it comes to school-based mental health services, peer support groups, and other infrastructures, for providing safe, supportive environments, and for fostering early recovery and decreasing the risk of PTSD (Pecora et al., 2005). Childhood abuse is highly heterogeneous and the resulting reactions to trauma are highly individualized, making it important to use individual treatment paradigms when addressing PTSD (Cloitre et al., 1996). No single therapeutic approach is suitable; instead there is a need for judicious, dynamic titration of interventions, based on individual trauma histories, psychological characteristics and neurobiological changes (Teicher & Samson, 2016). This involves the flexibility to use evidence-based treatment modalities (such as EMDR, trauma-informed CBT), possible psychopharmacological augmentation and developmental stage, gender and cultural considerations. Optimizing outcomes and ensuring sustained recovery, improving engagement, reducing risk of relapse and supporting long-term well-being are all priorities of social and psychosocial support, and treatment of comorbidities (Chen et al., 2010). Child abuse survivors face several barriers to accessing appropriate treatment for PTSD, such as cost, lack of adequate insurance, provider availability, particularly trauma specialists, and stigma associated with the condition, all of which disproportionately impact rural and underserved communities (World Health Organization, 2024). Innovative approaches to increase access include the use of telepsychiatry, and/or primary and mental health care systems are integrated to identify and

refer patients early, as well as promoting sliding-scale or publicly funded programs. Community education and culturally responsive outreach efforts, as well as culturally competent and linguistically responsive services, are essential for minimizing stigma and maximizing reach and impact of services for different populations (Pecora et al., 2005). To fully understand the long term effects of PTSD after child abuse, longitudinal research designs are needed. Symptoms may last into adulthood and become more complex, with impacts on emotional regulation, relationships and physical health (De Bellis, 2001). Longitudinal studies are extremely useful for establishing the effectiveness of early interventions and for uncovering moderating factors that affect outcomes of resilience and adverse outcomes over a long period of time (Teicher & Samson, 2016). Monitoring an individual's trajectory over decades of development provides a comprehensive view of how early adversity interacts with developmental stages and events to inform better, individualized and "just in time" interventions and policy and resource allocation. Research initiatives that are culturally sensitive and have a nuanced understanding of the various PTSD presentations in multicultural populations are fundamental. The identification, expression, interpretation, and treatment preferences for mental illness are heavily influenced by cultural beliefs (Gone, 2013). Survivors from immigrant or marginalized communities could experience multiple barriers such as increased stigma, mistrust of the institutional system, and a lack of culturally responsive services (Kirmayer et al., 2011). Culture impacts the nature of symptoms (e.g., somaticization, distress internalization). Recognizing cultural specificity and implementing congruent assessment and intervention strategies is critical for diagnostic accuracy, appropriateness of treatment, and equal access to treatment, which will ensure that treatment models are valid and effective in a variety of contexts.

Conclusion This narrative review aimed to clarify and critically evaluate the current arms-length of interventions specifically designed to address the unique trauma of childhood maltreatment as a source of post-traumatic stress disorder (PTSD) symptoms. The thought process that led to the preparation of this manuscript was complex, yet ultimately aimed at four goals: to outline the complex etiological pathways, to examine the deep neurobiological underpinnings, to examine the current diagnostic paradigm, and to critically review both established and new therapeutic interventions relevant to this very vulnerable clinical group. The scope was deliberately limited to synthesizing the current therapeutic strategies, as a result of the etiological complexities and the long term developmental implications of childhood PTSD. Now, after the previous disquisition, in which a careful compilation of many-sided information has shed light on a few salient points. The strong and consistent association between childhood maltreatment (physical, sexual, and emotional) and later life PTSD is well established, and emotional maltreatment and neglect are particularly strong predictors of adult-onset psychopathology. From a neurobiological perspective, PTSD has been closely linked to heightened dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis and identifiable structural and functional changes in key neural circuits, such as the amygdala, hippocampus, and prefrontal cortex. In addition, the studies of genetic susceptibility, such as identification of specific genomic loci and gene-environment interactions, and the effects of familial disposition to mental illness and parental psychopathology, have highlighted the multi-factorial inheritance and interaction of risk factors. The challenges in pediatric populations and the shifts in paradigm brought about by the DSM-5, like the re-categorization of PTSD, and increased dimensional severity ratings, have been critically examined. The review has explored the traditional

therapeutic methods – trauma-informed cognitive behavioral therapy and EMDR – alongside methods showing promise but not as widely supported – such as creative arts therapy and animal-assisted therapy. The importance of this comprehensive overview is the fact that it is specifically about a subset of PTSD, which has a different developmental history and a wide range of lasting consequences. The heuristic value of this synthesis is that it provides a comprehensive, insightful, and sophisticated overview, which is designed to inform clinical practice and future research efforts, and brings together diverse strands of evidence to a coherent conceptual tapestry. This extensive review, however, has also been used to precisely identify critical lacunae in the existing knowledge base. Some new and developing therapeutic techniques, including creative arts therapy and animal-assisted interventions, are not routinely practiced because of their lack of compelling, empirical support, suggesting that they are worthy of additional systematic research. The critical role of longitudinal research designs to identify long-term effects of childhood abuse-related PTSD and the long-term effectiveness of interventions should not be underestimated. At the same time, the need for culturally responsive research and the creation of culturally-competent interventions is essential to meet the varying manifestations and requirements of multicultural populations and to work to remove cultural obstacles to receiving culturally relevant services. Overall, this manuscript has sought to offer more than just an up-to-date listing of available publications; it has attempted to offer a comprehensive, critically insightful and sophisticated overview of the symptomatology of Post-Traumatic Stress Disorder that is associated with childhood maltreatment. We hope this work makes a meaningful contribution to a more nuanced and historically informed perspective as we systematically interrogate core theoretical constructs, salient epidemiological data, elucidation of neurobiological mechanisms, diagnostic complexities, and therapeutic interventions. In the end, this kind of awareness is essential for ongoing research and development of treatments and the alleviation of the suffering caused by the long-lasting effects of early life adversity.

Statement of Ethics

All authors declare no conflict of interest.

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Data Availability Statement

In the interest of scholarly transparency and to provide a resource for future researchers, a dataset containing the complete list of all references reviewed and synthesized for this narrative review has been made available in the references section.

REFERENCES

1. American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). <https://doi.org/10.1176/appi.books.9780890425596>
2. Yehuda, R., Hoge, C. W., McFarlane, A. C., Vermetten, E., Lanius, R. A., Nievergelt, C. M., Hobfoll, S. E., Koenen, K. C., Neylan, T. C., & Hyman, S. E. (2015). Post-traumatic stress disorder. *Nature reviews. Disease primers*, 1, 15057. <https://doi.org/10.1038/nrdp.2015.57>
3. Brady, K. T., Killeen, T. K., Brewerton, T., & Lucerini, S. (2000). Comorbidity of psychiatric disorders and posttraumatic stress disorder. *The Journal of clinical psychiatry*, 61 Suppl 7, 22–32.

4. Breslau, N., Chilcoat, H. D., Kessler, R. C., & Davis, G. C. (1999). Previous exposure to trauma and PTSD effects of subsequent trauma: results from the Detroit Area Survey of Trauma. *The American journal of psychiatry*, 156(6), 902–907. <https://doi.org/10.1176/ajp.156.6.902>
5. Watts, B. V., Schnurr, P. P., Mayo, L., Young-Xu, Y., Weeks, W. B., & Friedman, M. J. (2013). Meta-analysis of the efficacy of treatments for posttraumatic stress disorder. *The Journal of clinical psychiatry*, 74(6), e541–e550. <https://doi.org/10.4088/JCP.12r08225>
6. World Health Organization. (2024, June 1). Child maltreatment. <https://www.who.int/news-room/fact-sheets/detail/child-maltreatment>
7. van der Kolk B. A. (2003). The neurobiology of childhood trauma and abuse. *Child and adolescent psychiatric clinics of North America*, 12(2), 293–ix. [https://doi.org/10.1016/s1056-4993\(03\)00003-8](https://doi.org/10.1016/s1056-4993(03)00003-8)
8. Chen, L. P., Murad, M. H., Paras, M. L., Colbenson, K. M., Sattler, A. L., Goranson, E. N., Elamin, M. B., Seime, R. J., Shinozaki, G., Prokop, L. J., & Zirakzadeh, A. (2010). Sexual abuse and lifetime diagnosis of psychiatric disorders: systematic review and meta-analysis. *Mayo Clinic proceedings*, 85(7), 618–629. <https://doi.org/10.4065/mcp.2009.0583>
9. Tolin, D. F., & Foa, E. B. (2006). Sex differences in trauma and posttraumatic stress disorder: a quantitative review of 25 years of research. *Psychological bulletin*, 132(6), 959–992. <https://doi.org/10.1037/0033-2909.132.6.959>
10. Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of general psychiatry*, 52(12), 1048–1060. <https://doi.org/10.1001/archpsyc.1995.03950240066012>
11. Spinazzola, J., Ford, J. D., Zucker, M., van der Kolk, B. A., Silva, S., Smith, S. F., & Blaustein, M. (2005). Survey Evaluates Complex Trauma Exposure, Outcome, and Intervention Among Children and Adolescents. *Psychiatric Annals*, 35(5), 433–439. <https://doi.org/10.3928/00485713-20050501-09>
12. Pecora, P. J., Kessler, R. C., Williams, J., O'Brien, K., Downs, A. C., English, D., White, J., Hiripi, E., White, C. R., Wiggins, T., & Holmes, K. (2005). Improving family foster care: Findings from the Northwest Foster Care Alumni Study. *Casey Family Programs*. <https://www.casey.org/media/FinalReport.pdf>
13. Teicher, M. H., & Samson, J. A. (2016). Annual Research Review: Enduring neurobiological effects of childhood abuse and neglect. *Journal of child psychology and psychiatry, and allied disciplines*, 57(3), 241–266. <https://doi.org/10.1111/jcpp.12507>
14. Carr, C. P., Martins, C. M. S., Stingel, A. M., Lemgruber, V. B., & Jurueña, M. F. (2013). The role of early life stress in adult psychiatric disorders. *Revista Brasileira de Psiquiatria*, 35(2), 115–121. <https://doi.org/10.1590/1516-4446-2012-0895>
15. Norman, R. E., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. *PLoS medicine*, 9(11), e1001349. <https://doi.org/10.1371/journal.pmed.1001349>
16. Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., DeRosa, R., Hubbard, R., Kagan, R., Liataud, J., Mallah, K., Olafson, E., & van der Kolk, B. (2005). Complex Trauma in Children and Adolescents. *Psychiatric Annals*, 35(5), 390–398. <https://doi.org/10.3928/00485713-20050501-05>

17. Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E., & Janson, S. (2009). Burden and consequences of child maltreatment in high-income countries. *Lancet* (London, England), 373(9657), 68–81. [https://doi.org/10.1016/S0140-6736\(08\)61706-7](https://doi.org/10.1016/S0140-6736(08)61706-7)
18. Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American journal of preventive medicine*, 14(4), 245–258. [https://doi.org/10.1016/s0749-3797\(98\)00017-8](https://doi.org/10.1016/s0749-3797(98)00017-8)
19. Nievergelt, C. M., Maihofer, A. X., Atkinson, E. G., Chen, C. Y., Choi, K. W., Coleman, J. R. I., Daskalakis, N. P., Duncan, L. E., Polimanti, R., Aaronson, C., Amstadter, A. B., Andersen, S. B., Andreassen, O. A., Arbisi, P. A., Ashley-Koch, A. E., Austin, S. B., Avdibegović, E., Babić, D., Bacanu, S. A., Baker, D. G., ... Koenen, K. C. (2024). Genome-wide association analyses identify 95 risk loci and provide insights into the neurobiology of post-traumatic stress disorder. *Nature genetics*, 56(5), 792–808. <https://doi.org/10.1038/s41588-024-01707-9>
20. Binder, E. B., Bradley, R. G., Liu, W., Epstein, M. P., Deveau, T. C., Mercer, K. B., Tang, Y., Gillespie, C. F., Heim, C. M., Nemeroff, C. B., Schwartz, A. C., Cubells, J. F., & Ressler, K. J. (2008). Association of FKBP5 polymorphisms and childhood abuse with risk of posttraumatic stress disorder symptoms in adults. *JAMA*, 299(11), 1291–1305. <https://doi.org/10.1001/jama.299.11.1291>
21. Ter Kuile, A. R., Hübel, C., Cheesman, R., Coleman, J. R. I., Peel, A. J., Levey, D. F., Stein, M. B., Gelernter, J., Rayner, C., Eley, T. C., & Breen, G. (2023). Genetic Decomposition of the Heritable Component of Reported Childhood Maltreatment. *Biological psychiatry global open science*, 3(4), 716–724. <https://doi.org/10.1016/j.bpsgos.2023.03.003>
22. Mayo Clinic. (2024). Post-traumatic stress disorder (PTSD) – Symptoms and causes. <https://www.mayoclinic.org/diseases-conditions/post-traumatic-stress-disorder/symptoms-causes/syc-20355967>
23. National Center for PTSD. (n.d.). PTSD in children and adolescents. U.S. Department of Veterans Affairs. https://www.ptsd.va.gov/professional/treat/specific/ptsd_child_teens.asp
24. Substance Abuse and Mental Health Services Administration. (2017). Children living with parents who have a substance use disorder (Publication No. PEP17-FAU-16). U.S. Department of Health and Human Services. https://www.samhsa.gov/data/sites/default/files/report_3223/ShortReport-3223.html
25. Krug, E. G., Mercy, J. A., Dahlberg, L. L., & Zwi, A. B. (2002). The world report on violence and health. *Lancet* (London, England), 360(9339), 1083–1088. [https://doi.org/10.1016/S0140-6736\(02\)11133-0](https://doi.org/10.1016/S0140-6736(02)11133-0)
26. Butchart A, Phinney Harvey A, Mian M, Furniss T, Kahane T. (2006). Preventing child maltreatment: a guide to taking action and generating evidence. Geneva: World Health Organization.
27. Sedlak, A.J., Mettenburg, J., Basena, M., Petta, I., McPherson, K., Greene, A., and Li, S. (2010). Fourth National Incidence Study of Child Abuse and Neglect (NIS–4): Report to Congress. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families.

28. Chaffin, M., Kelleher, K., & Hollenberg, J. (1996). Onset of physical abuse and neglect: psychiatric, substance abuse, and social risk factors from prospective community data. *Child abuse & neglect*, 20(3), 191–203. [https://doi.org/10.1016/s0145-2134\(95\)00144-1](https://doi.org/10.1016/s0145-2134(95)00144-1)
29. Brown, J., Cohen, P., Johnson, J. G., & Salzinger, S. (1998). A longitudinal analysis of risk factors for child maltreatment: findings of a 17-year prospective study of officially recorded and self-reported child abuse and neglect. *Child abuse & neglect*, 22(11), 1065–1078. [https://doi.org/10.1016/s0145-2134\(98\)00087-8](https://doi.org/10.1016/s0145-2134(98)00087-8)
30. Walsh, C., MacMillan, H. L., & Jamieson, E. (2003). The relationship between parental substance abuse and child maltreatment: findings from the Ontario Health Supplement. *Child abuse & neglect*, 27(12), 1409–1425. <https://doi.org/10.1016/j.chiabu.2003.07.002>
31. McGuigan, W. M., & Pratt, C. C. (2001). The predictive impact of domestic violence on three types of child maltreatment. *Child abuse & neglect*, 25(7), 869–883. [https://doi.org/10.1016/s0145-2134\(01\)00244-7](https://doi.org/10.1016/s0145-2134(01)00244-7)
32. Rumm PD, Cummings P, Krauss MR, Bell MA, Rivara FP. Identified spouse abuse as a risk factor for child abuse. *Child Abuse & Neglect*. 2000;24(11):1375-1381.
33. Finkelhor, D., Ormrod, R., Turner, H., & Hamby, S. L. (2005). The victimization of children and youth: a comprehensive, national survey. *Child maltreatment*, 10(1), 5–25. <https://doi.org/10.1177/1077559504271287>
34. Oh, D. L., Jerman, P., Silvério Marques, S., Koita, K., Purewal Boparai, S. K., Burke Harris, N., & Bucci, M. (2018). Systematic review of pediatric health outcomes associated with childhood adversity. *BMC pediatrics*, 18(1), 83. <https://doi.org/10.1186/s12887-018-1037-7>
35. Deutsch, S. A., & Fortin, K. (2015). Physical Health Problems and Barriers to Optimal Health Care Among Children in Foster Care. *Current problems in pediatric and adolescent health care*, 45(10), 286–291. <https://doi.org/10.1016/j.cppeds.2015.08.002>
36. World Health Organization. Social Change and Mental Health., & Global Forum for Health Research. (1999). Report of the consultation on child abuse prevention : 29-31 March 1999; WHO, Geneva. World Health Organization, Violence and Injury Prevention, Social Change and Mental Health.
37. Pérez-Fuentes, G., Olfson, M., Villegas, L., Morcillo, C., Wang, S., & Blanco, C. (2013). Prevalence and correlates of child sexual abuse: a national study. *Comprehensive psychiatry*, 54(1), 16–27. <https://doi.org/10.1016/j.comppsy.2012.05.010>
38. Straus MA (1992). Children as witnesses to marital violence: A risk factor for lifelong problems among a nationally representative sample of American men and women. Ross Laboratories; Columbus, OH.
39. Herrenkohl, T. I., Sousa, C., Tajima, E. A., Herrenkohl, R. C., & Moylan, C. A. (2008). Intersection of child abuse and children's exposure to domestic violence. *Trauma, violence & abuse*, 9(2), 84–99. <https://doi.org/10.1177/1524838008314797>
40. Mandavia, A., Robinson, G. G., Bradley, B., Ressler, K. J., & Powers, A. (2016). Exposure to Childhood Abuse and Later Substance Use: Indirect Effects of Emotion Dysregulation and Exposure to Trauma. *Journal of traumatic stress*, 29(5), 422–429. <https://doi.org/10.1002/jts.22131>
41. Juvenile Law Center. (n.d.). Solitary confinement & other conditions. <https://jlc.org/issues/solitary-confinement-other-conditions>

42. Maizan binti Ahmad, & Faridah Mydin Kuty. (2024). GASLIGHTING, PARENTING STYLES, AND THE MENTAL HEALTH OF SECONDARY SCHOOL STUDENTS. *Special Education [SE]*, 2(1), e0026. <https://doi.org/10.59055/se.v2i1.26>
43. Wolak, J., Finkelhor, D., Mitchell, K. J., & Ybarra, M. L. (2008). Online "predators" and their victims: myths, realities, and implications for prevention and treatment. *The American psychologist*, 63(2), 111–128. <https://doi.org/10.1037/0003-066X.63.2.111>
44. National Society for the Prevention of Cruelty to Children. (n.d.). Online abuse. NSPCC. <https://www.nspcc.org.uk/what-is-child-abuse/types-of-abuse/online-abuse/>
45. U.S. Department of Health and Human Services. (n.d.). What is cyberbullying. StopBullying.gov. Retrieved February 12, 2018, from <https://www.stopbullying.gov/cyberbullying/what-is-it>
46. U.S. Department of Health and Human Services. (n.d.). Facts about bullying. StopBullying.gov. Retrieved February 28, 2018, from <https://www.stopbullying.gov/bullying/facts>
47. Pollack, D., & MacIver, A. (2015, November). Understanding sexual grooming in child abuse cases. American Bar Association. https://www.americanbar.org/groups/public_interest/child_law/resources/child_law_practiceonline/child_law_practice/vol-34/november-2015/understanding-sexual-grooming-in-child-abuse-cases/
48. Wikipedia contributors. (2025, March 2). Institutional abuse. In Wikipedia, The Free Encyclopedia. Retrieved 10:23, July 12, 2025, from https://en.wikipedia.org/w/index.php?title=Institutional_abuse&oldid=1278487578
49. Kendrick, A., & Taylor, J. (2000). Hidden on the ward: the abuse of children in hospitals. *Journal of advanced nursing*, 31(3), 565–573. <https://doi.org/10.1046/j.1365-2648.2000.01311.x>
50. Nunno, Michael. A. (1997). Institutional Abuse: The Role of Leadership, Authority and the Environment in the Social Sciences Literature. *Early Child Development and Care*, 133(1), 21–40. <https://doi.org/10.1080/0300443971330103>
51. Office of the United Nations High Commissioner for Human Rights. (n.d.). Harmful traditional practices affecting the health of women and children (Fact Sheet No. 23). <https://www.ohchr.org/sites/default/files/Documents/Publications/FactSheet23en.pdf>
52. ZONTA: Girls no brides (2021). CHILD MARRIAGE AND FEMALE GENITAL MUTILATION/CUTTING. https://www.zonta.org/images/docs/MyZonta/Tools/AdvocacyTools/Ending%20Child%20Marriage/GNB_Childmarriage_FGMC.pdf?utm
53. Ndonko, F., & Ngo'o, G. (2006). Etude sur le modelage des seins au Cameroun [Study on breast modelling in Cameroon]. Deutsche Gesellschaft für Internationale Zusammenarbeit (GTZ).
54. Committee on Child Maltreatment Research, Policy, and Practice for the Next Decade: Phase II; Board on Children, Youth, and Families; Committee on Law and Justice; Institute of Medicine; National Research Council; Petersen AC, Joseph J, Feit M, editors. *New Directions in Child Abuse and Neglect Research*. Washington (DC): National Academies Press (US); 2014 Mar 25. 4, Consequences of Child Abuse and Neglect. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK195987/>

55. Rodriguez, P., Holowka, D. W., & Marx, B. P. (2012). Assessment of posttraumatic stress disorder-related functional impairment: a review. *Journal of rehabilitation research and development*, 49(5), 649–665. <https://doi.org/10.1682/jrrd.2011.09.0162>
56. Kozarić-Kovacić, D., & Kocijan-Hercigonja, D. (2001). Assessment of post-traumatic stress disorder and comorbidity. *Military medicine*, 166(8), 677–680.
57. Bufka, L. F., & Camp, N. (2010). Brief measures for screening and measuring mental health outcomes. In M. M. Antony & D. H. Barlow (Eds.), *Handbook of assessment and treatment planning for psychological disorders* (2nd ed., pp. 62–94). The Guilford Press.
58. Gray, M.J., Elhai, J.D., Owen, J.R. and Monroe, R. (2009), Psychometric properties of the Trauma Assessment for Adults. *Depress. Anxiety*, 26: 190-195. <https://doi.org/10.1002/da.20535>
59. Kubany, E. S., Haynes, S. N., Leisen, M. B., Owens, J. A., Kaplan, A. S., Watson, S. B., & Burns, K. (2000). Development and preliminary validation of a brief broad-spectrum measure of trauma exposure: the Traumatic Life Events Questionnaire. *Psychological assessment*, 12(2), 210–224. <https://doi.org/10.1037//1040-3590.12.2.210>
60. Schnurr, P. P., Spiro, A., Vielhauer, M. J., Findler, M. N., & Hamblen, J. L. (2002). Trauma in the Lives of Older Men: Findings from the Normative Aging Study. *Journal of Clinical Geropsychology*, 8(3), 175–187. <https://doi.org/10.1023/A:1015992110544>
61. Gray, M. J., Litz, B. T., Hsu, J. L., & Lombardo, T. W. (2004). Psychometric properties of the life events checklist. *Assessment*, 11(4), 330–341. <https://doi.org/10.1177/1073191104269954>
62. Prins, A., Ouimette, P., Kimerling, R., Cameron, R. P., Hugelshofer, D. S., Shaw-Hegwer, J., Thrailkill, A., Gusman, F. D., & Sheikh, J. I. (2003). The primary care PTSD screen (PC-PTSD): Development and operating characteristics. *Primary Care Psychiatry*, 9(1), 9–14. <https://doi.org/10.1185/135525703125002360>
63. Lang, A. J., & Stein, M. B. (2005). An abbreviated PTSD checklist for use as a screening instrument in primary care. *Behaviour research and therapy*, 43(5), 585–594. <https://doi.org/10.1016/j.brat.2004.04.005>
64. Connor, K. M., & Davidson, J. R. (2001). SPRINT: a brief global assessment of post-traumatic stress disorder. *International clinical psychopharmacology*, 16(5), 279–284. <https://doi.org/10.1097/00004850-200109000-00005>
65. Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of consulting and clinical psychology*, 68(5), 748–766. <https://doi.org/10.1037//0022-006x.68.5.748>
66. Gorgens, K.A. (2011). Structured Clinical Interview For DSM-IV (SCID-I/SCID-II). In: Kreutzer, J.S., DeLuca, J., Caplan, B. (eds) *Encyclopedia of Clinical Neuropsychology*. Springer, New York, NY. https://doi.org/10.1007/978-0-387-79948-3_2011
67. Levin, A. P., Kleinman, S. B., & Adler, J. S. (2014). DSM-5 and posttraumatic stress disorder. *The journal of the American Academy of Psychiatry and the Law*, 42(2), 146–158.
68. LeBeau, R., Mischel, E., Resnick, H., Kilpatrick, D., Friedman, M., & Craske, M. (2014). Dimensional assessment of posttraumatic stress disorder in DSM-5. *Psychiatry Research*, 218(1), 143–147. <https://doi.org/10.1016/j.psychres.2014.03.032>

69. Blake, D.D., Weathers, F.W., Nagy, L.M., Kaloupek, D.G., Gusman, F.D., Charney, D.S. and Keane, T.M. (1995), The development of a clinician-administered PTSD scale. *J. Traum. Stress*, 8: 75-90. <https://doi.org/10.1002/jts.2490080106>
70. Cohen, J. A., & Scheeringa, M. S. (2009). Post-traumatic stress disorder diagnosis in children: challenges and promises. *Dialogues in Clinical Neuroscience*, 11(1), 91–99. <https://doi.org/10.31887/DCNS.2009.11.1/jacohen>
71. Wilson, J.P., & Drozdek, B. (2004). *Broken Spirits: The Treatment of Traumatized Asylum Seekers, Refugees and War and Torture Victims* (1st ed.). Routledge. <https://doi.org/10.4324/9780203310540>
72. Kazlauskas E. (2017). Challenges for providing health care in traumatized populations: barriers for PTSD treatments and the need for new developments. *Global health action*, 10(1), 1322399. <https://doi.org/10.1080/16549716.2017.1322399>
73. Kunitatsu, A., Yasaka, K., Akai, H., Kunitatsu, N., & Abe, O. (2020). MRI findings in posttraumatic stress disorder. *Journal of magnetic resonance imaging : JMRI*, 52(2), 380–396. <https://doi.org/10.1002/jmri.26929>
74. Kitayama, N., Vaccarino, V., Kutner, M., Weiss, P., & Bremner, J. D. (2005). Magnetic resonance imaging (MRI) measurement of hippocampal volume in posttraumatic stress disorder: a meta-analysis. *Journal of affective disorders*, 88(1), 79–86. <https://doi.org/10.1016/j.jad.2005.05.014>
75. Schuff N, Zhang Y, Zhan W, et al. Patterns of altered cortical perfusion and diminished subcortical integrity in posttraumatic stress disorder: an MRI study. *Neuroimage*. 2011;54 Suppl 1:S62-S68. doi:10.1016/j.neuroimage.2010.05.024
76. Richert, K. A., Carrion, V. G., Karchemskiy, A., & Reiss, A. L. (2006). Regional differences of the prefrontal cortex in pediatric PTSD: an MRI study. *Depression and anxiety*, 23(1), 17–25. <https://doi.org/10.1002/da.20131>
77. Morina, N., Wicherts, J. M., Lobbrecht, J., & Priebe, S. (2014). Remission from post-traumatic stress disorder in adults: a systematic review and meta-analysis of long term outcome studies. *Clinical psychology review*, 34(3), 249–255. <https://doi.org/10.1016/j.cpr.2014.03.002>
78. Sayed, S., Iacoviello, B. M., & Charney, D. S. (2015). Risk factors for the development of psychopathology following trauma. *Current psychiatry reports*, 17(8), 612. <https://doi.org/10.1007/s11920-015-0612-y>
79. Vahia VN. Diagnostic and statistical manual of mental disorders 5: A quick glance. *Indian J Psychiatry*. 2013;55(3):220-223. doi:10.4103/0019-5545.117131
80. Deblinger, E., Mannarino, A. P., Cohen, J. A., Runyon, M. K., & Steer, R. A. (2011). Trauma-focused cognitive behavioral therapy for children: impact of the trauma narrative and treatment length. *Depression and anxiety*, 28(1), 67–75. <https://doi.org/10.1002/da.20744>
81. Thielemann, J. F. B., Kasparik, B., König, J., Unterhitzberger, J., & Rosner, R. (2024). Stability of Treatment Effects and Caregiver-Reported Outcomes: A Meta-Analysis of Trauma-Focused Cognitive Behavioral Therapy for Children and Adolescents. *Child maltreatment*, 29(2), 375–387. <https://doi.org/10.1177/10775595231167383>

82. Cohen JA, Deblinger E, Mannarino AP, Steer RA. A multisite, randomized controlled trial for children with sexual abuse-related PTSD symptoms. *J Am Acad Child Adolesc Psychiatry*. 2004;43(4):393-402. doi:10.1097/00004583-200404000-00005
83. Deblinger, E., Mannarino, A. P., Cohen, J. A., & Steer, R. A. (2006). A follow-up study of a multisite, randomized, controlled trial for children with sexual abuse-related PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45(12), 1474–1484. <https://doi.org/10.1097/01.chi.0000240839.56114.bb>
84. Thielemann, J. F. B., Kasparik, B., König, J., Unterhitzenberger, J., & Rosner, R. (2022). A systematic review and meta-analysis of trauma-focused cognitive behavioral therapy for children and adolescents. *Child abuse & neglect*, 134, 105899. <https://doi.org/10.1016/j.chiabu.2022.105899>
85. Shapiro, F., Kaslow, F. W., & Maxfield, L. (Eds.). (2007). *Handbook of EMDR and family therapy processes*. John Wiley & Sons. <https://doi.org/10.1002/9781118269985>
86. Leuning, E. M., van den Berk-Smeekens, I., van Dongen-Boomsma, M., & Staal, W. G. (2023). Eye Movement Desensitization and Reprocessing in adolescents with autism; Efficacy on ASD symptoms and stress. *Frontiers in psychiatry*, 14, 981975. <https://doi.org/10.3389/fpsyt.2023.981975>
87. Chen, R., Gillespie, A., Zhao, Y., Xi, Y., Ren, Y., & McLean, L. (2018). The Efficacy of Eye Movement Desensitization and Reprocessing in Children and Adults Who Have Experienced Complex Childhood Trauma: A Systematic Review of Randomized Controlled Trials. *Frontiers in psychology*, 9, 534. <https://doi.org/10.3389/fpsyg.2018.00534>
88. Gold, S. N. (2000). *Not trauma alone: Therapy for child abuse survivors in family and social context*. Brunner-Routledge.
89. Briere, J., & Lanktree, C. B. (2022). *Integrative treatment of complex trauma for adolescents (ITCT-A): Treatment guide (2nd ed.)*. Adolescent Trauma Training Center.
90. International Society for Traumatic Stress Studies. (2024). ISTSS guidelines position paper on complex PTSD in children and adolescents. <https://istss.org/wp-content/uploads/2024/08/ISTSS-Guidelines-Position-Paper-on-Complex-PTSD-in-Children-and-Adolescents.pdf>
91. Schottenbauer, M.A., Arnkoff, D.B., Glass, C.R. and Gray, S.H. (2006), Psychotherapy for PTSD in the community: reported prototypical treatments. *Clin. Psychol. Psychother.*, 13: 108-122. <https://doi.org/10.1002/cpp.480>
92. Reddemann, L. (2009). Psychodynamisch-imaginative Traumatherapie (PITT). In A. Maercker (Ed.), *Posttraumatische Belastungsstörungen* (pp. 259–274). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-88489-7_15
93. Abbas, A., & Macfie, J. (2013). Supportive and insight-oriented psychodynamic psychotherapy for posttraumatic stress disorder in an adult male survivor of sexual assault. *Clinical Case Studies*, 12(2), 145–156. <https://doi.org/10.1177/1534650112471154>
94. Ponniah, K., & Hollon, S. D. (2009). Empirically supported psychological treatments for adult acute stress disorder and posttraumatic stress disorder: a review. *Depression and anxiety*, 26(12), 1086–1109. <https://doi.org/10.1002/da.20635>
95. Hendin H. (2014). An innovative approach to treating combat veterans with PTSD at risk for suicide. *Suicide & life-threatening behavior*, 44(5), 582–590. <https://doi.org/10.1111/sltb.12135>

96. National Center for PTSD. (n.d.). Clinician's guide to medications for PTSD. U.S. Department of Veterans Affairs.
https://www.ptsd.va.gov/professional/treat/txessentials/clinician_guide_meds.asp
97. Brady, K., Pearlstein, T., Asnis, G. M., Baker, D., Rothbaum, B., Sikes, C. R., & Farfel, G. M. (2000). Efficacy and safety of sertraline treatment of posttraumatic stress disorder: a randomized controlled trial. *JAMA*, 283(14), 1837–1844.
<https://doi.org/10.1001/jama.283.14.1837>
98. Marshall, R. D., Beebe, K. L., Oldham, M., & Zaninelli, R. (2001). Efficacy and safety of paroxetine treatment for chronic PTSD: a fixed-dose, placebo-controlled study. *The American journal of psychiatry*, 158(12), 1982–1988.
<https://doi.org/10.1176/appi.ajp.158.12.1982>
99. Steenkamp, M. M., Litz, B. T., Hoge, C. W., & Marmar, C. R. (2015). Psychotherapy for Military-Related PTSD: A Review of Randomized Clinical Trials. *JAMA*, 314(5), 489–500.
<https://doi.org/10.1001/jama.2015.8370>
100. Boyd, J. E., Lanius, R. A., & McKinnon, M. C. (2018). Mindfulness-based treatments for posttraumatic stress disorder: a review of the treatment literature and neurobiological evidence. *Journal of psychiatry & neuroscience : JPN*, 43(1), 7–25.
<https://doi.org/10.1503/jpn.170021>
101. Goetter, E. M., Bui, E., Ojserkis, R. A., Zakarian, R. J., Brendel, R. W., & Simon, N. M. (2015). A Systematic Review of Dropout From Psychotherapy for Posttraumatic Stress Disorder Among Iraq and Afghanistan Combat Veterans. *Journal of traumatic stress*, 28(5), 401–409. <https://doi.org/10.1002/jts.22038>
102. Kehle-Forbes SM, Meis LA, Spont MR, Polusny MA. Treatment initiation and dropout from prolonged exposure and cognitive processing therapy in a VA outpatient clinic. *Psychol Trauma*. 2016;8(1):107-114. doi:10.1037/tra0000065
103. Al Jowf, G. I., Ahmed, Z. T., Reijnders, R. A., de Nijs, L., & Eijssen, L. M. T. (2023). To Predict, Prevent, and Manage Post-Traumatic Stress Disorder (PTSD): A Review of Pathophysiology, Treatment, and Biomarkers. *International journal of molecular sciences*, 24(6), 5238. <https://doi.org/10.3390/ijms24065238>
104. Gafen, M., van der Kolk, B. A., Hamlin, E., Hirshberg, L., Suvak, M., & Spinazzola, J. (2016). A Pilot Study of Neurofeedback for Chronic PTSD. *Applied psychophysiology and biofeedback*, 41(3), 251–261. <https://doi.org/10.1007/s10484-015-9326-5>
105. Frost, N. D., Laska, K. M., & Wampold, B. E. (2014). The evidence for present-centered therapy as a treatment for posttraumatic stress disorder. *Journal of traumatic stress*, 27(1), 1–8. <https://doi.org/10.1002/jts.21881>
106. Banks, K., Newman, E., & Saleem, J. (2015). An Overview of the Research on Mindfulness-Based Interventions for Treating Symptoms of Posttraumatic Stress Disorder: A Systematic Review. *Journal of clinical psychology*, 71(10), 935–963.
<https://doi.org/10.1002/jclp.22200>
107. Lang A. J. (2017). Mindfulness in PTSD treatment. *Current opinion in psychology*, 14, 40–43. <https://doi.org/10.1016/j.copsyc.2016.10.005>
108. Cole, M. A., Muir, J. J., Gans, J. J., Shin, L. M., D'Esposito, M., Harel, B. T., & Schembri, A. (2015). Simultaneous Treatment of Neurocognitive and Psychiatric Symptoms in Veterans with Post-Traumatic Stress Disorder and History of Mild Traumatic

- Brain Injury: A Pilot Study of Mindfulness-Based Stress Reduction. *Military medicine*, 180(9), 956–963. <https://doi.org/10.7205/MILMED-D-14-00581>
109. Earley, M. D., Chesney, M. A., Frye, J., Greene, P. A., Berman, B., & Kimbrough, E. (2014). Mindfulness intervention for child abuse survivors: a 2.5-year follow-up. *Journal of clinical psychology*, 70(10), 933–941. <https://doi.org/10.1002/jclp.22102>
110. Goldsmith, R. E., Gerhart, J. I., Chesney, S. A., Burns, J. W., Kleinman, B., & Hood, M. M. (2014). Mindfulness-based stress reduction for posttraumatic stress symptoms: building acceptance and decreasing shame. *Journal of evidence-based complementary & alternative medicine*, 19(4), 227–234. <https://doi.org/10.1177/2156587214533703>
111. Kearney, D. J., McDermott, K., Malte, C., Martinez, M., & Simpson, T. L. (2013). Effects of participation in a mindfulness program for veterans with posttraumatic stress disorder: a randomized controlled pilot study. *Journal of clinical psychology*, 69(1), 14–27. <https://doi.org/10.1002/jclp.21911>
112. Possemato, K., Bergen-Cico, D., Treatman, S., Allen, C., Wade, M., & Pigeon, W. (2016). A Randomized Clinical Trial of Primary Care Brief Mindfulness Training for Veterans with PTSD. *Journal of clinical psychology*, 72(3), 179–193. <https://doi.org/10.1002/jclp.22241>
113. Polusny, M. A., Erbes, C. R., Thuras, P., Moran, A., Lamberty, G. J., Collins, R. C., Rodman, J. L., & Lim, K. O. (2015). Mindfulness-Based Stress Reduction for Posttraumatic Stress Disorder Among Veterans: A Randomized Clinical Trial. *JAMA*, 314(5), 456–465. <https://doi.org/10.1001/jama.2015.8361>
114. Gallegos, A. M., Lytle, M. C., Moynihan, J. A., & Talbot, N. L. (2015). Mindfulness-based stress reduction to enhance psychological functioning and improve inflammatory biomarkers in trauma-exposed women: A pilot study. *Psychological Trauma: Theory, Research, Practice, and Policy*, 7(6), 525–532. <https://doi.org/10.1037/tra0000053>
115. Frewen, P., Rogers, N., Flodrowski, L., & Lanius, R. (2015). Mindfulness and Metta-based Trauma Therapy (MMTT): Initial Development and Proof-of-Concept of an Internet Resource. *Mindfulness*, 6(6), 1322–1334. <https://doi.org/10.1007/s12671-015-0402-y>
116. Bormann, J. E., Oman, D., Walter, K. H., & Johnson, B. D. (2014). Mindful attention increases and mediates psychological outcomes following mantram repetition practice in veterans with posttraumatic stress disorder. *Medical care*, 52(12 Suppl 5), S13–S18. <https://doi.org/10.1097/MLR.0000000000000200>
117. King, A. P., Block, S. R., Sripada, R. K., Rauch, S., Giardino, N., Favorite, T., Angstadt, M., Kessler, D., Welsh, R., & Liberzon, I. (2016). ALTERED DEFAULT MODE NETWORK (DMN) RESTING STATE FUNCTIONAL CONNECTIVITY FOLLOWING A MINDFULNESS-BASED EXPOSURE THERAPY FOR POSTTRAUMATIC STRESS DISORDER (PTSD) IN COMBAT VETERANS OF AFGHANISTAN AND IRAQ. *Depression and anxiety*, 33(4), 289–299. <https://doi.org/10.1002/da.22481>
118. King, A. P., Block, S. R., Sripada, R. K., Rauch, S. A., Porter, K. E., Favorite, T. K., Giardino, N., & Liberzon, I. (2016). A Pilot Study of Mindfulness-Based Exposure Therapy in OEF/OIF Combat Veterans with PTSD: Altered Medial Frontal Cortex and Amygdala Responses in Social-Emotional Processing. *Frontiers in psychiatry*, 7, 154. <https://doi.org/10.3389/fpsy.2016.00154>

119. Wang, J., Zhang, B., Yahaya, R., & Abdullah, A. B. (2025). Colors of the mind: a meta-analysis of creative arts therapy as an approach for post-traumatic stress disorder intervention. *BMC psychology*, 13(1), 32. <https://doi.org/10.1186/s40359-025-02361-4>
120. Malchiodi, C. A. (2020). *Trauma and expressive arts therapy: Brain, body, and imagination in the healing process*. Guilford Press.
121. van der Kolk, B. A. (2015). *The body keeps the score: Brain, mind, and body in the healing of trauma*. Penguin Books.
122. Schouten, K. A., MATH, van Hooren, S., PhD, Knipscheer, J. W., PhD, Kleber, R. J., PhD, & Hutschemaekers, G. J. M., PhD (2019). Trauma-Focused Art Therapy in the Treatment of Posttraumatic Stress Disorder: A Pilot Study. *Journal of trauma & dissociation : the official journal of the International Society for the Study of Dissociation (ISSD)*, 20(1), 114–130. <https://doi.org/10.1080/15299732.2018.1502712>
123. Bolwerk, A., Mack-Andrick, J., Lang, F. R., Dörfler, A., & Maihöfner, C. (2014). How art changes your brain: differential effects of visual art production and cognitive art evaluation on functional brain connectivity. *PloS one*, 9(7), e101035. <https://doi.org/10.1371/journal.pone.0101035>
124. International Association of Human-Animal Interaction Organizations (IAHAIO). (2018). *IAHAIO white paper 2014, updated for 2018: The IAHAIO definitions for animal assisted intervention and guidelines for wellness of animals*.
125. U.S. Naval Center for Combat and Operational Stress Control. (n.d.). *Animal-assisted therapy and PTSD [White paper]*. Internet Archive. <https://archive.org/details/white-paper-animal-assisted-therapy-and-ptsd>
126. Hediger, K., Wagner, J., Künzi, P., Haefeli, A., Theis, F., Grob, C., Pauli, E., & Gerger, H. (2021). Effectiveness of animal-assisted interventions for children and adults with post-traumatic stress disorder symptoms: a systematic review and meta-analysis. *European journal of psychotraumatology*, 12(1), 1879713. <https://doi.org/10.1080/20008198.2021.1879713>
127. O'Haire, M. E., Guérin, N. A., & Kirkham, A. C. (2015). Animal-Assisted Intervention for trauma: a systematic literature review. *Frontiers in psychology*, 6, 1121. <https://doi.org/10.3389/fpsyg.2015.01121>
128. Germain, S. M., Wilkie, K. D., Milbourne, V. M. K., & Theule, J. (2018). Animal-assisted Psychotherapy and Trauma: A Meta-analysis. *Anthrozoös*, 31(2), 141–164. <https://doi.org/10.1080/08927936.2018.1434044>
129. Cloitre, M., Tardiff, K., Marzuk, P. M., Leon, A. C., & Portera, L. (1996). Childhood abuse and subsequent sexual assault among female inpatients. *Journal of traumatic stress*, 9(3), 473–482. <https://doi.org/10.1007/BF02103659>
130. De Bellis M. D. (2001). Developmental traumatology: the psychobiological development of maltreated children and its implications for research, treatment, and policy. *Development and psychopathology*, 13(3), 539–564. <https://doi.org/10.1017/s0954579401003078>
131. Gone J. P. (2013). Redressing First Nations historical trauma: theorizing mechanisms for indigenous culture as mental health treatment. *Transcultural psychiatry*, 50(5), 683–706. <https://doi.org/10.1177/1363461513487669>

132. Kirmayer LJ, Narasiah L, Munoz M, et al. Common mental health problems in immigrants and refugees: general approach in primary care. CMAJ. 2011;183(12):E959-E967. doi:10.1503/cmaj.090292