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CONCEPTUALIZATION & TRAUMA-INFORMED ISSUES

Clinical Considerations for the Treatment of Latency Age Children in Residential Care

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Abstract Children in the United States are exposed to alarmingly high rates of violence and trauma. Notable are the rates of maltreatment among children and the heightened risk for both out of home placement and an array of developmental, behavioral, and psychosocial sequelae. Despite these risks, little information is available on effective interventions and services designed to address the complex needs of youth in residential treatment settings. To effectively respond to their unique developmental, behavioral, and emotional needs, trauma-informed interventions and services must be provided to support optimal outcomes. To this end, this paper delineates the prevalence of children in residential care secondary to chronic maltreatment and other trauma exposures, identifies behavioral and emotional issues through the theoretical framework of complex trauma, highlights the importance of organizational capacity to deliver trauma-informed services, and describes effective clinical interventions that are often used in residential treatment. Clinical considerations and recommendations are also provided.

Keywords Residential care · Young children · Abuse · Neglect · Complex trauma · Trauma-informed care

The number of children in out-of-home care has been increasing. Since 1986, the number of children ages 2–17 who have been admitted to psychiatric hospitals and residential treatment centers for emotional disturbances have doubled (Substance Abuse and Mental Health Services Administration (SAMHSA), 2012). According to the U.S. Department of Health and Human Services, in 2000, 30,995 emotionally disturbed children and adolescents lived in residential treatment centers (SAMHSA 2002). The increase in the number of children in residential care appears to be accompanied by a decrease in the age of the children being placed. For example, one study that included a large national sample of children involved with the child welfare system found that the average age of a child in out-of-home placement was 8.4 years (James et al. 2006). Similarly, in another study examining young children in residential care, children were on average 4.9 years of age when their first out-of-home placement occurred, and they experienced approximately 6.6 placements before being admitted into a residential program at an average age of 10 years (Hussey and Guo 2002). Undoubtedly these children have unique needs resulting from their traumatic experiences during critical developmental periods that necessitate removal from their homes and placement in substitute care.

The extant literature regarding youth in residential treatment and its effectiveness in remediating symptoms and problems is quite sparse (Zelechoski et al. 2013). Moreover, most of the articles on residential treatment focus primarily on adolescents. The paucity of the literature, especially on pre-adolescents in residential facilities, reflects many of the challenges faced by researchers and practitioners in this area. Conducting research on the effectiveness of treatment in residential facilities is challenging, largely since it can be cost-prohibitive as most facilities are publically funded, have limited budgets, and are not affiliated with academic universities (Butler et al. 2009). Moreover, most residential facilities lack dedicated resources and staff for research (Boyd et al. 2007), and those who attempt to conduct research are forced to balance both the need for providing quality services and contend with over-extended personnel (Boyd et al. 2007). Additionally, devising and implementing research in residential facilities may be difficult given other methodological constraints such as the limited

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ability to randomly assign children to divergent forms of treatment, the difficulty of constructing an accurate control group, or the improper comparison of different types of residential treatment services and programs (Butler et al. 2009; Butler and McPherson 2007; Thomson et al. 2011). Yet, despite these residential research challenges, there are increasing expectations on the part of policymakers, researchers, and practitioners for performance measures and treatment related outcome metrics (Butler et al. 2009).

Children who are placed in residential care have typically been identified as having higher levels of clinical needs (Briggs et al. 2012; James et al. 2006; Underwood et al. 2004). A study by Briggs et al. (2012) examined the trauma histories, treatment needs, and psychosocial outcomes for 525 youth in residential treatment compared to those youth who were not (n =9,925). The mean number of types of traumatic events experienced by those youth in residential treatment was 5.8 compared to 3.6 for those youth not in residential care, respectively representing 92 % and 77 % of those youth who reported multiple traumas. The primary types of trauma reported in this study in residential treatment included emotional abuse (68 %); traumatic loss, separation, or bereavement (62 %); impaired caregiver because of substance use or mental health problems (60 %); domestic violence (58 %); physical abuse (55 %); and sexual abuse (40 %). Youth exposed to multiple traumatic events who were in residential care, compared to youth who were not in residential care, were more likely to report behavior problems, attachment difficulties, and engage in an array of high risk behaviors (e.g. running away from home, substance abuse, suicidal ideation, self-injurious behaviors, and criminal activity (Briggs et al. 2012)). These findings underscore the high rates of trauma among children placed in residential treatment centers and the need for these facilities to respond to the trauma-related sequelae associated with these experiences (Briggs et al. 2012; Hussey and Guo 2005).

Residential treatment centers serve youth with moderate to severe mental health problems (Preyde et al. 2013) and have come to be considered the "last resort" for youth who have not been able to manage in home or community settings (Walter and Petr 2008). According to Lee (2008), there are considerable differences among residential treatment centers, specifically in the target population (i.e., mental health needs, substance abuse, sex offenders), lengths of stay (e.g. 30–60 days, long-term), and level of restrictiveness (e.g. locked facilities, family style). Given some of the needs of youth placed in residential treatment centers, these centers generally include programs that have a therapeutic milieu, a multidisciplinary team, deliberate client supervision, intense staff supervision and training, and consistent clinical/administrative oversight (Butler and McPherson 2007; Lee 2008).

Different from residential care facilities, residential treatment centers primarily have a clinical focus where internal program staff provide therapeutic interventions to address the unique needs of the youth. For example, the children in residential treatment in the Briggs et al. study (2012) were most likely to exhibit attachment difficulties and behavior problems as well as engage in an array of high risk behaviors (substance abuse, self-mutilation, suicidal ideation, delinquency, and running away). Thus, intensive intervention services must be provided within the context of around-the-clock care (Walter and Petr 2008) for children placed in residential treatment facilities. Increasingly more and more facilities are becoming trauma-informed to address these diverse needs.

According to the National Child Traumatic Stress Network (NCTSN), a trauma-informed organization or program recognizes and responds to the diverse needs of children and their families impacted by trauma (Ko et al. 2008). Thus a trauma-informed agency might routinely assess for trauma; use culturally appropriate evidence based interventions; support recovery and resilience of the child, family, and other supports; minimize the impact of secondary traumatic stress among staff and clientele; and collaborate with other partners to provide relevant resources and ensure continuity of care. Given that most youth in residential treatment centers have had prolonged exposure to abuse and/or neglect (Hussey and Guo 2002) and exhibit a range of psychosocial sequelae, it stands to reason that facilities that are trauma-informed are better equipped to comprehensively meet the needs of children and their families impacted by trauma.

Thus, the aim of this article is to discuss various factors relevant to latency age children in residential care, including behavioral issues explored through the domains of complex trauma, organizational capacity to provide trauma-informed services, and effective clinical interventions. This article is divided into three sections. First, the impact of complex trauma on the developing child will be discussed. Second, the importance of the organization's capacity to deliver trauma-informed services will be described. Lastly, effective clinical interventions for children in residential care will be explored as well as the application of those techniques.

Complex Trauma

The developmental needs of children are so great that when these needs remain unfulfilled or are violated, the long-term adverse sequelae are often significant. Instead of devoting existing resources to healthy growth and development, a child who is exposed to chronic abuse or neglect must often divert these resources to focusing on survival (van der Kolk et al. 2005). Children who are exposed to traumatic events (e.g. emotional, physical, and sexual abuse) demonstrate poor psychological outcomes that adversely impact development and increase the risk for developing a complex array of problems (Spilsbury et al. 2007; Zerk et al. 2009) including aggressive behavior (Calvete and Orue 2013) psychiatric symptoms

(Briere 1996; Heckman and Westefeld 2006) posttraumatic stress, somatization, anxiety, depression, and cognitive distortions (Briere et al. 2010).

Unfortunately, many young children in residential care have experienced chronic exposure to violence and trauma, often at the hands of their caregivers, during critical developmental periods. These experiences can occur either simultaneously or sequentially, further compounding the impact by adding "insult to injury" (Courtois and Ford 2009). This chronic exposure to maltreatment, intrapersonal violence, and other adversities is often described within the rubric of complex trauma. This framework of complex trauma provides a useful manner to assess the multifaceted needs, behaviors, and symptoms of young children in residential care. As multidisciplinary and milieu staff understand the impact of early childhood traumatic experiences, these behaviors are recognized as symptoms and/or survival mechanisms. The National Child Traumatic Stress Network Complex Trauma Workgroup (as reported by Cook et al. 2003) identified seven core domains of complex trauma to better conceptualize these trauma responses. These seven domains include: attachment, biology (and brain development), affect regulation, behavioral control, cognition, dissociation, and self-concept.

Attachment

Early relationships, especially with a primary caregiver, are paramount to the developing child, serving as a catalyst for other developmental competencies (Cook et al. 2003; Sroufe 1979; Toth et al. 2011). Bowlby (1973, 1988) stated that one of the most fundamental needs of humans is attachment, which influences a child's internal working model of how relationships function. Violations in the caregiving relationship, in the form of abuse and/or neglect, can have profound effects. Over 80 % of maltreated children develop insecure attachments (Cook et al. 2003), increasing the risk for being vulnerable to stress, requiring external assistance to regulate emotions, and having poor skills in seeking assistance (Maunder and Hunter 2001). Behaviors related to the development of insecure attachments for children in residential care often include distrust and suspicion of those around them. They may view the world as unpredictable and unsafe. Poor physical, emotional, and sexual boundaries are frequently noticed, as well as difficulty forming meaningful relationships. They also often lack the ability to interpret or understand social cues (Courtois and Ford 2009; Toth et al. 2011).

Biology and Brain Development

The brain is use-dependent and adapts based on cues from the environment (Blaustein and Kinniburgh 2010; Perry 2009). Brain development can be altered by the amount of stress in the environment or situation, including both extremely high and low levels of stress (Perry 2009; Perry et al. 1995; Zerk et al. 2009). Neglecting a child causes a lack of stimulation in brain development, while abusive, violent, or chaotic environments can be unpredictable, uncontrollable, and stressful (Perry 2009). The developing brain can be altered by severe levels of stress, including abuse and neglect, particularly during early childhood and in the absence of positive adults that can protect or buffer them from this stress. These alterations in the brain development as a result of the toxic nature of some environments can result in problems with sensorimotor development, body tone, balance, and coordination, limited sensitivity to physical touch or pain, and somatic complaints (Cook et al. 2003; Courtois and Ford 2009). A study by Heckman and Westefeld (2006) indicated that intrapersonal traumas were associated with somatic symptoms. Fortunately, the biological development can be enhanced in later years when a child is attended to by a secure caregiver (Gunner and Donzella 2002), including staff in residential treatment centers.

Affect Regulation

According to Bell and McBride (2010), the structures and processes for affect regulation occur in the later stages of a youth's brain development. Thus, most maltreated children do not have the necessary capacities to regulate affect, evidenced by deficiencies in identifying, safely expressing, and modulating emotions (Cicchetti et al. 1991; Courtois and Ford 2009; Toth et al. 2011). This inability to regulate affect can be seen in various behaviors of children ranging from withdrawn, isolating behaviors to the more extreme explosiveness, in addition to emotional volatility (Toth et al. 2011), such as crying one minute then screaming and yelling the next. Studies have indicated that individuals who have cumulative trauma exposures have less capacity to manage affect (Briere et al. 2010) and an increased likelihood of having depression (Putnam 2003), Borderline Personality Disorder, Somatoform Disorder (van Dijke et al. 2011), or other mood disorders which can impact the manner in which children's behaviors are perceived lasting into adulthood.

Behavioral Control

One of the most readily identifiable challenges in working with young children in residential care is the prevalence of behavioral problems including aggressive behaviors, impulsivity, conduct problems, and difficulty in understanding and following rules. These children are often described as destructive, aggressive, defiant, and oppositional (Cook et al. 2003, 2005; Courtois and Ford 2009; Toth et al. 2011). They may also re-enact behaviors modeled in a violent home as well as re-enact their traumatic experiences including verbal and physical aggression and inappropriate or risky sexual behaviors. Traumatized children struggle with issues of control to compensate for feeling a lack of

power. These children may also demonstrate issues relating to sleep, eating disorders, and substance abuse. In one study of children 3–6 years of age with a history of exposure to domestic violence, results indicated that 42 % exhibited such significant behavioral issues that clinical intervention was warranted (Smith et al. 1997). Another study noted high correlations between problem behaviors and children who experienced psychological abuse (Panuzio et al. 2007). These behavior problems can often be triggered by either conscious or unconscious thoughts.

Cognition

Because early traumatic experiences impact brain development, cognitive abilities are often impacted. Studies have indicated maltreated children have lower cognitive functioning (Egeland et al. 1983). Children in residential treatment may demonstrate deficits in their ability to solve problems, plan, and anticipate. They struggle with sustaining attention, which may result in a diagnosis of Attention Deficit Hyperactivity Disorder (ADHD). Additionally, they may exhibit deficits in language development, abstract reasoning, and executive functioning; there may also be problems with perception and other learning difficulties (Cook et al. 2003, 2005). Often maltreated youth have distorted thought processes adversely impacting their ability to function in the present moment.

Dissociation

Dissociation occurs when an individual is unable to engage phenomenological experience, tolerate sensory inputs, or integrate information from one's external environment in a normatively expected or routine manner (Cook et al. 2005; Putnam 1997). This response is often triggered as a defense mechanism in response to a traumatic stimuli or an overwhelming event. Thus, dissociation involves separating and cataloguing these memories or feelings in a detached manner in an effort to help the individual cope with the exposure (Cook et al. 2003, 2005; Courtois and Ford 2009). Since dissociation in children is fairly prevalent among those with complex trauma histories, it is a potential area for further assessment for children in residential treatment centers. Children may simply appear lost in thought or in a daze, depersonalize situations, and experience altered consciousness or realities. Complete loss of memory during particular periods of time or regarding certain events may also be common for these individuals who have been abused. Often these symptoms may be misdiagnosed as Attention Deficit Hyperactivity Disorder (ADHD) or other disruptive behavioral issues. At the most severe end of the continuum, dissociative disorders might develop (Courtois and Ford 2009). These experiences of dissociation can be exacerbated as most maltreated children lack a strong self-identity.

Self-Concept

An individual's sense of self is significantly impacted by the early relationship with a caregiver (Bowlby 1988; Courtois and Ford 2009; Sroufe 1979). A nurturing environment fosters greater self-worth, while abusive or neglectful experiences adversely impact feelings of competency (Cook et al. 2003, 2005) and self-esteem. Shame and guilt are recurrent responses for children in residential care who have experienced complex trauma, thereby increasing the likelihood that the youth will lack a strong, predictable sense of self.

Thus, the framework for complex trauma delineates the potentially deleterious sequelae for children chronically exposed to abuse and violence. Youth who exhibit many of these severe trauma-related symptoms and behaviors are often placed in residential treatment after many failed attempts at lower levels of care. Thus, there is an imminent need for organizations to assess the complex trauma histories and related symptoms for the youth they serve with the purpose of creating a culture of physical and emotional safety to promote psychosocial growth.

Organizational Capacity for Trauma-Informed Care

Organizational capacity refers to an agency's ability to implement a chosen policy. In May, 2008, the Child Welfare League of America convened a series of regional discussions with member agencies regarding the challenges of residential services. A summary of those meetings (Rainey 2010) highlighted that administrators across the country must constantly deal with staffing and workforce issues, adversarial relationships with public agencies, and financial burdens caused by low reimbursement rates and restrictive Medicaid rules for authorization. They struggle to find screening and assessment tools to determine appropriate diagnoses, treatment, and levels of care. There are also challenges to identify effective treatment modalities for highly acute clients and to successfully implement strategies to reduce restraints and seclusion. Similar issues have been echoed by the Alliance for Children and Families and the American Association of Children's Residential Centers.

Residential treatment centers for children are 24-hour care environments designed to respond to the special needs of the population. Most are highly structured and provide an array of services that address physical, psychological, emotional, and behavioral health issues as well as educational, spiritual, social, and recreational needs. Administrators must assure adequate staffing ratios to the numbers of children in care, provide pre-service and in-service training for child care staff, and hire or contract with a multi-disciplinary team of clinical service providers, while managing a highly-structured milieu environment. The milieu staff members provide round-the-clock interventions to promote pro-social behaviors as well as to

support children when their capacity to cope has been stressed typically resulting in the need for crises management.

Many quality-minded organizations go further to assure the best possible care for children by developing, monitoring, and maintaining nationally recognized accreditation standards. A range of issues are addressed in these standards such as access to care, intake and assessment, client rights and confidentiality, cultural competence, record keeping, maintenance of facilities, etc. Therapeutic services that are considered "best practices" often have a well-balanced mix customized to the individual needs and strengths of each client and also engage family members in service planning, treatment, and discharge planning (Pierpont and McGinty 2004).

When a residential facility and its staff members provide care for children who have experienced multiple traumatic events, the normal course of doing business is often not enough. According to Farragher (2006), an organization is a living, growing, changing system with its own unique biology and is as susceptible to stress and trauma as the individuals who live and work in the organization. The parallel impact of trauma on the organization can have many negative consequences that affect the quality of care (Bloom and Farragher 2010). If not driven by a trauma-informed system of care, trauma can cause agencies to become crisis-driven, fragmented, and ineffective (Bloom and Farragher 2010). Staff can resort to autocratic, punitive means of control, and become more resistant to change. Similar to symptoms of the children served, adults in a care-giving role can engage in constant reenactment and exhibit loss of hope and meaning (Bloom and Farragher 2010; Farragher 2006).

Bloom's Sanctuary Model (1997) has been adapted for children and adolescents in residential treatment programs (Rivard et al. 2004) for the purpose of addressing this organizational need. This model focuses on healthy relationships amongst those living together (Rivard et al. 2004). Fundamental to the Sanctuary Model is the community-oriented, nonviolent culture, attitude, and behaviors that are to be exhibited by the child and the residential treatment staff. Within the emotional and physical safety, or "sanctuary," of this treatment model, children are taught coping skills and effective adaptation to deal with the traumatic events the child has experienced (Rivard et al. 2004).

Developing trauma-informed services within a residential care environment is essential to help mitigate the impact of trauma on children and on the people providing those services (Zelechoski et al. 2013). It is not enough to implement trauma assessments and treatment, though these are key components of trauma-informed care. The entire organization must have multiple systems in place including policies and procedures, hiring processes, training, support practices, monitoring and feedback mechanisms (Hodgdon et al. 2013).

Essentially, staff awareness, sensitivity, and response to the effects of childhood trauma must permeate all facets of daily life within an organization. Every employee, from food service, maintenance, security, and clerical to child care staff, drivers, nurses, clinical therapists, and administrators need to fully understand how trauma affects the youth they serve and how to address these issues (Bloom and Farragher 2010). This culture of trauma-informed care not only avoids re-traumatization but also addresses the individual and organizational impacts of trauma and facilitates trauma recovery (Bloom and Farragher 2010).

Several models of trauma-informed care have emerged in the past several years and have been implemented successfully in residential treatment centers for children; those interventions include Attachment, Self-Regulation, and Competency (ARC; Blaustein and Kinniburgh 2010; Hodgdon et al. 2013), Trauma-Focused Cognitive Behavior Therapy (TF-CBT; Cohen et al. 2006), and Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS; DeRosa et al. 2005; Habib et al. 2013). Similar themes among them include ensuring physical and emotional safety for clients and staff; allowing and encouraging open, honest communication and feedback; building a sense of trust; allowing consumer choice; maximizing collaboration and team work; teaching self-control and emotional regulation skills (staff and clients, alike); empowering clients to plan for their future and for staff to be engaged in planning together regarding daily operations and the care of children (Rivard et al. 2003). Engaging in case advocacy for the child within the broader systems of support externally and managing smooth transitions to a "least restrictive environment" (foster homes, birth or adoptive families) help continue these strategies for children when they leave residential care (Blaustein and Kinniburgh 2010).

With the multitude of internal and external demands that administrators of children's residential facilities face on a daily basis, the challenge of implementing trauma-informed care can certainly seem daunting. However, with increased emphasis by funders, families, and oversight agencies on achieving positive client outcomes, especially for children's safety, well-being, and permanency, leaders in this field are increasingly turning to evidence-informed models that address the negative impacts of trauma and make positive change possible. Necessary clinical interventions include assessments, accurate diagnoses, as well as specific models or techniques demonstrated to be effective with children.

Clinical Interventions and Applications

Clinical interventions are most effective when providers understand the unique needs of these children whose psychosocial development and trajectories have been disrupted by trauma. For instance, a latent age child who has experienced significant physical, sexual, and/or emotional abuse may exhibit a variety of aggressive behaviors (verbal and physical), impulsivity, distorted thought processes, poor ability to relate with others,

and deficient coping skills. Thus, clinical interventions must attend to the unique developmental and cultural issues that affect symptom presentation and severity (Arvidson et al. 2011). Residential treatment facilities must embed assessments, interventions and services that address these both in treatment and in day-to-day therapeutic activities (Hodgdon et al. 2013).

Studies have indicated that formal assessments of exposure to violence or other traumatic events might benefit children referred to child welfare services (see Kolko et al. 2010). In addition, Woodland et al. (2011) report the need to assess children's individual strengths when residing in residential treatment centers. Unfortunately, the few studies that have examined the developmental and behavioral needs of treatment involved with the child welfare system suggest that only a fraction of the children with an identified need will be referred for assessment and even fewer are referred for treatment and intervention services (Stahmer et al. 2005). The use of assessments is paramount to inform successful treatment planning as well as to provide ongoing monitoring of symptomology and progress during treatment. In essence, trauma-related assessments can serve as a "navigator" in determining treatment direction.

Several studies of youth exposed to violence have reported elevated posttraumatic stress (PTS; Kolko et al. 2010; McCloskey and Walker 2000; Schwab-Stone et al. 1999), including domestic violence (56 %; Lehman 1997), family violence (15.4 %; McCloskey and Walker 2000), and sexual and physical abuse (64.0 % and 42.0 %, respectively; Dubner and Motta 1999). In one study on adolescents, youth who experienced multiple types of abuse reported elevated symptoms of posttraumatic stress, depression, and anxiety (Naar-King et al. 2002). For children who experienced maltreatment, adult mental health issues were related to the age of onset with earlier traumatic exposure before the age of six associated with internalizing symptoms and later onset associated with externalizing behaviors (Kaplow and Widom 2007). In addition, rates of Post Traumatic Stress Disorder (PTSD) or heightened PTS have been cited more frequently in studies of children than of adolescents (Dubner and Motta 1999; Kolko et al. 2010). Youth who exhibit symptoms of PTS or PTSD typically demonstrate difficulty regulating emotions, behaviors, and thought processes, in addition to experiencing comorbid anxiety and mood disorders (Abram et al. 2007; Wechsler-Zimring et al. 2012). Many of these symptoms appear to be associated with repeated and sustained child abuse and neglect, which highlights the necessity of using trauma-informed assessments.

Research suggests that complex trauma is better treated using a sequenced- or phase-based approach (Cloitre et al. 2011; Courtois and Ford 2009). Thus, while research is emerging with suggested treatment for complex trauma, it is beneficial to consider the setting in which it is being implemented. Various treatment approaches that demonstrate efficacy and applicability for young children in residential care are discussed below, although the list is not exhaustive in exploring all interventions available.

Emotional Regulation

Children who struggle with emotional regulation often lack an ability to function and adapt in stressful or emotionally challenging situations; thus, resulting in an inability to control, modulate, or modify their responses (Cicchetti et al. 1991). They are often unable to recognize, express, or understand emotions, which in young children may cause more frustration, confusion, and disruptive or aggressive behaviors. The ability to regulate emotions can have profound impacts on relationships. Targeting emotional regulation in treatment assists traumatized children in identifying their internal emotional experience, expressing those emotions even in nonverbal ways, and recognizing the emotions of others that are expressed verbally and nonverbally. A recent study by Cloitre and colleagues (2011) highlighted some of the components of effective treatment approaches for complexly traumatized youth. Emotional regulation was the only treatment approach determined to be appropriate in all three areas evaluated which included: effectiveness (ability to decrease symptoms by 75 %), safety (likelihood of not increasing severe behaviors), and acceptability ("likely to promote engagement, responsiveness, and retention in treatment") (Cloitre et al. 2011, p. 618). Several interventions designed for trauma-impacted youth target emotional regulation including ARC (Blaustein and Kinniburgh 2010; Hodgdon et al. 2013), TF-CBT (Cohen et al. 2006), and SPARCS (DeRosa et al. 2005; Habib et al. 2013).

Sensorimotor Techniques

Children who have experienced early childhood trauma sometimes demonstrate a fragility to assimilate sensory input from their environment often resulting in emotional dysregulation (Perry 2009). Children in residential care are often initially unable to use information received through the senses to function effectively in daily life and have difficulty reading verbal and nonverbal cues from the environment. Sensorimotor techniques enhance a child's attunement to their own body (Ogden and Minton 2000). Tactile experiences can be especially beneficial. The use of rice or sand for hiding small toys can be soothing for children as they move their hands through the coarse material searching for hidden toys. Physical activities can target proprioception and vestibular experiences. Activities that engage proprioception enables the child to determine the position of their bodies relative to their environment, such as opportunities to run, skip, jump, and hop. Other activities such as rocking, swinging, or other rhythmic movement stimulate the vestibular mechanism and enhance spatial awareness of the child's body (Kranowitz and

Miller 2006). While there has been no empirical research on the use of sensorimotor techniques (Ogden and Minton 2000), patterned and repetitive activities such as yoga, music, body movement, and balance can provide sensory input facilitating brain development and self-regulation skills for children (Perry 2009; van der Kolk 2006). Changing intensity and pace can help emotional and physical regulation. Warner, Koomar, Lary, and Cook (2013) articulate the use of sensory integration for children in residential treatment centers, including the creation and use of sensory rooms, hiring Occupational Therapists to provide services to the children as well as serve as consultants to multidisciplinary staff, and incorporating sensorimotor techniques in trauma psychotherapy which can include expressive therapies. For a more comprehensive exploration of the application of sensory modulation principles and techniques as interventions with youth in residential treatment settings, see Warner et al. (2013).

Expressive Therapies

Expressive therapy can be helpful in residential settings, including various art forms such as painting, clay, sculpting, and drawing, as a means to help children learn to express their emotions and traumatic experiences (Kagan and Spinazzola 2013). An art therapist is able to utilize work produced by the child to cognitively process the feelings and experiences of the child through the subjective representations the art creates (Clements 1996). The use of drama and writing are useful tools of self-expression allowing the child freedom and power to give voice to their experiences and emotions without judgment or not having to identify themselves as the victim in the scenario, which may help the child develop helpful coping skills.

Play therapy using puppets, toys, or objects can be effective (Bratton and Ray 2000) with traumatized children as play provides the requisite safety needed to explore feelings and allows the child control over the selection and use of toys. The therapist gains insight into the child's emotions and perceptions regarding the experiences and can assist the child in verbal expression, and the child articulates details and emotions regarding their difficult experiences and considers different responses to those events as possible outcomes for future situations. A longitudinal study of sexually abused children found that after six months of play therapy, the severity of trauma-related symptoms decreased (Reyes and Asbrand 2005). Similarly, sand tray therapy provides a structured environment in which the child's metaphors for their life experiences can be created and explored (Homeyer and Sweeney 1998) while providing a visual of the child's internal reality.

Dyadic Therapies

Because attachment and relational issues are problematic for the complexly traumatized child, incorporating dyadic therapies, preferably with a primary caregiver, can be effective. There are several interventions that target the dyadic relationship, such as Child Parent Psychotherapy (see Lieberman and Van Horn 2005), Dyadic Developmental Psychotherapy (see Becker-Weidman 2011), and Theraplay (see Booth and Jernberg 2010). There is growing empirical support for these dyadic therapies, which are modeled on healthy parent–child interactions to foster relationships. The empathic, attuned responsiveness of caregivers is essential to the development of a strong sense of self, feelings of self-worth, and secure attachment. In one study on maltreated children ages 2–6 who were provided Theraplay, significant gains were made in overall development as well as personal-social and adaptive domains of development (Stubenbort et al. 2010). These dyadic therapies demonstrate the important role caregivers have in the child's healing process.

Family Therapy

While engaging a primary caregiver can be powerful in the treatment of young children, family therapy can also be important. Kolko (1996) found that compared to routine community interventions, children who were physically abused, along with the offending parent, benefited similarly from either both the parent and child receiving individual cognitive behavior therapy or family therapy. There are many family therapy interventions, including Bowen's Family Systems Therapy which examines the family unit as a whole and includes preceding generations and extended family members with the premise that a client's current relationships can be better understood by looking at them from a historical or transgenerational perspective (Kerr and Bowen 1998). Family Systems Therapy, along with other forms of family therapy (e.g., Structural Family Therapy, Strategic Family Therapy, Functional Family Therapy, and MultiSystemic Therapy) may be used in residential care to help children understand their history and to assist families in recognizing the interconnectedness and power of relationships within the family.

The level of involvement of the family for children in residential care may vary depending on the reason the child is in substitute care. When possible, family members should be engaged in the treatment process. Each member of the family brings into the family system traits, behaviors, and attitudes that impact the entire family dynamic. Each member of the family may explore family of origin issues and patterns influencing the current family system. While regular face-to-face sessions are preferred, geographical distance or transportation may provide challenges for children in residential treatment; thus, available technology (i.e., telephone, web cameras) via secure connections can be invaluable to effective treatment.

In addition to therapy, residential treatment centers provide a contact person for regular communication to share their

child's progress in treatment, details about the child's daily life, and to gather parental input for treatment consideration. This contact helps the family remain connected and engaged with their child and can serve as a catalyst for repairing the parent–child relationship as well as promote collaboration between the parent and multi-disciplinary team.

Narration of Trauma Memory

Trauma experts agree that processing a trauma memory can be one of the most effective treatment approaches for youth who have experienced complex trauma (Cloitre et al. 2011). The traumatized individual is asked to access the distressing memory and share the events, often times orally or in writing; yet, with younger children drawings may also be used. There are several interventions that include a narrative of the trauma memory, including TF-CBT. In a study of 229 children ages 8–14 who had PTSD resulting from abuse, results indicated that children who received TF-CBT compared to child-centered therapy demonstrated greater improvement in behavior problems as well as symptoms of depression and PTSD (Cohen et al. 2004). While processing traumatic memories may be one of the more effective techniques, in an expert survey on best practices in the treatment of complex posttraumatic stress by Cloitre et al. (2011) trauma narration is not considered a first-line intervention for safety or for accessibility, indicating that experts are concerned about the complexly traumatized individual's vulnerabilities while processing the traumatic memory as well as acknowledging that this form of intervention is less likely to engage the individual in the therapeutic relationship. Children in residential treatment centers have significant issues (e.g., severe or acute mental illness, aggressive or self-harming/suicidal behaviors), and most are highly vulnerable from having experienced multiple trauma types (Briggs et al. 2012). Thus, decisions in a residential treatment center to process the child's traumatic memories, along with readiness and which of several traumatic experiences to process, should be cautiously and judiciously considered for appropriateness within the context of available sequential or phase-based approaches to treatment.

When considering which clinical intervention would be most effective with a child, the child's development should be considered. Because of the potential disruptions in development as a result of maltreatment, the chronological age may be higher than a child's developmental age. A comprehensive assessment, including a trauma history, may provide some indication as to the child's functioning. Within the residential treatment center, discussions must occur amongst the multi-disciplinary staff to determine appropriate clinical interventions. The individual roles of the multidisciplinary team, as well as the function of the team in an organization, may be influenced by organizational culture. In addition, treatment philosophies and clinical interventions available will vary amongst residential treatment centers and often reflect decisions of organizational leaders.

Conclusion

Sources are available to provide consumers information on the efficacy of many evidence-based practices. The NCTSN has compiled a resource guide of interventions developed specifically for children who have experienced trauma (de Arellano et al. 2008). SAMSHA maintains the National Registry of Evidence-Based Programs and Practices (SAMHSA 2013), and the California Institute for Mental Health (CIMH) (CIMH 2013) notes the level of research on various interventions in the California Evidence-Based Practices Clearinghouse. Administrators and clinical supervisors in residential facilities should discuss the specific dynamics of the children in care along with various treatment interventions to better determine which technique/model(s) the organization has the capacity to implement.

Utilizing effective clinical interventions in residential care is imperative when working with young children who have experienced complex trauma. Each passing moment is pivotal in their development—physical, psychological, emotional, cognitive, social, and spiritual. Residential treatment facilities have the obligation and responsibility to seek effective interventions and train all clinical and direct care staff on implementing the modality(s) consistently. Outcomes should be measured to determine results to further inform professionals serving on multi-disciplinary teams in this setting and make data-driven decisions. Additional research on effective clinical interventions in residential treatment centers is needed for all youth including adolescents; however, because research targeting the effectiveness of treatment in residential care for younger children is not widely available, greater emphasis on this population is needed.

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