

## Treatment of Complex Trauma in Young Children: Developmental and Cultural Considerations in Application of the ARC Intervention Model

JOSHUA ARVIDSON,<sup>1</sup> KRISTINE KINNIBURGH,<sup>2</sup>  
KRISTIN HOWARD,<sup>1</sup> JOSEPH SPINAZZOLA,<sup>2</sup>  
HELEN STROTHERS,<sup>1</sup> MARY EVANS,<sup>1</sup> BARRY ANDRES,<sup>1</sup>  
CHANTAL COHEN,<sup>1</sup> AND MARGARET E. BLAUSTEIN<sup>2</sup>

<sup>1</sup>The Alaska Child Trauma Center at Anchorage Community Mental Health Services

<sup>2</sup>The Trauma Center at Justice Resource Institute

*The Attachment, Self Regulation, and Competency (ARC) Framework is a theoretically grounded, evidence-informed, promising practice used to treat complex trauma in children and adolescents. This article introduces the ARC model and describes its application with young children of diverse ethnocultural backgrounds involved in the child protection system due to maltreatment. Examination of the clinical application of the ARC model with this population underscores the importance of grounding child complex trauma treatment in the caregiving system. Strategies for successful clinical intervention are identified, with attention devoted to cultural and systemic resources to advance the treatment process. This article presents preliminary evidence of the effectiveness of the ARC model derived from program evaluation conducted at a community-based clinic.*

**Keywords** complex trauma, attachment, regulation, trauma, ARC

Early development takes place largely within the context of the caregiving relationship. The impact of trauma on infants and young children is unique because it occurs within a critical developmental period and is vastly influenced by the nature and quality of the caregiving system (Scheeringa & Zeanah, 2001). The primary attachment system provides the security and safety necessary for children to master an array of competencies including the ability to self-regulate (Schore, 2001a), develop positive relationships (Schneider, Atkinson, & Tardif, 2001), and acquire cognitive skills relevant to learning (Meins, Fernyhough, Russel, & Clark-Carter, 1998). Additionally, it provides the foundation for self and identity formation (McCarthy, 1998).

When the caregiving relationship is characterized by uncertainty, unpredictability, or fear, it affects a child's basic sense of safety within relationships and in the world (Hesse & Main, 2006). Young children's sense of themselves develops within the context of their perception and internalization of the relationship with their caregiver. If a child's perception

Submitted August 28, 2009; revised January 11, 2010; accepted July 1, 2010.

Address correspondence to Joshua Arvidson, The Alaska Child Trauma Center at Anchorage Community Mental Health Services, 4045 Lake Otis Parkway, Suite 101, Anchorage, AK 99508. E-mail: jarvidson@acmhs.com

is negative, it impairs the development of self-identity and the acquisition of developmental competencies (Beeghly & Cicchetti, 1994; Goodvin, Meyer, Thompson, & Hayes, 2008).

The use of a trauma-focused intervention that emphasizes the attachment system as a foundation on which to base clinical intervention is critical in the promotion of recovery with young children affected by complex trauma (Osofsky, 2004). In the realm of child mental health, the term *complex trauma* has been used to reference the “dual problem of exposure and adaptation” frequently observed in victims of severe and sustained childhood abuse and neglect (Spinazzola et al., 2005, p. 433), namely, the effects of chronic maltreatment on immediate and long-term outcomes across domains of impairment, including attachment, biology, affect regulation, dissociation, behavioral control, cognition, and self-concept (Cook et al., 2005). The Attachment, Self Regulation, and Competency (ARC) Framework is one of a handful of emerging treatment models being developed in partnership with the National Child Traumatic Stress Network (NCTSN) as an intervention for children and adolescents impacted by complex trauma (Cook et al., 2005).

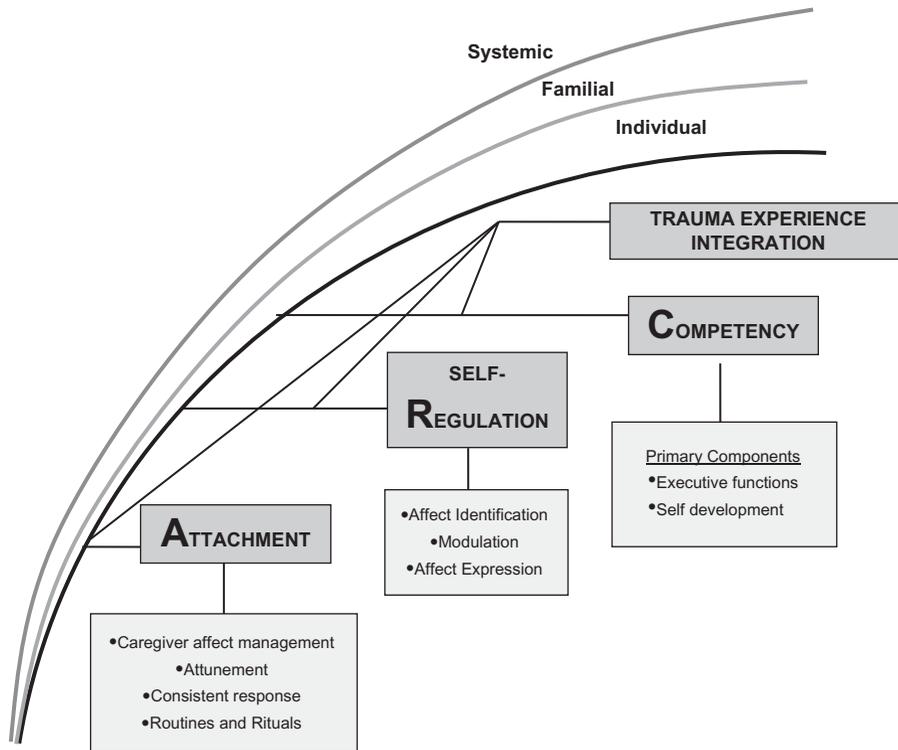
### **The ARC Framework**

The ARC framework is a flexible, component-based intervention for treating children and adolescents who have experienced complex trauma (Blaustein & Kinniburgh, 2010; Kinniburgh & Blaustein, 2005; Kinniburgh, Blaustein, Spinazzola, & van der Kolk, 2005). The ARC framework is theoretically grounded in attachment, trauma, and developmental theories and specifically addresses three core domains impacted by exposure to chronic, interpersonal trauma: attachment, self-regulation, and developmental competencies (see Figure 1). Within those domains, the framework is organized around 10 core targets or building blocks of intervention.

#### ***Attachment***

The attachment domain targets the child’s caregiving system. This may include biological parents, extended relatives, foster or adoptive parents, residential staff within a milieu, school personnel, and the clinician. Building a safe attachment system provides the foundation on which all other developmental competencies are built. Within the attachment domain, four key building blocks are targeted:

1. *Caregiver management of affect* focuses on the ability of the caregiver to recognize and regulate emotional experience. Caregivers are provided education about trauma and children’s adaptive responses. Clinical work includes depersonalizing child behaviors; validating caregivers’ responses; and improving their ability to identify, understand, and appropriately manage affect.
2. *Attunement* concentrates on the capacity of caregivers and children to accurately read each others’ cues and respond effectively. Positive engagement between caregiver and child is actively targeted as the foundation for a rewarding dyadic experience. Intervention targets the caregiver’s ability to recognize and respond to the emotional needs underlying a child’s distressing behaviors. Psycho-education includes information about trauma triggers and responses.
3. *Consistent response* refers to a caregiver’s ability to respond consistently and appropriately to a child’s behaviors. This skill is often compromised due to caregiver difficulties with affect management and child attunement. Interventions seek to build effective parenting skills and clinicians actively work with caregivers to identify and implement tools.



**Figure 1.** Attachment, self-regulation, and competency (ARC): A framework for intervention with complexly traumatized youth. Adapted from “Attachment, Self-Regulation, and Competency: A Comprehensive Framework for Intervention With Complexly Traumatized Youth. A Treatment Manual,” by K. Kinniburgh and M. Blaustein, 2005, p. 426. Copyright 2005 by authors. Reprinted with permission.

4. *Routines and rituals* focus on the ability of the caregiving system to develop predictable routines in order to increase a child’s perceived safety and help with self-regulation. Clinicians work within the caregiving system to develop routines targeted to specific trauma triggers such as bedtime or transitions.

### ***Self-Regulation***

The self-regulation domain targets a child’s ability to identify, modulate, and express his or her internal experience. Impaired self-regulation is a key feature among children exposed to complex trauma (Alink, Cicchetti, Kim, & Rogosch, 2009; Schore, 2001b). Traumatic stress overwhelms the limited coping skills available to developing children. In the absence of a caregiving system that is able to support the development of more sophisticated skills or provide external regulation, children are unable to regulate emotions, they disconnect from their feelings, or they use unhealthy coping skills. Within the self-regulation domain, three key building blocks are targeted:

1. *Affect identification* supports children in building a vocabulary for their emotional experience and understanding the connection between emotions and precipitating events.

Children learn to recognize physiological states and internal and external cues to their emotions and behaviors.

2. *Modulation* targets children's ability to tune in to, tolerate, and sustain a connection to internal states. Children who have experienced trauma often feel overwhelmed or constricted with few strategies to modulate arousal states. Children are assisted in developing concrete strategies to effectively manage their bodies and emotions.
3. *Affect expression* works to increase a child's ability to identify safe resources and communicate emotional experience. Sharing emotional experience is a key aspect of human relationships and the inability to effectively communicate interferes with children being able to form and maintain healthy attachments.

### **Competency**

The competency domain focuses on a child's ability to acquire the foundational skills for ongoing development. Children who experience complex trauma must invest their energy into survival rather than in the development of age-appropriate competencies. Children may lag behind peers in a variety of developmental domains or fail to develop a sense of confidence and efficacy in task performance (Shonk & Cicchetti, 2001; Toth & Cicchetti, 1996; Vondra, Barnett, & Cicchetti, 1990). This domain targets two building blocks:

1. Clinicians promote the building of *executive functions* to increase the child's ability to effectively engage in problem solving, planning, and anticipation. Children are supported in building an understanding of the link between actions and outcome and to consider, implement, and evaluate choices.
2. *Self-development and identity* targets the development of a sense of self that is unique and positive and incorporates experiences from the past and present. Children are encouraged to create a narrative of their life, explore personal attributes, and develop a future orientation.

### **Trauma Experience Integration**

The final ARC building block, Trauma Experience Integration, integrates the range of skills encompassed within the attachment, self-regulation, and competency domains, to support children in building a coherent and integrated understanding of self and engage more fully in present life. This building block delineates developmentally tailored strategies for addressing and resolving sequelae of exposure to traumatic events that continue to intrude on children or undermine their healthy development. Posttraumatic elements targeted in this building block include traumatic memories and reminders, triggered arousal and freeze states, and trauma-related self-attributions and cognitions.

### **Application of the ARC Framework with Young Children**

In recognition of the inherent challenges of clinical work with traumatized children, including systemic factors, cultural factors, and therapeutic context, ARC was designed to provide guidelines that could be adapted to address the needs of a diverse population. Although the framework has been developed for youth across the developmental spectrum, published considerations of the ARC model to date have primarily been based on treatment of latency-aged children and adolescents. The present article explores implementation of the ARC model with a younger clinical cohort, specifically ethnoculturally diverse

preschool and school-aged children involved in a state child protective system. Clinical observations provided herein are drawn exclusively from treatment of children exhibiting complex behavioral, relational, and psychiatric disturbance associated with exposure to severe and prolonged interpersonal abuse and neglect, most commonly occurring within their immediate or extended caregiving system.

In addition, this article presents preliminary results from a naturalistic study of the utility of the ARC model for this population derived from ongoing program evaluation of ARC treatment implementation within a large community-based mental health agency. Review of clinical, functional, and placement outcomes associated with interrupted and successful completion of a trial of ARC-based treatment bear meaningfully on the potential promise of this model for effective treatment of complex trauma in young children.

### *Developmental Considerations with Young Children*

Children need to have the opportunity to process traumatic experiences in a manner consistent with their cognitive and emotional development. For young children, traumatic experiences are not necessarily linked to a specific event but may derive from the physiological experience of terror associated with the failure of the caregiver to provide soothing, safety, and security (Schuder & Lyons-Ruth, 2004). Infants are largely reliant on a caregiver to provide tools for soothing in the face of internal distress (Kopp, 1982). When child trauma has occurred within the caregiving relationship due to a caregiver's inability to maintain the child's safety or the caregiver being the source of distress, clinical interventions must include reparative work within the attachment system (Blaustein & Kinniburgh, 2007; Cicchetti, Rogosch, & Toth, 2006; Lieberman & van Horn, 2008).

For young children, traumatic experiences may occur prior to the acquisition of expressive language skills. Young children may lack a specific, identifiable traumatic event and do not have the skills necessary to process trauma through a coherent, sequential, verbal narrative. Trauma processing with young children often occurs in the moment when a child experiences heightened physiological reactions. The restoration of internal safety happens when the child's distress is identified, validated, and modulated by a caregiver. This process is internalized and over time builds the capacity for effective self-regulation. Additionally, it creates a sense of mastery over a physiological experience once associated with perceived loss of control and extreme distress.

Application of the ARC framework with young children grounds treatment within the caregiving relationship in three ways: (a) increasing caregiver attunement in order to build a secure attachment base to support the development of competencies, (b) enhancing the caregiving system's ability to support the child in the implementation of effective self-regulation strategies, and (c) teaching and encouraging caregivers to support the child's development of a positive sense of self and mastery. As described previously, the "caregiving system" is defined broadly within the ARC framework, and intervention efforts may include primary caregivers (i.e., biological, foster, or adoptive parents) as well as larger kinship structures, milieu caregivers, and/or programs such as day care or schools. When applying this framework, in addition to individual work with the child, the clinician engages the caregiver in education and dyadic work throughout the course of treatment. This multilayered approach builds capacities within the caregiver and within the caregiver-child relationship.

**Table 1**  
Types of trauma experienced ( $N = 93$ )

Trauma Type	Yes (%)	Suspected (%)	Total (%)
Impaired caregiver	90.3	2.2	92.5
Neglect	88.2	4.3	92.5
Traumatic loss/bereavement	89.2	1.1	90.3
Domestic violence	73.1	11.8	84.9
Emotional/psychological abuse	57.0	16.1	73.1
Physical maltreatment/abuse	48.2	21.5	69.7
Sexual maltreatment/abuse	20.4	26.9	47.3
Other trauma	8.6	4.3	12.9
Sexual assault/rape	4.3	7.5	11.8
Physical assault	8.6	3.2	11.8
Community violence	4.3	6.5	10.8
Illness/medical	7.5	1.1	8.6
Extreme interpersonal violence	4.3	2.2	6.5
Serious injury/accident	5.4	1.1	6.5
Forced displacement	2.2		2.2
Natural disaster	2.2		2.2
School violence	1.1		1.1
Kidnap		1.1	1.1

*Note.* War/terrorism/political violence experienced inside the United States, war/terrorism/political violence experienced outside the United States are not included because no trauma was reported.

### **Population**

The concepts described in this article have been developed through therapeutic intervention at an outpatient clinic (Alaska Child Trauma Center at Anchorage Community Mental Health Services) serving children age 3 to 12. The clinic provided services to 93 children using the ARC framework. The average age of clients at admission was 7.5 years. For clients who completed treatment, the child and caregivers participated in an average of 50 sessions. The children represent a diverse racial group: American Indian/Alaska Native 65.6%, Caucasian 39.8%, African American 20.4%, Native Hawaiian/Pacific Islander 4.3%, and Asian 2.2%. Ethnocultural considerations were critical in the application of the ARC framework at the Alaska Child Trauma Center, particularly in working with a predominantly American Indian/Alaskan Native population. All of the children involved in this trial had a history of exposure to multiple traumatic experiences (see Table 1). The most common types of trauma were impairment of caregiver (92.5%), neglect (92.5%), traumatic loss/bereavement (90.3%), domestic violence (84.9%), emotional abuse or psychological maltreatment (73.1%), and physical maltreatment (69.7%). All of the children exhibited trauma-related symptoms that interfered with their ability to function.

### **Attachment**

#### ***Caregiver Affect Management***

Young children who have experienced trauma may display trauma responses or adaptations that make it difficult for caregivers to regulate their own affect. These children's

early experience of caregivers often includes harm, unpredictability, neglect, and overall lack of safety. The effects of these early experiences can cause children to react to their environment in a manner that can be quite challenging for their current caregiver. This is illustrated in the case of Sara and Melissa: Melissa is a 5-year-old girl who experienced neglect, maternal substance abuse, and sexual abuse as a toddler. She was subsequently removed from her home of origin followed by placement with Sara, an experienced foster parent who described the challenges of parenting Melissa.

When Melissa gets upset it is as though her world falls apart. We can't comfort her. If she is upset and I try to comfort her she screams and pushes me away. When she isn't upset she is always by my side. We try to give her lots of attention but it is never enough. It is like she is a glass with holes in the bottom; we can never fill her up. I love this child and I want to help her but I feel I am failing.

Sara felt ineffective as a caregiver and these feelings threatened dissolution of the placement. Sara said, "Maybe she needs a different foster mother, someone who knows what to do." Melissa's trauma adaptation was a baseline state of clinginess interrupted by triggered states of dysregulation during which she rejected the caregiver. This adaptation triggered feelings of hopelessness and ineffectiveness for her foster mother, feelings that impeded on her ability to accurately attune to Melissa's needs.

In this case, assisting the caregiver in managing her affect was the initial trauma intervention. The first step was to normalize Melissa's behavior as a trauma adaptation likely based on prior experiences and to normalize Sara's response: "You are used to being able to comfort a child and when you can't it is really frustrating and sad." A component of attunement work with Sara was to help her understand Melissa's behavior in the context of her trauma history. This allowed Sara to step back from her emotional response and understand Melissa's trauma-related behaviors in a different way. The most effective tool for managing her own emotional response was to create a cognitive reframe that allowed her to think differently: "What happened to her was not her fault. What is happening now is not my fault. I just have to do the best I can. We will get through this." Sara's use of self-talk to counter self-blame reduced feelings of helplessness and inadequacy. With these feelings acknowledged and managed, she was able to attend to herself and develop a self-care toolbox that included taking deep breaths, going for walks, and listening to relaxing music. Sara was successfully able to care for Melissa for 6 months until a permanent adoptive home became available.

Although young children may have trauma responses that challenge a caregiver's capacity to manage his or her own affect, they also have limited resources for independent, internal regulation and are heavily dependent on the caregiver for co-regulation. This can create a cycle of dysregulation. The child's behavior challenges the caregiver's regulatory capacities, and any resulting caregiver dysregulation reinforces the child's perception that the world is an unsafe and unpredictable place. As in the case of Melissa and Sara, trauma adaptations can threaten even a strong and positive child-caregiver relationship. As Sara developed an ability to understand Melissa's behavior and manage her affect she was able to be the stable, consistent caregiver that Melissa needed. This consistency and safety is the foundation of trauma work with young children. It is built on the capacity of the caregiver to manage the strong emotions that trauma can elicit in both the child and the caregiver.

Culture is a critical consideration when working with children and their caregivers (see Ellis, Miller, Baldwin & Abdi, for further discussion of cultural issues, this issue), as

is illustrated in the case of Samuel (5-year-old boy) of Alaskan Native background, living in the home of Pauline and Harold (Filipino-American) foster parents. In Samuel's family and culture of origin, one demonstrates respect for a parent or elder by listening quietly. When Samuel's foster parents would set limits with him and carefully attempt to explain the reasons for the limit, Samuel's quiet deference was misinterpreted as recalcitrance. As his caregivers felt ignored they increased the intensity of their attempts to engage Samuel, which as he understood it, "means I'm really in big trouble." Work on caregiver affect management in this case included psycho-education about the trauma response, Samuel's tendency to shut down in the presence of strong affect, and a cultural misattunement that exacerbated the response of both caregiver and child.

### ***Routines and Rituals***

Routines and rituals help children create expectations about the predictability of their external environment. Young children rely on their primary caregivers to help them organize their experiences and guide them in exploration and mastery of new skills through practice and repetition. Children who have experienced complex trauma frequently have lived in an environment void of structure and routines. They form a perception that the world is an unpredictable and dangerous place, and their capacity for developing competencies through self-exploration and mastery of new skills becomes inhibited by fear (Larrieu & Bellow, 2004). One of the key principles in restoring a sense of safety for a child is implementing predictable daily routines that establish safety, help children organize experience, and develop mastery.

The ARC framework emphasizes the importance of building routines into therapy, providing education to caregivers about the importance of building routines and rituals in the home, and concretely working with caregivers to develop and support these routines and rituals. When young children have structure in daily living with attention to predictable schedules and sequential tasks, they feel safer, decreasing their need to control their environment with problematic behaviors.

Bedtime and other transition times are a frequent target of intervention with young children who have experienced interpersonal trauma. In normative development, children commonly experience some anxiety and distress at bedtime, which is managed through consistent co-regulation provided by their caregivers. Children who have experienced abuse or neglect have a high incidence of sleep disturbance (Sadeh, 1996); they may feel particularly vulnerable at night and may not trust that their primary caregiver will keep them safe. These children may demonstrate hypervigilance, intrusive thoughts, nightmares, bed-wetting, excessive clinginess, inconsolable crying, and severe tantrums. An example of a bedtime routine and ritual in which the caregiver helps the child decrease feelings of anxiety through the building of routines founded on co-regulation is as follows.

Mrs. Smith prepares Nicole for her bedtime routine by turning off the TV and reading her a bedtime story. She knows that Nicole is terrified of the shower due to a history of abuse in the bathroom, so she chooses to bathe Nicole at a less vulnerable time of day. After story time, Mrs. Smith retrieves a special flashlight and walks with Nicole to the bathroom to do a safety check. With lights on in the bathroom, she points the flashlight behind the shower curtain and in the closet to ensure that no bad people or monsters are present. When a sense of immediate physical safety is established, Mrs. Smith assists Nicole in going to the bathroom, washing her face, brushing her teeth, and putting on her pajamas. She provides praise and positive feedback to Nicole throughout the routine as Nicole completes these tasks. She then turns on nightlights in Nicole's room and completes a safety check

with Nicole, looking under the bed and in corners and closets to ensure that there are no threats in the room. Mrs. Smith sits down beside Nicole and wraps her in a special blanket to keep her safe. She gives her a teddy bear to watch over her while she sleeps and turns on the baby monitor so that she can hear Nicole in the next room if Nicole becomes scared. Mrs. Smith holds Nicole's hand and sings her a bedtime song. Mrs. Smith assures Nicole that she will keep her safe tonight as she sleeps. Mrs. Smith squeezes Nicole's hand, says a prayer, and slowly walks out of the room, leaving the door cracked open and the hall light on. Nicole's clinician worked with Mrs. Smith to build these routines; test them; assess their effectiveness; and adjust them to meet Nicole's need for safety, reassurance, and connection with her caregiver at bedtime.

Nicole's clinician also worked with Nicole and Mrs. Smith to build routines into therapy, as children who have experienced separation and loss may feel vulnerable and distressed when saying goodbye or moving to a new activity. Transitional objects, predictability, and rituals can ease a child's anxiety during transitions. Nicole's therapist structured therapy to allow Nicole advanced notice of the end of the session and then allowed Nicole to choose a sticker to take home from a special basket. The clinician then gave Nicole an opportunity to hide an object somewhere in her office assuring Nicole that she could "find it again" when she returned the following week.

Children experiencing complex trauma often live in a chaotic and unpredictable environment, contributing to a state of fear and loss of control. Caregivers and clinicians play an essential role in restoring a sense of safety and security to traumatized children by developing predictable routines and rituals in their lives.

## **Self-Regulation**

A child's ability to regulate affect includes the ability to safely modulate physiological arousal. Young children rely on their caregiver to provide soothing when distressed or overwhelmed. Caregivers provide this through co-regulation including a number of sensory experiences such as touch, movement, and sound. For example, an infant in distress can be calmed by swaddling, rocking, and singing. Over time, children internalize these experiences and begin to develop more sophisticated strategies for self-soothing and managing physiological arousal (Kopp, 1982). The self-regulation component of the ARC model targets building skills with affect identification, modulation, and expression. Because young children are only beginning to develop a vocabulary for their affective experience and still primarily express emotion with their bodies, it is important to target modulation as a primary treatment goal.

Young children often lack words to express themselves, relying instead on a range of adaptive and maladaptive behaviors to communicate their needs, including crying, tantrums, facial expressions, running away, and other demonstrations of urgency or demand (Bowlby, 1982). Even children who have attained adequate language proficiency to express basic needs may exhibit transient loss of the ability when in a state of distress, panic, or fear. If the caregiver can accurately read the child's cues and attune to the child, the caregiver can successfully regulate the child. As the child is successfully soothed and comforted by the caregiver, the child internalizes this experience and develops some ability to modulate independently. A child who did not receive a safe, supportive caregiving environment will develop alternative ways to cope with distress. Young children with deficits in the ability to modulate affect may present as withdrawn, isolated, overly compliant, or dissociative. Other symptoms may include hyperactivity, aggression, self-harm, sleeping problems, and difficulty managing bodily functions.

**Table 2**  
Affect modulation exercises for children 3–5 years

Upregulation	Downregulation	Alternating states
“I Spy” engagement games	Deep slow breathing with a stuffed animal held against stomach	Bubble blowing: small (requires fast breathing) and big bubbles (requires slow breathing)
“Do the Hokey Pokey” or a movement game	Create a small, contained “safe place” with soothing objects inside	Rolling cars at different speeds
Twirling like a top	Yoga for kids	“Red Light, Green Light”
Balloon kick	Mirroring game: child and caregiver face each other and move slowly	“If You’re Happy and You Know It”: songs with alternating soft and loud states; “Head, Shoulders, Knees, and Toes”: songs with fast and slow movements
Jump rope	Story time	“Walk like a turtle, run like a bear” Imaginary games with slow and fast animals
Play sword fight	Feather balancing: balancing a peacock feather on hand	“Simon Says”
Exercise ball	Sand wheels or sand tray	“Hide-and-Go-Seek”
Hula hoop	Coloring	“Mother May I?”

A key principle of modulation is to assist the child in managing physiological arousal and linking this arousal to “energy” in the body. This involves increasing tolerance for arousal (upregulation), as well as decreasing the general level of arousal (downregulation). For young children, the use of movement and sensory-focused activities is the primary modality for teaching modulation skills (see Table 2). These activities provide concrete tools to help children connect to their bodies in a nonthreatening, developmentally appropriate manner. Guiding a child through play activities that incorporate movement and other sensory experiences, while providing reflection and containment, allows children to develop an awareness of their internal physiological states and ultimately the ability to tolerate and modulate internal states.

For example, a clinician and client play a game in which they pretend to be animals, moving as slowly as an elephant and as fast as a bunny. Throughout the play, the clinician helps the child to connect to what he or she is experiencing in his or her body, “When we were moving really fast like a bunny my face and hands were getting warm. When we slowed down I could feel them cool down. What did you notice in your body?” Movement activities paired with reflection and modeling of self-appraisal skills provides the foundation for early modulation. Over time, the experience of mastery over the body and associated arousal states is internalized and provides the basis for the development of more sophisticated and independent modulation skills.

When a young child enters ARC treatment, the clinician assesses the child's current regulation strategies and begins addressing modulation at a pace that is safe and comfortable. For instance, a child may have learned to be still or relied on dissociative strategies to avoid danger and manage arousal. If the therapist began by focusing on an upregulation activity immediately, it might make progress difficult as it would require the child to move away from a place of physiological safety. It is more effective to begin with an activity that honors the need for quiet or stillness and slowly bring the child from an inactive to an active state of arousal. Conversely, for a child who relies on hypervigilance for safety it may be more effective to begin with an activity that necessitates high-energy states and slowly moves the child toward decreased levels of arousal.

For self-regulation work to be effective there are important insights and skills a caregiver must develop. He or she needs to have a basic understanding of the trauma response of the child in order to interpret the behavioral adaptations the child has developed to cope with life stressors. This is crucial if the child has a history in which physical touch was a primary part of the trauma. In such cases, modulation activities with limited touch may be important to implement early in treatment. Caregivers are encouraged to be creative in their use of language with this age group. For example, metaphors such as "your engine" can help children symbolize their body. Children may also have culturally rooted experiences and concepts that create opportunities or vehicles for regulation. James, a 5-year-old client whose family engaged in subsistence fishing for generations, could strongly identify with the persona of the fisherman–hunter who must be extremely calm, thoughtful, and patient. James could practice being "perfectly still" like a hunter and "quiet and careful" like a fisherman, attributes highly valued in his culture. By individualizing intervention based on a child's trauma history and experiences, using normative physical activities, and engaging the caregiver in co-regulation, young children can master the essential skill of modulating their affective experience.

## Competency

### *Child-Centered Play*

During the normal course of development, children have the opportunity to acquire a variety of cognitive, emotional, interpersonal, and physical competencies. The development of competencies is cumulative: As children negotiate new skills and areas of expertise, they build an increased sense of efficacy and achievement that allows them to continue to approach new challenges throughout childhood (Masten & Coatsworth, 1998). Traumatic exposure can interrupt this developmental trajectory, as children need to focus on their physiological and emotional survival. This can leave children with deficits in their sense of mastery over themselves and their environment. The ARC framework individualizes treatment for each client by assessing the specific vulnerabilities associated with traumatic exposure that can interfere with healthy development. The goal of treatment is to build normative competencies and establish external resources that support ongoing recovery. There are two key principles in encouraging competency development in young children: the use of child-centered play and embedding the work within an attachment relationship.

Play is the primary modality young children use in order to communicate their internal experience, master developmental tasks, and self-regulate (Perry, Hogan, & Marlin, 2000). One of the primary impacts of trauma with young children is a deficit in their ability to play: either the absence of free or narrative play or play that is characterized by traumatic content

and causes intense physiological arousal. Play in which the child has the opportunity to direct and lead the play is a critical component in competency development for young children. It is a channel for children to address feelings identification in a neutral manner, discover and explore unique aspects of themselves, and have an opportunity to practice problem solving and serves as the foundation for the development of executive functioning. Children use play to externalize an internal dialogue of stories in mediums such as the sand tray and the dollhouse or while taking on roles and characters during dress up. Integration of child-centered play into the therapeutic work and the caregiver–child relationship helps children develop competency, executive functioning, and a positive sense of self.

Olivia, a 4½-year-old, had experienced chronic neglect in her home. Olivia was fearful and had limited early opportunities to explore her environment or engage with others through play. In session she timidly moved to the sand tray, placed her hands in it, and sifted the sand through her fingers. The clinician provided reflections of Olivia’s sensory experience in the sand tray. Olivia looked at the clinician saying, “Can you put your hands in too?” She asked the clinician to hide her hand in the sand and then squeezed it gently when she found it. With the use of sand tray play Olivia was able to practice relaxation, explore body sensations, and experience safe affectionate touch that gave her a new trust in her body. Later in treatment, Olivia was able to create and share stories of her past and present integrating her trauma experience into a more coherent narrative of self.

The goal in building young children’s executive functioning is to help teach cause and effect and an understanding that the child’s actions have an impact on their environment. For example, the ability to tie a shoe, make a snack, create something out of play dough, or toss a ball back and forth can be used to help build a positive sense of competency, particularly when the completion of these tasks are recognized and reflected by adults. These accomplishments need to occur within a caregiving environment that reinforces mastery thereby giving it meaning and supporting the child’s sense of efficacy. Through play, children begin to see the effect they have on the world by the therapist or caregiver reflecting their actions. In order to generalize competency promotion for young children, it is important for caregivers to learn to recognize opportunities to reflect and promote these concepts so that they can foster their children’s healing in those teaching moments that occur outside of the clinic.

### ***Self-Development and Identity***

The caregiver serves as a mirror to the young child reflecting back the child’s expressions and feelings, and it is through this special attuned relationship that the child develops a sense of both the “other” and the “self.” The child looks out into the world, particularly to the caregiver, and that which is reflected serves as the basis for the development of an “I.” When a young child experiences an environment that is violent and chaotic or a caregiver who is unable to respond and attune to the child, this process is derailed. The negative environmental input is internalized and a fragmented or a negative self-identity can develop. In cases of neglect, the lack of reflection and input can lead to an underdeveloped self.

Self-identity is developed through a process of internalization. Thus, the initial step in intervention is to work with the environment, particularly the caregiver, to develop consistent, positive mirroring and reflection for the child. Kinniburgh and Blaustein (2005) identified four interrelated facets of the self for trauma intervention: the unique self, positive self, cohesive self, and future self. Young children do not have the verbal or abstract thinking capacities to reflect on the self in the way that older children and adults do; therefore, self and identity work may rely more on experiential learning than on language.

Young children are developmentally oriented toward action and simple games like tracing handprints, self-drawings, and creating a song of “likes and don’t likes” targeting the development of a unique and positive self. Caregivers can support this work through reflections that acknowledge the uniqueness and individuality of the child. Frequent and simple statements, “You really like apples” or “You are having lots of fun with your truck” can assist the child in developing an internal representation of a unique self.

The development of a positive self is supported by the caregiver identifying and reflecting attributes of the child indicating that the child is effective and capable. Building opportunities for the child to successfully engage and master the environment and reflecting and acknowledging this success develops the positive self. Routines and rituals support the child’s sense of efficacy as he or she creates a predictable and navigable world in which the child can feel successful. The development of the future self in young children can be supported through make-believe and fantasy play where the child begins to imagine the possibilities of what the self might become.

Having a broader systemic perspective on identity can create opportunities to explore family, tribal, and cultural identity. Awareness of sociocultural characteristics begins as early as 4 to 5 years old, and identification with a specific group and the reciprocal impact on identity continues to grow and shift throughout the lifespan (Aboud & Doyle, 1993; Phinney, 1990). In the case of Peter, a 5-year-old Tlingit child in foster care, Native American symbols, metaphors, and activities were utilized in treatment. Tlingit tribes are divided into two different clans, Eagle or Raven. The clinician used expressive art and books to explore the meaning of the Raven, characteristics of the Raven, and read the legend of Raven and the Creation Story. As Peter engaged in a therapeutic group, each group member made a section of a totem pole to represent their individual, family, or cultural identity. Peter used a cardboard box to create a raven with feathers, which was placed on the top of the group totem pole. This exploration allowed Peter to incorporate aspects of his cultural identity into his self-identity and develop a positive and cohesive self.

Self-development is one of the critical areas impacted by trauma and poor self-esteem has been identified as one of the common consequences of complex trauma (Cook et al., 2005). The development of self in young children can be easy to overlook as young children do not possess the verbal or intellectual abilities to reflect on the self as older children and adults can. In addition, trauma intersects with culture to potentially challenge the development of a cohesive self. Self-development is one of the critical tasks of early childhood and an important target for trauma intervention.

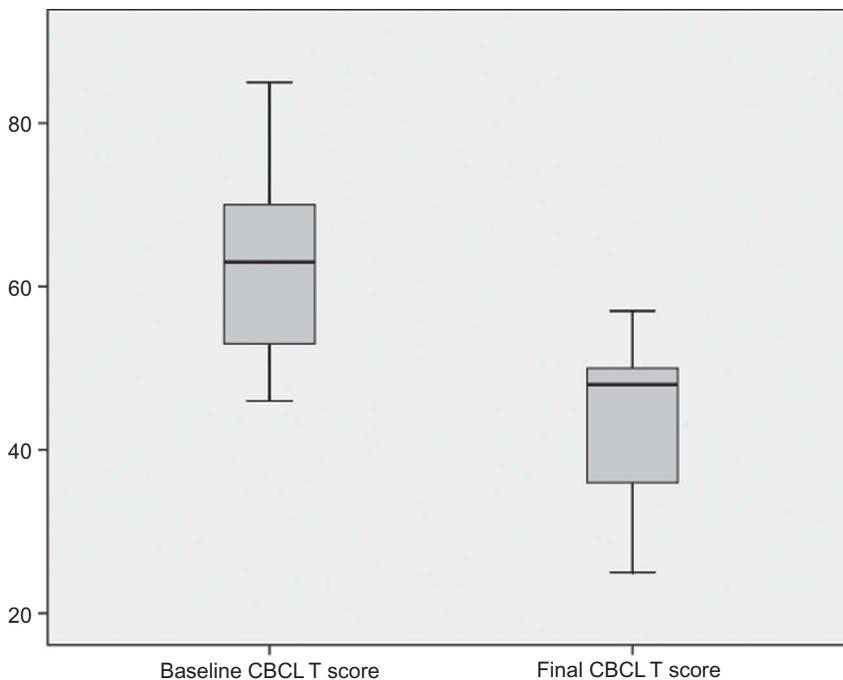
### **Preliminary Clinical and Placement Outcomes**

The Alaska Child Trauma Center tracks outcomes for children receiving ARC treatment through the NCTSN’s Core Data Set, managed by Duke Clinical Research Institute, with analysis provided by local third-party evaluators at the University of Alaska Anchorage’s Center for Human Development. The NCTSN’s Core Data Set uses several measures to track outcomes, including the Trauma Symptom Checklist-Alternate Version (TSCC-A; Briere, 1996), the UCLA PTSD Index for DSM IV (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998), and the Child Behavior Checklist (CBCL; Achenbach, 2001). These measures are administered at baseline, at three-month intervals, and at discharge. Half of the children served at the Alaska Child Trauma Center are under the age of 7, limiting the utility of the TSCC-A and UCLA PTSD Index for our population. There are two versions of the CBCL, a young child’s version for ages 1.5 to 5 (Achenbach & Rescorla, 2000) and an older child version for

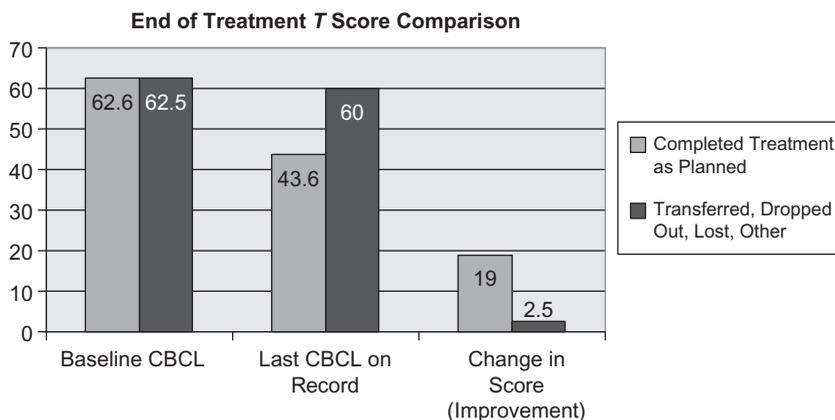
ages 6 to 18 (Achenbach, 2001). The young child's version includes seven symptom subscales: Emotionally Reactive, Anxious/Depressed, Somatic Complaints, Withdrawn, Sleep Problems, Attention Problems, and Aggressive Behavior. The older child's version includes eight symptom subscales: Anxious/Depressed, Somatic Complaints, Social Problems, Thought Problems, Withdrawn/Depressed, Attention Problems, Rule Breaking, and Aggressive Behavior.

Although the Alaska Child Trauma Center has initiated ARC services with 93 children, as of the date of submission of this article, 53.8% (50/93) of clients had end of treatment status. Of these 50 clients, 52% completed ARC treatment and had a completed treatment status at discharge. The most frequent reason for noncompleted treatment status (26%) was relocation of the family to a community outside the Anchorage area. Due to the vast distances encountered in travel between communities in Alaska, and the prohibitive cost of air travel, clinical services were transferred to a local provider when a client moved out of the Anchorage area. Fourteen percent of clients dropped out of treatment. The factor that most often accounted for this population leaving treatment was the achievement of reunification with the biological family. Given the sometimes contentious relationship between child protective services and biological families, this is an expectable occurrence in a minority of cases. Eight percent of cases were lost to follow-up.

Of the 26 children who completed treatment, 21 had baseline and discharge CBCL scores and legal consent for data collection. For this group, at baseline, the mean CBCL *t*-score was 62.6 and at discharge the mean *t*-score was 43.6 (see Figure 2). The average drop in CBCL *t*-scores for children completing treatment was 19 points. A paired



**Figure 2.** Comparison of baseline and discharge Child Behavior Checklist (CBCL) scores. Adapted from "Alaska Child Trauma Center Summary Report," J. Atkinson and R. Lamar, 2009, p. 10. Copyright 2009 by University of Alaska Anchorage. Reprinted with permission.



**Figure 3.** Child Behavior Checklist (CBCL) overall *t*-score comparison. Adapted from “Alaska Child Trauma Center Summary Report,” J. Atkinson and R. Lamar, 2009, p. 16. Copyright 2009 by University of Alaska Anchorage. Reprinted with permission.

samples *t* test was run to test statistical significance of the overall CBCL *t*-scores among these 21 cases and concluded that a statistically significant decrease ( $p < .05$ ) in overall CBCL *t*-scores occurred (Atkinson & Lamar, 2009). In addition, when comparing clients who completed treatment and those who ended treatment early, those completing treatment demonstrated a far greater level of improvement, a 19-point improvement compared to a 2.5-point improvement with clients who did not complete treatment (see Figure 3).

Children completing treatment also achieved a high rate of permanent placement. To date, 92% are in a permanent placement, defined as adoption, preadoptive placement, permanent placement with relatives, or reunification with biological parents. This compares favorably to the rate of permanent placement for children in foster care in Alaska. According to the federal review of Alaska’s child protection system, the *Alaska Child and Family Services Review* (U.S. Department of Health And Human Services, 2009), less than 40% of cases achieve permanency within one year, permanency being defined as adoption, reunification, guardianship, or permanent placement with relatives.

## Discussion

The present article provides clinical illustration and associated outcomes from the first naturalistic program evaluation of the ARC model applied to young children impacted by complex trauma exposure and maladaptation. Outcome from program evaluation with preschool-age American Indian, Alaskan Native, Caucasian, and African American children involved in the child protective system suggests ARC to be a promising practice for young children. The potential generalizability of the present clinical observations and preliminary outcomes associated with use of the ARC model with young children is strengthened by the rich ethnocultural diversity of our clinical sample as well as their extensive and wide-ranging trauma exposure history. These observations are consistent with and expand upon emerging empirical evidence in support of the ARC model in treatment of complex trauma in latency-aged children and adolescents (Blaustein et al., 2010; Kinniburgh, Spinazzola, Gabowitz, & Blaustein, 2010).

The higher success rate of treatment completers in obtaining permanent home placements is a particularly noteworthy outcome of this study. If sustained at our Center and

replicated elsewhere, this finding has significant clinical and policy implications regarding model dissemination. Observations from the present evaluation support the utility of conducting more formal research on the ARC model, including controlled clinical trials designed to test the comparative efficacy and effectiveness of this framework as a front-line intervention for children exhibiting complex adaptation to chronic maltreatment and neglect.

## Acknowledgments

We express much gratitude to Jerry Jenkins, MAC, and Dee Foster, LPA, of Anchorage Community Mental Health Services for supporting our work. We would also like to thank Dr. Bessel van der Kolk of the Trauma Center at Justice Resource Institute for leadership in the field of child trauma, and we would like to thank the National Child Traumatic Stress Network and the Substance Abuse and Mental Health Services Administration for their ongoing commitment to helping children recover from trauma.

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