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<p>Treatment Description</p>	<p>Acronym (abbreviation) for intervention: ABC</p> <p>Average length/number of sessions: 10 sessions; 60 minutes per session</p> <p>Aspects of culture or group experiences that are addressed (e.g., faith/spiritual component, transportation barriers): ABC was developed primarily for use with low-income Black, Hispanic, and non-Hispanic White families. A version of the intervention was also developed specifically for young children in foster care and for children adopted internationally. Cultural and linguistic enhancements are considered in each implementation context. Session content includes consideration of personal and cultural experiences that influence parenting.</p> <p>Trauma type (primary): Neglect</p> <p>Trauma type (secondary): Abuse, domestic violence, placement instability</p>
<p>Target Population</p>	<p>Age range: Birth to 48 months</p> <p>Gender: <input type="checkbox"/> Males <input type="checkbox"/> Females <input checked="" type="checkbox"/> Both</p> <p>Ethnic/Racial Group (include acculturation level/immigration/refugee history—e.g., multinational sample of Latinos, recent immigrant Cambodians, multigeneration African Americans): ABC was developed and adapted for Black, Hispanic, and non-Hispanic White families. It has been used with single parent families, as well as two parent and multigenerational families. It has also been implemented with Latino families in the US (Aparicio et al., 2016). ABC is implemented with cultural humility, and cultural adaptations or enhancements are considered in each implementation context.</p> <p>Language(s): ABC has been implemented in English, German, Mandarin, Norwegian, Russian, Spanish, and Swedish. Contact the program representative for information on which materials are available in each language.</p> <p>Region (e.g., rural, urban): ABC has been implemented both in urban and rural areas.</p>
<p>Essential Components</p>	<p>Theoretical basis: ABC is based in attachment theory, as well as in stress neurobiology.</p> <p>Key components:</p> <ol style="list-style-type: none"> 1. Children who have experienced early adversity especially need nurturing care. ABC helps parents provide nurturing care even if children do not elicit it and/or it has been challenging for parents. 2. Children who have experienced early adversity are often dysregulated behaviorally and biologically. ABC helps parents behave in sensitive and responsive ways that help children develop optimal regulatory strategies. 3. Parents often behave in frightening ways that dysregulate children’s behavior. ABC helps parents reduce frightening behaviors.

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<p>Essential Components cont'd</p>	<p>While <i>ABC</i> is a manualized intervention that also incorporates video-feedback and homework, the most crucial aspect of the intervention is the parent coach's use of "In the Moment" comments that target the caregiver behaviors of nurturance, following the lead with delight, and non-frightening behaviors. These are used throughout the home visiting sessions while discussion session content with the parent(s).</p>	
<p>Clinical & Anecdotal Evidence</p>	<p>Are you aware of any suggestion/evidence that this treatment may be harmful? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain</p> <p>Extent to which cultural issues have been described in writings about this intervention (scale of 1-5 where 1=not at all to 5=all the time). 3</p> <p>This intervention is being used on the basis of anecdotes and personal communications only (no writings) that suggest its value with this group. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Are there any anecdotes describing satisfaction with treatment, drop-out rates (e.g., quarterly/annual reports)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If YES, please include citation: Please see list below.</p> <p>Has this intervention been presented at scientific meetings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If YES, please include citation(s) from last five presentations: Conference presentations have been published in the scientific literature and are cited below.</p> <p>Are there any general writings which describe the components of the intervention or how to administer it? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If YES, please include citation: Please see list below.</p> <p>Has the intervention been replicated anywhere? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Research Evidence</p>	<p>Sample Size (N) and Breakdown <i>(by gender, ethnicity, other cultural factors)</i></p>	<p>Citation</p>
<p>Published Case Studies</p>	<p>Included in papers cited below</p>	
<p>Randomized Controlled Trials</p>	<p>ABC-Infant RCT with children in foster care</p> <p>N = 93, plus 48 children not in foster care</p> <p>Age at intervention: 15-24 months.</p>	<p>Bick & Dozier, 2013; Bernard et al., 2017; Dozier et al., 2006; Dozier et al., 2008; Dozier et al., 2009; Lewis-Morriarty et al., 2012.</p>

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<p>Randomized Controlled Trials cont'd</p>	<p>ABC: <i>M</i> = 20.0 months (<i>SD</i> = 5.98), DEF (Control intervention): <i>M</i> = 19.5 months (<i>SD</i> = 5.6).</p> <p>Race/Ethnicity: ABC: 38% African American, 8% White, and 1% Latino/Hispanic; DEF: 31% African American, 14% White, and 2% Latino/Hispanic.</p> <p>Gender: ABC: 59% girls; DEF: 43% girls</p> <p>Population: Children in foster care and their foster caregivers.</p>	
	<p>ABC-Infant RCT with children living with birth parents in a foster care diversion program</p> <p>N = 120 children</p> <p>Age at intervention: ABC: 5.0-33.8</p> <p>Race/ethnicity: ABC: 29% African American, 5% White, 2% Hispanic, and 13% Biracial; DEF: 59% African American, 10% White, 4% Hispanic, and 27% Biracial.</p> <p>Gender: ABC: 41% female; DEF: 44% Female.</p> <p>Population: Children referred to Child Protective Services and their birth parents.</p>	<p>Bernard et al., 2012; Bernard, Dozier et al., 2015; Bernard, Hostinar et al., 2015; Garnett et al., 2020; Korom et al., 2020; Lind et al., 2014; Lind et al., 2020; Tabachnick et al., 2019; Yarger et al., 2020; Zajac et al., 2020.</p>
	<p>ABC-Infant RCT with children who were adopted internationally</p> <p>N = 131 children</p>	<p>Lind et al., 2020; Yarger et al., 2020; Raby et al., 2020.</p>

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<p>Randomized Controlled Trials cont'd</p>	<p>Age at intervention: ABC: 8.0-47.2 months, DEF: 9.1-50.5 months.</p> <p>Race/ethnicity: ABC: 6.2% African American, 42% Asian American, 11% White, 8% other. DEF: 11% African American, 38% Asian American, 15% White, 2% other.</p> <p>Gender: ABC 50% female, DEF 52.3% female.</p> <p>Population: Children adopted internationally to the US.</p>	
	<p>ABC-Toddler with children in foster care</p> <p>N = 173 children</p> <p>Age at intervention: ABC 14.0-56.3 months, DEF: 14.5-54.7 months.</p> <p>Race/ethnicity: ABC: 54% African American, 28.6% White, 17.4% other. DEF: 58.6% African American, 22.4% White, 19% other.</p> <p>Gender: ABC 42.9% female, DEF 51.7% female.</p> <p>Population: Toddlers in foster care and their caregivers.</p>	<p>Lind et al., 2017; Raby et al., 2020</p>
<p>Outcomes</p>	<p>What assessments or measures are used as part of the intervention or for research purposes, if any? Attachment assessed in Strange Situation in early childhood and with the Kerns Security Scale in middle childhood; Cortisol production assessed through salivary samples (diurnal and in Strange Situation); Problem behaviors assessed through DB/DOS; Theory of mind assessed through range of tasks; behavioral regulation assessed with an observational task; parental sensitivity assessed during a parent-child interaction during a play assessment; autonomic regulation through a variety of biomarkers (RSA, heart rate, skin conductance...); inhibitory control in middle childhood through the Stop Signal Reaction Time paradigm.</p>	

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<p>Outcomes cont'd</p>	<p>The observational assessment of parental sensitivity is assessed pre- and postintervention as part of the implementation protocol at dissemination sites.</p> <p>If research studies have been conducted, what were the outcomes? Parents who received the ABC intervention showed higher parental sensitivity than parents assigned to a control intervention (Bick & Dozier, 2013). Fewer children in the ABC intervention developed disorganized attachment than children randomly assigned to an alternate intervention (32 vs. 58%), as reported by Bernard et al. (2012). Children in the ABC intervention also showed more normative levels of cortisol production as measured across the day and in response to stress, both immediately after the intervention (Bernard, Dozier, et al., 2015; Dozier et al., 2006, 2008) and several years after (Bernard, Hostinar, et al., 2015; Garnett et al., 2020). Children in the ABC intervention also showed better behavioral regulation (Lind et al., 2020), and better autonomic regulation (Tabachnick et al., 2019), inhibitory control (Korom et al., 2021) and attachment security (Zajac et al., 2020) in middle childhood compared with children in the control intervention.</p>
<p>Implementation Requirements & Readiness</p>	<p>Space, materials or equipment requirements? Intervention conducted in families' homes. Computer, videocamera, and toys needed. ABC has also been conducted through telehealth during the COVID-19 pandemic (Roben et al., in press).</p> <p>Supervision requirements (e.g., review of taped sessions)? Review of taped sessions and codification of In the Moment (ITM) comments and parent's behaviors through random 5 minutes segments of sessions. Individual weekly supervision meetings for ITM commenting and coding (30 minutes) and group clinical supervisions (1 hour).</p> <p>To ensure successful implementation, support should be obtained from: The ABC Dissemination Team (contact Caroline Roben).</p>
<p>Training Materials & Requirements</p>	<p>List citations for manuals or protocol descriptions and/or where manuals or protocol descriptions can be obtained.</p> <p>Dozier, M. and ABC Lab (2010). Attachment and Biobehavioral Catch-up. University of Delaware: Unpublished document.</p> <p>Manuals are available only to those receiving training and supervision.</p> <p>How/where is training obtained? ABC dissemination team, University of Delaware</p> <p>What is the cost of training? Training, year of twice-weekly supervision, program evaluation and consultation for ABC-Infant: \$7,000</p> <p>Training, year of twice-weekly supervision, program evaluation and consultation for ABC-Toddler: \$5,000</p> <p>Training in supervision and training are also available. Please contact the ABC Dissemination Team for more information and pricing.</p>

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<p>Training Materials & Requirements cont'd</p>	<p>Are intervention materials (handouts) available in other languages? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If YES, what languages? Arabic, German, Mandarin, Norwegian, Russian, Spanish, and Swedish</p>
<p>Pros & Cons/ Qualitative Impressions</p>	<p>What are the pros of this intervention over others for this specific group (e.g., addresses stigma re. treatment, addresses transportation barriers)?</p> <p>The intervention has powerful and long-term effects on attachment and on physiology, especially given that it is relatively brief (10 weekly sessions). Given that it is implemented in the home, families are reached who would not be reached otherwise and skills are more easily generalized than if implemented in an office.</p> <p>Due to the Covid-19 pandemic, ABC has also been implemented through telehealth, showing comparable effectiveness in improving parental sensitivity (Roben et al., in press; Schein et al., under review).</p> <p>What are the cons of this intervention over others for this specific group (e.g., length of treatment, difficult to get reimbursement)?</p> <p>This intervention requires extensive supervision to be implemented with fidelity.</p>
<p>Contact Information</p>	<p>Name: Caroline Roben, Director of ABC Dissemination.</p> <p>Address: Attachment & Biobehavioral Catch-up Lab, University of Delaware, Newark, DE 19716</p> <p>Phone number: (302) 319-1229</p> <p>Email: croben@udel.edu</p>
<p>References</p>	<p><u>Results of randomized clinical trials:</u></p> <p>RCT with infants in foster care</p> <p>Bick, J., & Dozier, M. (2013). The effectiveness of an attachment-based intervention in promoting foster mothers' sensitivity toward foster infants. <i>Infant Mental Health Journal</i>, 34, 95–103. https://doi.org/10.1002/imhj.21373</p> <p>Bernard, K., Lee, A. H., & Dozier, M. (2017). Effects of the ABC intervention on foster children's receptive vocabulary: Follow-up results from a randomized clinical trial. <i>Child Maltreatment</i>, 22(2), 174-179. https://doi.org/10.1177/1077559517691126</p> <p>Dozier, M., Lindhiem, O., Lewis, E., Bick, J., Bernard, K., & Peloso, E. (2009). Effects of a foster parent training program on children's attachment behaviors: Preliminary evidence from a randomized clinical trial. <i>Child and Adolescent Social Work Journal</i>, 26, 321-332.</p> <p>Dozier, M., Peloso, E., Lewis, E., Laurenceau, J., & Levine, S. (2008). Effects of an attachment-based intervention on the cortisol production of infants and toddlers in foster care. <i>Development and Psychopathology</i>, 20, 845-859.</p>

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RCT with children living with birth parents in a foster care diversion program

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Bernard, K., Dozier, M., Bick, J., Lewis-Morrarty, E., Lindhiem, O., & Carlson, E. (2012). Enhancing attachment organization among maltreated children: results of a randomized clinical trial. *Child development*, 83(2), 623-636. <https://doi.org/10.1111/j.1467-8624.2011.01712.x>

Bernard, K., Hostinar, C. E., & Dozier, M. (2015). Intervention effects on diurnal cortisol rhythms of CPS-referred infants persist into early childhood: Preschool follow-up results of a randomized clinical trial. *JAMA-Pediatrics*, 169, 112-119. <https://doi.org/10.1001/jamapediatrics.2014.2369>

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Korom, M., Goldstein, A., Tabachnick, A. R., Palmwood, E. N., Simons, R. F., & Dozier, M. (2021). Early parenting intervention accelerates inhibitory control development among CPS-involved children in middle childhood: A randomized clinical trial. *Developmental science*, 24(3), e13054. <https://doi.org/10.1111/desc.13054>

Lind, T., Bernard, K., Ross, E., & Dozier, M. (2014). Intervention effects on negative affect of CPS-referred children: results of a randomized clinical trial. *Child abuse & neglect*, 38(9), 1459-1467.

Lind, T., Bernard, K., Yarger, H., & Dozier, M. (2020). Promoting compliance in children referred to Child Protective Services: A randomized clinical trial. *Child Development*, 91, 563-576. <https://doi.org/10.1016/j.chiabu.2014.04.004>

Raby, K. L., Waters, T. E. A., Tabachnick, A. R., Zajac, L., & Dozier, M. (2021). Increasing secure base script knowledge among parents with Attachment and Biobehavioral Catch-up. *Development and Psychopathology*, 33, 554-564. <https://doi.org/10.1016/j.chiabu.2014.04.004>

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Yarger, H. A., Bronfman, E., Carlson, E., & Dozier, M. (2020). Intervening with Attachment and Biobehavioral Catch-Up to decrease disrupted parenting behavior and attachment disorganization: The role of parental withdrawal. *Development and psychopathology, 32*(3), 1139–1148. <https://doi.org/10.1017/S0954579419000786>

Zajac, L., Raby, K. L., & Dozier, M. (2020). Sustained effects on attachment security in middle childhood: results from a randomized clinical trial of the Attachment and Biobehavioral Catch-up (ABC) intervention. *Journal of child psychology and psychiatry, and allied disciplines, 61*(4), 417–424. <https://doi.org/10.1111/jcpp.13146>

RCT with children adopted internationally

Lind, T., Lee Raby, K., Goldstein, A., Bernard, K., Caron, E., Yarger, H., . . . Dozier, M. (2020). Improving social–emotional competence in internationally adopted children with the Attachment and Biobehavioral Catch-up intervention. *Development and Psychopathology, 1-13*. [doi:10.1017/S0954579420000255](https://doi.org/10.1017/S0954579420000255)

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RCT with toddlers in foster care

Lind, T., Raby, K.L., Caron, E., Roben, C.K.P., & Dozier, M. (2017). Enhancing executive functioning among toddlers in foster care with an attachment-based intervention. *Development and Psychopathology, 29*, 575-586.

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