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Improving outcomes for babies and toddlers in child welfare: A model for infant mental health intervention and collaboration

Susan Chinitz*,[1], Hazel Guzman, Ellen Amstutz, Joaniko Kohchi, Miriam Alkon

Albert Einstein College of Medicine, Early Childhood Center, Yeshiva University, 1300 Morris Park Ave, Bronx, York, NY 10461, United States

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ABSTRACT

Children under three comprise a sizable and growing proportion of foster care placements. Very young children who enter the child welfare system experience disruptions of critical attachments that are essential to this formative stage of brain development, as well as other traumatic events, leaving them at great risk for lifelong impairments. To reverse these concerning outcomes, babies who have been removed from their homes require intensive, relationship-based interventions that promote secure attachment to a primary caregiver and holistic attention the child's developmental needs. Child welfare decision-makers must be informed of infant brain development and knowledgeable about the particular needs and circumstances of each child. This article describes a model with these features that has been developed and tested in the Bronx, New York, one of the nation's poorest urban counties with high rates of foster care. The Project utilizes evidence-based Child-Parent Psychotherapy (CPP) as its core intervention, and emphasizes collaboration and information sharing– driven by the CPP clinician– with judges, child welfare workers, attorneys and other social service and mental health providers, thereby encouraging developmentally and relationally informed case planning and permanency decisions. The model is evaluated using pre and post treatment psychosocial measures and program outcome data. Results indicate improvement in parenting interactions, positive child welfare outcomes (including increased rates of reunification, fewer returns to foster care), and improved safety and wellbeing. Results highlight the need for child welfare practices to be more closely aligned with the current science of infant brain development, and to incorporate a specialized approach to address the unique needs of infants.

1. Introduction

Infancy is the most plastic and receptive period in human development, as well as the most foundational. Neglect, abuse, and disturbances and disruptions of critical attachments during this formative stage of brain development can derail neurodevelopment and result in lifelong impairments. In contrast, sensitive, nurturing care and healthy and stimulating environments can set a foundation for physical and emotional well-being, healthy relationships and the development of skills needed for success in school and beyond. Infants who come to the attention of the child welfare system have already experienced adversity, but are still within a sensitive period of neurological, cognitive/linguistic, and social emotional development during which high quality interventions can make an important difference in shifting the balance between risk and protective factors.

* Corresponding author at: 333 East 30th St. New York, NY 10016, United States.
E-mail addresses: susan.chinitz@gmail.com (S. Chinitz), guzman.hazel@gmail.com (H. Guzman), ellenamstutz@gmail.com (E. Amstutz), jkohchi.lcsw@gmail.com (J. Kohchi), miriamalkon@yahoo.com (M. Alkon).
[1] Susan Chinitz, Psy.D is now Infant Mental Health and Early Childhood Consultant, Center for Court Innovation, New York, NY, United States.

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While the overall number of children in foster care has decreased in recent years, the number of very young children in care is increasing nationally, both in total numbers and as a proportion of all children entering care (Annie E. Casey Foundation, Kids Count Data Center, 2015, Casey Family Programs, 2013). Nationally, children under age three make up 46.3% of all substantiated cases of victimization, and account for an astounding three-fourths (73.9%) of maltreatment fatalities (U.S. Department of Health and Human Services, 2015). Infants and toddlers constitute a disproportionately large percentage of first-time admissions to foster care, and they stay in foster care longer than children entering care at older ages (Wulczyn, Ernst & Fisher, 2011). Of great concern is the finding that nearly one in three infants who are reunited with their parents return to foster care (Wulczyn, Chen, Collins & Ernst, 2011).

Parents of infants who have been placed in foster care most often have complex histories and multiple adverse experiences of their own, starting in childhood and persisting through their childbearing years (Hudson, 2011). Compared to parents of older children, parents of infants in foster care are more likely to abuse drugs or alcohol, to be victims of prior or active domestic violence, to have a serious mental health problem, to have been recently arrested, to struggle financially, and to have high levels of stress in the family. A larger percentage has a childhood history of abuse or neglect themselves (Wulczyn, Ernst et al., 2011).

It is not surprising, therefore, that outcomes for infants and toddlers in foster care have historically been poor. They have significantly higher rates of medical, developmental and behavioral problems than their non-child welfare involved age peers resulting from pre- and post-natal stressors on the developing brain and neuroendocrine systems (Shonkoff, Boyce, & McEven, 2009), as well as from the psychological experiences of neglect, abuse and loss. In a study of infants followed in the National Survey of Child and Adolescent Well Being, 38% of children known to the child welfare system had accrued more than four adverse childhood experiences by the time they were two years old (Stambaugh et al., 2013).

Despite these realities, and despite all that is known about the importance of these earliest years, current approaches in child welfare too often fail to take the special needs of infants into account. A survey of child welfare policies and practices conducted in 2013 by Zero to Three and Child Trends revealed that few states have policies that differentiate services for infants and toddlers from those for older children, or have implemented promising approaches to meeting the unique needs of children under three (Child Trends and Zero to Three, 2013). While most infants come into care due to parental dysfunction, and though there is almost universal acceptance of the critical importance of children's attachment as a necessary and important foundation for healthy social emotional development (van IJzendoorn & Sagi, 1999), few practices have a relational focus or provide evidence-based interventions that are specifically designed to promote nurturing parenting and children's secure attachment. Few child welfare interventions address the complex traumatic experiences that are common in the histories of both the children and their parents, and which may be pivotal for achieving lasting reunification, family stability, and the goal of child well-being (Jones Harden, 2007).

A meta-analytic review of interventions aimed at improving maternal-child attachment security (Letourneau et al., 2015) found a large effect size for those that targeted maternal sensitivity and/or reflective functioning. While, overall, such interventions were effective at promoting maternal-child attachment and maternal child interaction, effects were greatest for maltreated children, and for mothers and children affected by socioeconomic adversity and maternal depression. Studies that provided attachment-based psychotherapies for maltreated young children improved children's attachment security and their representations of self and other to a significantly greater extent than psychoeducational/didactic skill-based parenting interventions (Cicchetti, Rogosch & Toth, 2006; Toth, Maughan, Manly, Spagnola & Cicchetti, 2002). Other studies showed that Family Court collaboration with an academic medical center that assessed and identified the mental health needs of young children in foster care and their parents, and provided needed mental health interventions, reduced maltreatment recidivism (Zeanah et al., 2001; Constantino et al., 2016). Collaboration between child welfare and infant mental health practitioners is clearly important and has been found to be effective. It is, however, still a relatively rare and underutilized partnership for child welfare involved families.

2. Project rationale

The Infant Parent Court Project was developed in 2009 by the Early Childhood Center of the Albert Einstein College of Medicine, a clinic that offered relationship-based developmental and social emotional interventions for children birth through five. The Project was developed in collaboration with the Bronx Family Court. The Bronx is a borough in New York City that has the highest rates of poverty and child welfare system involvement in the state. According to the NYC Administration for Children's Services (ACS), in 2013, 711 Bronx children under the age of three entered the child welfare system; half of these children were placed in foster care (personal communication with NYC ACS, 2014).

The Infant Parent Court Project was developed to address the following shortcomings in the approaches typically used by the child welfare system when very young children are involved:

- Interventions for parents whose infants or toddlers have been removed due to maltreatment are often generic (e.g. parenting classes) and do not emerge from a thorough assessment of the child, parent, or social context in order to specifically target the problems that resulted in maltreatment and removal.
- Dyadic or relational interventions are rarely used, thus obscuring the interactional problems that occur between parent and child, and leaving them unavailable for intervention.
- Courts do not typically refer for relational interventions, as court personnel are usually unaware of evidence-based practices in the field of infant mental health and/or have no access to resources for dyadic services for young children and their parents.
- Court personnel typically do not have access to comprehensive information related to psychotherapeutic treatment progress, thus limiting their ability to use such information to inform permanency planning.
- Prolonged court processes either impede the development of the attachment between child and parent, which is a critical

foundation for successful reunification and for subsequent child competencies, or they contribute to attachment disruption by working toward reunification when an infant/toddler has already consolidated a secure attachment with alternate caregivers (i.e., foster parents).

3. Project Description/Intervention

3.1. Procedures and research design

The Project received referrals from child protective judges, children's or parents' attorneys, staff of the NYC child welfare agency, and foster agency caseworkers, as well as from other child welfare professionals working with infants and toddlers in foster care, or at risk of being removed. Referral criteria included a child under age three and a permanency goal of family reunification. The Project sought referrals as early in the child's life or as early in the case as possible so that attachment between child and parent could be promoted from the start of the case. Parents who were interested provided informed consent to participate in research according to the protocol reviewed and approved by the Center for Clinical Investigations at the Albert Einstein College of Medicine. To prevent the perception of coercion, the Project offered parents the option to refuse without prejudice, to receive comparable therapeutic services without the research component, and to review consents with their attorneys or other court team members. In addition, the consents to release information to the court team were separate from the consent to participate.

Comprehensive initial assessment of the birth parent, the child, and the social context was completed over three sessions. In the first session, a thorough psychosocial interview with the parent was conducted. A second intake appointment was conducted to complete all parent-specific measures listed below. A third intake appointment involved both the parent and the child, and consisted of developmental screening of the child and the administration of the parent-child interaction measures. Assessment was used to target specific intervention goals (e.g., improve parental affect regulation; increase parent's verbalizations to infant; improve child's language development) and to measure program impact.

Trained infant mental health clinicians provided Child-Parent Psychotherapy (CPP) (Lieberman & Van Horn, 2008) with infant-parent dyads. CPP is an evidence-based (California Evidence-Based Clearinghouse, 2006; see especially Lieberman, Van Horn & Ghosh Ippen, 2005), relationally focused, trauma-informed and developmentally appropriate intervention for young children and their caregivers. CPP was selected as the intervention modality due to its focus on attachment and on resolving the traumatic experiences that contributed to the attachment disorders. CPP uses the modality of interactive play to provide opportunities for developmental guidance to parents, to permit children and parents to put powerful feelings into words or to express them in play, to develop trauma narratives or play narratives for parents and children to share, to help parents gain insight into the impact of their own histories on their interactions with their child, to retrieve benevolent memories to guide parents' responses to children, to promote appropriate parenting behaviors for child safety and behavior management, to provide emotional support, and for crisis intervention, case management, and concrete assistance with daily living needs.

Sessions were scheduled on a weekly basis, adjusted to the needs of birth and foster parents. Transportation was provided when needed in order to facilitate attendance. Due to multiple stressors impacting families and the instability inherent to the lives of both children and parents, 26 sessions of CPP were completed in an average of 11 months. Families were often referred for further sessions when indicated, but due to available resources, this Project graduated dyads following completion of the 26 sessions, a number or dosage determined following the experiences of other court projects (cf. Osofsky et al., 2007; Casanueva et al., 2013).

Clinicians provided regular feedback on each family's progress via bi-monthly written reports to the child's court-based team (the judge, parent's and children's attorneys, attorneys, and caseworkers from the foster agency and local child welfare department), and in-court testimony, to inform the team of families' progress, so that such information could be used to make decisions regarding contact type and frequency between parent and child, and to make developmentally and relationally informed permanency decisions for the infant or toddler. Reports and court appearances also sought to ensure that young children and parents received all needed ancillary services, such as early intervention services for children's developmental delays, and/or individual mental health services for the parent, with the goal of preventing any recurrence of maltreatment.

Project clinicians also provided case management and collaboration with foster agency caseworkers and others responsible for intervention planning to buttress their knowledge with clinicians' insights about infant development, infant mental health, and evidence-based interventions in the infant/family field. Case management often included advocacy for developmental or special education services for children, often in collaboration with educational advocacy groups. Every effort was made to enrich communication between all attorneys and caseworkers to remediate the proclivity for fragmentation of information and an adversarial stance between parties on a case. Clinicians worked with stakeholders to prevent unnecessary and frequent foster home changes in order to protect children's attachment security. Toward the same goal, clinicians also advocated for children's increased contact with birth parents through more liberal visitation schedules, whenever safe and appropriate.

Project staff also worked to improve practice through education and training for judges, attorneys and child welfare professionals in principles of infant mental health, including attachment, brain development, the impact of trauma in infancy and early childhood and the impact of parent-infant visiting on infant mental health and permanency outcomes. These trainings served to infuse decision-making with a greater understanding of children's developmental needs in all domains. Psychoeducation was also provided during routine contact with stakeholders.

The Project had the following goals:

1. Improved parenting interactions

2. Improved safety, permanency and well-being of infants and toddlers
3. Impact on child welfare practice and policy related to the needs of infants and toddlers.

3.2. Measures

The following measures were administered at intake, at 6-month intervals during the intervention, and again at program completion:

Keys to Interactive Parenting (KIPS) (Comfort & Gordon, 2006) was the primary measure of improved parenting interactions. The KIPS is a structured observational system in which parents are video-recorded interacting with their babies in an unstructured play situation. Videos were then randomly assigned to, and coded and scored by, trained and certified outside reviewers. Studies have shown the KIPS to have good construct and criterion validity when compared to other validated observational tools, such as the NCAST Teaching Scale and the HOME Inventory (Comfort, Gordon & Naples, 2011).

Parent-Infant Relationship Global Assessment Scale (PIR-GAS) (Zero to Three, 2005) is an instrument used to describe the degree of adaptation in the parent-child relationship. The dyad's functioning was assessed based on the intensity, frequency and duration of adaptive and maladaptive patterns in the parent-child interaction. The clinician assigned a number, which placed the dyad in one of nine categories ranging from well adapted (100-91) to grossly impaired (10-1). Clinicians assigned dyads a PIR-GAS score at intake following completion of a comprehensive psychosocial history and clinical observations.

Beck Depression Inventory − II (BDI-II) (Beck, Brown & Steer, 1996) was used to measure the presence of depression symptoms in parents. Results of this measure were used to inform intervention planning. Parents completed a 21-item questionnaire asking them to endorse symptoms of depression experienced during the two preceding weeks and to indicate the severity of each symptom. The parent was then assigned a total score, which placed them in one of four categories: none, mild, moderate or severe. Referrals for mental health services were made as necessary based on parents' response to this inventory.

Parenting Stress Index − Short Form (PSI-SF) (Abidin, 1990) is a 36-item questionnaire assessing self-reported parental stress on a Likert scale. Parental responses resulted in a total score, as well as the following subdomain scores: parental distress, parent-child dysfunction, and difficult child.

Adverse Childhood Experiences Questionnaire (ACE) (http://www.cdc.gov/violenceprevention/acestudy/) was used to better understand the life histories of participating parents and to inform treatment planning. The ACE Questionnaire consists of a series of questions designed to ascertain if an adult experienced any, or a combination, of ten different types of maltreatment or family dysfunction in their first 18 years of life, including parental separation/divorce, emotional, physical or sexual abuse, emotional or physical neglect, domestic violence, or a household member with mental illness, substance abuse or incarceration.

Adult Adolescent Parenting Inventory (AAPI-2) (Bavolek, 1999) is a measure that assesses parenting attitudes and beliefs in both adults and adolescents and was used to inform treatment planning as well as to assess change in beliefs and attitudes during intervention. The measures consist of 40 items answered on a 5-point Likert scale. Parents were assigned scores for each of the following domains: expectations of children, parental empathy towards children's needs, use of corporal punishment, parent-child family roles, and children's power and independence. In this Project, there was a particular focus on the Empathy subscale of the APPI-2 due to its relevance for child welfare system concerns.

Family Support Scale (FSS) (Dunst, Jenkins & Trivette, 2007) was used to better understand families' perception of the availability and helpfulness of various sources of social support systems, or lack thereof, and to inform intervention planning. Parents rated the various social supports on a Likert scale ranging from "not at all helpful" to "very helpful".

Ages & Stages Questionnaire, Third Edition (ASQ-3) (Squires & Bricker, 2009) is a widely used developmental screening tool, designed to be based on parental observation, to identify developmental delays. Clinicians interviewed the caregiver and used this information, combined with clinical observations, to score the child's abilities across the following five domains: gross motor, fine motor, communication, problem solving, and personal-social skills. Each domain is assigned a score which denotes whether the child is "on schedule", "close to the cutoff", or "below the cutoff".

Case Outcome Data: Clinicians tracked all changes to families' court-approved visit schedules, including frequency of visits and loosening of restrictions on visits, i.e., from supervised visits to unsupervised visits, or to overnight or weekend visits. Similarly, clinicians tracked all changes in permanency planning and documented if and when permanency was achieved.

3.3. Participant demographics

Over the course of the project (2009–2015), 142 dyads participated in the intervention and 59 achieved program completion, defined as having attended 26 sessions of Child-Parent Psychotherapy. The demographics of the families who completed the intervention and for whom complete data sets were available are presented in Table 1. There were no significant differences between the demographics and reported characteristics of families who did, and those who did not, complete the full course of intervention according to baseline measures.

Participants were primarily low-income if not poverty-affected, minority, single mothers with a mean age of 26 years. A few children also engaged in dyadic therapy with their fathers in addition to their mothers. Enrolled parents faced multiple and co-occurring adversities and difficult life circumstances: 61% had mental health concerns, 59% reported a history of trauma, 45% had spent some time in foster care as a child, 34% were assessed to have cognitive limitations, 32% had histories of substance abuse, and 32% were living in homeless shelters. Thirty-six percent had four or more adverse childhood experiences (ACEs), placing them at significantly increased risk for physical and mental health problems throughout their lifespan (Felitti et al., 1998).

Table 1
Demographic Profile of Families who Completed Treatment.

Parent Characteristics (N = 52)*		Child Characteristics (N = 51)*	
Primary Caregiver		**Age at Referral**	
Age at time of treatment (range and average)	16–51; 26.	Under 1 year-old	69%
Gender		1 year-old	24%
Male	11%	2 years-old	8%
Female	89%	3 and older	0%
Ethnicity		**Gender**	
African-American/Afro-Caribbean	55%	Male	53%
Hispanic/Latino	32%	Female	47%
Bi-racial	11%	**Ethnicity**	
Caucasian	2%	African-American/Afro-Caribbean	41%
Other	0%	Hispanic/Latino	33%
		Bi-racial	22%
Single Parent	82%	Caucasian	2%
History of Trauma	59%	Other	2%
Mental Health Concerns	61%		
Cognitive Limitations	34%		
Substance Abuse	32%		
Living in Shelter	32%	**Involvement in Child Welfare System**	
Four or more	36%	Child in Foster Care (at Referral)	67%
Adverse Childhood Experiences		Parent in Foster Care (at Referral)	2%
Partner Involved in Treatment	27%	Parental History of Foster Care	45%

* Some parents had more than one child participating in treatment and some children had more than one parent.

Most children (69%) were referred to the program prior to their first birthday. This permitted intervention at an early stage of their lives and of their child welfare system involvement. Two-thirds of children (67%) were in formal foster care placements at the time of referral. The remainder were living with relatives or with parents under court ordered supervision.

4. Results

4.1. Improved parent-Child interactions

The quantifiable measure of improvement was the KIPS. The KIPS addresses 3 categories of parenting behaviors and 12 sub-categories which contribute to a mean score between 1 and 5. Scores between 1 and 2 represent low-quality interactions, scores between 3 and 4 represent average-quality interactions and scores between 4 and 5 represent high quality. Fig. 1 highlights changes in KIPS overall mean scores from initial assessment to program completion for parents who completed the full course of treatment. While only 21% of parents demonstrated a total score within the high-quality range (scores of 4 or over) at intake, 39% met the standard of high quality interactions at completion of the intervention. The proportion of parents who demonstrated less than adequate parenting behaviors (scores of 1 or 2) decreased from 39% at intake to 25% at discharge.

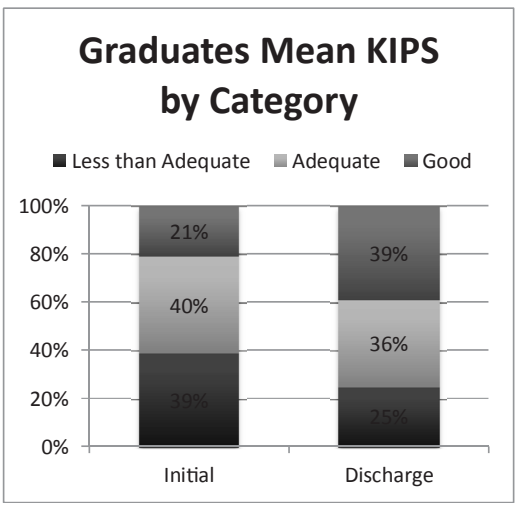

Fig. 1. Change in KIPS Means for Graduates.

Table 2
Changes in KIPS Scores by Domain for Project Graduates.

	Initial	Discharge	Net Change	Effect Size
KIPS Mean Score (N = 38)*	3.2*	**3.6***	0.4	d = 0.38
Domain Scores				
Building Relationships (N = 41)	3.5	3.7	0.2	
Promoting Learning (N = 37)*	**2.8***	**3.5***	0.7	d = 0.59
Supporting Confidence (N = 26)	3.3	3.7	0.4	
Subdomain Scores				
Sensitivity of Responses (N = 40)	3.5	3.9	0.4	
Supports Emotions (N = 40)	3	3.3	0.3	
Physical Interaction (N = 43)	4	4	0	
Involvement in Activities (N = 39)	4.1	4	−0.1	
Open to Agenda (N = 39)	3	3.4	0.4	
Language Experiences (N = 42)*	**2.7***	**3.4***	0.7	r = 0.33
Reasonable Expectations (N = 41)*	**2.8***	**3.4***	0.6	r = 0.30
Adapts Strategies (N = 37)*	**2.8**	**3.4**	0.6	r = 0.30
Limits and Consequences (N = 14)	2.9	3.4	0.5	
Supportive Directions (N = 26)	3.3	3.4	0.1	
Encouragement (N = 43)*	**3.5**	**4**	0.5	r = 0.31
Promotes Exploration (N = 43)	3	3.3	0.3	

* Significant difference ($p < 0.05$) between pre-test and post-test.

Table 2 shows changes in KIPS scores by domain and subdomain, enabling closer analysis of the effects of the intervention. Five of twelve subdomains show statistically significant improvement, with strong gains in the domain of *Promoting Learning*. It is nevertheless important to state that the KIPS was part of a clinical assessment that included the foundational context of safety; the KIPS was never the sole parameter.

Through the course of intervention, parents also showed significantly increased attitudes and beliefs reflecting empathy for children's needs, as measured by the Adolescent and Adult Parenting Inventory (APPI-2). Parents with APPI scores in the High Risk range decreased from 46% to 29% from intake to graduation. This was meaningful, as low parent empathy is highly correlated with risk for maltreatment (Rosenstein, 1995 Perez-Albeniz & de Paul, 2003).

4.2. Safety, permanency and well being

4.2.1. Safety

The Project recorded all incidences of maltreatment recurrence, defined as a new substantiated report or return to care, during families' participation in the Project. Of the 142 families who received intervention, five children (3.5%) experienced a recurrence. Rate of recurrence of maltreatment in all child populations is difficult to assess due to significant variations in criteria and methodology across studies. However, rates have been found to vary from 15% to 50% for children of all ages, and there is evidence that younger children are at greatest risk (Hindley, Ramchandani & Jones, 2006).

4.2.2. Permanency

Permanency was assessed by the number of children who achieved permanency, and the type of permanency achieved (i.e., reunification with a birth parent, placement with a fit and willing relative, legal guardianship, and adoption). While reunification with the birth parent was the goal, if this was not possible, the Project aimed to help children achieve permanency through an alternate resource by the periodic provision to the court of timely and meaningful information on children's relationships and families' strengths and vulnerabilities. De-identified case outcome data provided to the Project by the New York State Court System revealed that among all families who completed intervention between 2010 and 2013, 86% (n = 35) of children placed in foster care were reunified with their birth parent(s). This is significantly higher than the rate of reunification for children placed in foster care during infancy reported locally and nationally (33–48%) (Wildfire, Barth & Green, 2007; Casanueva, Tueller, Dolan, Smith & Ringeisen, 2012).

4.2.3. Well-Being

Well-being in this Project was operationalized as children receiving all needed services to alleviate the sequelae of maltreatment and to meet developmental needs, including routine and specialized medical services, early intervention or other developmental therapies, mental health or behavioral support services and special education or regular preschool programs. Previously established infant court programs have emphasized the importance of ensuring such services for child well-being (Osofsky et al., 2007; Zeanah et al., 2001). The ASQ-3, a widely used developmental screening tool, in addition to clinical observation, permitted detection of developmental delays. Nearly half of all children seen in the Project had suspected or diagnosed developmental delays that required intervention. All children were referred for services needed to address developmental concerns. This required persistence and sometimes the collaboration of educational advocates. In all but a few cases, the children received indicated developmental therapies

and demonstrated positive responses.

4.3. Impact on the child welfare system

Project clinicians developed trainings, based on multimedia resources available at Harvard's Center on the Developing Child (www.developingchild.net), for the judiciary and child welfare professionals on infant brain development, attachment, and the biological adversity of neglect and toxic stress in infancy and early childhood. These trainings improved decision-making to reduce disruptions in attachment relationships, to increase frequency of parent-child contact, and to heighten awareness of the impact of toxic stress and trauma. In 2014–2015, clinicians provided training to 130 caseworkers from the local child protection agency and its contracted foster care agencies, and to 20 Legal Aid attorneys and social workers. In previous years, project staff provided training to Family Court judges, court-appointed attorneys, and supervisory and management staff of the local child protection agency. Judicial decisions and attorney advocacy on behalf of clients reflected improved understanding of these concepts, and reduced re-traumatization.

5. Discussion

Integrating infant mental health services and expertise into child welfare practice appears to have direct benefits for infants, toddlers and their birth parents, as well as additional impact through the improved knowledge base and changed practices of the legal and child welfare professionals responsible for the management and resolution of cases.

The evidence-based, relationally focused intervention, Child-Parent Psychotherapy, permits an experienced clinician to observe the nature and quality of child-parent interactions, and to tailor treatment goals and therapeutic approaches to the specific needs of individual dyads. The Project's use of CPP was found to improve parenting practices in a population of families contending with multiple adversities, affirming the benefit of an infant mental health intervention in child welfare cases. The increase in attitudes reflecting parental empathy for the child, achieved during Project participation, reflects strengthening parental sensitivity and increased reflective functioning, identified as areas of deficit for parents of maltreated children (Lyons-Ruth, Connell & Zoll, 1987).

Findings are also consistent with a call in child welfare for expansion beyond a focus on safety to one that also includes child well-being (USDHHS, ACF, ACYF, 2012). Operationally defined as ensuring that all identified needs were met, the Project's two-generational focus on parent and child well-being encompassed physical health, emotional health, social support and functional competencies. Comprehensive screenings and assessments of parents and children, conducted biannually, were highlighted in each interface between the Project's infant mental health clinicians and their child welfare partners. Project clinicians were able to articulate and advocate for all services needed by child and parent, and to help ensure these were obtained.

The Project achieved a reunification rate of 86%, which is substantially higher than the rate documented for infants and toddlers nationally. This speaks to the improvement in parenting capacity observed for participants, who were also assisted by ancillary services once their specific, individual and often complex needs were better understood, and by improved parental insight into their child's needs. It also attests to the confidence judges felt knowing that parents received an intensive, dyadic intervention together with their babies and young children.

The rate of reunification was noteworthy in light of the fact that 36% of parents had four or more adverse childhood experiences, a threshold that was found in the original ACE studies to correlate with a high prevalence of health and mental health problems (Felitti et al., 1998, Felitti & Anda, 1997), and in more recent studies to distinguish parents with poor child welfare outcomes from those with more positive ones (Smithgall, DeCoursey, Yang & Hazeltine, 2012). It is likely that a deeper understanding of parents' trauma histories and the developmental and contextual pathways that contributed to parenting problems resulted in more successful strategies for engagement and intervention, as well as for judges' improved understanding of events. A concerted effort to thoroughly assess the strengths and vulnerabilities of birth parents, and to use this information to remediate the parenting practices that resulted in child welfare system involvement, contributed to improved parenting skills as measured by a standardized and valid observational instrument.

The trainings offered to child welfare personnel accrued additional benefits for children and families. Given the preponderance of infants and toddlers in the overall population of children in foster care, and the lifelong impact of adversity in infancy and early childhood (Shonkoff & Phillips, 2000), training in infant development and principles of infant mental health is essential for attorneys and judges. These professionals often have no background in child development, yet bear the responsibility of making critical decisions for children. Trainings on infant brain development underscored the urgency in considering the context in which children were living, with a focus on the need for protection, nurturing relationships, stimulating and language-rich environments, and for stability (especially relational stability). Trainings challenged previously held beliefs about the immunity of infants that confounded immaturity with imperviousness. Trainings on attachment, and the need for frequent contact between infants and the parents seeking reunification with them, had direct impact on how attorneys advocated for their clients and resulted in more frequent infant-parent contact. The increased visits promoted children's growing attachment to the parent not living with them, as well as providing a means by which parents could practice and refine their emerging skills.

The Project also advocated for the preservation of placements for babies, underscoring the deleterious effects of multiple attachment disruptions. Newly informed by this body of knowledge, judges made decisions that prevented unnecessary caregiver changes (e.g., placing a baby in "respite care" during a foster parent's vacation). This impact was of direct benefit to children's well-being and reflects the meaningful practice changes that accrue with interdisciplinary collaboration and infusion of legal and judicial practice with developmental science.

Limitations of this study include the lack of a control group. National data on the course and outcomes of infants and toddlers in the child welfare system (e.g., National Survey of Child and Adolescent Well Being) are available and have been used as a proxy for comparison. Second, the attrition of dyads from referral, to program participation, and to program completion reduced the sample size. This is common in child welfare populations and reflects both the functional impairments often seen in parents whose children have been removed from their care, as well as the many demands on their time as they attempt to fulfill their service plans. Finally, findings in the domains of safety (i.e., no maltreatment recurrence) and permanency are limited by the fact that investigators only had open access to this information during families' participation in the intervention. It is not known how many of the participants may have had maltreatment recurrence after they exited the program and were no longer in touch with Project staff, or how many may have been reunified at a time point after Project involvement. Future studies of this nature would benefit from consents that permit access to families' child welfare records post-intervention.

While this intensive intervention resulted in improved outcomes for the Bronx infants and parents who were able to engage in these services, it also served to highlight fundamental structural and policy changes that are needed in the child welfare system. States must work to align policies for infants with our current understanding of developmental science. A differentiated approach for infants would include more frequent contact with birth parents, fewer disruptions in placements, quicker times to permanency, more appropriate clinical services for parents of infants who face allegations of neglect and abuse, and intensive support post-reunification. Of most benefit in this Project was the use of infant mental health informed assessment of parent and child, and the use of a comprehensive relational intervention. In addition, infant mental health services, including CPP, should be widely available to families as a preventive service rather than only after the removal of the child.

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References

Abidin, R. R. (1990). *Parenting stress index: (Short form)*. Charlottesville, VA: Pediatric Psychology Press.
Annie E. Casey Foundation Kids Count Data Center (2015). *Children in foster care by age group*. Retrieved from http://datacenter.kidscount.org.
Bavolek, S. (1999). *Adult adolescent parenting inventory –2*. Park City, UT: Family Development Resources.
California Evidence-Based Clearinghouse for Child Welfare. original listing http://www.cebc4cw.org/program/child-parent-psychotherapy/.
Casanueva, C., Tueller, S., Dolan, M., Smith, K., & Ringeisen, H. (2012). *NSCAW II wave 2 report: Child permanency. OPRE report #2013-28*Washington, DC: Office of Planning, Research and Evaluation, the Administration for Children and Families.
Casanueva, C., Fraser, J. G., Maze, C., Katz, L., Ullery, M. A., Stacks, A. M., et al. (2013). Evaluation of the Miami child well-Being court model: Safety, permanency, and well-Being findings. *Child Welfare*, *92*(3), 73–95.
Casey Family Programs (2013). *Making the case for early childhood intervention in child welfare: A research and practice brief*.
Child Trends, & ZEROTOTHREE (2013). *Changing the course for infants and toddlers, a survey of state child welfare policies and initiatives*. Washington, DC: Publication #2013-36: Jordan,S zrom, Colvard, Cooper, DeVoogh t.
Cicchetti, D., Rogosch, F. A., & Toth, S. L. (2006). Fostering secure attachment in infants in maltreating families through preventive interventions. *Development and Psychopathology*, *18*(3), 623–649.
Comfort, M., & Gordon, P. R. (2006). The keys to interactive parenting scale (KIPS): A practical observational assessment of parenting behavior. *NHSA Dialog: A Research-to-Practice Journal for the Early Intervention Field*, *9*(1), 22–48.
Comfort, M., Gordon, P. R., & Naples, D. (2011). KIPS: An evidence-based tool for assessing parenting strengths and needs in diverse families. *Infants and Young Children*, *24*(1), 56–74.
Constantino, J. N., Ben-David, V., Navsaria, N., Spiegel, T. E., Glowinski, A. L., Rogers, C. E., et al. (2016). Two-generational psychiatric intervention in the Prevention of early childhood maltreatment recidivism. *American Journal of Psychiatry*, *173*(6), 566–573.
Dunst, C. J., Jenkins, V., & Trivette, C. M. (2007). *Family support scale: Reliability and validity*. Morganton, NC: Winterberry Press.
Felitti, V. J., & Anda, R. F. (1997). *The adverse childhood experiences (ACE) study*. Centers for Disease Control and Prevention. Retrieved from http://www.cdc.gov/ace/index.htm.
Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., et al. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, *14*, 245–258.
Harvard University, Center on the Developing Child, Multimedia Resources http://developingchild.harvard.edu/resourcecategory/multimedia/ 2017.
Hindley, N., Ramchandani, P. G., & Jones, D. P. H. (2006). Risk factors for recurrence of maltreatment: A systematic review. *Archives of Disease in Childhood*, *91*(9), 744–752.
Hudson, L. (2011). Parents were children once too? *Zero to Three*, *31*(3), 23–28.
Jones Harden, B. (2007). *Infants in the child welfare system; A developmental framework for policy and practice*. Washington, DC: Zero to Three.
Letourneau, N., Tryphonopoulos, P., Giesbrecht, G., Dennis, C., Bhogal, S., & Watson, B. (2015). Narrative and meta-analytic review of interventions aimed to improve maternal-child attachment security. *Infant Mental Health Journal*, *36*(4), 366–387.
Lieberman, A. F., & Van Horn, P. (2008). *Psychotherapy with infants and young children*. New York: Guilford Press.
Lieberman, A. F., Van Horn, P., & Ghosh Ippen, C. (2005). *Journal of the American Academy of Child and Adolescent Psychiatry*, *44*(12), 1241–1448.
Lyons-Ruth, K., Connell, D. B., & Zoll, D. (1987). Infants at social risk: Relations among infant maltreatment, maternal behavior, and infant attachment behavior. *Developmental Psychology*, *23*(2), 223–232.
National Scientific Council on the Developing Child (2004). *Young children develop in an environment of relationships. Working Paper No. 1*. Retrieved from http://www.developingchild.net.
Osofsky, J. D., Kronenberg, M., Hammer, J. H., Lederman, C., Katz, L., Adams, S., et al. (2007). The development and evaluation of the intervention model for the Florida infant mental health pilot program. *Infant Mental Health Journal*, *28*(3), 259–280.
Perez-Albeniz, A., & de Paul, J. (2003). Dispositional empathy in high- and low-risk parents for child physical abuse. *Child Abuse and Neglect*, *27*(7), 769-780.
Rosenstein, P. (1995). Parental levels of empathy as related to risk assessment in child protective services? *Child Abuse and Neglect*, *19*(11), 1349–1360.
Shonkoff, J. P., & Phillips, D. (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academies Press.
Shonkoff, J. P., Boyce, W. T., & McEwen, B. S. (2009). Neuroscience, molecular biology, and the childhood roots of health disparities: Building a new framework for health promotion and disease prevention. *Journal of the American Medical Association*, *301*(21), 2252–2259.

Smithgall, C., DeCoursey, J., Yang, D., & Hazeltine, L. (2012). *Parents' past and families' futures: Using family assessments to inform perspectives on reasonable efforts and reunification*. Chicago: Chapin Hall at the University of Chicago.

Squires, J., & Bricker, D. (2009). *Ages & stages questionnaire* (3rd ed.). Baltimore: Brooks Publishing Company.

Stambaugh, L. F., Ringeisen, H., Casanueva, C. C., Tueller, S., Smith, K. E., & Dolan, M. (2013). *Adverse childhood experiences in NSCAW. OPRE report #2013-26*Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Toth, S. L., Maughan, A., Manly, J. T., Spagnola, M., & Cicchetti, D. (2002). The relative efficacy of two interventions in altering maltreated preschool children's representational models: Implications for attachment theory? *Development and Psychopathology*, *14*(4), 877–908.

U.S. Department of Health and Human Services, Human Services, Administration on Children, Youth and Families, & Children's Bureau (2012). *Information Memorandum: Promoting social and emotional well-being for children and youth receiving child welfare services (ACYF-CB-IM-12-04)*. [Available from] http://www.acf.hhs.gov/sites/default/files/cb/im1204.pdf.

U.S. Department of Health and Human Services, Administration on Children, Youth and Families, & Children's Bureau (2015). *Child maltreatment 2013*. Available from http://www.acf.hhs.gov/programs/cb/research-data-technology/statistics-research/child-maltreatment.

van IJzendoorn, M. H., & Sagi, A. (1999). Cross-cultural patterns of attachment, universal and contextual dimensions. In J. Cassidy, & P. R. Shaver (Eds.), *Handbook of attachment theory, research, and clinical applications*. New York and London: Guilford Press.

Wildfire, J., Barth, R. P., & Green, R. L. (2007). Predictors of reunification. In R. Haskins, F. Wulcyzn, & M. Webb (Eds.), *Child protection: Using research to improve policy and practice* (pp. 155–170). Washington, DC: Brookings Institution.

Wulczyn, F., Chen, L., Collins, L., & Ernst, M. (2011a). The foster care baby boom revisited: What do the numbers tell us? *Zero to Three*, *31*(3), 4–10.

Wulczyn, F., Ernst, M., & Fisher, P. (2011b). *Who are the infants in out-of-home care? An epidemiological and developmental snapshot*. Chicago: Chapin Hall at the University of Chicago.

Zeanah, C. H., Larrieu, Heller, J. A., Valliere, S. S., Hinshaw-Fuselier, J., Aoki, S., et al. (2001). Evaluation of a preventive intervention for maltreated infants and toddlers in foster care. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40*, 214–221.

ZERO TO THREE (2005). *Diagnostic classification of mental health and developmental disorders of infancy and early childhood, revised (DC:0-3R)*. Washington, DC: Zero to Three.