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The Development and Evaluation of the Intervention Model for the Florida
Infant Mental Health Pilot Program *

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Abstract

The focus of this paper is on the development and evaluation of an intervention model for Florida's Infant and Young Child Mental Health Pilot Program, designed to identify children at risk for abuse and neglect and their families, and to provide clinical evaluation and treatment services. The evaluation model, intervention strategies, and results presented in this paper are all part of the Florida pilot project, developed as a response to the recommendations of the state's Strategic Plan for Infant Mental Health. Funded by the Florida legislature, the three-year, multi-site pilot was designed to provide earlier identification, better evaluation, and more effective treatment services for high-risk children under the age of three. The target population was children either at-risk for out-of-home placement due to abuse and neglect, or those already in the child welfare system or adjudicated dependent by the state. The goals of the pilot project were: 1) to reduce the occurrence and re-occurrence of abuse and neglect; 2) to enhance the child's developmental functioning; 3) to improve the parent-child relationship; 4) to increase expeditious permanency placements; 5) to develop a model for intervention and treatment that could potentially be replicated in different sites; and 6) to document the components of a quality infant mental health intervention model and evaluate its effectiveness.

The focus of this paper is on the development and evaluation of an intervention and treatment model for Florida's Infant and Young Child Mental Health Pilot project. The project was designed to identify children at risk for abuse and neglect and their families and to provide clinical evaluation and treatment services. In this paper, the problems facing the target population of children will be described, an overview of relevant literature will be reviewed, the approach utilized to address the problems will be presented, and the process, evaluation and treatment model and outcome results will be presented. The paper will also describe the evolution of the Miami Court Team Program that grew out of the original pilot project.

Defining and Addressing the Problem of Abuse and Neglect

Every year, approximately one million cases of child abuse and neglect are substantiated in the United States (US Department of Health and Human Services Administration on Children, Youth, and Families, 2005). It is likely that the actual rate of abuse and neglect is much higher than the numbers in official records. Forty-five percent of these children are under the age of 5 years comprising the largest percentage of maltreated children. Infants and toddlers make up one third of all admissions into the child welfare system and once they are in care, young children remain longer and are more likely to be abused and neglected (Wulczyn, Hislop, & Harden, (2002). Further, each change in social worker reduces the chances of permanency by 52% (National Clearing House on Child Abuse and Neglect, April 2005). Young children are also more

vulnerable than older children. For example, in 2004, children under four years accounted for 79 percent of child fatalities, and children under one year accounted for 44 percent (US Department of Health and Human Services, Administration on Children, Youth and Families, 2005).

Research shows that abuse and neglect impacts children negatively affecting their physical, cognitive, social, and emotional development. Developmental delays occur at a much higher rate in these children than in the non-abused population and they also have a much higher incidence of behavioral problems (Leslie, Gordon, Lambros, et al, 2005). As they grow older, these children are at higher risk than non-abused children for problems in school including behavioral difficulties, truancy, delinquency, and risk taking behaviors such as substance abuse and mental illness (Widom and Maxfield, 2001). At least half of all children who are maltreated will experience school problems. There is increasing evidence that multiple traumas such as maltreatment combined with exposure to other types of violence, such as domestic violence, can affect children even more negatively including lowering a child's IQ (Knitzer, 2000; Moffitt, Caspi, Taylor, & Purcell, 2003). The social and educational consequences of maltreatment start early in childhood and continue into later development. The Infant and Young Child Mental Health Pilot Project was designed to address the very serious issue of intergenerational abuse and neglect that is seen both in juvenile court and in the child welfare system. Not infrequently in juvenile dependency court, a young parent who has grown up in the child welfare system appears before the judge, unable to parent her own child who has been adjudicated dependent due to abuse and neglect. She repeats what she knows. As Roy Muir states it, "Parenting comes naturally – but it comes naturally the way you learned it"

(When the Bough Breaks Video, 1995). Maltreatment not only leads to increases in aggression, depression, and other deviant social behaviors such as school dropout, but in addition, the personal costs and financial obligations for society are very significant.

The Importance of the Earliest Relationship

Despite considerable scientific and research evidence (Shonkoff and Phillips, 2000), discussions on children's mental health have consistently excluded babies and toddlers, focusing instead on school-age children and adolescents. Unfortunately within the public mental health system, the majority of mental health professionals who provide services for children know relatively little about those under the age of six years. It is important to recognize, however, that babies and toddlers have many ways of communicating without necessarily using language and that mental health professionals are able to assess their social and emotional needs. In the infant mental health field, many say that play is the language of young children.

Attachment is one of the most critical developmental tasks of infancy. The science of early childhood development tells us that early relationships and attachments to a primary caregiver are the most consistent and enduring influence on social and emotional development for young children- and that early relationships form the basis for all later relationships (Bowlby, 1988; Emde & Robinson, 2000; Shonkoff and Phillips, 2000). Young children are generally more vulnerable than older children to experiences beyond their control and, therefore, cannot self-regulate their behaviors and emotions to the same degree as older children (Osofsky, 2004). Infants and young children depend on a caregiver-infant system that serves to protect them (Bowlby, 1969; Masten & Gewirtz, 2006). Infants and toddlers who are able to develop secure attachments which help them

develop the capacity to self regulate are observed to be more positive in their interactions with adults and peers than children who lack secure attachments. These early relationships can also impact on how they relate to others in adulthood (Waters, Merrick, Treboux, Crowell, & Altersheim, 2000). The caregiver is a source of responsive, predictable and comforting emotion regulation. When the attachment relationship is secure, the infant experiences relatively short periods of distress and can be comforted easily. Stimulation is appropriate to the infant's capacity to manage, and the infant and caregiver develop flexible physiological and emotional communication (Sroufe, 1996). These infants and young children may also develop a more positive self-concept, more advanced memory processes, and a better understanding of emotions. Alternatively, unresponsive, frightening and/or chaotic caregiving are associated with insecure and disorganized attachments leaving the infant vulnerable with less ability to self regulate arousal and distress. These infants develop disturbed patterns of dyadic regulation in their responses to the environment and stress (Kochanska, 2001; Lieberman & Zeanah; Sroufe, Carlson, Levy, & Egeland, 1999). Studies of brain plasticity in relation to early social experiences also suggest vulnerabilities in the developing child's capacity to respond adaptively to stress (Shonkoff & Phillips, 2000). Thus, the caregiver-infant relationship is a key to both vulnerability and protection in early development. Infants who do not have an opportunity to form a reliable attachment with a trusted adult (for example, infants and toddlers who experience multiple foster homes) may suffer grave consequences. Without intervention, their development can deteriorate, resulting in delays in cognition and learning, relationship dysfunction, difficulty expressing emotions,

school problems and even future mental health disorders or delinquency (Eckenrode, Laird, & Doris, 1993; Dodge, Bates & Petit, 1990; Widom & Maxfield, 2001).

Unlike adults, babies and toddlers have fairly limited ways of responding to stress and trauma. They may respond through inconsolable crying, withdrawal from daily activities, sleeplessness or lack of appetite due to depression, anxiety, and traumatic stress reactions, poor weight gain in infancy, or aggressive behavior, sleep problems, and dysregulation in older toddlers (Cicchetti & Toth, 1997; DeBellis & Van Dillen, 2005; Osofsky, 2004). If the underlying causes of the stress are not addressed, they can develop into serious mental health disorders, including depression, attachment disorders, and traumatic stress disorder. Infants can experience withdrawal and depression as early as four months of age (Luby, 2000). Unfortunately, despite the severe consequences, these disorders are not being identified. Neither parents nor most providers know enough about how to identify the early warning signs to make effective referrals. Further, for those who want to refer children for mental health services, there are very few evidence based services available for babies and toddlers in most communities.

Babies do not exist in isolation. The parent's mental health can also affect the young child. Conditions such as maternal depression and anxiety disorders can disrupt parenting. For example, infants of mothers who have severe chronic, untreated depression often withdraw, ultimately affecting their language skills, as well as physical and cognitive development. Older children of depressed mothers show poor self-control, aggression, poor peer relationships, and difficulty in school (Embry & Dawson, 2002). Fraiberg and her colleagues (Fraiberg, Adelson, & Shapiro, 1975) important work on "ghosts in the nursery" provides insight on understanding the immediate effects on young

children and their families as well as their subsequent reactions. For children exposed to trauma, retraumatization can play a very significant role. Children who have experienced previous losses may have much more serious mental health reactions to a current trauma (Pynoos, 1993; Knitzer, 2000). Further, Fraiberg et al (1975) emphasized how unresolved issues of parents can interfere with and confound their ability to provide loving supportive relationships with their own baby.

Providing Infant Mental Health Intervention in Three Florida Communities:

Structure of the Pilot project

As mentioned above, children under age five comprise the largest percentage of age groups of maltreated children (Wulczyn, Hislop, & Harden, 2002; Dicker & Gordon, 2004). Many of these young children have both developmental and mental health problems, but typically must wait until school age when their problems are much more severe before they are identified or receive services.

The focus of this paper is on Florida's efforts to identify these children early and to provide clinical evaluation and treatment services for both the young children and their caregivers. The Florida legislature funded a three-year, multi-site pilot Infant and Young Child Mental Health Pilot Project designed to provide earlier identification, better evaluation, and more effective treatment services for high-risk children. The children in the project were either at-risk for out-of-home placement due to abuse and neglect, or were already in the child welfare system and judged dependent by the state but for whom parental rights had not yet been terminated. This paper will also include a description of the Miami Court Team Model Program that has not only continued the work of the initial Florida Infant Mental Health Pilot Program, but also expanded it in important directions.

The primary goal of the pilot project was to reduce the occurrence and re-occurrence of abuse and neglect, enhance the child's developmental functioning, and increase expeditious permanent placements. A secondary goal was to develop a model for intervention and treatment that could be replicated in different sites, document the components of quality infant mental health interventions, and evaluate their effectiveness.

METHOD

Site Selection

Three geographically diverse sites were chosen within Florida: Miami, an ethnically diverse urban city (a collaborative project between the Dependency Division of the Juvenile Court, Eleventh Judicial Circuit, and the University of Miami's Linda Ray Intervention Center), Sarasota, one of the most affluent communities in the state (Child Development Center) and Pensacola, in the rural Florida Panhandle (Lakeview Community Mental Health Center). Each site committed to recruiting 25 high risk infants and toddlers, ranging in age from birth to 48 months and their parent(s): however, the actual range extended to 52 months at intake because the three sites served different populations and recruited in different ways. The sample size also differed by location; this was expected considering the population differences across sites. All sites agreed to participate concurrently in extensive infant mental health training for their therapists and to follow the evaluation and treatment protocols.

Participants

The sample of mothers included in this study was particularly high risk; the parents had either maltreated their children who were adjudicated dependent¹ or they were at high risk for abuse/neglect of their young child having been identified by the child protection system. Fifty-nine percent of the sample was court-ordered to participate (and made up the Miami Court Team sample); others were referred from the Department of Children and Families, pediatricians, and community sites because of risk of maltreatment and their participation in the program was voluntary.

One hundred twenty nine child–caregiver pairs were referred during the three year project. Seventy-five dyads were recruited in Miami, all referred from Juvenile Dependency Court; 29 were recruited in Sarasota referred by the Department of Children and Families (child protection) and primary care physicians, and 25 were recruited in Pensacola, mainly from the Department of Children and Families. Of those referred, 72 dyads were noncompliant from the onset or dropped out of treatment. They came from the three referral sources, those who were court ordered, child welfare referred, and referred by primary care providers. Such attrition is not unexpected for such a high psychosocial risk sample where substance abuse, parental mental illness or low functioning, and homelessness were common.

Fifty-seven dyads completed treatment; twenty-nine (38%) were from Miami, nineteen (65%) were from Sarasota, and nine (36%) were from Pensacola. The lower attrition rate in Sarasota probably relates to the difference in socioeconomic status with those parents having slightly more education and probably motivation than the others. Of the 57 dyads that completed treatment, 50 also completed the pre and post assessments.

¹ Only a juvenile court judge can declare, based on clear and convincing evidence, that a child is dependent. A child who has been declared dependent may be removed from his/her home by the court and placed in a facility for dependent children

We obtained data on reasons for noncompliance or drop-out for 58 of the 72 dyads (see Table 1). The remaining 14 were referred, but did not come in for the assessment.

Full or partial demographic data were available for 110 of the 129 referred mothers. Mothers ranged in age from 14 to 42 with a mean age of 24.33 years old ($SD = 6.22$). Thirty-nine percent of the mothers were in an ongoing relationship with the child's father. The sample of mothers included in this study was particularly high risk as 49% dropped out of high school before graduating or obtaining a GED, and 52% of the mothers had been incarcerated.

Full or partial demographic data were available for 117 children. At intake, children ranged in age from 1 to 52 months (Mean age = 19.39, $SD = 9.97$); 57% were male, and 43% were female. They were a racially diverse group; 51% were Black/African American; 21% were Caucasian; 17% were Hispanic; 8% were bi-racial, and 3% were classified as other.

Forty-six children were included in the final analysis. Children ranged in age from 2 to 52 months at intake (mean age = 20.19, $SD = 10.91$). Thirty children were male, and 16 were female. Twenty-two children were Black/African-American; 13 children were Caucasian; 7 were Hispanic; 3 were bi-racial, and data was not available for one child. Of the 46 dyads included in the analyses, number of treatment sessions attended ranged from 8 to 92 with a mean of 27 sessions. The number of sessions varied due to clients' missing appointments resulting in differences in time between sessions. However, change in parent-child interaction assessed after 25 sessions (or in a few cases at the end of their shorter treatment) was not related to the amount of time it required to complete the sessions.

In order to study differences between the participants that completed treatment and those that were noncompliant, the groups were compared on pertinent variables. Complete data were not available for all participants. *T*-tests were used to test continuous data; 2X2 chi-square with Yates correction were used for discrete data, and Fisher's exact probability tests were used to test discrete data with less than five cases per cell. Results showed that mothers who completed high school were more likely to complete treatment (See Table 2).

Procedure

The referral procedures differed in the three sites. In Miami, infants, toddlers, and their caregivers were referred from Miami Juvenile Dependency Court. In Sarasota and in Pensacola, they were referred from the Department of Children and Families, pediatricians, and community sites. All dyads referred to the program were evaluated using a relationship-based assessment to be described in detail below as well as a number of self-report measures. After the assessment, if the parent or caregiver consented to participate in weekly dyadic relationship-based treatment, and if one of the following conditions was not present, the infant/toddler and caregiver were referred for therapy. If the mothers suffered from mental illness, if they were not being compliant with substance abuse treatment, if they were homeless, or if the parent was incarcerated, they were not referred for therapy.

Evaluation

The pre and the post assessment protocols included qualitative and quantitative measures. The research component of the program was reviewed and approved by the

IRB Boards of the University of Miami and Louisiana State University Health Sciences Center.

Modified Parent-Child Relationship Assessment

The modified Parent-Child Relationship Assessment (Crowell & Fleishman, 1993) was done at the time of referral, before the initiation of treatment, and after 25 treatment sessions or at an earlier session if no further treatment was deemed necessary. Parental informed consent was obtained for the assessment including consent to videotape for educational and research purposes. While treatment may not have been completed after 25 sessions, it was decided that a post treatment evaluation was needed at a standard time for all dyads. The modification of the original Crowell assessment was structured in the following way.

Prior to assessment	Parents/caregivers are given instructions about the assessment, told what to expect, and informed that they will receive further instructions between each episode. Individual tasks are demonstrated to the parent/caregiver.
Free play – 8-10 minutes	Instruction: “Play with the child as you would at home.”
Cleanup – no more than 5	Instruction: “Have the child clean up, helping him/her

minutes	if you feel your child needs help.”
Bubbles – 3 to 5 minutes	Instructions: “Use the bubbles to play with your child.”
Task 1 – 2 to 4 minutes	Specific tasks instructions are given. (This task is slightly below child’s developmental level. Although the caregiver is not told, the child will likely be able to complete the task independently.)
Task 2 – 2 to 4 minutes	Specific tasks instructions are given. (Task is slightly below or at child’s developmental level)
Task 3 – 3 to 5 minutes	Specific tasks instructions are given. (Task is slightly above or at child’s developmental level,)
Task 4 – 3 to 5 minutes (if used)	Specific tasks instructions are given. (Task is slightly above child’s developmental level. Although the caregiver is not told, the child will likely need help to complete the task,)
Separation – no more than 3 minutes (Have parent take bubbles)	Instructions: “Open the cabinet doors, so that the child can see the task toys and than leave the room as you would at home.”
Reunion – 3 minutes	Instructions, “Knock on the door, call the child’s name, and step all the way into the room.” The parent and child return to play.

Scoring for the Modified Parent-Child Relationship Scales:

The coding scales used for the evaluation were based on a modification of the original Crowell scales (Crowell and Chase-Landsdale, 1999 by Heller, Aoki, & Sheffner (1999) that were further modified and adapted for this study by Osofsky, Bosquet, Kronenberg, and Hammer (2003). (The Parent-Child Relationship Scales are available from the first author). Specifically, caregivers' behaviors and emotions were coded on a 5-point scale for the free-play and structured play segments. For all scales, 5 is the most optimal score, and 1 is the least optimal score. Caregivers were scored on *positive affect* (e.g. *smiling, laughing*), ranging from 1 (no or low positive affect) to 5 (high positive affect), *withdrawal/depression*, ranging from 1 (high withdrawal/depression) to 5 (no or low withdrawal/depression), and on *irritability/anger/hostility toward the child*, ranging from 1 (high irritability/anger/hostility) to 5 (no or low irritability/anger/hostility).

Caregivers' behaviors during the structured play segments were coded on the following scales. *Intrusiveness*, ranging from 1 (very highly intrusive) to 5 (very low intrusive), was defined as the caregiver's ability to follow the child's lead and to be sensitive to the child's pacing and physical space. *Behavioral responsiveness*, ranging from 1 (poor responsiveness) to 5 (optimal responsiveness), was defined as the caregiver's ability to structure the play and tasks in ways that were developmentally sensitive to the child's needs and to help the child maintain emotional regulation. *Emotional responsiveness*, ranging from 1 (poor emotional responsiveness) to 5 (outstanding responsiveness), was defined by the caregiver's ability to create a positive, warm, and supportive emotional environment for the child and prevent the child from becoming overly distressed or frustrated. Caregivers' discipline strategies during the structured task were also scored, including their use of positive discipline, ranging from 1 (no or very low positive

discipline) to 5 (very high positive discipline) (e.g. modeling the correct behavior, praising the child for success) and negative discipline, ranging from 1 (very high negative discipline) to 5 (no or very low negative discipline) (e.g. shaming the child, physically threatening the child). Children's emotions were also scored using a 5 point scale. Affective responses including positive affect, withdrawal/depression, anxiety/fear, irritability/anger/hostility, and enthusiasm were scored. Children were also scored on a five point scale for aggression and noncompliance towards the caregiver and on persistence during the structured tasks. During the brief separation and reunion, caregivers and children's behaviors were rated. Caregivers were coded on their ability to provide sensitive comfort to the child, to minimize the child's distress, and to help the child return to play and exploration (caregiver's emotional and behavioral responsiveness). The children were coded on their ability to self-soothe, be comforted in response to parental support, and return to play (child's emotional and behavioral responsiveness).

Three coders who were not involved with the pilot project scored the tapes using the Parent-Child Relationship Scales (Osofsky, Bosquet, Kronenberg, Hammer, 2003). Two raters were trained by a master rater who was involved in the modification of the scales, and reliability was achieved during training when the two raters' coding matched the coding of the master rater for five dyads. Inter-rater agreement between the two raters was then established based on independent coding of a third of the tapes. Reliability was based on blind coding, meaning the raters did not know which tapes were pre or post assessments. Paired r values for each scale ranged from .87 to 1.0 (mean $r = .96$).

Child Developmental Status

Children's developmental status was measured using the Ages and Stages Questionnaire (ASQ). The ASQ is a screening system designed to identify children who may be developmentally delayed and in need of further assessment and potentially early intervention services. It measures child's functioning in five domains, communication, gross motor, fine motor, problem solving, and personal-social. (Squires, Potter, & Bricker, 1999). Each domain has six items, and each item is scored as "yes" (10 points), "sometimes" (5 points), or "not yet" (0 points). Scoring is based on a cutoff score. Children who are above the cutoff are considered to be within normal limits for that domain of functioning; children who are below the cutoff score (two standard deviations below the mean) are considered at risk and in need of further evaluation.

Beck Depression Inventory

The Beck Depression Inventory (BDI-II) was used to measure depressive symptomatology in caregivers. The BDI-II is a 21 item self-report instrument that measures the presence and severity of depressive symptoms in adults and adolescents. The BDI-II discriminates between depressed and nondepressed individuals (Beck, Steer, & Garbin, 1988) and yields a total score ranging from 0 to 63 which discriminates mild, moderate, and severe depression.

Parenting Stress Index

Caregiver report of the parent-child relationship was measured by the Parenting Stress Index-Short Form (PSI-SF). The PSI-SF, a 36-item scale, measures Total Stress as well as three subscales, Parental Distress, Parent-Child Dysfunctional Interaction, and Difficult Child. It also has a validity subscale (Defensive Responsiveness) to determine

the amount of response bias (Abidin, 1992). Total Stress and each subscale are scored according to raw scores and percentiles. A percentile score of 85% or above indicates significant stress in that domain.

Caregivers' and Therapists' Qualitative Impressions of Treatment

Following treatment, caregivers were asked a number of questions in order to qualitatively examine the caregiver's experiences of the treatment and its effects. The questions and responses are listed in Table 3. Therapists were also asked to describe their experience of treatment and its impact on the families served.

Treatment Program

An assumption of the program, incorporated into the treatment component, is that the young child has been harmed in the relationship through abuse and neglect and must be healed in the relationship. Abuse and neglect leads to lack of trust and difficulties in attachment that can best be addressed by repairing the damage that has been done and together with the caregiver working to create a new narrative for the parent and child moving forward.

Child-Parent Psychotherapy (CPP) which engages both child and parent working together is the relationship based treatment program implemented for the project (Lieberman & Van Horn, 2004). CPP is an evidence-based relationship-based intervention for children aged birth through five who are showing mental health or behavioral problems, including symptoms of post-traumatic stress. It is based on the premise that the child's relationship with the mother or primary attachment figure represents the most expeditious port of entry to alleviate the child's psychological difficulties, promote age-appropriate affect regulation, and restore developmental

momentum. The interventions promote affect regulation in the child, the parent, and their interaction. CPP has been shown to be effective in two independent studies, one by Lieberman, Ghosh-Ippen, and Van Horn (2006) and the other by Toth, Maughan, Manly, Spagnola, & Cicchetti (2002). The Lieberman et al study provides evidence for the efficacy and durability of CPP evaluated with paper-and-pencil outcome measures with multiethnic preschool-age child mother dyads from diverse economic backgrounds when compared with case management plus community referral for independent treatment. The Toth et al (2002) study using a narrative story-stem task evaluated the efficacy of CPP to psychoeducational home visitation or community standard intervention. They found that CPP resulted in a greater decrease in maladaptive maternal representations as well as negative self representations. In addition, the mother-child relationship expectations became more positive over time.

CPP is a multi-theoretical approach that integrates attachment, psychoanalytic, and trauma theory with intervention strategies derived from cognitive-behavioral and social learning therapies. Attention to the cultural values of the parents and the family is an integral component of the intervention plan and is weaved into all the principal components of the intervention. The principal components of CPP are:

- 1) Joint sessions centered on the child's free play with carefully selected therapeutic toys in order to facilitate focus on the child's trauma experience and on the child-parent interaction, with individual collateral sessions with the parent as needed.
- 2) Translating the developmental and emotional meaning of the child's behavior to the parent in order to increase parental understanding and empathy.

- 3) Targeting for intervention affect dysregulation in the child and the parent, maladaptive child behavior, parenting patterns that are punitive or developmentally inappropriate, and patterns of parent-child interaction that reflect mistrust and misunderstanding of each other's developmental agendas.
- 4) Fostering joint parent-child activities that promote mutual pleasure and the child's trust in the parent.
- 5) Employing a variety of intervention strategies that are individually tailored to the needs of the child and the parent. These strategies include developmental guidance, role modeling, emotional support, crisis intervention, assistance with problems of living, and insight-oriented intervention.
- 6) Starting with the most simple and direct intervention strategies, with more complex modalities such as insight-oriented interventions used only when simpler interventions are not successful in producing child improvement.

Incorporated in CPP work with the parent-child dyad is “speaking for baby” as an additional intervention to help sensitize the caregiver to the young child’s feelings (Carter, Osofsky, & Hann, 1997). This therapeutic strategy allows the therapist to express what the baby may be feeling in words to help the mother understand what his/her play and behaviors may mean. Often, it is very difficult for mothers who experienced poor mothering and other adversities themselves to be empathic with the babies’ feelings. Also, many do not know how to understand what behaviors and emotions may mean. Speaking for baby incorporated into dyadic CPP therapeutic interventions provides a strategy to help the parents gain understanding and empathy for their children and is an

indirect way to influence changes in parenting behavior. It can dramatically change the parent's understanding of the child and the meaning of behaviors and emotions.

If the trauma that the child has experienced is difficult at first for the parent to hear or see through play, play therapy may be used as an adjunct to parent-child psychotherapy to allow the child the opportunity to play out and work through the trauma. When the parent is ready, she will join the play as a way of creating a new way of being together, thus creating a more positive relationship. Play therapy may also assist with self-regulation and appropriate expression of emotion.

Another main component of the work with parents involves parental psycho-education to help the parent learn skills for nurturing and caring for her child and to allow her to ask questions about her child. Parental guidance and other work with the parent include teaching and modeling appropriate expectations and interactions relative to the child's developmental needs. Exploration and raising awareness of the parent's own unresolved issues from childhood that might be interfering with attachment and her attitude toward her child is also stressed (Fraiberg, Adelson, & Shapiro, 1987). Case management that may include help in finding child care for the child, and even help with housing used in conjunction with psychoeducation contributes to growth in the parent and the success of the program. Activities may include home visiting, visiting the child at child care, helping to arrange transportation or communicating with the Department of Children and Families. The treatment plan also included referral for other services. In addition, the project required extensive engagement services necessary to maintain the therapeutic work.

On-going screening was done for possible parental substance abuse, domestic violence, mental illness, parent and/or child cognitive deficits that could interfere with the parent's ability to parent effectively. This information was used to inform treatment planning.

Post-Assessment Following Treatment

The decision was made to do a post assessment after 25 sessions in order to ensure consistency for the evaluation component. Twenty-five sessions was chosen due to the variable time frame that was part of the treatment program. Some parents engaged right away and were consistent with treatment each week; others took some time to engage; still others were consistent for a while and then something happened in their lives that interfered with them being consistent. Some child-parent dyads completed treatment before the 25 sessions and the post-treatment evaluation was done at that time. If child-parent dyads required additional treatment after the 25-week assessment, continuation was offered.

RESULTS

Main findings

First, there were no further reports of abuse or neglect during the treatment period and up to post assessments for participants. There was a major reduction in reports of child abuse and neglect to the Department of Children and Families (DCF-Child Protection) from 97% of children prior to treatment to none of the children completing treatment during the first three years of the pilot project. There was only one call to the DCF hotline pertaining to a participant and it was unsubstantiated. Second, there were permanency placements of either reunification with the parent or a family member for all

children completing the child-parent dyadic psychotherapy who were not in parental custody at the beginning of the project. The court data base of abuse and neglect filings at the time of the post assessment were used to substantiate these findings. The therapists' reports were also used as another indicator at the time they closed their case. Third, the health and developmental status of children improved. Following treatment, 50% of the children who were screened ($n = 22$) showed improvement in their developmental functioning as determined by the ASQ. Fourth, the percentage of caregivers reporting depressive symptoms, as determined by the BDI-II, decreased from 53% pretreatment to 32% following completion of treatment, with sixty-eight percent of caregivers reported minimal to no depression after treatment at the time of the post assessment. Finally, parent-child relationship functioning based on both observational assessments and parent reports improved significantly for both parents and children.

Parent-Child Relationship Functioning

To examine the treatment effectiveness, the pre and post scores on the Parent-Child Relationship Scales were analyzed. For some subjects, complete data were not available on all segments of the procedure; in those instances, the available segments were scored and analyzed.

Data were first analyzed for basal or ceiling effects, and scales were removed from analysis if more than 75% of the participants scored at the highest or lowest data points. Thus, child aggression was removed from the analysis as 83% of children were observed to display no aggression toward the caregiver. To facilitate data analysis, composite scales were created. First, identical scales from the free play and the clean up/structured tasks sessions were averaged for each of the scales. Scales were further

combined if they correlated at $r \geq .80$. As child positive affect and enthusiasm were highly correlated ($r = .85$), the two variables were combined to create a single child positive affect variable.

Paired t -test analyses were used to compare pre and post treatment scores. A total of 50 pre and post parent-child videotaped relationship assessments were available for analysis. Forty-six were used in the actual analyses since interactions were not included if the dyads attended less than three treatment sessions; in this sample 2 dyads attended 2 sessions prior to the post assessment.

Following the intervention, caregivers showed increases in behavioral responsiveness, emotional responsiveness, and positive discipline. Caregivers also demonstrated a decrease in intrusiveness with their children. Thus, compared to pre-assessment, post-treatment interactions were characterized by increased caregiver sensitivity. Children showed significant increases in positive affect following treatment. Caregivers showed increased responsiveness toward their children during the reunion after a brief separation, and, although it was not statistically significant, there was a trend for children to be more responsive to their parents during the reunion period. See Table 3.

Child Developmental Status

Prior to the intervention and using the ASQ, 32% ($n = 25$) had screened as at risk for a developmental delay in one or more of the domains measured, communication, gross motor, fine motor, problem solving, and personal-social development. Following treatment and based on the ASQ, developmental status had improved in one or more areas for 50% of the children screened ($n = 22$). Forty-five percent ($n = 20$) improved in

the communication domain; 17% ($n = 18$) improved in the gross motor domain; 17% ($n = 18$) improved in the fine motor domain; 28% ($n = 18$) improved in the problem solving domain, and 26% ($n = 19$) improved in the personal-social domain.

Parental Stress

Based on scores from the Parenting Stress Inventory, Short Form (PSI), 58% of caregivers responded indicating little or no stress. These low reports of parental stress were found despite the fact that the parent was referred by the court or the child was placed in protective custody. Given the extraordinary number of tasks on the case plans facing mothers in the study, and the connection with the court's expectations for success in order for permanency/reunification to occur within 12-18 months, it was expected that the participants would have scored in the higher range of stress on the pre-assessment. These low scores, hypothetically, may suggest that pre-treatment, the full responsibility of being a parent of a young child and what it will take to "get it all done" may not yet be clear to the participants. However, at post-treatment, the knowledge gained about the role of the parent in the relationship may be clear, and with that, comes increased stress to live up to all the responsibilities. Similar results have been found in our non-clinical parenting classes. (Sheinberg, Goncz, & Katz, 2006).

Caregiver Depression

Caregivers were administered the Beck Depression Inventory (BDI) prior to and following treatment. The BDI is a measure of depressive symptomatology that classifies individuals as having minimal, mild, moderate, or severe depression according to their self-report answers. The pre and post assessment data on the BDI was available for 34 caregivers. A paired t -test analysis was used to compare pre and post treatment BDI

scores. The analysis revealed that caregivers were significantly less depressed following treatment ($t(33) = 2.441, p < .05$). Prior to treatment, the mean BDI score of 14.85 ($SD = 10.03$) fell within the mild range. Following treatment, the mean BDI score dropped to 10.88 ($SD = 12.18$) and fell within the minimal range as determined by standardized cutoff scores.

Caregivers' and Therapists' Qualitative Impressions of Treatment

Following treatment, caregivers were asked a number of questions in order to provide a qualitative assessment of the caregiver's experiences of the treatment and its effects. Forty-four percent of participants who completed treatment also completed the satisfaction survey. One participant who was noncompliant with treatment and one participant who was currently in treatment also completed the survey. Given the low response rate, statistical analyses were conducted on demographic variables to determine if such factors were related to survey completion rate. Demographic variables such as caregiver age, caregiver race, caregiver relationship status, caregiver education level, caregiver employment, caregiver depression, and if the caregiver was ever incarcerated were not related to completion of the survey. Site of enrollment into the program was significantly related to completion of form. Seventy-two percent of dyads in Pensacola completed the survey; fifty-eight percent of the dyads in Sarasota completed the survey, and 28% of the dyads in Miami completed the survey. The questions and responses are listed in Table 4.

Therapists were also asked to describe their experience of treatment and its impact on the families served. Therapists noted positive outcomes of treatment beyond the primary goal of improving caregiver-child interactions. Other observed benefits of

treatment included early detection of possible developmental delays in the identified child and his/her siblings, ability to follow through with the primary medical needs of the children, parents advocating on their children's behalf, and mothers recognizing the need for and establishing support systems.

DISCUSSION AND IMPLICATIONS

A major goal of the Infant and Young Child Mental Health Pilot Program in Florida has been to interrupt the intergenerational cycle of violence and develop more effective and comprehensive evaluation and treatment programs for the most vulnerable young children and their families. The results of this program, that included relationship based assessments, child-parent relationship-based psychotherapy, parental psycho-education and guidance, and enhanced case management, indicated that parent-child relationship functioning improved significantly in all domains for both parents and children. Parents showed an increase in behavioral/emotional responsiveness and positive discipline with their children and a decrease in intrusive behaviors. Increased responsiveness and positive discipline and less intrusiveness from parents or caregivers is likely to enhance the child's development, positive self esteem, and readiness to learn. Children showed an increase in positive affect in play with their parents. Both children and parents showed increased responsiveness to each other during the reunion after a brief separation. These results indicate more sensitivity, responsivity, and reciprocity in the parent-child relationship from the pre to the post test assessments. The increased responsiveness that resulted in both children and parents is important because early relationships form the basis for later relationships. If they are positive, development is likely to proceed more smoothly for children as they are more likely to learn to relate

positively to others such as teachers and peers. These findings also indicate that early intensive therapeutic interventions with these young, vulnerable children and their parents, combined with effective engagement and enhanced case management, can have a significant impact on both their development and their relationships which will lead to more positive self esteem and increased readiness for school. There is also strong evidence that children who are abused and neglected without intervention are at higher risk for school failure and later violence (Widom & Maxfield, 2001). It is important to recognize and note that the data indicated completion of treatment was more likely for families with mothers who had completed high school who may have been more highly motivated. These findings are consistent with the literature indicating that mothers with less than 12 years of education have children at highest risk.

Barriers and Lessons Learned

Efforts to engage families in the treatment process were critical. It was estimated that at least 10 hours of “engagement” efforts was spent for every hour of treatment. The engagement efforts included frequent telephone calls, home visits, child care visits, and other efforts to build a trusting relationship with the parent. The efforts that were most successful were those that engaged the parents effectively to understand and recognize that they were very important for their infants and those that also allowed for a trusting relationship leading to confidence in the therapeutic relationship. Despite these efforts at engagement, a little over half of the sample did not complete treatment. Cooperation, collaboration, and communication with foster care workers were essential both to retain parents and children in the program and help with engagement activities. Collateral services were needed which is often the case with high risk families. A major barrier to

the success of the program was problems with transportation. One site included home visits but even then, multiple attempts were made to find the families at home, even with prior appointments made for specific times. Further, the host agency had to be committed to providing infant mental health services. Indeed the host agency had to absorb some of the costs of training and start up, as well as on-going costs not covered by reimbursement.

Limitations

The Infant and Young Child Mental Health Pilot Program in Florida demonstrated that intensive evaluation and relationship based treatment can impact positively on the interactions between very high risk parents and children and their developing relationship. However, these findings, while significant, have several major limitations. First, the sample size completing pre and post assessments was small so that the generalizability of the findings is somewhat limited.

Second, this very high-risk sample had a high non-compliance rate, despite extensive efforts to engage families in the treatment and some being court-ordered. Of the 129 dyads referred during the three year treatment window, slightly less than half (57 dyads) completed treatment and post assessment data. Thus it could be construed that only the motivated families completed the intervention. While this may be the case, with families at such high risk, engaging almost 50% of them can be considered a major success.

Third, there was no control group to compare how the parent-child dyads would be doing without the intensive intervention or with another type of intervention. It should be noted, however, that in evaluating the effectiveness of therapy, results from

randomized control trials may not translate well to naturalistic clinic settings and designs have been suggested that may mirror the naturalistic context in which the therapy occurs (Cohen, Muir, Lojkasek, et al, 1999).

Progress, Accomplishments, and Future Plans

Ongoing training at the pilot sites and other venues in Florida has resulted in the creation of a cadre of mental health providers with expertise in infant mental health. The pilot projects have increased awareness of the need for services and has served as a stimulus for more training in this area in Florida. All three pilot sites have succeeded in establishing their programs and integrating them successfully in their host agencies with commitments to sustaining the project beyond the pilot.

Following the Florida Infant and Young Child Mental Health Pilot Project, the Miami site has continued this model of infant mental health assessments and treatment for dependent children, by obtaining additional funding for ongoing collaboration between Judge Cindy Lederman, Administrative Judge of the 11th Circuit Juvenile Court and the University of Miami's Linda Ray Intervention Center with funding from the Department of Children and Families, District XI Division of Children's Mental Health, the Office of Juvenile Justice and Delinquency Prevention for a Miami *Safe Start Promising Approaches* site, and the Head Start Bureau for the Early Head Child Welfare Initiative. Remarkably, the intervention model developed and implemented by this Miami Court Team collaborative in the 11th Circuit Juvenile Court in collaboration is being replicated and expanded in several jurisdictions around the country. Current work also includes: 1) a follow-up study of the Miami sample, funded by Zero to Three, to determine if the very positive results continue; and 2) continued work, in collaboration

with Zero to Three and the National Council of Juvenile and Family Court Judges, to develop national models for juvenile dependency courts for abused and neglected children that include evaluation and services to determine the effectiveness of such interventions in other jurisdictions with the goal of breaking the cycle of child maltreatment.

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Table 1: Reasons Participants Did Not Complete Treatment

Reason for Not Completing Treatment	Numbers Not Completing Treatment
Caregiver lived out of the service delivery area and never attended appointments.	14
Caregiver's rights were terminated.	6
Family could not be contacted for appointment.	4
Caregiver was incarcerated.	3
Caregiver did not cooperate.	2
Caregiver's location was unknown.	2
Case was closed and treatment was not mandated.	2
Transportation was not available and school-based treatment was not possible.	1
Caregiver died.	1
Reason was unknown (likely some reasons were similar to those listed above)	23

Table 2: Demographic Characteristics by Group^a

	Dyads that completed treatment (<i>n</i> =57)	Dyads that were noncompliant with treatment (<i>n</i> =58)
Child's age in months at intake	Mean = 20.48 SD = 10.88 (<i>n</i> =56)	Mean = 18.40 SD = 8.66 (<i>n</i> =49)
Mother's age at intake ^b	Mean = 25.31 SD = 6.15 (<i>n</i> =49)	Mean = 23.55 SD = 6.60 (<i>n</i> =49)
Child's gender (Male:Female)	38 : 19 (<i>n</i> =57)	25 : 25 (<i>n</i> =50)
Child's race (Caucasian:Minority ^c)*	16 : 40 (<i>n</i> =56)	5 : 44 (<i>n</i> =49)
Maternal education (Completed high school:Did not complete high school)*	33 : 20 (<i>n</i> =53)	20 : 27 (<i>n</i> =47)
Mother ever incarcerated (Yes:No)	26 : 27 (<i>n</i> =53)	24 : 22 (<i>n</i> =46)
Mother and father in an ongoing relationship (Yes:No)	23 : 30 (<i>n</i> =53)	14 : 33 (<i>n</i> =47)
Caregiver depression ^d	Mean = 12.78 SD = 9.59 (<i>n</i> =46)	Mean = 11.52 SD = 8.64 (<i>n</i> =23)

(*)*p* < 0.05.

^a Frequencies are reported for discrete data, means and standard deviations for continuous data.

^b Mother's age in years

^c Minority includes Black/African-American, Hispanic, Bi-Racial, and Other

^d Depression based on pre-assessment BDI raw score

Table 3: Pre and Post Treatment Means, Standard Deviations, Significance Levels, and Effect Sizes on Components of the Modified Crowell Parent-Child Relationship

Procedure

	Number of dyads included in the analysis	Pre-treatment Mean (<i>M</i>), Standard Deviation (<i>SD</i>)	Post-treatment Mean (<i>M</i>), Standard Deviation (<i>SD</i>)	Paired Sample <i>t</i>	<i>p</i> value	Effect Size ^a
Caregiver Variables						
Positive affect	46	<i>M</i> = 3.42 <u><i>SD</i></u> = 0.82	<i>M</i> = 3.45 <i>SD</i> = 0.76	-0.19	.85	.04
Withdrawn/depressed	46	<i>M</i> = 4.63 <i>SD</i> = 0.59	<i>M</i> = 4.53 <i>SD</i> = 0.71	0.92	.36	.17
Irritability/anger/hostility	45	<i>M</i> = 4.29 <i>SD</i> = 0.82	<i>M</i> = 4.53 <i>SD</i> = 0.77	-2.12	.04	.29
Intrusiveness**	45	<i>M</i> = 2.98 <i>SD</i> = 1.09	<i>M</i> = 3.71 <i>SD</i> = 0.86	-5.21	<.01	.67
Behavioral responsiveness**	46	<i>M</i> = 3.01 <i>SD</i> = 0.93	<i>M</i> = 3.57 <i>SD</i> = 0.83	-4.01	<.01	.60

Emotional responsiveness**	46	<i>M</i> = 3.02 SD = 0.78	<i>M</i> = 3.46 SD = 0.74	-3.93	<.01	.56
Positive discipline**	38	<i>M</i> = 3.42 SD = 0.79	<i>M</i> = 3.97 SD = 0.79	-3.48	<.01	.70
Negative discipline	38	<i>M</i> = 4.21 SD = 0.99	<i>M</i> = 4.42 SD = 0.86	-1.19	.24	.21
Caregiver emotional and behavioral responsiveness at reunion**	39	<i>M</i> = 3.21 SD = 1.06	<i>M</i> = 3.69 SD = 0.92	-2.98	.01	.45
Child Variables						
Positive affect**	46	<i>M</i> = 3.06 SD = 0.98	<i>M</i> = 3.53 SD = 0.79	-3.77	<.01	.48
Withdrawn/depressed	46	<i>M</i> = 4.39 SD = 0.91	<i>M</i> = 4.51 SD = 0.86	-0.72	.48	.13
Anxiety	46	<i>M</i> = 4.74 SD = 0.56	<i>M</i> = 4.83 SD = 0.49	-0.98	.33	.16
Irritability/anger/hostility	46	<i>M</i> = 3.99 SD = 0.98	<i>M</i> = 4.27 SD = 0.66	-1.91	.06	.29
Noncompliance	45	<i>M</i> = 3.79 SD = 0.90	<i>M</i> = 3.92 SD = 0.64	-0.96	.34	.14
Persistence	38	<i>M</i> = 3.58 SD = 1.13	<i>M</i> = 3.97 SD = 1.10	-1.86	.07	.35

Child emotional and behavioral responsiveness at reunion*	39	$M = 3.13$ $SD = 0.95$	$M = 3.51$ $SD = 0.97$	-2.43	.02	.40
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(**) Statistically significant improvement between pre and post data collection points.

Based on Bonferroni adjustments, the significance level was set at $p=.01$ for both caregiver and child variables.

(*) Non-significant trend towards improvements between pre and post data collection points.

^a Interpretation of effect size is as follows: $\geq .80$ = large; $\geq .50$ = medium; $\geq .20$ = small (Cohen, 1988)

Table 4: Caregiver Satisfaction Survey Results

Question Asked	Number of Participants Responding	% Answering Yes
Do you think that your relationship with your baby has improved as a result of treatment?	24	96%
Has your child changed positively since the beginning of treatment?	26	92%
Has your child's emotions changed since treatment began?	25	72%
Has your child's behavior changed?	25	80%
Has your parenting changed since the beginning of treatment?	26	81%
Has your family life changed as a result of your involvement in this pilot study?	25	76%
Have you learned anything new from being in this program?	27	96%
Has treatment helped with the problems you and your child were having?	23	87%

