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TECHNICAL REPORT

National Evaluation of Safe Start Promising Approaches

Results Appendix H: Miami, Florida

In Jaycox, L. H., L. J. Hickman, D. Schultz, D. Barnes-Proby, C. M. Setodji, A. Kofner, R. Harris, J. D. Acosta, and T. Francois, *National Evaluation of Safe Start Promising Approaches: Assessing Program Outcomes*, Santa Monica, Calif.: RAND Corporation, TR-991-1-DOJ, 2011

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MIAMI, FLORIDA, SAFE START OUTCOMES REPORT

ABSTRACT

The Miami Safe Start Program developed two distinct interventions within domestic violence shelters, transitional housing and homeless shelters, and Juvenile Dependency Court service providers to improve outcomes for children (ages 6 months–12 years) exposed to violence. The interventions included the Infant Mental Health (IMH) model, a clinical assessment and dyadic treatment for infants to children age 5, and group therapy called Heroes for children ages 5 through 12. A full description of the interventions can be found in *National Evaluation of Safe Start Promising Approaches: Assessing Program Implementation* (Schultz et al., 2010). The two interventions were evaluated separately. The evaluations of these programs consisted of quasi-experimental studies in domestic violence and homeless shelters, with two intervention shelters and one comparison shelter. This design was augmented for the dyadic therapy component for court-referred children, with a randomized controlled study with a six-month wait-list control group and randomization occurring at the family level.

For the IMH study, Miami enrolled 90 families, but only 44 percent were retained after six months. Participants in the study were largely black or other minorities and impoverished, with caregivers reporting an average of 1.8 types of violence exposure at baseline. Participants were drawn from two settings: domestic violence or homeless shelters and dependency court. According to caregiver reports, about 10 percent of children scored in the clinical range for child posttraumatic stress disorder (PTSD) symptoms, and about 20 percent of caregivers reported parenting stress in the clinical range. All of the families who were retained at six months received Child-Parent Psychotherapy (CPP), and the vast majority received case management services (89 percent), with an average of about 11 and nine sessions or meetings, respectively. Given the number of participants in this study, we had a 49-percent percent chance to detect a medium effect size of 0.63 at six months. Because of low sample sizes and the wait-list control group design for court-referred families, only six-month outcomes could be examined. Intent-to-treat analyses showed no differences between the intervention and comparison group at six months, although some significant changes were detected within the intervention group over time (child's violence exposure, caregiver's violence exposure, and caregiver's personal problems), as well as within the comparison group over time (child's violence exposure and caregiver's violence exposure). However, the

reductions in violence exposure are, in part, expected because of the time frames used on the scales.

The Heroes program study enrolled 52 families into the project, but only 15 in the comparison group, and retained half of them at six months (with only four in the comparison group). The participants in the study were largely black or other minorities and impoverished, with caregivers reporting an average of 3.6 lifetime violent events, and older children reporting an average of 6.1 such events themselves. Almost half (46 percent) of children scored in the clinical range for PTSD symptoms, and 25 percent of caregivers reported parenting stress in the clinical range. Most of the families retained at six months participated in the Heroes groups (86 percent), with an average of six group sessions per family, and a smaller number (18 percent) received case management. Those who participated in the intervention received the child group sessions as intended (81 percent), and some also received case management (17 percent). Given the number of participants in this study, we were not able to compare the groups to examine outcomes over time. Examination of changes over time within the intervention group revealed some reductions in the types of violence exposure reported for the child and for the caregiver but no significant changes on the other outcome measures. However, the reductions in violence exposure are, in part, expected because of the time frames used on the scales.

Overall, the sample size limitations mean that no conclusions can be drawn about the effectiveness of the Miami Safe Start IMH or Heroes interventions as implemented on child and family outcomes. Further testing is needed with an adequate sample in order to statistically assess the potential impacts of the intervention.

INTRODUCTION

The Miami Safe Start program is located in the county of Miami-Dade in Florida, where rates of child maltreatment and domestic violence included over 17,155 cases of child abuse reported between 2000 and 2003 and 16,962 domestic violence crimes reported in 2002 (Consortium for Children in Crisis, 2004). In 2001–2002, family violence allegations constituted 31 percent of alleged child maltreatment cases in Miami-Dade County (Consortium for Children in Crisis, 2004).

Recognizing the frequent co-occurrence of domestic violence and child maltreatment among families, the negative outcomes associated with this experience, and the shortage of coordinated clinical services available for children in Miami-Dade County to address these issues, the Miami Safe Start program sought to provide assessment and treatment to children and families who were dually affected by these forms of violence.

The Miami Safe Start program built on earlier collaborative work within Miami-Dade County through three separate projects that together used the term “Infant Mental Health” (IMH) to describe the use of a standard assessment with CPP for very young children involved with the Dependency Court within Miami-Dade County. In a pilot study of the program for children (ages 0–3) in the Miami court system, investigators noted improvements in all target areas among treatment completers via pre-treatment and post-treatment data. These changes included the occurrence and reoccurrence of abuse and neglect, the health and developmental status of children, the percentage of caregivers reporting depressive symptoms, and parent-child relationship functioning (Osofsky et al., 2007). In earlier evaluations of CPP, Lieberman, Van Horn, and Ghosh Ippen (2005) showed medium intervention effects on PTSD symptoms and behavior problems (0.63 and 0.64, respectively). In addition to IMH, they planned a locally developed group therapy for older children called Heroes. The goal of the Miami Safe Start program was to produce a seamless community response among the juvenile justice system, law enforcement, domestic violence shelters, and transitional housing sites to expand clinical services for children from 6 months to 12 years old and included the addition of service delivery on site in domestic violence shelters.

The outcomes evaluation detailed here presents data relevant to the question of whether the Miami Safe Start program, as implemented within this project, improves outcomes for children exposed to violence.

MIAMI SAFE START

- **Intervention type:** (1) Infant mental health (IMH; including assessment and CPP) and (2) Heroes group sessions
- **Intervention length:** six months (IMH), ten weeks (Heroes)
- **Intervention setting:** Domestic violence shelters and homeless shelters, Linda Ray Intervention Center CPP clinic
- **Target population:** Children residing in specific shelters who have been exposed to domestic violence or community violence and/or experienced abuse or neglect, or court-referred children with verified maltreatment allegations for clinic-based treatment
- **Age range:** 6 months–12 years
- **Primary referral sources:** Shelter staff, juvenile court

INTERVENTION

The Miami Safe Start interventions included (1) the IMH program for children ages 6 months to 60 months and (2) Heroes groups for children ages 5 years up to 12 years. Both programs were provided to mothers and their children who were residing in domestic violence shelters at the inception of the project and were expanded to include homeless shelters later in the project. In addition, families referred by the Juvenile Dependency Court, whose children had verified maltreatment, participated in an IMH program that was implemented at the Linda Ray Intervention Center in Miami. The court-referred intervention was similar to that developed in their earlier work, including interaction and reporting to the court during the course of treatment. These elements are described briefly in the following paragraphs. For a full description of the Miami interventions as they were delivered, see Schultz et al. (2010).

The IMH program consisted of the PREVENT assessment and the CPP intervention model. The PREVENT assessment (Crowell and Fleischman, 1993) was conducted for all families with children in the 6- to 60-month age range. This assessment included several paper and pencil forms (depression inventory, parenting stress inventory), as well as a developmental assessment, gathering of background and pediatric health information, and a structured, videotaped parent-child interaction observation. This assessment was used for determining need for the intervention and to establish baseline functioning for the CPP intervention model. The assessment was administered twice: before treatment and at the end of treatment (defined as when treatment goals had been completed). Eligibility for the IMH program required that the assessment reveal particular problems in the parent-child relationship in terms of affect/mood (e.g., blunted or angry affect), intrusiveness (e.g., overly directive, repeated commands), behavioral responsiveness (e.g., teasing, indifference), emotional responsiveness (e.g., unable to read child's cues), or discipline (e.g., overly harsh or derogatory comments).

CPP had been developed by Alicia Lieberman and Patricia Van Horn and was adapted by Joy Osofsky for collaboration with the Miami courts via earlier Safe Start (Phase 1) and IMH pilot projects for children 0–3. It is highly similar to the CPP model implemented by other Safe Start sites, with the CPP itself being the same, but with specific court-related case management and the Crowell assessment added. CPP is a relationship-based intervention designed for use with children up to age 6. There are two components in CPP: assessment and treatment, with information gained during the assessment used to inform the treatment component. In the intervention component, child-parent interactions are the focus of six intervention modalities aimed at restoring a sense of mastery, security, and growth and promoting congruence between bodily

sensations, feelings, and thinking on the part of both child and parent and in their relationship with one another (NCTSN, 2008). The intervention was expected to last approximately 25 sessions.

The Heroes program is an arts-based group approach to explore underlying distress related to exposure to violence for school-aged children. The program was developed at the University of Miami and used by the School of Social Work in the community before the development of Safe Start but had not previously been published or evaluated. Each of the ten group sessions began with a clip from a child-focused animated film to help engage the children. Then various processing questions were asked of the group, followed by an expressive art activity (music, drawing, role plays, etc.) and a closure activity. A comprehensive manual for the Heroes intervention was developed during the course of this project. Children were to be included in Heroes groups if they were between the ages of 5 and 12 and had experienced or witnessed violence.

For the IMH intervention, efforts to monitor the quality of the program included one yearlong CPP training conducted by the model developer and additional faculty members from Florida State University using detailed training slides, videotapes of parent-child interaction, and reading material on the model and clinical diagnostic work. In addition, therapists met weekly with supervisors and in monthly collaborative discussions with the developer and had access to her for ad hoc consultation. Also, PREVENT assessments were videotaped and sent to the developer's team for quality ratings. IMH therapy sessions were videotaped as well for use in therapy sessions but not reviewed in supervision. For the Heroes intervention, clinicians for the groups provided peer-to-peer support and training and met regularly with the developers for model consultation and with a licensed clinician for supervision. During the course of the project, all of the program therapists developed the treatment manual that describes the program in detail.

METHOD

Design Overview

The design of this study was a quasi-experimental effectiveness trial originally focused on each of two intervention domestic violence shelters and one comparison domestic violence shelter. However, one of the intervention shelters stopped participating in the study early in the project. All families with children in the 6- to 60-month age range received the PREVENT assessment. Families enrolled at the intervention shelters received IMH until therapeutic goals were reached (averaging six

months or 25 sessions) or Heroes for up to ten weeks, depending on their age. Comparison site families received enhanced case management (i.e., case planning based on the PREVENT assessment results and resource planning information). This study was expanded to include homeless shelters as well, with one intervention shelter and one comparison shelter following the same protocol as the domestic violence shelters.

In addition, later in the project, the design for the IMH program was augmented. A randomized controlled effectiveness trial with a six-month wait-list control group was employed for court-referred children, adding to the shelter-based study of IMH. Randomization occurred at the family level, and eligible children were recruited after families were referred to the program. The PREVENT assessment was conducted with all families. Families assigned to the intervention condition received IMH until therapeutic goals were reached (averaging six months or 25 sessions). Families on the wait list received support and referrals during the waiting period and were eligible to begin IMH after completion of the first follow-up assessment at six months.

In sum, the IMH program was evaluated on a mixture of shelter-based families (with some shelters acting as intervention shelters and others acting as comparison shelters) and on court-referred families who were randomized to the intervention or a six-month wait-list control group. It is important to keep in mind this mixture of families participating in the mixed-design study. The Heroes program was evaluated using a sample of shelter-based families, with some shelters acting as intervention shelters and others as comparison shelters.

Child outcomes and contextual information were assessed at baseline, six, 12, 18, and 24 months. Study enrollment took place between October 2006 and March 2009.

Evaluation Eligibility Criteria

Children who spoke English or Spanish and had been exposed to domestic violence or child maltreatment were eligible to participate in the Safe Start program. The IMH program was offered to children in the 6- to 60-month age range, and children age 60 months up to 12 years were eligible for the Heroes program. Additional eligibility criteria for court-referred families included (1) reunification as a permanency plan goal; (2) the parent being in compliance with substance abuse, mental health, and/or domestic violence services; (3) parent-child visits being permitted; and (4) allegations of violence, abuse, or neglect being substantiated in the Dependency Petition. There were no other exclusion criteria for the program.

When more than one child in the eligible age range was potentially eligible for the program by virtue of exposure to violence, identification of the “target child” evolved over time in this project. At the beginning of the study, the child with the most

recent birthday was assigned to be in the evaluation, but later this was changed so that the mother decided which child would be the target child for the evaluation. Early on in the project, rules for the research project required that only one child per family participate in the evaluation portion of the project, but this was later adjusted to allow one child from a family to take part in each arm of the study (IMH or Heroes). Additional siblings were also allowed to take part in Heroes as space permitted (but were not included in the evaluation).

Randomization Procedures and Enrollment in Intervention and Comparison Groups

For the randomized portion of the IMH evaluation for court-referred families, children were randomized on enrollment into an intervention or wait-list control group using a block randomization scheme that allowed for approximately the same number of children in the intervention and comparison groups (see Chapter Four of the main document [http://www.rand.org/pubs/technical_reports/TR991-1.html]). Because of the possibility that the impact of the intervention could differ by child age, the sample was stratified into two groups. One group of children was recruited those from 6 months up to 2 years of age and the other group of children from those between 3 and 5 years old.

For the quasi-experimental evaluation conducted in the shelters, domestic violence shelters were assigned as intervention or comparison shelters at the outset of the project. Later on when homeless shelters were added into the project, the assignments were reversed so that there would be balance in intervention and comparison shelters based on geography. Within each shelter, families were recruited for participation into the intervention group or the comparison group, as applicable.

Measures

The measures used in this study are described fully in Chapter Two of the main document (see http://www.rand.org/pubs/technical_reports/TR991-1.html). The measures were uniform across the national evaluation but prioritized within each site as to the relevance to the intervention under study. Given the nature of the Miami Safe Start intervention, the outcomes were prioritized as shown in Tables 1a (IMH intervention) and 1b (Heroes intervention). It should be noted that the Miami Safe Start leadership did not agree completely with the prioritization of outcomes for IMH, but that it was nonetheless kept uniform across all the sites that were evaluating CPP, as presented.

Table 1a
Prioritized Outcome Measures for Miami Safe Start IMH Intervention

Primary Outcome Measures			
<i>Domain</i>	<i>Source/Measure</i>	<i>Age of Child</i>	<i>Respondent</i>
PTSD Symptoms	Trauma Symptom Checklist for Young Children	3–5 years	Caregiver
Behavior/Conduct Problems	BITSEA and Behavior Problem Index	1–5 years	Caregiver
Social-Emotional Competence	ASQ	0.5–2 years	Caregiver
Social-Emotional Competence	BITSEA and SSRS (Assertion and Self-Control)	1–5 years	Caregiver
Caregiver-Child Relationship	Parenting Stress Index	All	Caregiver
Secondary Outcome Measures			
<i>Domain</i>	<i>Measure</i>	<i>Age of Child</i>	<i>Respondent</i>
Social-Emotional Competence	SSRS (Cooperation)	3–5 years	Caregiver
Violence Exposure	Juvenile Victimization Questionnaire	All	Caregiver
Violence Exposure	Caregiver Victimization Questionnaire	All	Caregiver
Tertiary Outcome Measures			
<i>Domain</i>	<i>Measure</i>	<i>Age of Child</i>	<i>Respondent</i>
School Readiness/Performance	Woodcock-Johnson III	3–5 years	Child
Background and Contextual Factors	Everyday Stressors Index	All	Caregiver

NOTE: ASQ = Ages and Stages Questionnaire, BITSEA = Brief Infant-Toddler Social and Emotional Assessment, SSRS = Social Skills Rating System.

Table 1b
Prioritized Outcome Measures for Miami Safe Start Heroes Intervention

Primary Outcome Measures			
<i>Domain</i>	<i>Source/Measure</i>	<i>Age of Child</i>	<i>Respondent</i>
Social-Emotional Competence	BITSEA and SSRS (Assertion and Self-Control)	All	Caregiver
Secondary Outcome Measures			
<i>Domain</i>	<i>Measure</i>	<i>Age of Child</i>	<i>Respondent</i>
PTSD Symptoms	Trauma Symptom Checklist for Young Children	5–10 years	Caregiver
PTSD Symptoms	Trauma Symptom Checklist for Children	8–12 years	Child
Depressive Symptoms	Children’s Depression Inventory	8–12 years	Child
Behavior/Conduct Problems	Behavior Problem Index	All	Caregiver
Social-Emotional Competence	BERS-2 (School Functioning, Affective Strengths)	6–12 years	Caregiver
Social-Emotional Competence	BERS-2 (School Functioning, Affective Strengths)	11–12 years	Child
Social-Emotional Competence	SSRS (Cooperation)	All	Caregiver
Caregiver-Child Relationship	BERS-2 (Family Involvement)	6–12 years	Caregiver
Caregiver-Child Relationship	BERS-2 (Family Involvement)	11–12 years	Child
Caregiver-Child Relationship	Parenting Stress Index	All	Caregiver
Violence Exposure	Juvenile Victimization Questionnaire	All	Caregiver
Violence Exposure	Juvenile Victimization Questionnaire	11–12 years	Child
Violence Exposure	Caregiver Victimization Questionnaire	All	Caregiver
Tertiary Outcome Measures			
<i>Domain</i>	<i>Measure</i>	<i>Age of Child</i>	<i>Respondent</i>
Behavior/Conduct Problems	Delinquency Items	11–12 years	Child
School Readiness/Performance	Woodcock-Johnson III	All	Child

NOTE: BERS-2 = Behavior and Emotional Rating Scales—2, BITSEA = Brief Infant-Toddler Social and Emotional Assessment, SSRS = Social Skills Rating System.

Enrollment and Retention

Miami Safe Start received referrals from the domestic violence or transitional housing shelter service providers. Once a referral was received and screened for eligibility, the case was assigned to a therapist so that the baseline assessment could be scheduled and completed in the shelter. In the randomized portion of the study for court-referred families, Miami Safe Start received referrals from the Juvenile

Dependency Court and scheduled an appointment at the Linda Ray Intervention Center for the baseline assessment. After the assessment, the random assignment procedures were implemented, and the court was informed of the results.

According to data submitted on its Quarterly Activity Reports, Miami Safe Start enrolled 49 percent of the families referred to the program. The most common reasons that families did not enroll included legal guardian–related issues, such as inability to locate the legal guardian (21 percent) and other issues (43 percent), and caregiver-related issues, such as lack of interest (16 percent), and no time to participate (15 percent).

In Tables 2a and 2b, we present the number and percentage of all enrollees who were eligible for participation at each data collection time point for the IMH and Heroes interventions. As seen in Table 2a, 46 (intervention) and 44 (comparison) families were enrolled into the IMH study, but less than half (44 percent) were reassessed at six months, and many fewer were assessed at the subsequent time points. This includes a mixture of families recruited from the shelters and those enrolled and randomized into the court-referred portion of the study. Miami IMH’s low retention at the six-month follow-up assessment increases the potential for biased results. This degree of attrition may be related to treatment factors that lead to selection bias. For example, if families in more distress are more likely to leave the study and be lost to follow-up, then the results can be misleading.

Table 2a
Retention for Enrollees Eligible to Participate in Assessments at Each Time Point (IMH)

	Caregiver Assessment				Child Assessment			
	Six Months	12 Months	18 Months	24 Months	Six Months	12 Months	18 Months	24 Months
Intervention								
Received	18	1	2	0	5	1	1	0
Expected*	46	15	11	1	11	15	12	1
Retention Rate	39%	7%	18	0	45%	7%	8%	0%
Comparison								
Received	22	4	4	1	5	3	4	0
Expected*	44	8	8	1	6	8	8	1
Retention Rate	50%	50%	50%	100%	83%	38%	50%	0%
Overall								
Retention Rate	44%	22%	32%	50%	59%	17%	25%	0%

* The number of expected assessments for longer-term assessments differs from the number who entered the study because the field period for collecting data in this study ended in the fall of 2009, before all families entered the window of time for assessments at 18 or 24 months.

As seen in Table 2b, 37 (intervention) and 15 (comparison) families were enrolled in the Heroes portion of the study, and half remained in the study at six months. Both enrollment and retention were skewed, with fewer enrolled from comparison shelters and fewer retained from this source as well (27 percent versus 59 percent). Miami Heroes' retention at the six-month follow-up assessment increases the potential for biased results, since there is differential retention in the intervention and the control group. Since attrition may be related to treatment factors that lead to selection bias, it can be particularly problematic when it differs across the two groups. For example, if families in more distress are more likely to leave the study and be lost to follow-up in one group, then the results can be misleading.

Table 2b
Retention for Enrollees Eligible to Participate in Assessments at Each Time Point (Heroes)

	Caregiver Assessment				Child Assessment			
	Six Months	12 Months	18 Months	24 Months	Six Months	12 Months	18 Months	24 Months
Intervention								
Received	22	10	8	2	22	10	6	2
Expected*	37	17	15	5	35	17	15	5
Retention Rate	59%	59%	53%	40%	63%	59%	40%	40%
Comparison								
Received	14	1	1	0	4	1	1	0
Expected*	15	2	2	1	15	2	2	1
Retention Rate	93%	50%	50%	0%	27%	50%	50%	0%
Overall								
Retention Rate	50%	58%	53%	33%	52%	58%	41%	33%

* The number of expected assessments for longer-term assessments differs from the number who entered the study because the field period for collecting data in this study ended in the fall of 2009, before all families entered the window of time for assessments at 18 or 24 months.

Special Issues

The two evaluations conducted in Miami both suffered from some difficulties in recruiting and retaining families, as well as some logistical issues that presented challenges to the study. First, the planned study in domestic violence shelters changed as a result of one shelter stopping participation in the study and expansion of the project into homeless shelters. Second, with just two of each type of shelter in the project, differences in the shelters and the types of families residing in them at baseline were expected. Third, addition of the experiment with court-referred children to augment recruitment into the IMH evaluation changed the focus of the evaluation. The planned evaluation of IMH for families residing in domestic violence shelters became an evaluation of IMH in three different settings (two types of shelters and a clinic). For a more in-depth discussion, see Schultz et al. (2010).

Analysis Plan and Power Calculations

We conducted the analyses and present results separately for the two interventions in this report.

For each intervention, we first conducted descriptive analyses to summarize the sample characteristics: age, gender, race or ethnicity, family income, and the child's violence exposure at baseline. Because of the overall quasi-experimental design, there was a possibility of differences between the two groups (intervention and comparison) at baseline. For the evaluation of IMH, we expected that any imbalance may have been improved because of the addition of the randomized design to the quasi-experimental

design. For both evaluations, we tested for differences in child and caregiver characteristics and outcomes between intervention and comparison group children using t-tests and chi-square tests.

We examined differences between the intervention and control groups using an intent-to-treat approach, which includes in analyses all those assigned to the intervention group, regardless of the amount of services received. As discussed in Chapter Four of the main document (see http://www.rand.org/pubs/technical_reports/TR991-1.html), comparisons of a control group only to those who complete services (or who receive a predetermined amount of services) is likely to bias results. That is, those who do not engage in services or drop out prior to completion may be systematically different than those who remain. Ideally, analyses would take into account the type and amount of services received to account for dosage variability. However, there were not enough families in this site's sample in order to proceed with this type of analysis. Thus, the findings presented here on the entire intervention sample may obscure important subgroup differences by service dose received.

To assess the effect of the Safe Start intervention, we primarily examined differences between children in the intervention and control groups at six months. It is important to consider the power this study has for such an analysis. One way to describe power is by using the effect size difference between the two groups being compared. The effect size is a standardized measure of the strength of association between an intervention and an outcome and is defined as the average difference in an outcome between the intervention and control groups divided by the common standard error. The effect size measure is commonly classified as small if it is about 0.2, medium if it is about 0.5, and large if it is about 0.8 (Cohen, 1988). With only 40 children observed at both baseline and six months (18 intervention and 22 comparison) for IMH, we can expect only a 9.4-percent chance to detect a small intervention effect, a 33.5-percent chance to detect a medium effect, and a 68.9-percent chance to detect a large effect (at the nominal 0.05 significance level). CPP has been demonstrated to have medium intervention effects on PTSD symptoms and behavior problems (0.63 and 0.64, respectively) in prior studies (Lieberman, Van Horn, and Ghosh Ippen, 2005). Unfortunately, with this small sample size, we only have a 48.9-percent chance of statistically detecting the 0.63 effect size observed in prior studies. Further, with these data we will only be able to detect a large intervention effect of 0.914 at the nominal 80-percent power. Statistical power was dampened by several factors other than overall sample size. The range of children's ages meant the full data were not available for some measures because not all children were in the age range eligible to complete that measure. Further, the corrections for the multiple statistical tests being conducted also

reduced the power. The low power in this study must be kept in mind in interpreting results.

To examine differences in outcomes between the IMH intervention and comparison groups, we present baseline and follow-up estimates of primary, secondary, and tertiary outcomes for both groups when the sample size is greater than or equal to five. We compare groups via chi-square or t-tests at each time point, compare means within groups across time, and examine difference in differences to comparing the two groups on changes over time between baseline and the six-month assessments (when the sample size is at least ten per group). The sample size does not allow for further modeling of the differences in differences over time.

For the Heroes program, there were only four children included in the comparison group and only 22 children in the intervention group at the six-month follow-up. These low numbers at the follow-ups do not allow for the examination of the effect of the Heroes intervention over time. Thus, we only present means of the outcomes measured in each group when the sample size is greater than five and compare means within the intervention group across time (when the sample size is at least ten at the time point).

Examination of the sample of those who took part in the intervention services offered was not possible, as there were too few families to examine groups that received varying levels or “dosages” of the intervention services.

When conducting large numbers of simultaneous hypothesis tests (as we did in this study), it is important to account for the possibility that some results will achieve statistical significance simply by chance. The use of a traditional 95-percent confidence interval, for example, will result in one out of 20 comparisons achieving statistical significance as a result of random error. We therefore adjusted for false positives using the False Discovery Rate (FDR) method (Benjamini and Hochberg, 1995). Our assessments of statistical significance were based on applying the FDR procedure separately to all of the primary, secondary, and tertiary outcome tests in this report using an FDR of 0.05. For instance, for the IMH evaluation, with seven test models with covariates conducted among the primary outcomes, this led to adopting a statistical significance cutoff of 0.007 in the unadjusted difference in difference results. With seven secondary outcomes with enough sample sizes to allow for modeling with covariates, the FDR significance level adopted was again 0.007, while such significance level was set at 0.025 for the tertiary outcomes (only two outcomes).

In the discussion of results, we have also identified nonsignificant trends in the data, defined as those tests with p-values of less than 0.05 but not exceeding the threshold established using the FDR method to adjust for multiple significance tests.

While these trends may suggest a practical difference that would be statistically significant with a larger sample size, they must be interpreted with caution, because we cannot rule out that the difference was due to chance because of the multiple significance tests being conducted.

RESULTS FOR THE IMH PROGRAM

Descriptive Statistics

For the descriptive statistics, we provide the characteristics for the full sample and the six-month sample. Sample sizes are too small for the longer-term follow-ups, and the court-referred families in the control group were allowed to take part in IMH after completion of the six-month assessment. Shown in Table 3, children who participated were on average 2 years old (ranging from birth to 5, with 75 percent under the age of 3), with a slight majority being male, particularly in the intervention group. The racial/ethnic background of families was largely minority (57 percent black, 39 percent other race/ethnicity). Families reported low family incomes, with 86 percent reporting a family income of \$15,000 or less in the prior year, and caregivers reporting an average of about two types of violence exposure in the child's lifetime. About 70 percent of caregivers reported being the parent or guardian of the target child, while 30 percent reported being another relative or foster parent caring for the child. There were no statistically significant differences observed between the intervention and comparison groups at baseline. In the sample that was retained in the study at six months (data not shown), the distribution of these characteristics was similar, despite relatively high attrition in the sample.

Table 3
Miami IMH Safe Start Sample Characteristics for Families in the Baseline Assessment Sample*

	Combined		Intervention		Comparison		Test for Comparison P-Value
<i>Child Characteristics</i>	<i>N</i>	<i>Mean</i>	<i>N</i>	<i>Mean</i>	<i>N</i>	<i>Mean</i>	
Age	90	2.1	46	2.3	44	1.9	0.15
CR Violence Exposure	83	1.9	42	2.1	41	1.6	0.21
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
<i>Gender</i>							
Male	51	56.7	29	63.0	22	50.0	0.21
Female	39	43.3	17	37.0	22	50.0	
<i>Race/Ethnicity</i>							
Hispanic	3	3.3	2	4.3	1	2.3	0.29
White	2	2.2	1	2.3	1	2.3	
Black	51	56.7	30	65.2	21	47.7	
Other	34	37.8	13	28.3	21	47.7	
<i>Caregiver Characteristics</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
<i>Family Income Level</i>							
Less than \$5,000	23	40.4	12	42.9	11	37.9	0.98
\$5,000–\$10,000	16	28.1	8	28.6	8	27.6	
\$10,001–\$15,000	10	17.5	4	14.3	6	20.7	
\$15,001–\$20,000	0	0.0	0	0.0	0	0.0	
\$20,001–\$30,000	4	7.0	2	7.1	2	6.9	
More than \$30,000	4	7.0	2	7.1	2	6.9	
<i>Relationship to Child</i>							
Parent-Guardian	69	76.7	37	80.4	32	72.7	0.39
Other Relationship	21	23.3	9	19.6	12	27.3	

NOTES: CR = Caregiver Report. Percentages may not total 100 percent because of rounding.

We also examine the Miami IMH sample at baseline on two outcomes (PTSD symptoms and parenting stress) to understand the level of severity on these indexes among families entering the project. At baseline, the majority of caregivers (83 percent) reported symptoms of PTSD in the normal range for their children age 3 and older, with caregivers reporting symptoms in the significant range for 14 percent of boys, whereas no caregivers of girls reported symptoms in this range. A fifth of parents reported parenting stress in the clinical range (see Table 4), with caregivers of boys reporting stress in the clinical range 30 percent of the time, whereas caregivers of girls reported parenting stress in the clinical range just 7 percent of the time.

Table 4
Baseline Assessment Estimates for Miami IMH Families

	Combined		Boys		Girls	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
CR PTSD Symptoms for Ages 3–10						
Normal	20	83%	11	79%	9	90%
Borderline	2	8%	1	7%	1	10%
Significant	2	8%	2	14%	0	0%
CR Total Parenting Stress for Ages 0–12						
Parental Distress—Clinical	20	23%	15	30%	5	14%
Parent-Child Dysfunctional Interaction—Clinical	19	22%	14	28%	5	14%
Difficult Child—Clinical	17	21%	12	26%	5	15%
Total Stress—Clinical	17	20%	15	30%	2	7%

Finally, we examined differences between the intervention and comparison groups at baseline for Miami IMH’s primary, secondary, and tertiary outcomes (see the appendix). Primary outcomes include child PTSD symptoms, child behavior problems, some aspects of social-emotional competence, and the parent-child relationship. There were no statistically significant differences between the two groups at baseline before the intervention began (see Table A.1, first column). No statistically significant differences were observed between groups at baseline for any of the secondary or tertiary outcomes (see Tables A.2 and A.3, first columns).

Uptake, Dosage, and Process of Care

Family-level service data were recorded by the program on the follow-up Family Status Sheet and submitted at six-month intervals following initial enrollment (see Chapter Two of the main document [http://www.rand.org/pubs/technical_reports/TR991-1.html] for a description). Tables 5a and 5b show the type and amount of services received by the families assigned to the IMH intervention group. As described fully in the national Safe Start process evaluation report (Schultz et al., 2010), Miami’s IMH program services included the PREVENT assessment and the CPP intervention model, which were supplemented with case management services.

Table 5a presents the results for services received for all families who were initially enrolled in the IMH program, regardless of whether they continued to participate in the ongoing research assessment. The data displayed in Table 5a include services received by summing all time points reported by the program, which was six months for most participants in Miami Safe Start. Service data were available on all 46 of the initial Miami IMH program enrollees. As shown in Table 5a, the majority of these families received CPP (69 percent), and more than half received case management services (58 percent), with an average of about ten sessions or meetings of each service

type. All participants were also expected to participate in the PREVENT assessments, but reliable information on this service was not documented. The program reported information on the reason that the therapy services ended for 25 of the 46 families for whom data were reported. Twelve (48 percent) of these families dropped out of therapy, but since data were not available on many families, this information may not be a reliable indicator of intervention completion for the full sample.

Table 5a
Services Received by Miami (IMH) Safe Start Intervention Families (Baseline Sample)

Service	Number with Service	Percentage with Service*	Range	Distribution	Mean	Median
Dyadic Therapy (CPP)	33	69%	1–26	1–5 48% 8–11 21% 12–19 15% >19 15%	9.6	6.5
Case Management	28	58%	1–42	1–4 50% 5–10 18% 11–17 14% >17 18%	10.3	4.0

* The denominator is the 48 intervention group families with a follow-up Family Status Sheet at the six-month assessment point.

NOTE: Percentages may not total 100 percent because of rounding.

Table 5b shows the services received by the subgroup of IMH group families who participated in the six-month follow-up research assessment. These are the 18 families included in the intervention group in the outcome analyses sample for the Miami IMH program. Table 5b shows the services they received between baseline and the six-month assessment. As shown in Table 5b, all of these families received CPP, and the vast majority received case management services (89 percent), with an average of about 11 and nine sessions or meetings, respectively. These data indicate that those retained in the study were the families that were more likely to engage in intervention services. Service ending data were available on only ten of the 18 families in the six-month analysis sample, with families split about evenly across completion of treatment, dropping out, ending because of a therapist decision, or ending for a combination of reasons.

Table 5b
Six-Month Services Received by Miami (IMH) Safe Start Intervention Families (Six-Month Analysis Sample)

Service	Number with Service	Percentage with Service*	Range	Distribution	Mean	Median
Dyadic Therapy (CPP)	18	100%	3–25	3–5 39% 6–11 28% 12–19 11% >19 22%	10.7	9.0
Case Management	16	89%	1–29	1–4 50% 6–10 19% 12–17 13% >17 19%	9.1	4.0

* The denominator is the 18 intervention group families with a follow-up Family Status Sheet at the six-month assessment point who participated in the six-month research assessment.
 NOTE: Percentages may not total 100 percent because of rounding.

IMH Outcomes Analysis

We begin by examining differences in primary, secondary, and tertiary outcomes between the intervention and comparison groups at each follow-up assessment point. We then analyze changes in mean scores over time both within the intervention and comparison groups and between the groups. For these analyses, we used an intent-to-treat approach that included all families allocated to the intervention, regardless of the level of service they received.

Comparison of Means

A summary of differences between the intervention and comparison group at each assessment point for Miami IMH’s primary, secondary, and tertiary outcomes is depicted in the appendix. Primary outcomes include child PTSD symptoms, child behavior problems, some aspects of social-emotional competence, and the parent-child relationship. There were no statistically significant differences between intervention and comparison groups on any of the primary outcome variables at six months, although some outcomes could not be tested because of low sample sizes (Table A.1). One observable nonsignificant trend was noted, such that caregivers in the intervention group reported worse scores on child assertion than those in the comparison group. However, because of the multiple significance tests being conducted, this trend did not reach statistical significance and thus may be due to chance. Differences were not tested at the later follow-up assessments because of low sample sizes.

Similarly, in terms of secondary and tertiary outcomes at six months (see Tables A.2 and A.3), on measures of the child’s social-emotional competence and both child

and caregiver violence exposure, there were no statistically significant differences between groups, although low sample sizes prevented conducting some of the tests. However, for one secondary outcome an observable nonsignificant trend was noted, such that caregivers in the comparison group reported more child assault experiences than did caregivers in the intervention group. However, because of the multiple significance tests being conducted, this trend did not reach statistical significance and thus may be due to chance. Outcomes for the 12-, 18-, and 24- month assessments are not reported because there were fewer than five cases per group for these outcomes measures.

Mean Differences over Time

Table 6 shows differences over time for Miami IMH's primary outcomes, comparing changes for each individual family between baseline and six months. Some outcomes are omitted because of low sample sizes (fewer than ten in both groups), including the caregiver report of child's cooperation and personal-social competence and the child's performance on two aspects of academic performance/readiness. In the second column of numbers in Table 6, the mean changes between six-month and baseline scores are shown for each group. The comparison here is whether there was significant change on the outcomes for the families in each group separately (rather than a comparison of one group with the other). No statistically significant changes in scores within groups were observed. One nonsignificant trend indicated that caregiver report of child assertion increased in the comparison group during this period. However, because of the multiple significance tests being conducted, this trend did not reach statistical significance and thus may be due to chance. Within-group changes between baseline and later follow-up assessments could not be examined because of low sample sizes. The statistical test of differences in differences in unadjusted models (third column in Table 6) compares the amount of mean change for the intervention group families with the amount of mean change for the comparison groups between the baseline and six-month assessment. These comparisons revealed no statistically significant differences in changes between intervention and comparison groups, but several tests could not be performed because of low sample sizes.

Table 7 shows differences over time for Miami IMH's secondary outcomes. Secondary outcomes include child cooperation and child and caregiver violence exposure. Several statistically significant decreases in violence exposure were observed between baseline and six months, including the caregiver's report of the child's exposure to and witnessing of different types of violence (both groups), the caregiver's report of child maltreatment and child assault (intervention group only), the caregiver's own experience of domestic violence, and non-domestic violence traumas (both

groups). These decreases would be expected because of differences in the time frame of the questions, in which the baseline survey asked about exposure over a longer period of time than the follow-up assessment did. At the six-month assessment point, the statistical test of differences in differences in unadjusted models revealed no statistically significant differences in changes between groups.

Table 8 shows differences over time for Miami IMH's tertiary outcomes, including caregiver personal and resource problems and the child's school readiness/performance. One statistically significant difference over time within the intervention group was observed between baseline and the six-month follow-up (second column of numbers in Table 8), such that caregivers in the intervention group reported decreases in personal problems. However, the test of differences in differences did not reveal any statistically significant differences between the groups.

Table 6**Changes in Means for Primary Outcome Variables Between Baseline and Six-Month Assessment and Group-Level Comparison of Mean Changes (Miami IMH)**

Primary Outcome		N	Within-Family Mean Changes ^a	Group-Level Comparison of Mean Changes (Unadjusted Model) ^b
Behavior/Conduct Problems				
CR Child Behavior Problems for Ages 1–18	Intervention	16	0.03	–0.13
	Comparison	15	0.17	
Social-Emotional Competence				
CR Child Assertion for Ages 1–12	Intervention	16	–0.08	–0.41
	Comparison	15	0.33 #	
CR Child Self-Control for Ages 1–12	Intervention	16	–0.06	0.06
	Comparison	15	–0.12	
CR Parental Distress for Ages 0–12	Intervention	17	–2.41	–3.37
	Comparison	22	0.95	
CR Parent-Child Dysfunction for Ages 0–12	Intervention	16	0.06	–1.66
	Comparison	22	1.73	
CR Difficult Child for Ages 0–12	Intervention	17	0.47	–0.26
	Comparison	22	0.73	
CR Total Parental Stress for Ages 0–12	Intervention	16	–2.38	–5.78
	Comparison	22	3.41	

^a This column reflects within-family mean changes between the baseline and six-month scores for each group separately. * indicates a significant paired t-test of differences over time.

^b This column reflects the group-level comparison of within-family mean changes from baseline to six months. * indicates a significant t-test of group differences.

NOTES: CR = Caregiver Report. # indicates a nonsignificant trend in the t-test ($p < 0.05$ but does not meet the FDR correction threshold). Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group.

Table 7
Changes in Means for Secondary Outcome Variables Between Baseline and Six-Month Assessment and Group-Level Comparison of Mean Changes (Miami IMH)

Secondary Outcome		N	Within-Family Mean Changes ^a	Group-Level Comparison of Mean Changes (Unadjusted Model) ^b
Violence Exposure				
CR Total Child Victimization Experiences for Ages 0–12	Intervention	17	-1.88 *	-0.78
	Comparison	20	-1.10 *	
CR Child Maltreatment for Ages 0–12	Intervention	17	-0.41 *	-0.11
	Comparison	20	-0.30	
CR Child Assault for Ages 0–12	Intervention	17	-0.41 *	-0.36
	Comparison	20	-0.05	
CR Child Sexual Abuse for Ages 0–12	Intervention	16	0.00	0.00
	Comparison	21	0.00	
CR Child Witnessing Violence for Ages 0–12	Intervention	14	-1.07 *	-0.18
	Comparison	18	-0.89 *	
CR Caregiver Total Number of Traumatic Experiences	Intervention	18	0.06	0.15
	Comparison	22	-0.09	
CR Caregiver Experience of Any Non-DV Traumas ^c	Intervention	18	-0.28 *	-0.19
	Comparison	22	-0.09 *	
CR Caregiver Experience of Any Domestic Violence ^c	Intervention	18	-0.39 *	-0.30
	Comparison	22	-0.09 *	

^a This column reflects within-family mean changes between the baseline and six-month scores for each group separately. * indicates a significant paired t-test of differences over time.

^b This column reflects the group-level comparison of within-family mean changes from baseline to six months. * indicates a significant t-test of group differences.

^c This outcome is a categorical variable, and the unadjusted within-family mean change and the group-level comparison are changes in proportion.

NOTES: CR = Caregiver Report; DV = domestic violence. # indicates a nonsignificant trend in the t-test ($p < 0.05$ but does not meet the FDR correction threshold). Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group.

Table 8
Changes in Means for Tertiary Outcome Variables Between Baseline and Six-Month Assessment and Group-Level Comparison of Mean Changes (Miami IMH)

Tertiary Outcome		N	Within-Family Mean Changes ^a	Group-Level Comparison of Mean Changes (Unadjusted Model) ^b
Background and Contextual Factors				
CR Caregiver Resource Problems	Intervention	18	-0.78	0.77
	Comparison	22	-1.55	
CR Caregiver Personal Problems	Intervention	18	-2.83 *	-1.61
	Comparison	22	-1.23	

^a This column reflects within-family mean changes between the baseline and six-month scores for each group separately. * indicates a significant paired t-test of differences over time.

^b This column reflects the group-level comparison of within-family mean changes from baseline to six months. * indicates a significant t-test of group differences.

NOTES: CR = Caregiver Report. # indicates a nonsignificant trend in the t-test ($p < 0.05$ but does not meet the FDR correction threshold). Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group.

RESULTS FOR THE HEROES PROGRAM

Descriptive Statistics

For the descriptive statistics, we provide the characteristics for the full sample and the six-month sample, because sample sizes are too small for the longer-term follow-ups and because the court-referred families in the comparison group were allowed to take part in Heroes after completion of the six-month assessment. Shown in Table 9, children who participated were on average 8 years old (ranging from 4 to 12), with even numbers of boys and girls participating. The racial/ethnic background of families was largely minority (52 percent black, 39 percent other race/ethnicity). Families reported low family incomes, with 90 percent reporting a family income of \$15,000 or less in the prior year, and caregivers reported an average of between three and four types of violence exposure in the child's lifetime. All of the caregivers reported being the parent or guardian of the child. There were no statistically significant differences on these background characteristics observed between the intervention and comparison groups at baseline. In the sample that was retained in the study at six months (data not shown), these characteristics were similar, despite relatively high attrition in the sample.

We also examine the Miami Heroes sample at baseline on two outcomes (PTSD symptoms and parenting stress) to describe the level of severity on these indexes among families entering the project (see Table 10). The majority of caregivers (61 percent) reported symptoms of PTSD in the normal range for their children age 3 and older, with caregivers of boys reporting symptoms in the significant range for 27 percent of boys and 23 percent of girls. Forty-six percent of parents reported parenting stress in the clinical range (see Table 10), with caregivers reporting stress in the clinical range for 42 percent of boys and 50 percent of girls.

Table 9
Miami Heroes Sample Characteristics for Families in Baseline Assessment
Sample*

	Combined		Intervention		Comparison		Test for Comparison (p-value)
<i>Child Characteristics</i>	<i>N</i>	<i>Mean</i>	<i>N</i>	<i>Mean</i>	<i>N</i>	<i>Mean</i>	
Age	52	7.9	37	7.7	15	8.3	0.38
CR Violence Exposure	52	3.7	37	3.9	15	3.4	0.65
SR Violence Exposure	7	6.1	3	5.0	4	7.0	0.32
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
<i>Gender</i>							
Male	26	50.0	19	51.4	7	46.7	0.76
Female	26	50.0	18	48.6	8	53.3	
<i>Race/Ethnicity</i>							
Hispanic	2	3.8	2	5.4	0	0.0	
White	3	5.8	1	2.7	2	13.3	
Black	27	51.9	20	54.1	7	46.7	
Other	20	38.5	14	37.8	6	40.0	
<i>Caregiver Characteristics</i>							
<i>Family Income Level</i>							
Less than \$5,000	29	61.7	26	70.3	3	30.0	
\$5,000–\$10,000	8	17.0	6	16.2	2	20.0	
\$10,001–\$15,000	5	10.6	3	8.1	2	20.0	
\$15,001–\$20,000	2	4.3	0	0.0	2	20.0	
\$20,001–\$30,000	3	6.4	2	5.4	1	10.0	
More than \$30,000	0	0.0	0	0.0	0	0.0	
<i>Relationship to Child</i>							
Parent or Guardian	51	100.0	36	100.0	15	100.0	
Other Relationship	0	0.0		0.0		0.0	

NOTES: CR = Caregiver Report; SR = Child Self-Report. Percentages may not total 100 percent because of rounding.

Table 10
Baseline Assessment Estimates for Miami Heroes Safe Start Families

CR PTSD Symptoms for Ages 3–10	Combined		Boys		Girls	
	N	%	N	%	N	%
Normal	27	61%	13	59%	14	64%
Borderline	6	14%	3	14%	3	14%
Significant	11	25%	6	27%	5	23%
CR Total Parenting Stress for Ages 0–12	N	%	N	%	N	%
Parental Distress—Clinical	20	39%	10	40%	10	38%
Parent-Child Dysfunctional Interaction—Clinical	21	40%	11	42%	10	38%
Difficult Child—Clinical	20	41%	9	36%	11	46%
Total Stress—Clinical	24	46%	11	42%	13	50%

NOTE: CR = Caregiver Report.

Finally, we examined differences between the intervention and comparison groups at baseline for Miami Heroes’ primary, secondary, and tertiary outcomes (see the appendix). As shown in Tables A.4, A.5, and A.6, there were no statistically significant differences between intervention and comparison groups on the primary, secondary, or tertiary outcome variables at baseline, although some outcomes could not be examined because of a low sample size (e.g., child self-report of family involvement and delinquent behavior, caregiver report of own traumatic experiences). There was one observable nonsignificant trend among the secondary outcomes. In this case, caregivers in the comparison group reported more family involvement than those in the intervention group (see Table A.5). However, we cannot rule out that this difference between the groups may be due to chance because of the multiple significance tests being conducted (i.e., the group difference did not exceed the more-stringent statistical criterion set using the FDR method).

Uptake, Dosage, and Process of Care

Family-level service data were recorded by the program on the follow-up Family Status Sheet and submitted at six-month intervals following initial enrollment (see Chapter Two of the main document [http://www.rand.org/pubs/technical_reports/TR991-1.html] for a description). Tables 11a and 11b show the type and amount of services received by the families assigned to the Heroes

intervention group. As described fully in Schultz et al. (2010), Miami’s Heroes program services included child group sessions and case management services.

Table 11a presents the results for services received for all families who were initially enrolled in the Heroes intervention group, regardless of whether they continued to participate in the ongoing research assessment. The data displayed in Table 11a include services received by summing all time points reported by the program, which was six months for most Heroes participants. Service data were available for 36 of 37 initial intervention group enrollees. As shown in Table 11a, the vast majority of families participated in the Heroes groups, with an average of six group sessions per family. Few families received case management services (17 percent), with those families receiving an average of two meetings or contacts. The program reported information on the reason that the therapy services ended for 27 of the 36 families for whom we had data, noting that all of them had successfully completed the group sessions. However, since data was not available on all families, this may not be a reliable estimate of reasons for ending.

Table 11a
Services Received by Miami (Heroes) Safe Start Intervention Families
(Baseline Sample)

Service	Number with Service	Percentage with Service*	Range	Distribution	Mean	Median
Child Group Therapy	29	81%	4–9	4–5 38% 6–7 34% 8–9 28%	6.3	5.6
Case Management	6	17%	1–3	1 17% 2 67% 3 17%	2.0	1.5

* The denominator is the 36 intervention group families with a follow-up Family Status Sheet at the six-month assessment point.

NOTE: Percentages may not total 100 percent because of rounding.

Table 11b shows the services received by that subgroup of intervention group families who participated in the six-month follow-up research assessment. These are the 22 families included in the intervention group in the outcome analyses sample for the Miami Heroes program. Table 11b shows the services they received within the six-month period between baseline and the six-month assessment. Again most of the families participated in the Heroes groups (86 percent), with an average of six group sessions per family. Case management

services were provided to four out of the 22 families (18 percent), with those families receiving an average of two meetings or contacts. These data indicate that those retained in the study were the families that were more likely to engage in intervention services. Service ending data were available on 17 of the 22 families in the six-month analysis sample, noting that all of them had successfully completed the child group sessions.

Table 11b
Six-Month Services Received by Miami (Heroes) Safe Start Intervention Families (Six-Month Analysis Sample)

Service	Number with Service	Percentage with Service*	Range	Distribution	Mean	Median
Child Group Therapy	19	86%	4-9	4-5 42% 6-7 26% 8-9 32%	6.4	5.6
Case Management	4	18%	2-3	1 0% 2 75% 3 25%	2.3	2.0

* The denominator is the 22 intervention group families with a follow-up Family Status Sheet at the six-month assessment point who participated in the six-month research assessment.

NOTE: Percentages may not total 100 percent because of rounding.

Heroes Outcomes Analysis

We begin by examining differences in primary, secondary, and tertiary outcomes between the intervention and comparison groups at the six-month follow-up assessment, when sample sizes allowed it. We then analyze changes in mean scores over time both within the intervention and comparison groups and between the groups. For these analyses, we used an intent-to-treat approach that included all families allocated to the intervention, regardless of the level of service they received.

Comparison of Means

A summary of means in the intervention and comparison group at each assessment point for Miami Heroes' primary, secondary, and tertiary outcomes is depicted in the appendix (Tables A.4, A.5, and A.6). Because of low sample sizes, it was not possible to test differences between intervention and comparison groups at any of the follow-up waves. The sample sizes at 24 months were too low, and data are not presented.

Mean Differences over Time

We examined differences over time for Miami Heroes’ outcomes, comparing changes for each individual family between baseline and six months in the intervention group only (since there were not enough families in the comparison group to test change). Some outcomes were omitted from this analysis because of low sample sizes, including child self-reported family involvement, violence exposure, and delinquent behavior. No differences over time were observed for primary or tertiary outcomes (see Tables 12 and 14). In the second column of numbers in Table 13, there were several changes observed for secondary outcomes (see Table 13). Specifically, significant decreases were observed within the intervention group in caregiver report of child witnessing violence, total child victimization, and the caregiver’s report of his or her own experiences with domestic violence. All of these decreases can be partly explained by the different time frames used on these assessments, with the baseline survey covering lifetime child exposure to violence and caregiver experiences in the prior year, whereas the time frame for the follow-up assessment covers only the prior six months. Given low sample sizes, it was not possible to examine changes within the comparison group or differences in differences over time.

Table 12
Changes in Intervention Group Means for Primary Outcome Variables
Between Baseline and Six-Month Assessment (Miami Heroes)

Primary Outcome	N	Within-Family Mean Changes ^a
Social-Emotional Competence		
CR Child Assertion for Ages 1–12	22	0.07
CR Child Self-Control for Ages 1–12	22	-0.06

^a This column reflects within-family mean changes between the baseline and six-month scores for each group separately. * indicates a significant paired t-test of differences over time.

NOTES: CR = Caregiver Report. # indicates a nonsignificant trend in the t-test ($p < 0.05$ but does not meet the FDR correction threshold). Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group.

Table 13
Changes in Intervention Group Means for Secondary Outcome Variables
Between Baseline and Six-Month Assessment (Miami Heroes)

Secondary Outcome	N	Within-Family Mean Changes ^a
PTSD Symptoms		
CR Child PTSD Symptoms for Ages 3–10	19	1.58
SR Child PTSD Symptoms for Ages 8–12	11	-0.36
Depressive Symptoms		
SR Child Depressive Symptoms for Ages 8–18	11	-1.73
Behavior/Conduct Problems		
CR Child Externalizing Behavior Problems for Ages 3–18	22	0.59
CR Child Internalizing Behavior Problems for Ages 3–18	21	0.62
Social-Emotional Competence		
CR Child Affective Strengths for Ages 6–12	18	0.83
CR Child School Functioning for Ages 6–12	18	-0.78
CR Child Cooperation for Ages 3–12	16	-0.44
Caregiver-Child Relationship		
CR Parental Distress for Ages 0–12	22	-4.64 #
CR Parent-Child Dysfunction for Ages 0–12	22	-0.95
CR Difficult Child for Ages 0–12	22	-0.82
CR Total Parental Stress for Ages 0–12	22	-6.41
CR Family Involvement for Ages 6–12	18	0.72
Violence Exposure		
CR Total Child Victimization Experiences for Ages 0–12	21	-2.71 *
CR Child Maltreatment for Ages 0–12	21	-0.76 #
CR Child Assault for Ages 0–12	21	-0.43
CR Child Sexual Abuse for Ages 0–12	20	0.00
CR Child Witnessing Violence for Ages 0–12	20	-1.65 *
CR Caregiver Total Number of Traumatic Experiences	22	-0.64 #
CR Caregiver Experience of Any Non-DV Traumas ^b	22	0.00
CR Caregiver Experience of Any Domestic Violence ^b	22	-0.50 *

^a This column reflects within-family mean changes between the baseline and six-month scores for each group separately. * indicates a significant paired t-test of differences over time.

^b This outcome is a categorical variable, and the unadjusted within-family mean change is a change in proportion.

NOTES: CR = Caregiver Report; DV = domestic violence; SR = Child Self-Report. # indicates a nonsignificant trend in the t-test ($p < 0.05$ but does not meet the FDR correction threshold). Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group.

Table 14
Changes in Intervention Group Means for Tertiary Outcome Variables
Between Baseline and Six-month Assessment (Miami Heroes)

Tertiary Outcome	N	Within-Family Mean Changes ^a
School Readiness/Performance		
Letter Word Identification for Ages 3–18	15	–3.07
Passage Comprehension for Ages 3–18	14	–3.43
Applied Problems for Ages 3–18	13	1.31

^a This column reflects within-family mean changes between the baseline and six-month scores for each group separately. * indicates a significant paired t-test of differences over time.

NOTES: # indicates a nonsignificant trend in the t-test ($p < 0.05$ but does not meet the FDR correction threshold). Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group.

CONCLUSIONS

Miami Safe Start’s two programs, the IMH program for children age 5 and younger and the Heroes program for children between the ages of 6 and 12, were evaluated separately in two quasi-experimental studies.

The IMH program was evaluated on a mixture of shelter-based families (with some shelters acting as intervention shelters and others acting as comparison shelters) and on court-referred families who were randomized to the intervention or a six-month wait-list control group. In the IMH study, 90 families were enrolled, but only 44 percent were retained at six months. The participants in the study were largely black or other minorities and impoverished, with caregivers reporting an average of 1.8 types of violence exposure at baseline. About 10 percent of children scored in the clinical range for PTSD symptoms, and about 20 percent of caregivers reported parenting stress in the significant range. All of the families who were retained at six months received CPP, and the vast majority received case management services (89 percent), with an average of about 11 and nine sessions or meetings, respectively.

Given the number of participants in this study, we had a 49-percent chance to detect a medium effect of 0.63 at six months. We expected a medium intervention effect, given earlier work with the CPP intervention. Because of low sample sizes and the wait-list control group design for court-referred families, only outcomes at six months could be examined. Intent-to-treat analyses showed no differences between the intervention and comparison group at six months, although some significant changes were detected within the intervention group over time (child’s violence exposure, caregiver’s violence

exposure, and caregiver's personal problems), as well as in the comparison group over time (child's violence exposure and caregiver's violence exposure). However, the reductions in violence exposure are, in part, expected because of the time frames used on the scales. Further, the groups did not differ on the amount of change on any measure between baseline and six months, as would be expected if the intervention were having an impact on measured outcomes. The lack of difference between groups over time could reflect a lack of statistical power to observe a medium effect of the program on the measured outcomes. That is, a larger sample size might have allowed for the detection of statistically significant changes associated with the Safe Start services. Further, the evaluation ended early because of funding constraints when the appropriation for Safe Start was curtailed, which may have affected the sample size. Overall, the sample size limitations mean that no conclusions can be drawn about the impact of the Miami IMH Safe Start intervention as implemented on child- and family-level outcomes within this mixed sample of families.

In addition to the small sample size, there were several other limitations that make the results more challenging to interpret. First, this study included a mixed sample of families drawn from several settings (homeless shelters, domestic violence shelters, and dependency court), making conclusions about its impact in any one of the settings impossible with this sample size. The inability to detect significant differences between the groups may also have been due to the particular outcomes measured. That is, the Miami IMH program may have improved the lives of children and families in ways that were not measured (or were not measured adequately) in this study. In fact, the Miami Safe Start team augmented the national evaluation measures with their own measures, and they plan to examine and publish those data in the future. It is also possible that outcomes among those families who participated fully and completed the intervention are better than those in the full sample of the families allocated to the intervention condition presented here. Low retention could also have affected the results seen here, possibly biasing the results. Finally, caregivers in this program reported relatively low levels of child symptoms at baseline, and this may have made it difficult to demonstrate significant changes in children over time, since there may not have been "room" to improve for children who were not experiencing many symptoms or problems at baseline.

The Heroes program was evaluated on a sample of shelter-based families, with some shelters acting as intervention shelters and others as comparison shelters. The program enrolled 52 families into the study overall but only 15 in the comparison group. Half of all families were retained at six months, but only four in the comparison group). The participants in the Heroes study were largely black or other minorities and impoverished, with caregivers reporting an average of 3.6 lifetime violent events and older children reporting an average of 6.1 such events themselves. Almost half (46 percent) of children scored in the clinical range for PTSD symptoms, and 25 percent of caregivers reported parenting stress in the clinical range. Most of the families retained at six months participated in the Heroes groups (86 percent), with an average of six group sessions per family, and a smaller number (18 percent) received case management.

Because of the low sample size, evaluation of the impact of the Heroes intervention was not possible because of an inability to compare groups on post-intervention outcomes. Limited statistical testing was conducted for six-month change within the intervention group only, but no significant changes in outcomes were observed, with the exception of reductions in the types of violence exposure reported for the child and for the caregiver. The changes in violence exposure are to be expected, however, because of the time frame used on the assessments, with a longer time period assessed at the baseline assessment and only the prior six months assessed at follow-up.

Overall, the sample size limitations mean that no conclusions can be drawn about the impact of the Miami Heroes or IMH interventions on child- and family-level outcomes. Since the Miami Safe Start program was implementing two different interventions to the different-aged children and then augmented their shelter-based work with court-referred families partway through the project, the limited evaluation resources were spread thin across these various activities. The evaluation of the IMH program did not demonstrate the effectiveness of the program, but it was underpowered, and therefore the findings are inconclusive. Thus, both the Miami IMH and Heroes programs require further testing with adequate sample sizes to determine whether the interventions positively affect outcomes for children exposed to violence.

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MIAMI OUTCOMES APPENDIX

Table A.1
Comparison of Means for Primary Outcome Variables over Time (Miami
IMH)

Primary Outcome		Baseline		Six Months	
		N	Mean	N	Mean
PTSD Symptoms					
CR Child PTSD Symptoms for Ages 3–10	Intervention	14	35.57	4	
	Comparison	11	32.36	6	32.50
Behavior/Conduct Problems					
CR Child Behavior Problems for Ages 1–18	Intervention	42	-0.13 #	16	-0.28
	Comparison	34	-0.58	16	-0.59
Social-Emotional Competence					
CR Child Personal-Social Competence for Ages 0–2	Intervention	9	41.67	0	
	Comparison	11	39.45	3	
CR Child Assertion for Ages 1–12	Intervention	42	-0.23	16	-0.44 #
	Comparison	34	0.05	16	0.20
CR Child Self-Control for Ages 1–12	Intervention	42	-0.06	16	0.07
	Comparison	34	0.14	16	0.11
Caregiver-Child Relationship					
CR Parent Distress for Ages 0–12	Intervention	44	27.68	18	24.78
	Comparison	43	24.95	22	24.68
CR Parent-Child Dysfunction for Ages 0–12	Intervention	44	21.32	18	21.11
	Comparison	44	18.91	22	20.27
CR Difficult Child for Ages 0–12	Intervention	45	27.89 #	18	25.11
	Comparison	44	23.55	22	23.14
CR Total Parenting Stress for Ages 0–12	Intervention	43	77.28 #	18	71.00
	Comparison	43	67.47	22	68.09

NOTES: CR = Caregiver Report. * indicates statistically significant (p-value < FDR significance criterion); # indicates nonsignificant trend (p < 0.05 and > FDR significance criterion). Data are not shown for outcomes when the cell size is fewer than five for either group. Comparisons were not tested when the group size was fewer than ten for either group.

Table A.2
Comparison of Means for Secondary Outcome Variables over Time (Miami
IMH)

Secondary Outcome		Baseline		Six Months	
		N	Mean	N	Mean
Social-Emotional Competence					
CR Child Cooperation for Ages 3–12	Intervention	10	12.30	4	
	Comparison	5	14.00	5	14.80
Violence Exposure					
CR Total Child Victimization Experiences for Ages 0–12	Intervention	42	2.14	18	0.11
	Comparison	41	1.59	22	0.36
CR Child Maltreatment for Ages 0–12	Intervention	42	0.38	18	0.06
	Comparison	40	0.40	22	0.14
CR Child Assault for Ages 0–12	Intervention	41	0.34	18	0.00
	Comparison	41	0.37	22	0.23
CR Child Sexual Abuse for Ages 0–12	Intervention	41	0.00	18	0.00
	Comparison	40	0.00	22	0.00
CR Child Witnessing Violence for Ages 0–12	Intervention	36	1.42	18	0.06
	Comparison	36	0.92	22	0.05
CR Caregiver Total Number of Traumatic Experiences	Intervention	46	0.30	18	0.28
	Comparison	44	0.32	22	0.18
CR Caregiver Experience of Any Non-DV Trauma	Intervention	46	0.28	18	0.00
	Comparison	44	0.14	22	0.00
CR Caregiver Experience of Any DV	Intervention	46	0.39	18	0.00
	Comparison	44	0.23	22	0.05

NOTES: CR = Caregiver Report; DV = domestic violence. * indicates statistically significant (p-value < FDR significance criterion); # indicates nonsignificant trend (p < 0.05 and > FDR significance criterion). Data are not shown for outcomes when the cell size is fewer than five for either group. Comparisons were not tested when the group size was fewer than ten for either group.

Table A.3
Comparison of Means for Tertiary Outcome Variables over Time (Miami
IMH)

Tertiary Outcome		Baseline		Six Months	
		N	Mean	N	Mean
Background and Contextual Factors					
CR Caregiver Resource Problems	Intervention	46	16.11	18	15.06
	Comparison	44	15.30	22	11.77
CR Caregiver Personal Problems	Intervention	46	22.50	18	18.94
	Comparison	44	22.14	22	18.64
School Readiness/Performance					
Letter Word Identification for Ages 3–18	Intervention	7	-1.14	4	
	Comparison	3		5	8.80
Passage Comprehension for Ages 3–18	Intervention	9	17.44	4	
	Comparison	4		5	19.20
Applied Problems for Ages 3–18	Intervention	7	-8.14	3	
	Comparison	3		4	

NOTES: CR = Caregiver Report. * indicates statistically significant (p-value<FDR significance criterion); # indicates nonsignificant trend (p<0.05 and >FDR significance criterion). Data are not shown for outcomes when the cell size is fewer than five for either group. Comparisons were not tested when the group size was fewer than ten for either group.

Table A.4
Comparison of Means for Primary Outcome Variables over Time (Miami Heroes)

Primary Outcome		Baseline		Six Months		12 Months		18 Months	
		N	Mean	N	Mean	N	Mean	N	Mean
Social-Emotional Competence									
CR Child Assertion for Ages 1–12	Intervention	37	0.07	22	0.13	9	0.00	7	0.09
	Comparison	15	0.23	4		1		1	
CR Child Self-Control for Ages 1–12	Intervention	37	0.16	22	0.18	9	0.22	7	0.34
	Comparison	15	0.51	4		1		1	

NOTES: CR = Caregiver Report. * indicates statistically significant (p-value<FDR significance criterion); # indicates nonsignificant trend (p<0.05 and >FDR significance criterion). Data are not shown for outcomes when the cell size is fewer than five for either group. Comparisons were not tested when the group size was fewer than ten for either group.

Table A.5
Comparison of Means for Secondary Outcome Variables over Time (Miami Heroes)

		Baseline		Six Months		12 Months		18 Months	
Secondary Outcome		N	Mean	N	Mean	N	Mean	N	Mean
PTSD Symptoms									
CR Child PTSD Symptoms for Ages 3–10	Intervention	34	41.76	19	45.05	7	51.00	4	
	Comparison	11	42.64	4		1		1	
SR Child PTSD Symptoms for Ages 8–12	Intervention	15	10.60	12	12.08	7	12.00	5	8.60
	Comparison	7	9.29	2		1		1	
Depressive Symptoms									
SR Child Depressive Symptoms for Ages 8–18	Intervention	15	12.87	12	12.00	6	10.00	5	8.80
	Comparison	7	13.14	2		1		1	
Behavior/Conduct Problems									
CR Child Externalizing Behavior Problems for Ages 3–18	Intervention	37	26.70	22	27.32	10	27.40	8	25.25
	Comparison	15	25.33	4		1		1	
CR Child Internalizing Behavior Problems for Ages 3–18	Intervention	36	15.28	22	16.59	10	16.30	8	13.38
	Comparison	15	15.73	4		1		1	
Social-Emotional Competence									
CR Child Affective Strengths for Ages 6–12	Intervention	30	15.57	20	16.55	9	15.89	7	17.29
	Comparison	15	16.33	4		1		1	

Table A.5—continued

Secondary Outcome		Baseline		Six Months		12 Months		18 Months	
		N	Mean	N	Mean	N	Mean	N	Mean
CR Child School Functioning for Ages 6–12	Intervention	30	18.33	20	19.00	9	19.67	7	17.43
	Comparison	15	19.93	4		1		1	
CR Child Cooperation for Ages 3–12	Intervention	34	11.76	18	11.50	8	11.25	4	12.00
	Comparison	13	14.77	4		1		1	
Caregiver-Child Relationship									
CR Parent Distress for Ages 0–12	Intervention	37	32.81	22	28.86	8	30.50	7	22.86
	Comparison	15	29.93	4		1		1	
CR Parent-Child Dysfunction for Ages 0–12	Intervention	37	25.19	22	24.45	9	23.22	7	20.71
	Comparison	15	21.33	4		1		1	
CR Difficult Child for Ages 0–12	Intervention	37	29.73	22	28.14	9	31.22	7	28.57
	Comparison	15	28.20	4		1		1	
CR Total Parenting Stress for Ages 0–12	Intervention	37	87.73	22	81.45	8	86.38	7	72.14
	Comparison	15	79.47	4		1		1	
CR Family Involvement for Ages 6–12	Intervention	30	22.27 #	20	23.15	9	22.78	7	22.43
	Comparison	15	25.87	4		1		1	
Violence Exposure									
CR Total Child Victimization Experiences for Ages 0–12	Intervention	37	3.86	21	1.33	9	1.00	7	1.43
	Comparison	15	3.40	4		1	0.00	1	
CR Child Maltreatment for Ages 0–12	Intervention	37	0.78	21	0.33	9	0.22	7	0.43
	Comparison	15	0.87	4		1		1	

Table A.5—continued

Secondary Outcome		Baseline		Six Months		12 Months		18 Months	
		N	Mean	N	Mean	N	Mean	N	Mean
CR Child Assault for Ages 0–12	Intervention	37	0.68	21	0.29	9	0.22	7	0.29
	Comparison	15	0.80	4		1		1	
CR Child Sexual Abuse for Ages 0–12	Intervention	36	0.06	21	0.00	9	0.00	7	0.14
	Comparison	15	0.00	4		1		1	
CR Child Witnessing Violence for Ages 0–12	Intervention	36	2.19	20	0.45	9	0.33	7	0.43
	Comparison	15	1.60	4		1		1	
CR Caregiver Total Number of Traumatic Experiences	Intervention	37	0.76	22	0.32	10	0.30	8	0.00
	Comparison	15	0.60	4		1	0.09	1	
CR Caregiver Experience of Any Non-DV Traumas	Intervention	37	0.30	22	0.18	10	0.00	8	0.00
	Comparison	15	0.13	4	0.00	1		1	
CR Caregiver Experience of Any Domestic Violence	Intervention	37	0.68	22	0.23	10	0.20	8	0.25
	Comparison	15	0.33	4	0.00	1		1	

NOTES: CR = Caregiver Report; SR = Child Self-Report. * indicates statistically significant (p -value < FDR significance criterion); # indicates nonsignificant trend ($p < 0.05$ and $>$ FDR significance criterion). Data are not shown for outcomes when the cell size is fewer than five for either group. Comparisons were not tested when the group size was fewer than ten for either group.

Table A.6
Comparison of Means for Tertiary Outcome Variables over Time (Miami Heroes)

		Baseline		Six Months		12 Months		18 Months	
Tertiary Outcome		N	Mean	N	Mean	N	Mean	N	Mean
School Readiness/Performance									
Letter Word Identification for Ages 3–18	Intervention	29	6.34	22	10.05	10	14.60	6	24.67
	Comparison	14	-6.64	4		1		1	
Passage Comprehension for Ages 3–18	Intervention	27	-6.56	22	-4.50	10	-7.30	6	6.17
	Comparison	14	-13.36	4		1		1	
Applied Problems for Ages 3–18	Intervention	27	-8.89	22	-3.05	10	0.90	6	8.00
	Comparison	14	-8.93	4		1		1	

NOTES: * indicates statistically significant (p -value < FDR significance criterion); # indicates nonsignificant trend (p < 0.05 and > FDR significance criterion). Data are not shown for outcomes when the cell size is fewer than five for either group. Comparisons were not tested when the group size was fewer than ten for either group.