
Lotus House Therapeutic Mother-Child Program: Year IV Report

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Table of Contents

Program Description	1
Assessment and Instruments.....	2
Assignment to Therapy	2
Service Schedule and Post-Assessment	4
Data Recording and Confidentiality.....	5
Timeline and Staffing.....	5
Evaluation and Continuous Improvement.....	6
Results.....	8
Implementation Fidelity	8
Child and Family Social and Demographic Characteristics	12
Aim 1: Child and Mother-Child Relationship Status at Entry.....	14
Aim 2: Participation in Treatment	21
Aim 3: Treatment Outcomes	22
Outcome of Randomized Treatment Groups	25
Conclusions and Interpretations.....	26
Recommendations.....	29
Appendices	31
A. Staff Titles, Effort, Qualifications, and Duties: End of Year III	31
B. Sample Instruments.....	32

Program Description

This report summarizes a Program funded by two grants¹ awarded to the Lotus House Women's Shelter (LH) for the provision of therapeutic services for mothers and their children. Because the aims and objectives of the two grants were complimentary, LH staff incorporated these into a single service-driven research Program. The aims, objectives, and activities designed to attain the grants' objectives are presented in Table 1.

Table 1. Aims and Objectives of the Lotus House Therapeutic Mother-Child Program.

Aims	Objectives	Activities
Increase current understanding of the status of homeless mothers and their children	Determine the children's developmental status	Screen for developmental delays with a standardized and normed instrument.
	Determine children's mental health status	Collect demographic, experiential, and contextual data on mothers and their children through and child self-report.
	Quantify mental health domains and the quality of maternal-child interactions	Use established scales to collect data on. Mothers <ul style="list-style-type: none"> a. parenting stress, b. parent child relationships, c. children's behavior, d. children's trauma experiences, and e. symptoms of posttraumatic stress Children (7 and older) <ul style="list-style-type: none"> a. trauma experiences b. symptoms of post-traumatic stress Use established observational protocol to rate maternal-child interactions.
Improve child mental health status with therapeutic services for mothers and children	Provide therapeutic child-focused services to dyads and/or children. Adapt modalities to enhance appropriateness to the population.	Provide therapy to families in need: <ul style="list-style-type: none"> a. psychotherapy (<i>Child-Parent Psychotherapy</i>), b. parenting (<i>Parent-Child Interaction Therapy</i>), or c. trauma focused therapy (<i>Trauma Focused Cognitive Behavior Therapy</i>)
Evaluate the effectiveness of services provided	Improve services on the basis of treatment outcomes	Establish and maintain an electronic data collection system
		Re-assess families in treatment at 4 months post- assignment.
		Analyze service provision, assessment results, and provide feedback
		Staff undertakes corrections, adaptations, or improvements to services if/as necessary

¹ Funds were awarded by The Children's Trust for services that commenced in 2017.

Aims	Objectives	Activities
Dissemination	Make results available to other shelters nationwide and other relevant stakeholders.	Publish results in the LH website, present at conferences, and publish in academic journals

Assessment and Instruments

As part of the intake procedure to the LH, all families were assessed by specially trained assessment specialists and coders to determine family status and needs². Assessments typically took one hour and a half with some of it occurring concurrently. A coder read out the rating instruments to the mother while the assessment specialist conducted the developmental screening of the young children or interviewed the older children. Generally, in families with multiple siblings, assessments were conducted in order of maternal concern, else in descending age order, with older siblings scheduled first and generally, assessments were completed in the first two weeks post entry to the LH.

The instruments, which included rating scales read to mothers, structured interviews, and structured observations, focused on five aspects of functioning: young children's development, child behavior, maternal stress, parenting, and trauma experiences with subsequent post-traumatic symptoms. Specifically, interviews provided demographic and contextual information according to maternal and child report. The child interview administered to children and youth ages 8 and older, provided information on childhood experiences and on children's self-reported concerns. Children up to age 8 were screened for developmental delays. Mother-child interactions of dyads with children ages 6 months to 13 years of age were assessed with a protocol that requested that mothers play with their children for 15 minutes during 3 specified conditions while the session was recorded for subsequent coding. Table 2 specifies the instrument used, the age ranges of children with which they were used, the domains or scales generated, and an approximate time for administration. Copies of the interview protocols are available from the LH and all others are established instruments that are available online.

Subsequent participation in therapy and the availability of assessment results for analyses depended on maternal informed consent. Families already in-residence at the beginning of the Program were also assessed and invited to participate in relevant services.

Assignment to Therapy

Mothers and children who needed therapy, as determined by the assessment battery, were offered therapy in the following manner. Mothers who agreed to participate in one of the service modalities and agreed for their results to be available for research purposes signed informed consent forms that had been cleared by the Florida International University IRB.

- a. Mothers of children under age 2 were offered 10 or more sessions of the *Child-Parent Psychotherapy (CPP_10+)*. The aim of this modality is to help young children and their families recover from stressful and traumatic events. Therapeutic stages

² Assessment specialists had master's level clinical degrees. Coders, who might administer the ECBI, SIPA, or PRQ, had bachelor's degrees in psychology. Both received specialized training as necessary for the protocol.

include: getting to know the family, addressing the families' needs, and planning for the future. Sessions include toys, helping parents and children understand each other, talk and play about difficult experiences, respond to difficult feelings and behaviors, and create a family story that leads to healing. With very young children, sessions focus on helping parents understand the effects of experiences on their relationship and ways to strengthen the parent-child relationship. Therapy is intended to extend over 30 to 50 sessions. But, in this Program it generally included 10 to 14 sessions although over 80 cases had from 14 to 30 sessions.

Table 2. Assessment Instruments.

Instrument	Abbreviation	Ages	Topics/Scales	Duration
Lotus House Child Clinical Assessment	LHCC	all	Demographics and child clinical history	20 min.
Parenting Stress Index IV-Short Form	PSI-IV SF	Birth to age 13	Subscales: 1) parental distress, 2) parent-child dysfunctional interaction, 3) difficult child, and 4) total score (36 items)	15 min.
Stress Index for Parents of Adolescents	SIPA	13 to 21	Sub-scales: 1) adolescent, 2) parent, 3) adolescent-parent relationship, 4) life stress scale, and 5) total parenting stress (111 items)	30 min.
Eyberg-Child Behavior Inventory	ECBI	6 months to age 13	Subscales: 1) intensity of behavior problems, 2) problem score (36 items)	15 min.
Parenting Relationship Questionnaire	PRQ	13 to 21	Subscales: 1) attachment, 2) communication, 3) discipline practices, 4) involvement, 5) parenting confidence, 5) satisfaction with school, 7) relational frustration (71 items)	25 min.
Dyadic Parent-Child Coding System	DPICS	2 to 13	Subscales: 1) Do statements (labeled praises, reflections, and descriptions, 2) Don't statements	20 min.
Child and Adolescent Trauma Screener-Caregiver	CATS - C	3 to 8	Measures: 1) list and count of child traumatic events, 2) child PTSD score	20 min.
Battelle Developmental Screener (v2)	Battelle	6 months to age 8	Sub-scales: 1) fine and gross motor, 2) adaptive, 3) personal-social, 3) receptive and expressive language, 4) cognitive skills, and 5) total score	30 minutes (concurrent)
LH Child Clinical Interview -self report	LHCC		Child's report of mood, desires, problems	20 minutes

Instrument	Abbreviation	Ages	Topics/Scales	Duration
Child and Adolescent Trauma Screener -Self-Report	CATS		Measures: 1) list and count of child traumatic events, 2) child PTSD score	(concurrent with maternal interview)

Note. Duration times varied depending on the number of children in a family.

- b. Mothers of children ages 2 to 5'11", at random, were offered either CPP_10+ or *Parent Child Interaction Therapy (PCIT)*. The aim of this modality is to address the needs of families with children ages 2 to 7 with disruptive behavior problems. The focus of treatment, which is to improve the quality of the parent-child relationship by changing the parent-child interaction patterns has a two-phase implementation: child-directed interaction in which the parent follows the child's lead in play and parent-directed interaction in which the parent is taught to lead play with appropriate use of commands and consistent and positive discipline. Intervention was designed to be 10 to 14 sessions.
- c. Mothers of children 6'0" to 6'11" year of age were offered PCIT or *Trauma Focused Cognitive Behavior Therapy (TF-CBT)* depending on clinical need. Like the CPP_10+, the aim of this modality is to help children and adolescents recover from trauma. It addresses the effects of trauma such as affective or behavioral problems and supports effective parenting. But, whereas the CPP_10+ is psychotherapeutic in its orientation and delivered over a period of a year or more, the TF-CBT is based on cognitive behavioral principles and is designed to be provided over a period of 12 to 16 sessions.
- d. Mothers of youth ages 7'0" and above were offered *TF-CBT* for their children.

Families with more than one child with clinical need were assigned to the age category (0 to 2, 2 to 6, 6 to 13, and 13 up) of the child with the most pressing need. In Year I it was planned that only one child would be served at a time. However, that practice would leave siblings without needed services. Thus, starting in Year II, families with multiple children had two children assigned at a time as appropriate, both to the same modality, or to the TF-CBT and one of the other two modalities except that mothers were not assigned to CPP_10+ and PCIT concurrently. In some cases, two different modalities were provided consecutively and in a few cases, dyads were re-assigned if new needs or previously unperceived needs emerged.

Service Schedule and Post-Assessment

Therapeutic services were scheduled weekly for 45 to 60 minutes for the CPP_10+, 60 minutes for the PCIT, and 30 to 45 minutes for the TF-CBT. To ensure fidelity to the treatment protocols, each modality included supervision and recorded checks on fidelity.

Participants were considered to be fully engaged if they completed at least 3 sessions per month. Re-assessments were undertaken 4 months after the first assessment, earlier if at least 12 sessions had been completed, or after completing 10 sessions if the clinician deemed that the guest had attained treatment goals. Mothers who required additional support continued in therapy after the re-assessment. Service goals were 400 children, youths, and their mothers per year.

The post intervention assessment protocol was the same as the pre-intervention assessment with the exclusion of demographic questions and the Battelle Screener. It also included questions on perceived improvements on child behavior, child trauma symptoms, parenting relationship as well as Program satisfaction.

Subsequent treatment options depended on the results obtained. Specifically,

- a. Families who completed therapy, at least 10 sessions of their treatment, and their assessment results did not suggest continued need, discontinued therapy.
- b. Families continued in the same modality if assessment results suggested substantial progress, assessment suggested continued need, and their clinicians considered that additional sessions were potentially beneficial. For instance, CPP_10+ included some dyads who had over 30 sessions. Without perfect attendance, TF-CBT treatment goals modality might not have been completed by 4 months and required one or more sessions.
- c. Mothers were offered an additional modality for additional needs of the same or another child.

Data Recording and Confidentiality

Two electronic data systems were used to record data. An electronic health record was used for clinical data such as session attendance and clinical notes, i.e. what would be kept in a paper chart. Results of assessments were kept in the LH Research Electronic Data Capture (REDCap). Each system used numeric unique identifiers for each child and mother. To ensure confidentiality a very limited number of authorized staff had access to each depending on need. Paper records were in locked drawers within locked offices, uploaded, and then shredded. Transfers between Staff and the Evaluator/Researcher were encrypted prior to transfer. The Evaluator/Researcher maintained the same confidentiality procedures with all data received.

Timeline and Staffing

Implementation schedule was as follows. During the first quarter of the Program, staff was hired, an application for IRB approval was submitted, the assessment protocol was established, staff was trained on assessments and treatment modalities, a data entry protocol was determined, and fidelity protocols for each modality were developed. During the second quarter, protocols were pilot tested and full implementation was commenced. Process evaluation commenced during the first quarter and continued throughout. Reliability and fidelity checks were started with full implementation. Clinical staff met weekly to review attendance and guest progress. The research team, composed of clinical directors, administrators, researcher, and evaluator met monthly to ensure adherence to protocol, monitor progress towards service goals, troubleshoot, and make programmatic decisions. Service use and therapeutic outcomes were evaluated yearly.

Staffing at the end of Year III included administration (10% FTE), Clinical Program Director (100% FTE), Assessment specialists (200% FTE), Coders & Data Management (300% FTE), Counselor/Therapists (6.25% FTE), Engagement Specialist (100% FTE), and the contracted services of a researcher and an evaluator. Detailed information on staff qualifications and duties

are available in Appendix A. A major change in staffing that occurred since the Program was implemented was to hire a Clinical Program Director that could oversee operations and provide clinical supervision instead of having separate positions for the two roles.

Evaluation and Continuous Improvement

The evaluation, conducted on a continuous basis since the beginning of the Program, had the formative functions of providing feedback to Program staff so that corrective action and/or adaptations could be undertaken if necessary. It also had the summative function of documenting attainments for reporting to LH administration and to the funding agency. Summative evaluation measured the extent to which the Program was carried out as proposed and attained its objectives. Overarching evaluation questions were as follows.

1. Were Program activities conducted as planned, in a timely and efficient manner?
2. Did Program activities contribute to the desired outcomes?
3. Were mothers, staff, and administration satisfied with the process and outcomes?
4. Might activities and outcomes be improved?

Sources of data included observations, results of mother and child assessments, as well as interviews, focus groups, and surveys of staff. To ensure data quality and the fidelity of the implementation plan such as timely assessments and assignment to treatment modalities, the Evaluator helped to set up data entry and in the first year of operation reviewed the data and implementation first weekly and then monthly. Quarterly review of data quality and procedures began in the middle of the second year.

Interviews and focus groups of mothers and staff along with staff surveys were conducted as needed, roughly twice a year. The focus of these varied depending on need. For instance, in the first year, the aim of data gathering was to understand the reasons for maternal attrition from the service programs and to collect staff ideas for improvements. In the second year, the focus was on staff attrition and re-engaging with new staff. In the third year the focus was on adaptations to the Covid-19 pandemic. These efforts provided a qualitative context for interpretation of quantitative results.

Client-based outcomes identified by the funder, the Children's Trust, as meaningful improvement. are presented in Table 3. Results were measured against the targets displayed in the Table.

Table 3. Contracted Client-Based Outcomes: Meaningful Improvements.

Outcome & Target %	Data Source/ Measurement Tool(s)	Meaningful Improvement	Associated Activity & Service Component
75% of parents/primary caregivers increase positive parent/child interactions	<p>DPICSIV, Dyadic Parent-Child Interaction Coding System (DPICS-IV)- Child Directed Interaction (for children ages 5-12 years)</p> <p>Scoring: 5-minute CDI coding periods</p> <ul style="list-style-type: none"> ·Total # of labeled praises ·Total # of reflections ·Total # of behavioral descriptions 	A total increase of 10 or more positive parent-child interactions (labeled praises, reflections, or behavioral descriptions) from pre- to post-intervention	Parenting Consultation Behavioral/ Mental Health Intervention Weekly
	<p>Parenting Relationship Questionnaire (PRQ-CA) (for children ages 13 and above)</p> <p>71 items Scoring: t-scores (M=50, SD=10). Range: 0-100 Clinically significant scores on the following 6 out of the 7 subscales are indicated by $t \leq 40$:</p> <ul style="list-style-type: none"> ·Attachment ·Communication ·Discipline Practices ·Involvement ·Parenting Confidence ·Satisfaction with school <p>Clinically significant scores on the Relational Frustration subscale is indicated by $t \geq 60$</p>	<p>The following condition must be met for at least 5 out of the following 7 subscales:</p> <ul style="list-style-type: none"> ·Attachment ·Communication ·Discipline Practices ·Involvement Parenting ·Confidence ·Satisfaction with school <p>If pretest t score is in the lower extreme range (0-30), then posttest must be t score > 30 OR if pretest t score > 30 then posttest must be t score > 40. For the Relational Frustration subscale, if pretest t score is in the upper extreme range (70-100), then posttest must be t score < 70 OR if pretest t score < 70 then posttest must be t score < 60.</p>	
75% of parents/primary caregivers decrease parenting stress	<p>PSI4, Parenting Stress Index (PSI-4) (for parents of children ages 0-12 years)</p> <p>36 items Scoring: Percentile Range: 16 - 99 Scoring ranges: 16-80 = normal, 81-84 = borderline, 85-99 = clinically significant. Only use Adolescent Domain</p>	A post-intervention percentile total score of 84 or lower	Parenting Consultation Behavioral/ Mental Health Intervention Weekly
	<p>Stress Index for Parents of Adolescents (SIPA): (13 and above)</p> <p>112 items; percentile scores from 0 to 99; scoring ranges: 0 to 84th percentiles is normal, 85th to 89th is borderline, 90th</p>	A post-intervention assessment total score below the 85 th percentile	

Outcome & Target %	Data Source/ Measurement Tool(s)	Meaningful Improvement	Associated Activity & Service Component
	to 94 th percentile is clinically significant, and 95 th to 99 th percentile is clinically severe.		
75% of children/youth decrease problem behavior	<p>ECBI, Eyberg Child Behavior Inventory (ECBI) (children 2-16)</p> <p>36 items Scoring: Sum of scaled Intensity items Range: 36-252 Scoring ranges: 36-130 = normative, greater than or equal to 131 = clinically significant.</p> <p>Child and Adolescent Trauma Screener (Caregiver ages 3 to 7'11' and self-repot ages 8'0" and above)</p>	<p>A post-intervention intensity score equal or lower than 130</p> <p>A post-intervention decrease of 20% in total PTSD symptom score.</p>	<p>Parenting Consultation</p> <p>Behavioral/Mental Health Intervention Weekly</p>

Results

Implementation Fidelity

This section examines the evidence available on the fidelity of Program implementations; a prerequisite to considering whether or not treatment outcomes were attained. Implementation was determined from quantitative data as well as from information derived from regular conversations with the Clinical Program Director, monthly team meetings, and staff interviews, surveys, and focus groups.

As can be seen from the following indicators of implementation, in the majority of instances, the Program was implemented as designed. All mothers on whom data were provided to the Evaluator had signed informed consent. By the end of Year IV the Program had evaluated 1,551 children and their mothers. Seventy eight (78%) of mothers had their first assessment within a week of entry as planned and an additional 10% had their first assessment within 2 weeks. Some of the families with longer lags between entry and assessment were in-house before the Program started or the mother became a guest while pregnant.

Pre- to post- assessments occurred within 12 to 20 weeks in 53% of the cases and between 21 and 30 weeks in an additional 33% of cases. First therapy session to post-intervention assessment occurred within 12 to 20 weeks in 70% of cases and between 21 and 30 weeks in an additional 15% of cases. As can be seen from the difference between 53% and 70%, some families did not start therapy sessions immediately. Most of those delays occurred because of staff turnover, including maternity leave, and the non-availability of CPP_10+ trained clinicians to replace them. During the four years of program implementation, 26 staff members provided therapy. The second barrier to prompt completion was maternal no show. Nonetheless, from the statistics it can be seen that almost three quarters of mothers who had post assessments did so on a timely manner as measured by their starting date.

Focus Groups and Interviews

Each year, focus groups, interviews, and/or surveys were conducted as necessary with mothers and staff in accordance to what was relevant and appropriate at the time. In Years I and II, the main foci of data collection were on issues related to fine-tuning implementation and on program non-completers and staff attrition, respectively. In Year III, the focus was on program implementation in the face of the Covid-19 pandemic and on maternal stress.

Year I. Two focus groups five months apart were conducted with all clinical staff as well as a survey of clinical staff including supervisors ($n = 13$). Focus groups or interviews were also conducted with mothers ($n = 17$). Because procuring attendance at focus groups was challenging, the evaluator moved to one-on-one interviews and because it was not possible to procure participation from more than a handful of non-completers, feedback can be assumed to be biased.

Findings and recommendations arising from these were summarized and shared with staff. Key findings included: a) some small program features were not understood (such as why in the Battelle children were asked to perform tasks that were too difficult for them) and explanations or adaptations for new participants were undertaken; b) mothers of children who had undergone trauma understood the need and the benefit of therapy; c) for other mothers, before commencing treatment, it was not clear why play is important for children or for dyads; d) many mothers felt awkward playing with their children; e) some mothers were surprised when strategies taught them improved children's behavior; and f) even when strategies obviously worked, it was challenging to implement them on a regular basis. The latter seemed to be an issue of lack of habit, of not having practiced them enough.

Year II. Interviews with non-completers were sought unsuccessfully in Year II. Mothers who had left the LH did not respond to phone calls or begged off the phone promising to speak at a later, more convenient time, but would never make themselves available. From responses to a hasty question on the part of the evaluator akin to, '*...but did anything happen to make you unhappy or displease you.*' The Evaluator developed the impression that reasons for attrition were not related to the services received, but instead were based on women's desire to move on with their lives. However, that impression must be interpreted with caution because it was based on only a handful of mothers.

Year III. The beginning of Year III had a very promising start with a Clinical Program Director who had been in place for almost one year and with the recruitment and training of new staff to replace counseling staff that had left or filled in for staff on maternity leave so that families could be moved from the waiting list into active participation. But, shortly after mid-year, the Covid-19 epidemic broke out and Administration and staff had to develop new procedures that would be maximally protective while at the same time continue to provide services. Without organized childcare the pandemic increased the challenge of providing sessions. The question arose as to whether sessions that were provided with physical distance and masks or virtually could be used to measure treatment effects. In effect, most sessions continued to be offered in-person because Administration deemed that the level of needs and stressors of the families as well as the importance of personal engagement, mitigated in favor of in-person sessions whenever possible and safe. Hence, the evaluator surveyed clinicians who unanimously reported that although, particularly at the beginning of the pandemic, some therapy time was taken to address concerns related to the pandemic, they felt confident that treatment goals for all sessions were being attained.

Barriers to Implementation. Missed appointments were common, a major barrier to implementation, and an issue that according to staff, was not limited to counseling sessions. The reasons for no-shows were many; some clearly justified and/or associated with low income such as having a family member in the hospital, delayed public transportation, or a cell phone not working. Others such as “forgetting” were not as easily explained. Hence, staff undertook a series of strategies aimed at improving regular attendance that included: voice and/or text reminders the day before the appointment, an hour or so before the appointment, and a “you must be on your way” text 5 minutes before the scheduled appointment.

By the end of Year I, as a matter of routine, staff met weekly to review attendance, no-shows, and reasons for no-shows to identify barriers to attendance and address those on a case by case basis. A first “no-show” or occasional missed appointments were addressed by the clinician assigned to the family. Repeated missed appointments were addressed by the supervising clinician because repeated missed appointments might signal a problem in the mothers’ lives that might need to be addressed or it might signal a problem with the treatment itself. At the end of Year I, when treatment issues were ruled out and it was observed that the major reason for non-attendance was maternal difficulty with planning and organizing, a staff member skilled in motivational strategies was charged with the responsibility of reminding mothers, encouraging them, and helping them address barriers to attendance. When possible this “engagement specialist” was introduced to mothers during the pre-intervention assessment. According to clinician report, in the process of engaging mothers with the therapeutic modality, the first session might have been critical towards completion because in the first session, the therapist had an opportunity to put forth to mothers the benefits of participation and that play is children’s work. In Year III, lack of childcare during the pandemic added one more reason for missed appointments. Nonetheless, to the immense credit of staff, the fourth quarter of Year III evidenced more sessions than the first three and attendance levels attained in Year II were maintained.

A second barrier to implementation was staff turnover. Specific to the CPP was a lack of professionals trained in the modality. A substantial amount of time and resources were spent in professional searches and training.

Facilitators. Implementation benefitted from the following features or **adaptations**: 1) food and drink available at assessments, which depending on the length of the session were provided during a break or after the session; 2) translation/interpretation of items for Creole speaking families; 3) a standardized re-phrasing of rating items that proved incomprehensible to many mothers such as “dawdles,” “sasses,” “lingers” and “acts defiant”; 4) deletion of rating items that refer to a spouse; 5) administration of the most intrusive rating scale at the end of the assessment to give the assessment clinician a chance to establish rapport; 6) selecting as assessment clinician a person whose manner was markedly friendly and who was very skilled at putting mothers at ease; 7) providing rewards; 8) allowing in-room time-out for children of mothers who expressed concern about their children’s wellbeing if out of sight; 9) adding a depression screener for mothers of infants under 6 months of age; and 10) regular attendance reminders.

Staff experienced in working with very low income families, families who had experienced domestic violence or other trauma, and individuals with mental health issues were a critical asset to successful implementation. Unexperienced therapists tended to lack the skill set and the understanding of the families’ situations necessary to work successfully with the families.

Rewards and reinforcers to motivate attendance were used throughout the Program’s four years of implementation but their nature and schedule shifted and adapted multiple times depending on the clinical sense of what schedule was most effective and most desirable. By the end of Year I mothers received a reward after each session. By Year III, mothers received a reward after each assessment, at the mid-point of the Program, and if they finished their modality within 4 months. This completion reward might be a gift card to a national chain store, generally of \$20, but possibly more for large families. At the other time points children received toys and mothers received a beauty product or costume jewelry of their choice. Families who had left the LH and needed to return to complete a modality or a post-assessment were offered an additional incentive. By the end of Year III, staff felt that this schedule worked well and no immediate plans for change. Changes in practices reflected the Clinical Program Director’s philosophy towards the use of extrinsic motivators.

The evaluation undertaken in Year II (see Appendix B) included the suggestion that two **additional strategies** be considered in order to increase attendance. One was a response cost program for missing sessions whereby some small privilege would be lost for non-attendance. However, administration felt that it would not be beneficial for Program participants to have additional losses in lives that were already characterized by loss. A second strategy was for clinicians to emphasize children’s needs and how the sessions would address those needs. The aim of this latter strategy was to cause a shift in maternal priorities. Administration opted in favor of the latter strategy.

Child and Family Social and Demographic Characteristics

This section examines whether child and family characteristics were sufficiently consistent across years to allow the data to be collapsed across years. In other words, was LH serving the same population across all years? The advantage of collapsing data across years is that statistics based on larger numbers are more stable and more likely to reflect true population values than statistics based on fewer observations. It also presents the demographic information on participating families.

Table 4. Demographic Characteristics of Participants.

Year	I	II	III	IV	TOTAL
Children	n= 378	350	390	433	1551
Children's Ages					
0 to 3	54%	53%	50%	54%	53%
4 to 12	41%	38%	41%	37%	39%
13 up	5%	9%	9%	9%	8%
Gender					
female	48%	49%	50%	47%	48%
male	52%	51%	50%	53%	52%
Single-child family					
	34%	34%	24%	34%	31%
Child's race					
Black	74%	73%	74%	73%	73%
White/mixed	26%	27%	26%	27%	27%
Mothers	n = 218	202	198	269	887
Maternal Ethnicity					
Hispanic	27%	33%	29%	28%	29%
Non-Hispanic	73%	67%	70%	72%	71%
Maternal Civil Status					
Never married	82%	86%	84%	84%	84%
Married	9%	3%	4%	7%	6%
Other	9%	11%	12%	11%	11%
Maternal Employment					
Employed	27%	25%	18%	23%	23%

A total of 1,551 children and their mothers (n = 887) were assessed in Years I through IV of the Program (see Table 4). The frequency distributions of the demographic characteristics varied slightly across the years but the ranges of values were small such that it can be supposed that families were comparable across years. Roughly half the children (53%) were under 4 years of age; 31% of the children arrived without siblings; and roughly three-quarters (71%) of the children were Black. Most mothers (84%) had never married, 71% were non-Hispanic, and roughly one-quarter (23%) was employed.

Aim 1: Child and Mother-Child Relationship Status at Entry

This section addresses the Program objectives that were specified to achieve the first aim, that of increasing current understanding of the status of mothers and children experiencing homelessness. Specifically, the objectives were to: a) determine the developmental status of all young children entering the LH, b) determine children's mental health status, and quantify mental health domains and the quality of maternal-child interactions. (See Table 1).

Children's **developmental status** was screened with the *Battelle Developmental Screener*. Results on this screener identify children who need a full developmental evaluation. These are children whose scores are 1.5 standard deviation below the average score for their ages. As can be seen from Table 5 below, the major findings of the assessment were as follows.

1. The need for referral increased with age. Whereas 26% of children under 3 scored in the referral range, referrals were indicated for 50% of children above 3.
2. With increase in age, there was also a higher percentage of children with at least one developmental area at risk; 56% of children under 3 and 76% of children from 3 to 8 years of age.
3. With increase in age, the domains most at risk changed. Communication was the domain most frequently at risk among the younger children, 36%. For the older children the Personal Social domain was most at risk, 53%.

Table 5. Children's Development Status at Entry: Referral Rates.

	6 to 36 mos.	36 mos. up	All
<i>n</i> =	465	516	981
Adaptive	26%	43%	35%
Personal Social	17%	53%	36%
Communication	36%	36%	36%
Motor	13%	15%	14%
Cognitive	25%	38%	32%
Total Referral Rate	26%	50%	39%
Children with 1 or more referral category	56%	76%	63%

Note. Excludes children less than 6 months of age.

These results might indicate a relationship between delayed communication in the first three years of life and delayed personal social relationships among the 3-to-8-years-olds. In other words, do children with early delays in communication become children who later are likely to have delays in social skills? Do early delays in communication signal an environment that is lacking in interaction, hence an environment where it is also difficult to learn social skills? Longitudinal research could answer these questions.

The occurrence of traumatic events and the severity of symptoms associated with their occurrence were assessed with the CATS-Caregiver and the CATS-Youth. As can be seen from Table 7, the results of assessment with these instruments indicated that the children experienced high rates of traumatic events and of PTSD symptoms and that children tended to be affected in one or more functional areas. Findings also indicate that children reported considerably more traumatic events and more symptomatology than mothers did on their behalf. Specific findings were as follows.

1. In addition to experiencing homelessness, almost all children had experienced one or more traumatic event. The percentages as reported by the mothers and by the children were 89% and 96% respectively.
2. Children tended to experience multiple traumatic events. The average number of traumatic events were 2.3 ($SD = 1.8, n = 834$) as reported by the mothers, and 3.8 ($SD = 2.0, n = 347$) as reported by the children.
3. As reported by mothers and children respectively, the average PTSD scores were at or above the threshold that indicates the possibility of PTSD, i.e., scores of 16 or above ($mean = 14.9, SD = 10.1, n = 834; mean = 21.7 SD = 12.0, n = 347$).
4. From caregiver and youth report, from 42% to 72% of children met one or more DSM-V criteria associated with PTSD: re-experiencing (57% & 75%), avoidance (43% & 74%), negative mood/cognition (42% & 63%), and arousal (65% & 73%). Percentages listed in parenthesis are from caregiver and youth reports respectively.
5. Impairment in one or more area of children's functioning was reported by 52% of mothers and by 64% of youths.

Child behavior was assessed with the ECBI, a maternal rating scale in which scores above the 85th percentile are deemed of clinical concern. Overall, 33% of mothers reported their children's behavior to be of concern to them and rated 29% of children in the clinical range on the intensity of their behavior ($mean T Intensity score = 53.4, SD = 12.1 n = 1,014$). Because the population norm for clinical concern is 15% (100 - the 85th percentile threshold), these results indicate that roughly twice as many children were rated in the clinical range as one would expect from a general population sample. See Table 7.

Parenting stress was measured with the PSI-4 SF for mothers of children under 13 years of age and with the SIPA for mothers of adolescents. Both instruments have clinical cut-offs at the 85th percentile. On the SIPA, only the Adolescent Domain was used because the Parent Domain had multiple questions that assume the presence of a spouse and these questions in addition to not being appropriate, were coded differently by interviewers, including as "strongly disagree."

Parenting stress totals in the clinical range as measured by the inventories were evident among 14% of mothers of children ($mean percentile score = 59 SD = 24.9, n = 1,428$) and among 16% of mothers of adolescents ($mean percentile score = 60, SD = 21.7, n = 123$). Thus, the percentages of mothers who rated their stress at the clinical level was comparable to what one would expect to find in the general population. See Table 7.

Subscales of the PSI-4 SF indicated that the percentages of mothers who rated themselves and their children above the clinical threshold on the Parental Distress subscale (24%) and the Difficult Child subscale (23%) were higher than expected population values. On the other hand, the Parent Child Functional Interaction subscale (7%) was considerably lower than expected population values, normed at 15%, and explain the Total Scale clinical rate of 14%. Were it not for the ratings on the Parent Child Functional Interaction subscale, the mothers' total score would have been much higher. To follow up on this uneven pattern of results, clinical staff was interviewed for their interpretation of results.

It was suggested by clinical staff that the markedly low level of distress on the Parent Child Functional Interaction subscale might have been a protective stance by mothers well aware of the high rate of interventions in their community by Child Protective Services and that the 24% of scores in the clinical range on the Parental Distress subscale were modest relative to their expectation. Staff considered it likely that these levels under-reported the mothers' actual stress status. Upon request clinicians provided vignettes that portrayed maternal stress at whichever level they wished; low, average, or high levels of stress. After these were provided, the mothers' stress scores were identified to look for apparent concurrence between the vignettes and the scores. See summary in Table 6.

Thematic analyses of the interviews and vignettes yielded the following interpretation. The stress instruments were primarily sensitive to situational stress, i.e., the level of stress experienced by mothers at the time of the interview that was above and beyond their typical stress levels. However, the instrument failed to account for chronic stress, in other words, whether the mother's typical level of stress was low, average, elevated, or high. Clinicians on the other hand were sensitive to both types of maternal stress.

The failure of the instrument to pick up chronic stress is exemplified in synthesis #1, the case of a mother who still as an adult had a problem with bedwetting yet scored in the 12th percentile. The instrument's sensitivity to situational stress can be seen in synthesis #2. In this case the mother came in at a relatively low level of situational stress, had a number of very distressing life events, and even though when she left she was well enough to do so, her stress score at post-intervention was still elevated relative to her entry score. Mothers #3, #4, and #5 had the chronic stressors of high risk pregnancy, childhood history of sexual abuse, and domestic violence which at pre-assessment registered as stress in the average range, from the 44th to the 64th percentile because the burden of these experiences were part of the fiber of their lives. They were events that the mothers lived with daily and their levels of stress only heightened after the pre-assessment when the pandemic limited one mother's ability to find a job and help her child and during therapy when the other mother re-visited issues of sexual abuse. But, their stress levels were not measured at those times. Syntheses #6 and #7 show elevated levels that were consistent with punitive childrearing and shutting herself away. The last two cases, clearly show maternal distress during the pre-assessment which were indeed picked up by the instrument, as reflected in the fact that they both scored in the 99th percentile. This pattern of findings was interpreted to be consistent with the conclusion that the instrument was sensitive to situational stress and not particularly sensitive to chronic stress possibly because for mothers their high levels of chronic stress were normal.

Table 6. Stress Vignettes and Percentile Score on Stress Instrument.

Synthesis	Score(s)
1. Mother related that her 7-year-old was bedwetting, her 17-year old still occasionally had the same problem and that she herself had a history of bedwetting that persisted into adulthood, even to the date. Mother attributed the bedwetting to stress.	12th percentile
2. Pregnant mother had 3 children. Inconsistent attendance at therapy sessions became worse with closing of day care because of the pandemic. Telehealth sessions did not work for her because she and therapist could not hear each other due to children's noise. She was hospitalized, suffered a miscarriage, and at a subsequent in-person session endorsed and presented with depressive symptoms.	26th and 42nd percentile on pre- and on post-
3. Pregnant mother had one child. During the pandemic she reported that with a high-risk pregnancy that required regular doctors' visits, and with schools being closed she could not get a job. Reported concern for her situation and for not being able to adequately support her child's distance learning.	44th percentile
4. Mother blamed herself more than typical and had crying spells during therapy when she recounted her brother's sexual abuse of her daughter; that "she should have known better."	46th percentile
5. Mother fled from a situation of domestic violence which she left after her boyfriend physically attacked her while pregnant which resulted in early labor. She was hyper-vigilant, constantly looking out the window during assessment.	64th percentile
6. Mother withdrew to her room and would not come out after the daycare closed. She became more irritable with her child, struggled to attend services for herself and her child, and take care of herself. "This response to stress is typical."	74th percentile
7. Mother, who had fled domestic violence was extremely irritable, harsh, and negative towards her children while simultaneously being overprotective of her children and other children at the shelter. "Her behavior is typical of mothers at the shelter."	74th percentile
8. In session mother discussed that while walking out of the shelter a man tried to approach her daughter and made inappropriate comments to her. This event re-traumatized her own history of abuse.	
9. While responding to the PSI questions, mother seemed to be reflecting on the questions for the first time and started weeping. Said she tended to prioritize her child's needs and not think about herself. It is unusual for mothers to weep during assessment.	99th percentile
10. At pre-assessment, mother of 3 children expressed feeling extremely overwhelmed at having the sole responsibility of wage earning plus childcare. Prior to leaving her spouse because of domestic violence, she had been the family's wage earner and the father had cared for the children.	99th percentile

Parenting relationship for dyads with children under age 13 was measured by the sum of positive parental statements expressed by mothers during the DPICS-IV five-minute observational protocol, i.e., the sum of labeled praises, reflections, and behavioral descriptions. The sums indicated that 56% of mothers made 0 or 1 positive statement to their children during the five-minute interaction (*mean statements = 2.3, SD = 3.3, n = 1,211*). Thus, half the mothers offered no positive verbal communication to their children during the five-minute interaction and the average was fewer than 3 statements in five minutes. See Table 7.

For dyads with children ages 13 and above, the parenting relationship was measured with the PRQ-CA. Respondents were included if their F, D, Consistency Index, or Response Pattern Index were “acceptable.” T score averages of the seven scales ranged from a low of 44 for Satisfaction with School (SD = 13.0) to a high of 57 (SD = 11.2) for Involvement. In the clinical was Parenting Confidence (26%) and Involvement (44%). See Table 7.

Table 7. Trauma, Child Behavior, Parenting Stress, and Parenting Relationship: Averages, Percentage Occurrence and Percentages in the Clinical/Normal Range at Entry.

Domain - Instrument, Measure	mean	S.D.	Percentages		
			occurrence	normal	clinical
Trauma - CATS					
Potentially traumatic events-one or more					
Caregiver report	2.3	1.8	86%	n/a	n/a
Youth report	3.8	2.0	96%	n/a	n/a
Trauma symptom scores					
Caregiver report	14.9	10.1	--	n/a	n/a
Youth report	21.7	12.0	--	n/a	n/a
Meet DSM Criteria					
Caregiver report					
Re-experiencing	--	--	--	43%	57%
Avoidance	--	--	--	57%	43%
Negative mood/cognitive	--	--	--	58%	42%
Arousal	--	--	--	35%	65%
Youth report					
Re-experiencing	--	--	--	25%	75%
Avoidance	--	--	--	26%	74%
Negative mood/cognitive	--	--	--	37%	63%
Arousal	--	--	--	27%	73%
Functional Impairment					
Caregiver Report	--	--	--	48%	52%
Youth report	--	--	--	36%	64%
Child Behavior – ECBI					
Intensity T score	53.4	12.1	--	71%	29%
Problem T score	55.1	11.6	--	67%	33%

Domain - Instrument, Measure	mean	S.D.	Percentages		
			occurrence	normal	clinical
Parenting Stress Percentile Score					
Children (PSI-4 SF)					
Parental Distress	65	24.8	--	76%	24%
Parent Child Functional Interaction	50	25.0	--	93%	7%
Difficult Child	57	28.9	--	77%	23%
Total Stress	59	24.9	--	86%	14%
Adolescents (SIPA)					
Adolescent Domain	60	21.7	--	84%	16%
Parenting Relationship					
Children (DPICS)					
Positive statements	2.3	3.3	--	n/a	n/a
0 or 1 positive statement	--	--	56%	n/a	n/a
Adolescents (PRQ) T Scores					
Attachment	49	10.2	--	87%	13%
Communication	49	10.0	--	85%	15%
Discipline Practices	50	11.0	--	86%	14%
Involvement	57	11.2	--	56%	44%
Parenting Confidence	52	11.8	--	74%	26%
Satisfaction with School	44	13.0	--	86%	14%
Relational Frustration	50	13.9	--	83%	17%

Note n/a = measure or indicator does not have normed clinical cutoffs.
 . Highlighted percentages indicate clinical rates above the 15% population norm.
 Counts for the statistics presented above are as follows:
 CATS Caregiver = 834; CATS Youth = 347
 ECBI = 1,014
 PSI-4 SF = 1,428
 SIPA = 123
 DPICS = 1,211
 PRQ = 98 respondents whose F, D, Consistency Index or Response Pattern were "Acceptable"

Aim 2: Participation in Treatment

This section addresses the Program's second aim of improving child mental health status. The objective was to provide therapeutic services to mothers and children who reside in the shelter, adapting these as necessary.

Sessions. Since the beginning of Program implementation on August 1, 2018, through the end of Year IV, 11,195 sessions were provided: 1,972, 2,898, 2,677, and 3,648 in Years I, II, III, and IV respectively. Thus, the number of sessions provided in Year II increased substantially over the prior year and the level was maintained in Year III despite the Covid-19 pandemic and increased again in Year IV. Of the 11,195 sessions, 1,775 were multiple sibling sessions for a total of 10,297 unique sessions. CPP_10+ sessions were provided most frequently (39%) followed by PCIT (26%) and by TF-CBT (35%).

Children. Table 8 presents the counts of children at various milestones of participation by treatment modality. Of 1,552 children assessed through the end of Year IV, 1,187 (76%) had attended at least one session and 667 (57%) completed 10 or more sessions. The highest rate of completion to 10 sessions was obtained by the TF-CBT (63%) followed by the CPP_10+ (57%) and followed by the PCIT (50%).

Post assessments were completed on 669 children. Of these, 40 had completed fewer than 10 sessions. Hence, not all children who had completed 10 or more sessions received post-assessments because they left the Lotus House before these could be carried out.

The average amount of time between sessions for children who had completed at least 3 sessions was 1.4 weeks ($n = 1,029$, $SD = .83$). The average amount of time between sessions for children who had completed from 10 to 14 sessions was comparable, 1.4 weeks ($n = 522$, $SD = .63$).

Twenty children who were initially assigned to CPP_10+ or to TF-CBT were switched to PCIT before or after completing the first assigned modality. In Table 8, those children are reflected under the first assigned modality to provide an unduplicated count of children who had any participation.

Table 8. Children Assessed, Attendees, and Completers.

Service Milestones	CPP_10+	PCIT	TF-CBT	Total
Assessed				1,552
Attended 1 or more sessions	465	332	390	1,187
Attended 10 or more sessions	263	166	244	673
Completed Post-Assessment	262	170	241	673

Children who had not attended at least one session included children who had not yet begun therapy, had failed to attend, and children who were not assigned for various reasons. Reasons for

non-assignment included: having moved out right away, having a sibling in therapy, receiving treatment outside of Lotus House, or having a member of the dyad unsuitable for therapy due to a health or developmental condition.

As frequently as possible, post-assessments were conducted as planned. Hence children were assessed at four months after the first treatment session even if they had not completed the assigned modality. However, children continued receiving services until they finished their treatment, services were no longer clinically necessary, or families moved out and refused to return for additional sessions. As such, 260 children participated in 1 to 20 sessions after their post-assessment (mean = 3.2, S.D. = 3.5).

A key indicator of adequate service coverage is the total percentage of participants who completed treatment. Of 834 children who entered prior to Year IV and attended at least one therapy session, 64% completed at least 10 sessions.

The Covid-19 Pandemic broke out eight months into the third year of services and a series of adaptations were made to continue to serve Program participants. A procedural manual was developed and revised multiple times as understanding increased on how to prevent transmission. Social distancing was practiced as much as possible, masks were used, and when necessary, sessions moved from in-person to a virtual delivery mode although most services were delivered in person. Breakdown by quarter of the services provided in Year III indicated that the very slight decrease in services from Year II to Year III, which was less than 10% of the sessions provided in Year II was not due to the Covid-19 pandemic. The slight decrease in services occurred in the first quarter of the year for reasons of staffing; staff on maternity leave, and staff turned over. The number of sessions provided in the first quarter of Year III and in the last quarter under Covid-19 conditions were 18% and 29% respectively of the total number of sessions for the year. Thus, the number of sessions provided in the fourth quarter, which was during the pandemic, was higher than the 25% that one would expect and shows excellent ability to deliver services.

The key findings on the analyses of participation in therapy during Year III were as follows. These generated confidence that results obtained during the pandemic could be aggregated with prior results for the purpose of analyses of treatment outcomes.

1. An increase in services in Year II with respect to Year I was maintained in Year III
2. Substantial numbers of families were in the service pipeline
3. Average 10-session attainment was within 4 months
4. 57% completion rate was attained for families who began services in Years I or III

Aim 3: Treatment Outcomes

This section addresses the third aim of the Program, to evaluate the effectiveness of services provided. It includes the effects obtained from improving services on the basis of feedback obtained from analyses conducted throughout the life of the Program (See Tables 1 for aims,

objectives and activities and table and Table 3 for the targets set by the Children's Trust for meaningful improvement).

Treatment results that occurred after the pandemic and include the effects of services provided during this period when session time was also allocated to pandemic-related stress and some sessions were conducted through Telehealth are included in analyses because a survey of clinicians, described below, indicated that they judged the sessions since the outbreak of the pandemic to be productive.

The section that follows provides statistics by treatment modality on the percentages of completers who met the meaningful improvement criteria established by the Children's Trust. Completers were families who had a post-intervention assessment, regardless of the number of sessions they accomplished. The statistics exclude children who participated in two modalities. These meaningful improvement criteria were as follows, each to be met by at least 75% of participants.

- a. A decrease of 20% or more from the pre-intervention symptom score on **trauma** symptoms.
- b. Score in the normal, non-clinical range on **child behavior**.
- c. Score in the normal, non-clinical range on **parenting stress**.
- d. For **dyadic interactions**:
 - a. Increase of 10 positive maternal statements from pre-intervention rate on observed interactions with children.
 - b. Movement towards or into the non-clinical range or staying in the non-clinical range on 5 of the 7 subscales of parenting relationships among mothers of adolescents.

Reductions in **trauma symptoms** were assessed among children who had pre-intervention scores above the clinical threshold of 15. As can be seen in Table 9, reductions of 20% or more on scores derived from maternal report were evident in: 68% of CPP_10+, 96% of PCIT, and 78% of TFCBT completers. Meaningful improvement was also observed on youth self-report by 80% of TF-CBT completers. Hence completers of two modalities, PCIT and TF-CBT, met the meaningful improvement criteria and it is particularly noteworthy that the PCIT had such marked reduction in trauma symptoms in spite of not being a modality designed to address it.

On **child behavior** ratings derived from maternal report, both PCIT and TF-CBT completers (87% and 86%, respectively) met the meaningful improvement criteria. CPP_10+ completers, at 74% were only one percent short of the 75% criteria.

In **parenting stress**, completers of all modalities met the outcome criteria of scores in the non-clinical range; 97%, 94% and 94% among mothers of children who participated in CPP_10+, PCIT, and TF-CBT respectively. For mothers of adolescents, 83% of TF-CBT completers likewise scored in the non-clinical range.

On **positive maternal interactions**, the program target was to increase these by a count of 10 positive interactions from pre-treatment levels. This target was met by 2%, 45%, and 2% of CPP_10+, PCIT, and TF-CBT completers, respectively. In addition to this target, the percentages of mothers who made only 0 or 1 positive statement were also examined. PCIT completers had substantially lower rates of no/almost no positive statements (12%) than CPP_10+ (47%) or TF-

CBT completers at post-interventions. This statistic is quite possibly the most meaningful indicator of improvement in the quality of mother child interactions, because at entry, regardless of subsequent assignment, 56% of mothers made no positive statement to their children during the observed play session. Thus, a reduction to 12% among the PCIT group can be considered quite meaningful.

Parenting relationship in adolescents could be examined in 50 completers who did not have an “extreme caution” on the D, F, Consistency indices, and Pattern of Responses. Of these completers who had participated in the TF-CBT, 74% improved or stayed in the non-clinical range in at least five of seven scales. Thus, the percentage only fell short of the 75% criteria by one percentage and the number of completers is somewhat modest so that a more robust sample might attain the desired percentage.

Table 9. Percentages of Children/Mothers who Met the Meaningful Improvement Criteria by Modality.

Construct	CPP %	PCIT %	TF-CBT %
Trauma symptom decrease: Caregiver (CATS)	68%	96% *	78% *
Baseline scores of 15 or more	<i>n</i> = 19	24	111
Trauma symptom decrease: Youth (CATS)	--	--	80% *
Baseline scores of 15 or more	<i>n</i> = --	--	91
Child behavior non-clinical (ECBI)	74%	87% *	86% *
	<i>n</i> = 82	148	222
Parenting stress non-clinical: Children (PSI4-SF)	97% *	94% *	94% *
	<i>n</i> = 254	173	173
Parenting stress non-clinical: Adolescents (SIPA)	--	--	83% *
	<i>n</i> = --	--	59
Positive relationship: Children (DPICS)	2%	45%	2%
	<i>n</i> = 178	171	169
Positive relationship: Adolescents (PRQ)			74%
	<i>n</i> =		50

Note. *n* indicates the count of responses on which statistics are based.

Values marked with * indicate that the met the following meaningful improvement criteria.

Outcome of Randomized Treatment Groups

In Year III enough dyads randomized to the CPP_10+ and the PCIT modalities completed interventions to allow analyses of results. Consistent with the findings from non-randomized families these indicated that families who participated in the PCIT showed significantly higher levels of improvements than families randomized to the CPP_10+. As of the writing of this report, LH staff, Dr. Paulo Graziano and colleagues are preparing a manuscript for publication in a peer reviewed research journal.

Maternal Satisfaction

Using a 5-point scale, mothers were asked to rate their satisfaction with the modality in which they had participated, the degree to which they would recommend the program, and the quality of the relationship with their children. Depending on whether children had presented with trauma or behavior problems, mothers were asked to rate the children's behavior and/or trauma symptom improvement. Favorable ratings were considered those to which mothers had chosen 'better' or 'much better.' Table 10 below provides the percentages of favorable responses by modality.

Table 10. Maternal Satisfaction Ratings by Therapeutic Modality

	Therapeutic Modality		
	CPP_10+ n=280	PCIT n=200	TF-CBT n=169
The mother-child relationship	69%	79%	72%
Improvement in child behavior	73%	79%	70%
Improvement in trauma symptoms	75%	73%	82%
The Lotus House Program	92%	86%	89%
Likely to recommend Program	93%	87%	94%

Maternal ratings indicated a good to high degree of satisfaction. Mothers who participated in the CPP_10+ program had lower ratings of satisfaction with regards to improvement in the mother-child relationship, than did mothers who participated in the other two modalities. Mothers who participated in the PCIT had higher satisfaction with improvements in their children's behavior than did participants in other modalities and mothers who participated in the TF-CBT had higher satisfaction in improvements of trauma symptoms than did other mothers. Thus, satisfaction ratings reflected the aims of the specific therapeutic modalities. Interestingly, although mothers who participated in the CPP_10+ modality had relatively lower satisfaction with regards to their

relationship with their children and with improvements in child behavior and trauma symptoms, they had the highest ratings on their overall satisfaction. This suggests that mothers benefited from the CPP_10+ in ways that are not assessed by the other three questions. Rather than extremely negative ratings, non-positive assertions tended to be neutral or “somewhat dissatisfied/disliked.”

Conclusions and Interpretations

A substantial number of families were served in the four years of implementation. Most of the children were quite young; infants and preschoolers. Mothers had very low levels of income, education, and most of the mothers were unmarried. Children’s histories indicated very high rates of potentially traumatic events and elevated symptomatology possibly indicative of PTSD. Children’s status at entry clearly provided a portrayal of a population that was fragile, at high risk of developing developmental delays, particularly in social-emotional development.

Implementation demonstrated three major challenges to services as planned: 1) engaging families to keep them attending sessions regularly, 2) preventing staff turnover, and 3) a pandemic which made physical proximity a health risk. Staff turnover evidenced in Year I continued in Year II despite staff’s high ratings of the Program (See Appendix). In response, administration hired clinicians with more experience working with special needs populations and added increases in compensation including increases when staff attains professional markers such as becoming licensed. Although administration should continue to explore strategies to promote staff retention, it is recognized that the working conditions are challenging. Clients are difficult to engage and few clients reward clinicians by showing appreciation for their efforts. In addition, services must be provided over the weekend. Thus, a certain level of staff turnover might be unavoidable.

The **viability of the Program** has been most evident by the fact that it continued to provide services through the pandemic that started in February of 2020. In addition to the fact that measures were taken to screen LH guests, to implement and teach best practices to reduce the possibility of transmission, it should be noted that from the outset, the Lotus House President moved into the shelter for three months to demonstrate to mothers that the shelter was a safe place to live. It cannot be determined whether or not this gesture inspired confidence in mothers, it operations continued uninterruptedly. h

As with any Program, it was important to monitor activities closely, including **data entry**, to prevent drift that can occur over time, particularly with changes in personnel. It is advisable that staff who maintain the database have experience in data management rather than a background in psychology. In a community setting where conditions are not controlled, for instance, families leave

and re-enter a shelter, or have several children all of whom need services, the realities of life can be at odds with the consistency necessary for data analyses. Experience with data management allows staff to structure datasets in ways that are appropriate for clinical and for research needs.

Families' Status. Findings indicated that children's risk of **developmental delay** and of **potential PTSD** increased with age. These findings are consistent with the fact that development is cumulative and other than motor development, which is relatively more "hard-wired" in the early years, it is also transactional. Abilities build over time through experience and interaction. With respect to development, a causal connection might be supposed between low rates of positive statements among mothers, young children's increased risk of communication delays, and older children's risk of socio-emotional delay. With respect to PTSD, the high rates of traumatic events in the lives of these children represent an accumulation of negative lived experiences that makes it increasingly more difficult for children to remain unaffected.

The percentage of mothers who rated their **children's behavior** in the clinical range was 29%, almost twice the 15% percentage that would be expected from the ECBI's norms. However, since the beginning of the Program, clinicians and administrative staff have suspected that the actual rate of disruptive behavior problems among the children was higher than reported by mothers. Whether mothers under-reported as a protective measure or under-reported because their understanding of normal and acceptable behavior differs from that of clinicians is a matter for further inquiry. Regardless, subsequent Programs should include an observational measure of children's behavior to avoid the drawbacks of depending on maternal reports.

The results of the PSI returned rates of total **parenting stress** in the clinical range that were comparable to that of the general population, 15%. This percentage included higher than the norm clinical percentages for Parental Distress and for Difficult Child, and lower than the norm rates for Parent Child Functional Interaction thereby creating an artifact of total scores comparable to the general population. Clinicians characterized the typical mother as highly stressed but the PSI suggests that her relationship with her children does not add to her stress. Given the established relationship between chronic stress in mothers, maternal irritability, and punitive parenting, future research at Lotus House could contribute to current understanding of maternal stress, how it is related to dyadic interactions, and how to affect both in a positive manner.

With mothers who are experiencing homelessness, **instruments** that require for mothers to report on trauma events, children's behavior, and children's symptoms might not be particularly appropriate. Specifically, staff and maternal **feedback on instruments** suggested that some items were difficult to understand, some mothers felt that the questions were not appropriate to their children, and others took offense at some items. For instance, one mother reported that acknowledging some of her daughter's behavior felt like a betrayal to her love for her daughter and that a good mother would not feel negatively about her children's behaviors. In addition, requesting that mothers rate item after item, at a time when mothers were facing being homeless, might have been taxing them with questions that might have appeared irrelevant. Also, differences between this population and the general population in education and in experiences, as well as in the thresholds of what is considered normal and acceptable might reduce the accuracy of self-report instruments. Indeed, children self-reported more trauma symptoms than their mothers did on their

behalf and reported higher levels of PTSD symptoms. Were mothers unaware of some of the events in their children's lives or did they not consider these to be potentially traumatic?

Notwithstanding difficulties in procuring regular attendance, a major **program attainment** was that 64% of mothers who had commenced services in Years I through III had completed at least 10 sessions and a post-assessment by the end of Year II. This is an impressive figure for this population. One study that used a similarly time-limited version of PCIT with parents who had or were at high risk of maltreating their children found an attrition rate of 32%. Hence, retention of 68%³.

Program Effectiveness. By the end of Year III, the number of completers in each modality was large enough to provide confidence in the finding that indeed remained stable in Year IV. Less so for teenagers, who were few, statistics remained unchanged with the addition of the outcomes obtained in Year IV. From completers it was evident that the PCIT was uniquely **successful** at improving mothers' interactive behavior; that the PCIT and the TF-CBT were successful at reducing trauma symptoms; and that the three modalities possibly reduced maternal stress. All the modalities were valued by mothers.

The percentages of dyads expected to make **meaningful improvement** or the meaningful improvement level itself on dyadic interaction as measured by the DPICS was too high for n population. Specifically, with a population that tends to make no positive statements in interacting with their children, it may be more reasonable to expect mothers to increase the number of positive statements by 5 rather than the currently expected 10 statements. In other words, whereas for most mothers, successful participation in the PCIT might imply an increase in the frequency of behavior that already exists, for these mothers implementing what they have learned in the PCIT requires two paradigm shifts. One is to be open to playing with their children and two, is to make positive statements. Thus, even a very modest increase from 0 might be an indicator of meaningful change. A follow-up study might examine the sustainability of gains.

The lack of performance of **the CPP_10+** on the measures of interest has been evident since the end of Year I. It could very well be that 10 to 12 sessions of the CPP_10+ is insufficient to show treatment effects. However, the reality of working with the population of families experiencing homelessness is that courses of treatment must be effective in as few sessions as possible. A modality that requires 40 to 50 sessions⁴, as does the CPP, is a challenge to implement for families experiencing homelessness who might not remain in a shelter for over a year. There is also a serious shortage of clinicians trained in the CPP_10+ modality. In Year I administration at the Lotus House tried for over a year to hire a trained clinician by posting on commercial hiring sites and industry job postings that historically have yielded results for other clinical positions, as well as by reaching out to agencies specializing in child therapy, specifically the CPP_10+. During that time, administration was unable to identify and hire one clinician who had completed the CPP_10+

³ R. Thomas, M.J. Zimmer-Gembeck. Parent-child interaction therapy: An evidence-based treatment for child maltreatment. **Child Maltreatment**, 17 (2012), pp. 253-266.

⁴ Lieberman, A. F., Ippen, C. G., & Van Horn, P. (2006). Child-parent psychotherapy: 6-month follow-up of a randomized controlled trial. **Journal of the American Academy of Child & Adolescent Psychiatry**, 45(8), 913-918.

training. Hence, to fill the position, the LH had to host its own CPP training. In addition, training is expensive and extensive, lasting 18 months. On the other hand, completers endorsed the CPP_10+ and appeared to feel supported by it. Besides being much briefer than intended to be, perhaps the assessment protocol fails to measure what mothers find beneficial.

The findings of engagement, however difficult they were to procure, and the favorable outcomes obtained have implications for the service community. In Year IV a presentation was made at the Conference for Child Development and academic manuscripts have been submitted for review.

Recommendations

With respect to the mother-child dyads, there are three major areas that the Program addressed for healing and preparing families for a successful life. Childhood trauma was addressed successfully by the TF-CBT and by the PCIT. Parenting strategies to increase positive mother-child interactions was addressed successfully by the PCIT. The CPP_10+ was well regarded by mothers but participation in this modality did not translate into more positive mother-child interactions as measured by the instruments used or by maternal report.

Recommendations for future services include a continued focus on staff support to enhance staff retention. Staff must be able to see the small improvements attained by families and understand these as meaningful. Also, staff turnover should be monitored to see if the measure taken of raising salaries had the desired effect on retention.

Future services should continue to include the PCIT and the TF-CBT modalities as well as a modality for mothers of young children that fulfills maternal need to feel supported and also enhances maternal-child interactions. Instruments should include an observational measure of child behavior that avoids the need to rely on maternal ratings to measure treatment outcomes.

The outcomes of this Program provide baselines against which to measure the success of subsequent endeavors. In addition to program effects such as the percentage of mothers with no positive statements at post-intervention assessment and the percentages of children in the clinical range with reduced symptoms, additional metrics to be used in evaluation include: 1) The percentage of families who complete at least 10 treatment sessions, with the number of families who participate in at least one session as the denominator, 2) the average number of days between sessions or the average number of weeks for completion, and 3) as a measure of staff turnover, the number of therapists on staff per mothers in treatment for one or more children. Because not all siblings necessarily participate in treatment, this last metric should be in terms of mothers.

Analyses should be conducted with the existing and future data to determine which child and maternal factors are associated with positive and negative child status at entry and with treatment gains. Results of such analyses would identify subgroups, if any who do not benefit as much as others and might provide indications on how to meet its needs.

Appendices

A. Staff Titles, Effort, Qualifications, and Duties: End of Year III

Title	#	% Effort	Position Type	Qualifications	Duties
President/Exec. Director	1	10% In-kind	Employee	Juris Doctorate	Overall project direction, program supervision, reporting, writing, and dissemination
Clinical Program Director	1	100%	Employee	Psychology Doctor or PhD in relevant field preferred and research experience. Else Master's degree in relevant field and 10 years of research management experience	Oversee all operations: assessment, clinical services, data management, ensure clinical and data fidelity, serve as liaison with consultants, prepare reports, assist in program development, co-author research articles, attend required training and meetings.
Assessment Specialist	2	100%	Employee	Bachelor in relevant field and research experience	Coordinate and conduct assessments, transcribe videotapes, code, enter data, track and monitor data.
Coders & Data Management	3	100%	Employee	Bachelor's degree + experience in data management	Enter data, score and verify coding, ensure fidelity, manage database.
Counselor/Therapist	6.25	100%	Employee	Masters' degree in psychology or related field, licensure or registered intern, 1 year of experience	Deliver CCP, PCIT, or TF-CBT, complete fidelity checks appropriate for the treatment modality, attend training and meetings. Two counselors have caseloads and supervisory responsibilities.
Engagement Specialist	1		Employee	Bachelor in related field	Engage mothers, assist operations
Researcher	1	N/A	Consultant	Ph.D. in Psychology or relevant field	Train staff on PCIT model, monitor delivery of the PCIT to ensure fidelity. Write research articles.
Evaluator	1	N/A	Consultant	Ph.D. in evaluation or relevant field	Evaluate program effects: acceptability of treatment modalities, absolute and relative effectiveness of services, conduct statistical analyses, write reports and dissemination material on methods and findings.

B. Sample Instruments

Sample Staff Interview. Interviews served multiple purposes. For instance, they provided the opportunity to obtain narrative descriptions of the assessment procedure that were used in order to compare the descriptions against the planned protocol and to assess the uniformity of strategies used across therapists. Interviews also tracked changes over time, both intended and unintended. Interviews provided an opportunity for emergent issues. After each interview the Evaluator provided the interviewee with a written summary of their conversation so that staff could review it for validity and completeness. Once the interviews were completed, the Evaluator met with the researcher and with the clinical supervisor to obtain additional feedback and to review key points and interpretations drawn from the narratives. Following, as a sample is an interview guide that was used in Year II, which focused on on maternal attendance and completion rates.

1. *What changes have come about since we spoke at the last focus group?*
2. *Tell me about “no-shows”.*
 - a. *What do you do to prevent them?*
 - b. *What do you do when they happen?*
3. *Have personnel changes affected the work that you do?*
 - a. *How?*
 - b. *How is the counselors’ mood?*
4. *What additional needs do children and mothers have that the Program might be able to meet?*
5. *Do you have any suggestions?*
6. *Do you have any questions?*

Sample Staff Survey. Surveys allowed quantification of issues that were noted during regular conversations with the program director, in research team meetings, or during focus groups. This survey was used as a result of staff turnover that occurred in Year II. Respondents rated items on a 5-point scale.

1. *The mission of the Lotus House is important.*
2. *My job is important for Lotus House to accomplish its mission.*
3. *I derive a sense of personal accomplishment from my work.*
4. *I feel valued by Lotus House guests.*
5. *I feel valued by Lotus House administration.*
6. *I am clear on my job responsibilities.*
- I have the....*
7. *...skills necessary to do my job well.*
8. *...motivation necessary to do my job well.*
9. *...desire necessary to do my job well.*
10. *...support necessary to do my job well.*
11. *...resources (time/space/materials) necessary to do my job well.*
12. *My feedback is valued by my supervisor.*
13. *The staff members with whom I must interact are fun.*
14. *The staff members with whom I must interact are supportive.*
15. *Work is distributed fairly.*

3.7

16. *I am doing a good job.*
17. *My co-workers feel that I am doing a good job.*
18. *My supervisor(s) feel that I am doing a good job.*
19. *I want to stay at my job.*

Fill in the blank for each item below. Feel free to write an extended response on the back of the paper.

At Lotus House...

20. *...my greatest source of satisfaction is*
21. *...my greatest source of dissatisfaction is*
22. *...my biggest skill challenge is*
23. *...I wish I knew how to ...*
24. *...the perk I most wish to have is ...*
25. *My suggestions...*
26. *If you gave any item a rating of "1" or "2", write in why*