



**Evaluating Outcomes for At-risk Families Participating in
The Family Tree's Positive Parenting Program:
A Retrospective Study
Interim Report
January 2009**

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This retrospective study is a collaboration between the University of Maryland Ruth H. Young Center and The Family Tree (TFT). TFT staff contributors include Carolyn Finney, Director of Programs and Services, Pat Cronin, Executive Director, the Positive Parenting Program (PPP) staff and other TFT staff who contributed to the planning of the study, development of a logic model for PPP, and discussion of interim findings and future evaluations.

Table of Contents

- 1. Executive Summary.....3
- 2. Interim Report.....5
 - a. Background.....5
 - b. Purpose of the Study.....5
 - c. Literature Review.....6
 - i. Evaluation of Parent Training Programs.....6
 - ii. Risk and Protective Factors for Child Maltreatment.....7
 - iii. Gaps in the Research.....7
 - iv. Evaluation of the Positive Parenting Program: Study Questions.....7
 - d. Methods.....8
 - i. Procedures.....8
 - ii. Participants.....9
 - iii. Positive Parenting Program..... 10
 - iv. Measures..... 10
 - v. Data Analysis.....12
 - e. Results.....12
 - i. Caregiver, Child and Service Characteristics at Baseline.....12
 - ii. Assessing Change in Risk and Protective Factors:
Repeated Measures Analyses..... 17
 - 1. Outcomes by Placement Status.....17
 - 2. Outcomes by Referral Source..... 18
 - f. Discussion.....20
 - i. Strengths and Limitations.....21
 - ii. Implications for Practice and Research.....22
 - iii. Continuing Evaluation.....24
- 3. References.....25
- 4. Appendices
 - a. Appendix A. Logic Model for Positive Parenting Program.....28
 - b. Appendix B. Analysis of Variance with Repeated Measures:
Summary Tables.....30
 - i. Table B1. Comparing Outcomes by Placement Status.....31
 - ii. Table B2. Comparing Outcomes by Referral Source.....32

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Interim Report

EXECUTIVE SUMMARY

The first phase of the retrospective evaluation of outcomes for families participating in the Positive Parenting Program utilized existing administrative data collected by The Family Tree (TFT) during the course of business. This study examines five protective factors (parenting knowledge and attitudes) and one risk factor (low self esteem) to determine whether change occurred after the PPP intervention, and to identify any group differences by the child's placement status. Exploratory analysis was also conducted to identify group differences by referral source. Several key findings were identified using analysis of variance with repeated measures:

- **Protective factors:** Parents and caregivers' scores on parenting knowledge and attitudes improved after the intervention. At pre-test average scores showed some deficiencies and some strengths, but by post-test scores had moved into the normal range in all of the parenting measures: appropriate developmental expectations, discipline, family roles (less role reversal), empathy, and (less) oppression of power and independence. In addition, parents with a child placed in out-of-home care scored higher on appropriate views of corporal punishment compared to families with children remaining home. However, both groups on average reported some strengths and some deficiencies in parenting knowledge and attitudes at baseline and moved into the normal range after intervention on all parenting measures.
- **Risk factor:** Self esteem scores decreased between pre and post test, indicating higher levels of self-esteem after intervention. There was no statistically significant group differences between parents with children remaining home and those with children in out-of-home care. However, there was a trend towards lower self-esteem in the out-of-home group, and a trend toward a greater improvement in self-esteem over time in the out-of-home group.

The post-test data were only available for parents and caregivers who completed the program, so results may not be generalized to all participants. Comparison of completers and non-completers identified statistically significant differences on a number of demographic characteristics and baseline measures for the outcomes observed. Program *completers* are more likely to be slightly older, male, people of color, married or divorced (not single), high school graduates, higher income (in this low-income sample), and court-ordered to participate. Completers scored higher on several parenting subscales at baseline, showing more appropriate family roles (less role reversal) and less oppression of the child's power and independence. At the same time, completers' scores showed less appropriate attitudes toward corporal punishment at baseline compared to non-completers, although both groups scored below average. Completers also reported slightly higher self esteem at baseline, although perhaps not of practical significance.

The results of the first phase of this study suggest that some program goals are being achieved, in that protective factors were enhanced and a risk factor reduced among parents and caregivers after participation in the Positive Parenting Program in Baltimore City during 2002 through 2007. However, these results are based on self-report measures of the intermediate

outcomes, and there is no control group to help rule out other explanations for the improvements. Although the findings cannot be attributed to the Positive Parenting Program with this research design (i.e. no control group), the apparent improvement on these factors is promising. Future evaluation using direct observation and a stronger research design would help corroborate the findings. Administrative data from child welfare services would also help corroborate the findings. In the second phase of the study, administrative data from DHR will be used to examine child safety, stability, and permanency outcomes to further assess whether the goals of PPP are being met. Implications for practice and future evaluation are discussed tentatively in this interim report, and will be revisited when the second phase of the study is completed.

Evaluating Outcomes for At-risk Families Participating in the Positive Parenting Program: A Retrospective Study

Interim Report

The following retrospective study seeks to evaluate the child and family outcomes for families participating in The Family Tree's Positive Parenting Program. The study is being conducted through collaboration between The Family Tree and the Ruth H. Young Center for Families and Children at University of Maryland.

Background

Child maltreatment is a serious societal problem that has been associated with poor short-term and long-term outcomes for children. According to official reports from child welfare agencies, approximately 12 out of every 1,000 children in the United States were found to be victims of child abuse or neglect annually in recent years (US DHHS, 2008), and more than one-fifth of these children were re-reported within two years (Fluke, Shusterman, Hollinshead, & Yuan, 2008). Higher rates of maltreatment are documented in the research based on self-report measures of abuse and neglect (Gilbert, Widom, Browne, Fergusson, Webb, & Janson, 2008). Children who have been abused and neglected face more negative outcomes than non-maltreated children, including higher rates of poor educational, health, and mental health outcomes, substance abuse, risky sexual behavior, and aggressive and criminal behaviors that persist into adulthood (Gilbert et al., 2008; Hildyard & Wolfe, 2002; Springer, Sheridan, Kuo, & Carnes, 2007; Teicher, Samson, Polcaris, & McGreenery, 2006).

Parent education programs are routinely offered as one form of intervention to reduce occurrence or recurrence of abuse or neglect in families involved with child welfare services or at risk of maltreating their children. These programs are often provided by private agencies and funded by public child welfare agencies, and include both voluntary and court-mandated clients. Such parenting programs, while widely used with this high risk population, are rarely evaluated to determine their impact (Hurlburt, Barth, Leslie, Landsverk, & McCrae, 2007). Moreover, although parent training groups often combine families with children remaining home and families in which the children have been removed from home (when parents are working to achieve reunification), little evidence is available to distinguish the efficacy of group-based parent training for these two subgroups of families (Barth et al., 2005).

The Family Tree – a private non-profit organization with funding from Maryland's public child welfare agency – provides a group-based parent training program serving families involved with child welfare services and other high-risk families. This program, the Positive Parenting Program, is designed to help parents and caregivers acquire the life skills and parenting skills that promote positive family functioning and strengthen families in order to prevent abuse and neglect and preserve families. As part of the agency's effort to improve services, this study seeks to evaluate the child and family outcomes in a sample of high-risk families who participated in the Positive Parenting Program between fiscal year 2002 and 2007.

Purpose of the Study

The purpose of this study is to utilize existing data, documents and records to 1) describe the characteristics of the high-risk families who participated in a 10 to 12-week group-based parent training program (PPP) in Baltimore City over a six year period (2002 – 2007); and 2) evaluate the outcomes for families who completed the program and those who did not. Utilizing administrative data from The Family Tree, this retrospective study entails an

examination of one risk factor (low self esteem) and several protective factors (parenting knowledge and attitudes) before and after the intervention, including a comparison of families with children remaining home to families with at least one child in out-of-home care. An exploratory analysis also compares the outcomes of families referred by social services, parole and probation, and self-referral. The second part of the study, to be completed in the coming months, will include an examination of child safety, stability, and permanency outcomes during the 18 months after parents began participating in the program.

Literature Review

Evaluations of Parent Training Programs

Parent training for child welfare involved parents generally consists of group-based educational and discussion groups in which parents learn strategies to improve their child management skills and appropriate expectations of child development (MacLeod & Nelson, 2000). Traditional parent training programs targeting parents involved with child welfare services are designed to improve parental performance and prevent future maltreatment, often serving parents with children remaining home and parents with children in out-of-home care (seeking reunification) together (Barth et al., 2005).

Evaluations of parent education programs frequently examine changes in parenting knowledge and attitudes, and some examine development of parenting skills. In a review of community and center-based parent education programs, researchers identified improvements in knowledge of child development, more positive discipline, increased parenting self-efficacy, and reduced negative parenting perceptions (Holzer, Higgins, Bromfield & Higgins, 2006). Parenting skills were examined in families at risk for maltreatment in a recent study, in which researchers directly observed improvements in parenting skills demonstrated in role plays before and after a 5-week parent training curriculum (Berard & Smith, 2008). This is one of few studies targeting families at risk for maltreatment that observes parenting skills rather than relying on parent self-report of knowledge and attitudes. There is substantial evidence that parenting programs which target families experiencing child behavioral problems (e.g. conduct disorder and ADHD) – such as Parent-Child Interaction Therapy and the Incredible Years—have demonstrated improvements in parenting such as increased nurturing parenting, reductions in harsh parenting (Reid, Webster-Stratton, & Baydar, 2004; Webster-Stratton, Reid, & Hammond, 2001), increased sense of parental competence, and less self-reported dysfunctioning in parenting (Schuhmann, Foote, Eyberg, Boggs & Algina, 1998; Bor, Sanders, & Markie-Dadds, 2002; Leung, Sanders, Leung, Mak, & Lau, 2003). The programs have also demonstrated fewer behavioral problems in children. However, few of the studies have included child welfare parents in their samples (Barth et al., 2005), so it is unclear the degree to which these interventions would improve parenting in child welfare populations.

Although a key goal of parent training programs is to reduce child maltreatment, a limited number of studies have measured subsequent child maltreatment outcomes. Results from a small group of studies showed fewer maltreatment incidents after the intervention (Holzer et al., 2006). However, one study evaluating a state's family preservation and support services—including parent education classes—found no significant differences between program completers and non-completers in preventing future maltreatment cases (Chaffin, Bonner, & Hill, 2001). The researchers also found that programs addressing basic needs and providing a mentoring approach had lower rates of subsequent maltreatment compared to parent education and family preservation programs.

Risk and Protective Factors for Child Maltreatment

The program being evaluated in the current study seeks to reduce risk factors and enhance protective factors as intermediate goals in an effort to increase child safety, permanency, and stability. With this in mind, a brief review of the literature on risk and protective factors is provided here. A large set of risk and protective factors have been identified for child abuse and neglect. According to a recent meta-analytic review of the literature, the risk factors with the largest effect sizes for abuse were parent anger or hyper-reactivity, family conflict, and family cohesion, whereas the risk factors with the largest effect sizes for neglect were parent-child relationship, perception of the child as a problem, parental stress, parent anger and hyper-reactivity, and parent self-esteem (Stith et al., 2009).

Low self-esteem is a risk factor for both child abuse and neglect, but a larger effect size was found between neglect and self-esteem (Stith et al., 2009). Relative to parenting interventions, affirming parent self-worth was an important theme affecting parenting outcomes for child welfare involved parents, as reported by parents during a focus group after they participated in an intensive parenting program (Russell, Gockel, & Harris, 2007).

Protective factors against child maltreatment include having more knowledge and skills related to parenting and child development (Berger & Brooks-Gunn, 2005; Connell-Carrick & Scannapieco, 2006) and more parental empathy and warmth (Shahar, 2001; Slack et al., 2004). In addition, social support has been identified as a protective factor against both abuse and neglect (Stith et al., 2009; Schumacher et al., 2001).

Gaps in the Research on Parent Training Programs

Little is known about the effectiveness of traditional parent training programs for improving parenting skills among parents involved in child welfare services (Barth et al., 2005; Johnson, Stone, Lou, Ling, Claassen & Austin, 2008). Also, few studies directly examine the impact of parent training programs on child safety (occurrence or re-occurrence of child abuse or neglect), permanency, or stability in high risk populations (Holzer et al., 2006; Johnson et al., 2008). Further, little is known about the efficacy of the programs for families with children remaining home compared to families with children in out-of-home care (Barth et al., 2005). Evaluation of parent training programs that serve families at high risk for child maltreatment – including those involved with child welfare services—is needed to examine their impact on parenting knowledge and skills and on the ultimate goals of child safety, permanency, and well-being.

Evaluating the Positive Parenting Program: Study Questions

The purpose of the current study is to evaluate the outcomes of families participating in the Positive Parenting Program, a group-based parenting program. Using the administrative data available, the intermediate outcomes including parenting knowledge and attitudes (protective factors) and self esteem (a risk factor), as well as longer term outcomes of child safety, permanency and stability, will be examined. Since post-intervention effects may diminish over time (Johnson et al., 2008; MacLeod & Nelson, 2000), the child safety, permanency, and stability outcomes will be examined during the 18 months following initial participation in the program.

The first part of the study, presented in this report, seeks to answer the following questions:

1. What are the characteristics of families who participated in the PPP program in Baltimore City during Fiscal Year 2002 through 2007, including those who completed the program and those who did not complete the program? Were there group differences in family characteristics and scores on risk and protective factors at baseline?
2. For parents completing the program, are risk factors (low self esteem) reduced and protective factors (parenting knowledge and attitudes) enhanced at post-test? Are there group differences in scores on these measures for families with children remaining home and families with at least one child in out-of-home care? Are there differences in change over time among these groups?
3. For parents completing the program, are there differences in outcomes for families referred by social services, parole and probation, and self-referral?

The second portion of the study will include all families who participated in the program, including those who completed and did not complete the program. The child safety (proportion with no indicated reports), stability (proportion with no removals from home), and permanency (proportion returned home) outcomes will be examined for the 18 month period after parents began participating in the program.

Consistent with the program goals, it was hypothesized that 1) program completers would score higher on assessments of parenting knowledge and skills, self-esteem, and social contacts after participating in the program compared to their baseline scores; 2) families with children in the home would show greater improvements than families with children in out-of-home care, based on the rationale that parents would have more opportunity to practice new parenting skills with the children in home; 3) program completers would have lower rates of maltreatment than non-completers during the 18 month period following participation in the program, controlling for initial risk levels.

Methods

Procedures

This study, a collaboration between the University of Maryland (UMB) and The Family Tree (TFT), is a retrospective evaluation of the parent training program using existing administrative records. As part of ongoing internal evaluation and service delivery for the parent training program during the prior ten years, TFT staff have asked participants to complete several pre- and post-intervention measures of intermediate outcomes, including the Adult and Adolescent Parenting Inventory (AAPI-2) and the Rosenberg Self-Esteem Scale. The UMB research staff worked with TFT administrators and staff to develop a logic model (see Appendix A) and study questions based upon available data, as well as begin communicating about future program evaluation and improvement. An IRB protocol outlining the study plan and human protections information was submitted to and approved by the UMB's Institutional Review Board. The existing administrative data from The Family Tree were analyzed to describe the participants and to examine the intermediate outcomes – the risk and protective factors – and compare subgroups on these outcomes for participants in the largest service area, Baltimore City, for the six year study period (2002-2007), using a more advanced statistical analysis than prior reports. These analyses, presented in this report, represent the first phase of the study. In addition, for the second phase of the study the research team plans to examine longer term outcomes including subsequent child maltreatment reports, removals of children from home, and returns home for families participating in the program. These plans are described further at the end of the report.

Participants

The sample for this study consisted of all families in which a parent or caregiver participated in at least one session of the core Positive Parenting Program within Baltimore City from Fiscal Years 2002 through 2007 (see Table 1), as documented in the agency's administrative data. Families were excluded if the caregiver participated in the anger management-focused parent training, rather than the core program, or if the parent completed neither a pre-test nor a post-test and thus had not been entered in the administrative database maintained by the private agency. More than half of the families were served at The Family Tree's main office (see Table 2).

The sample consists of 2,025 families who participated in the program, including 58.8% who completed the program and 41.2% who did not. The ages of parents and caregivers ranged from 15 to 76, with a median of 33 years (SD=9.640). The majority were women (68.5%), African American (71.8%), and single (63.0%). About one-third (34.4%) reported they had not completed high school, while 9.1% earned a GED, over one-third completed high school (35.9%), and about one-fifth had a college education (20.6%). Almost all of the caregivers (99.4%) spoke English as their primary language. Almost all (96.1%) were biological parents of the identified children. More than one-third of the parents had their children remaining in their home, while most had at least one child in out-of-home care. Most of the families (65.7%) were referred by the Department of Social Services, including CPS and foster care, while other families were referred by parole and probation (18.0%), self-referred (15.3%) or referred by Custody (1%); referral information was missing in over one-third of the cases, and so must be viewed cautiously.

Table 1. Completers and Non-completers by Year Enrolled in Core PPP in Baltimore City, 2002- 2007

	2002	2003	2004	2005	2006	2007	Total
Non-completers	101	149	128	89	179	188	834
Completers	142	254	224	194	194	183	1,191
Total	243	403	352	283	373	371	2,025

Notes: 1) These data differ from the TFT Annual Report for FY2007 because these represent Baltimore City only *and* the current study excludes participants in the anger management-focused parenting class. 2) The total number is a duplicated number, in that a small portion of non-completers later re-enrolled and completed the class.

Table 2. Location of PPP Class

	Number participants	Percent participants
Family Tree / Charles Street*	1,131	55.9%
Pleasant View	250	12.3%
Franklin Square	234	11.6%
St. Agnes	107	5.3%
Mpn/Walbrook Library	102	5.0%
Johns Hopkins Bayview	91	4.5%
Other locations	110	5.4%

* Includes 696 (34.4%) at Charles Street; and 435 (21.5%) listed as "Family Tree\FY2007"

Positive Parenting Program

The Positive Parenting Program (PPP) is a secondary and tertiary prevention program providing parent training to families with indicated maltreatment reports or otherwise at high-risk of maltreatment. The underlying assumptions guiding this program include the following:

1. Child maltreatment is associated with multiple risk factors, including a lack of knowledge of child development and child management, high stress levels, lack of social support, economic instability, low self esteem, and the parent's experience and perception of how they were parented.
2. By targeting risk factors and enhancing protective factors through group-based skills training parents will be more likely to provide appropriate care for their children and less likely to maltreat the children, preserving families.

During the study period PPP provided a series weekly training sessions in a classroom setting; each class lasted for 10 to 12 weeks, with each session lasting two hours. The modules and key components of the program are outlined in the logic model (see Appendix A), developed by staff and administrators when planning for this study. As noted, the majority of clients were referred by the child welfare agency, while most others were referred by probation or custody agencies or through self-referral. Although the agency offers multiple levels and types of parenting services, few families in the parent training classes utilized other services according to the administrative database.

Measures

According to the PPP logic model developed with staff, the agency seeks to reduce risk factors (e.g. low self-esteem) and enhance protective factors (parenting knowledge and attitudes) in order to achieve the long-term goals of safety, stability, permanency, and child and parent well-being. The first phase of the study focuses on the risk and protective factors – intermediate outcomes – utilizing data previously collected, scored, and entered by The Family Tree for administrative purposes. PPP participants were asked to complete several standardized measures, including the Adult-Adolescent Parenting Inventory (AAPI-2) and Rosenberg Self-esteem Scale¹, at the beginning of the PPP program and, if they completed the program, again at the end. In addition to scores from the standardized measures, administrative data were collected on the PPP Intake Form (e.g. demographic data, placement status, referrals source, etc.) and Attendance Logs (class attendance and certificate receipt), and incorporated into this study.

Protective factors: Parenting Knowledge and Attitudes. The Adult-Adolescent Parenting Inventory-II (AAPI-2; Bavolek & Keene, 1999), a widely used scale, was used to assess parenting knowledge and attitudes, including appropriate expectations of child development, oppression of the child's power and independence, strong belief in corporal punishment, parent-child role-reversal, and empathy for the child's needs. The instrument had previously been hand scored by staff and standardized (STEN) scores for each subscale had been entered in the administrative database for ongoing evaluation purposes. Higher scores indicate positive

¹ In addition, the Personal Network Matrix (PNM; Dunst, Trivette, & Deal, 1998) was used by the agency to assess client access to personal and community resources. Although continuous data from the PNM could be used to operationalize social isolation, one of the risk factors, the data were entered as a dichotomous variable; as such it was decided it would not be meaningful to analyze these data.

parenting attitudes. The lowest scores, 1 or 2, indicate high risk for abusive parenting behaviors, 3 or 4 indicate some strengths but some deficiencies, and 5 or 6 indicates normative behaviors among African American caregivers. A score of 7 to 10 exceeds expectations. According to the Bavolek & Keene, the AAPI-2 shows significant diagnostic and discriminatory validity, differentiating between known abusive parents and non-abusive parents. The authors also report internal consistency reliability, with Cronbach's alpha ranging from .80 to .92. It was not feasible to calculate the internal consistency of the measure for this study, as only STEN scores were available in the administrative database.

Risk Factor: Self-esteem. One goal of the Positive Parenting Program is to improve the parent or caregiver's sense of self worth or self esteem, thereby reducing a risk factor (low self-esteem) of child maltreatment. In this study *self esteem* is measured using the self-report Rosenberg (1965) Self-Esteem Scale. This 10 item measure assesses positive and negative feelings about one's self (i.e. self worth or self esteem). For example, statements include "I feel that I'm a person of worth, at least on an equal plane with others" and "All in all, I am inclined to feel that I am a failure". Participants are asked to respond to each statement on a 4-point scale ranging from strongly agree to strongly disagree. Each response receives a score from 1 (strongly disagree) to 4 (strongly agree), with half of the items reverse scored. Individual item scores are summed, to yield a total score between 10 and 40. Lower scores indicate higher self-esteem. The scoring had been completed prior to this study, and only scores (not individual items) had been entered in the administrative database. With only pre and post scores available it was not feasible to calculate the internal consistency of the measure in the current study sample. However, this widely used scale had good internal consistency reliability (Cronbach's alpha of .89 at pre-test and .90 at closing) in a recent study (Crocker, Karpinski, Quinn, & Chase, 2003).

Placement status. The placement status of the children at intake is a variable recorded in the existing administrative database. This dichotomous variable indicates that the children are in the home or that at least one child is in out-of-home care. These data, already entered in the administrative database, are collected on the intake form which asks for the names of children and their placement status (in home or out of home).

Program completion status. Participants were identified as having completed the program or not completed the program. Program "completers" include parents or caregivers who signed up for the core PPP class and successfully completed the program by attending all classes or by making up any missed classes during another class time. "Non-completers" include parents or caregivers who signed up for the core PPP class and attended at least one class, but did not complete the curriculum (i.e. did not attend all classes). Data were not available for the parents or caregivers who signed up but never attended any of the classes (service decliners).

The operational definition of program completion status for the first phase of the study is a dichotomous variable indicating the existence of post-test data (0 = no, 1=yes) as a proxy for completion status. This is believed to be a reasonable proxy, as post-tests were only administered to families completing the program. However, the agency's attendance logs provide the actual completion data which would be optimal. Because some of the logs from recent years were in the process of being entered from hard copy to electronic copy at the time of the analysis, the proxy variable was used. Once completion data are available for all data years, the data will be analyzed to determine whether there is a high correlation between the actual completion data and the proxy data; if a high correlation is not evident, the descriptive analyses will be re-run with the actual completion data.

Referral source. The intake form contains information about the referral source, including seven possible categories. For the purpose of this study the categories were condensed into four categories: Self Referred, Department of Social Services (including DSS, Child Protective Services, and Foster Care), Parole & Probation, and Custody. One other category on the intake form, Other, was excluded because no cases were reported in this category.

Demographic and other variables. Demographic variables include age in years (continuous), gender (dichotomous, male or female), race or ethnicity (3 categories: African American, White, or Hispanic, Asian or Other Ethnicity), marital status (married, single, widowed, divorced), education (college education, completed high school, GED, and did not complete high school), and family income (< \$10,000, \$10,000 – 18,999, \$19,000-25,999, \$26,000 – 40,999, \$41,000 or more). Other variables include relationship to child (biological parent, step-parent, kinship care, and foster or adopted parent), child's special needs (dichotomous, yes or no), and whether or not the caregiver was court-ordered to attend parent training classes (dichotomous, yes or no). Each of these variables are collected during the intake process.

Data Analysis

Descriptive statistics were calculated to describe the characteristics of the study sample at baseline. Chi-square analysis (for categorical variables) and t-tests (for continuous variables) were used to identify whether differences existed in several subgroups at baseline. First, the completer and non-completer groups were compared to determine whether there were significant differences in the two groups on caregiver, child, and service characteristics. Next, families with children in the home were compared to families with at least one child in out-of-home care to identify any significant group differences for these characteristics. The scores on the standardized measures at baseline were also compared for these subgroups.

Analysis of variance with repeated measures (two time points) was conducted to determine whether program completers' scores on the risk and protective factors changed after the intervention, while also comparing subgroups of program completers to learn whether there are group differences. In the first set of analyses, families with children remaining home were compared to families with children in out-of-home care. In the second set of analyses outcomes were compared for families based on their referral source using three categories: social services, probation and parole, and self-referred.

Results

Caregiver, Child and Service Characteristics at Baseline

Results from the descriptive, chi-square, and t-test analyses help describe the sample while identifying differences across several subgroups of participants in the PPP program in Baltimore City from 2002 through 2007. First, results comparing caregiver, child and service characteristics for program completers and non-completers are presented. Next, baseline scores on the outcome measures are compared for completers and non-completers. Then, characteristics of participants with a child remaining home are compared to participants with one or more children in out-of-home care.

Were there differences in characteristics for completers and non-completers? Because the intermediate outcomes data were available only for parents who completed the program, it was important to determine whether there were significant differences in the parent, child, or service characteristics of the completers compared to the non-completers. Of the 2,025 parents or caregivers participating in the training, 1,191 (58.5%) completed the program and post-test. Table 3 provides a summary of the characteristics for completers and non-completers. Statistical tests were conducted for each variable to determine whether or not there were statistically significant group differences, in other words, differences that would not be expected by chance.

An independent samples t-test was conducted to determine whether there were statistically significant group differences in the mean age of parents completing (M=34.14, SD=9.779) and not completing (M=32.50, SD=9.358) the program. Statistically significant group differences were found ($t=3.785$, $df=2021$, $p<.0005$), suggesting that parents and caregivers who are slightly older (1.64 years, on average) are more likely to complete the program than younger parents. .

Chi-square analyses were conducted to learn whether other parent characteristics, child placement, or service characteristics differed for families who completed and did not complete the parent training program. There were significant differences between the two groups in gender ($\chi^2 = 15.696$, $df=1$, $p<.0005$), race ($\chi^2 = .512$, $df=2$, $p=.023$), marital status ($\chi^2 = 11.746$, $df=3$, $p=.008$), education ($\chi^2 = 14.542$, $df=3$, $p=.002$), family income ($\chi^2 = 32.109$, $df=4$, $p<.0005$), referral source ($\chi^2 = 12.967$, $df=3$, $p=.005$) and whether or not the parent or caregiver was court-ordered to attend classes ($\chi^2 = 24.791$, $df=1$, $p<.0005$). The results suggest that participants were more likely to complete the program if they were male, people of color (African American or Hispanic/Asian/Other, not White), married, had attained higher levels of education (high school or college), and had higher income levels. In addition, as may be expected, parents who were court-ordered to attend the parent training were more likely to complete the program than those who were not court-ordered. There were no significant differences in completers and non-completers in their relationship to the child ($p=.602$), the child's special needs (yes or no; $p=.502$), or child placement status (in home vs. at least one child in out of home; $p=.877$).

Program Completion

Results suggest that parents or caregivers are somewhat more likely to complete the program if they have the following characteristics:

- Older (slightly)
- Male
- African American or Hispanic, Asian or Other (not White)
- Married or divorced (not single)
- High school graduates
- Higher income(not <\$10,000)
- Court-ordered

- Report less appropriate attitudes about corporal punishment at baseline, although both groups scored below average.

- Report more appropriate family roles (less role reversal) and expectations supporting the child's power and independence at baseline, although below average.

- Report slightly higher self esteem at baseline, although perhaps not of practical significance.

Table 3. Characteristics of PPP Completers and Non-completers, 2002 - 2007

	Completers	Non-completers	Total
Age****	<i>n</i> =1,191 M=34.14 (SD=9.779)	<i>n</i> =832 M=32.50 (SD=9.358)	<i>n</i> =2,023 M=33.47 (SD=9.640)
Gender****	<i>n</i> =1,191	<i>n</i> =834	<i>n</i> =2,025
Men	34.9%	26.6%	31.5%
Women	65.1%	73.4%	68.5%
Race or ethnicity*	<i>n</i> =1,178	<i>n</i> =828	<i>n</i> =2006
African American	72.6%	70.7%	71.8%
White	22.1%	26.0%	23.7%
Hispanic, Asian or Other Ethnicity	5.3%	3.4%	4.5%
Marital status**	<i>n</i> =1,128	<i>n</i> =788	<i>n</i> =1,916
Married	29.1%	22.7%	26.5%
Single	60.2%	67.0%	63.0%
Widowed	1.5%	2.0%	1.7%
Divorced	9.2%	8.2%	8.8%
Education***	<i>n</i> =1,109	<i>n</i> =777	<i>n</i> =1,886
College education	21.6%	19.3%	20.6%
Completed high school	38.3%	32.4%	35.9%
GED	9.1%	9.0%	9.1%
Did not complete high school	31.0%	39.3%	34.4%
Relationship to child	<i>n</i> =1,079	<i>n</i> =760	<i>N</i> =1,839
Biological parent	95.7%	96.6%	96.1%
Step-parent	1.8%	1.8%	1.8%
Kinship care	2.0%	1.3%	1.7%
Foster or adopted parent	0.5%	0.3%	0.4%
Child placement	<i>n</i> =1,075	<i>n</i> =745	<i>n</i> =1,820
In home	38.9%	38.5%	38.7%
At least one child in out of home care	61.1%	61.5%	61.3%
Child has special needs	<i>n</i> =956	<i>n</i> =670	<i>n</i> =1,626 ²
Yes	66.3%	67.9%	67.0%
No	33.7%	32.1%	33.0%
Court ordered?****	<i>n</i> =1,080	<i>n</i> =746	<i>n</i> =1,826
Yes	65.5%	53.9%	60.7%
No	34.5%	46.1%	39.3%

² Note: Close to one-fifth (19.7%) of cases were missing data on special needs of the child.

	Completers	Non-completers	Total
Referral source*	<i>n</i> =752	<i>n</i> =539	<i>n</i> =1,291 ³
DSS (incl. CPS & Foster Care)	64.0%	67.9%	65.6%
Parole and probation	20.5%	14.7%	18.0%
Self referred	14.0%	17.1%	15.3%
Custody	1.6	.4%	1.1%
Family income****	<i>n</i> =1,091	<i>n</i> =747	<i>n</i> =1,838
< \$10,000	54.2%	67.3%	59.5%
\$10,000 – 18,999	16.5%	11.9%	14.6%
\$19,000 – 25,999	11.4%	7.8%	9.9%
\$26,000 – 40,999	11.3%	8.4%	10.1%
\$41,000 or more	6.7%	4.6%	5.8%

p*<.05 *p*<.01 *** *p*<.005 *****p*<.0005

Table 4. Baseline AAPI Scores and Rosenberg Self-esteem Scores for Completers and Non-completers of the PPP program

	Completers			Non-Completers		
	N	Mean	(Std. Dev.)	N	Mean	(Std. Dev.)
AAPI						
Developmental expectations	1,164	4.69	(1.743)	823	4.59	(1.703)
Empathy	1,163	4.64	(2.075)	822	4.50	(2.140)
Corporal punishment*	1,162	4.49	(1.866)	819	4.70	(1.857)
Role reversal*	1,161	4.60	(2.002)	823	4.37	(1.908)
Oppression of power and independence*	1,161	4.62	(2.154)	823	4.42	(2.308)
Rosenberg Self-esteem**	1,106	17.41	(5.215)	793	18.11	(5.230)

p*<.05 *p*<.01

³ Note: More than one-third (36.2%) of cases were missing data on referral source.

The apparent differences between completers and non-completers must be taken into consideration when interpreting results of the repeated measures analyses and survival analyses in this study. Also, it is important to note that data were missing for many of these characteristics (e.g. family income was available for n=1,838 of the 2,025 participants, or 91%), which could bias results if they are not missing at random.

Were there differences in risk and protective factors for completers and non-completers at baseline? Independent t-tests were run to determine whether or not differences exist in participants' baseline scores on the AAPI-2 and Rosenberg scales for those who later completed the program and those who did not complete the program. Baseline AAPI-2 scores for both groups were below average, indicating some strengths and some weaknesses in parenting knowledge and attitudes (see Table 4). There was a statistically significant difference in completers' and non-completers' scores on the corporal punishment ($t=2.488$, $df=1979$, $p=.013$), role reversal ($t=-2.593$, $df=1982$, $p=.010$), and independence ($t=-1.984$, $p=.047$) subscales of the AAPI at baseline. Parents and caregivers who later completed the program were more likely to have scored *lower* on the corporal punishment subscale at baseline compared to non-completers. Conversely, parents and caregivers completing the program scored *higher* on the role reversal (indicating more appropriate family roles) and independence subscales (indicating less oppression of the child's power and independence) compared to non-completers. There was no significant difference in completers and non-completers on their scores for developmental expectations ($p=.212$) or empathy ($p=.138$) at baseline. For the Rosenberg Self-esteem scale (see Table 4) there was also a statistically significant difference between the two groups ($t=2.879$, $p=.004$). Completers were more likely to have scored lower, indicating higher self-esteem at baseline. However, on this 40 point scale the difference of a quarter of a point (.7) may not be of practical significance.

Chi square tests were also run to determine whether the proportion of parents and caregivers who completed the program compared to those who did not complete the program meet the agency's indicator on the personal network matrix. (Raw, continuous scores were not available in the administrative data used for this secondary analysis). There was no statistically significant difference for either family and friends ($p=.098$) or social and community resources ($p=.09$) at baseline.

Were there differences in characteristics for families with children in home versus out-of-home at baseline? Chi square tests revealed significant differences in families with children in home compared to those with at least one child in out-of-home care on the following characteristics: gender ($\chi^2 = 11.598$, $df=1$, $p=.001$), marital status ($\chi^2 = 22.831$, $df=3$, $p<.0005$), income ($\chi^2 = 52.176$, $df=4$, $p<.0005$), education ($\chi^2 = 69.075$, 3 , $p<.0005$), whether or not their child has special needs ($\chi^2 = 5.879$, $df=1$, $p=.015$), whether the parent was court ordered to attend parent training ($\chi^2 = 13.666$, $df=1$, $p<.0005$), the referral source ($\chi^2 = 65.707$, $df=5$, $p<.0005$), and the relationship to the child ($\chi^2 = 11.095$, $df=3$, $p=.011$). The results suggest that caregivers with the children placed at home, as opposed to one or more children in out of home care, are more likely to be female, married, more educated, higher income, have a child without special needs, not be court-ordered, and be referred by a source other than the child welfare agency (self-referral, parole and probation, custody). The children's placement (in home or out-of-home care) was not significantly related to the caregiver's race ($p=.223$). Results of a t-test show no significant difference in the average age of parents with children in home and out of home ($p=.649$). These results must also be taken into account in interpreting the repeated measures analyses and survival analyses.

Assessing Change in Risk and Protective Factors: Repeated Measures Analyses

A key purpose of this study is to examine whether or not there were significant changes in the risk and protective factors reported by participants before and after the intervention, and whether or not there were differences in subgroups of participants on these outcomes. Analysis of variance with repeated measures was the statistical test conducted because it simultaneously tests for differences over time (pre-test and post-test), group (e.g. placement status: in-home vs. out-of-home), and the interactions between time and group (was there a different pattern of change for the groups?). Separate repeated measures analyses were conducted to examine each outcome variable, including caregiver scores on each of the five AAPI subscales and the Rosenberg Self-esteem scale. First these analyses were conducted comparing outcomes by child placement status; later, the analyses were conducted with a smaller sample in order to compare outcomes by referral source.

Data for post test were available only for those parents or caregivers who completed the parent training program, limiting the sample for this analysis to program completers who completed both pre and post test (n=1,191). The sample size for each analysis was further limited by the availability of the data for the grouping variable and outcome variables, as explained in each section below.

Outcomes by placement status. The first set of analyses tested for differences in outcome scores over time (pre and post-test), group (families with children remaining in home compared to families with at least one child in out-of-home care), and group x time interaction. The protective factors – conceptualized as parenting knowledge and attitudes – were measured using five AAPI subscales to assess appropriate developmental expectations, view of corporal punishment, appropriate family roles (parent-child role reversal), empathy, and oppression of power and independence. All cases in which the child's placement status was known (n=1,075) and the caregiver completed the subscales at pre and post test (limiting the sample size further) were included in the analysis. The final sample size for these subscales ranged from n=1,065 to n=1,069, after cases with missing data were deleted (see Appendix B, Table 1). Assumptions were adequately

Comparing Outcomes for Families with Children Remaining Home vs. Children in Out-of-Home Care

Are risk factors reduced and protective factors enhanced at post-test?

- Results suggest that by post-test parents or caregivers' scores improve.
- Parenting knowledge and attitudes scores increased to the normal range for appropriate developmental expectations, discipline, family roles (less role reversal), empathy, and independence.
- Self esteem scores decreased, indicating more self-esteem.

Are there group differences in scores for families with children remaining home compared to families with at least one child in out-of-home care?

- Placement status makes a difference for discipline score. Overall, families with children in out-of-home care score higher on appropriate discipline, compared to families with children remaining home. Both groups show some strengths and deficiencies at baseline.
- Families did not differ significantly by placement status on other parenting measures
- There was a trend (p=.064) towards parents of children in out-of-home care having lower self-esteem than parents whose children remain in the home, although not statistically significant at the p=.05 level.

Are there differences in change over time among these groups?

- The two placement status groups have similar patterns of improvement over time.
- There was a trend (p=.064) toward the OHC group showing greater improvement in self-esteem over time, although not statistically significant at the p=.05 level.

met.

Results from the repeated measures analyses are presented in Appendix B, Table 1. In summary, there were statistically significant changes over time for all five of the AAPI subscales ($p < .0005$) (a main effect of time), suggesting that parenting knowledge and attitudes improved between pre and post-test on each of these measures. For each of the five subscales average STEN scores began in the middle to upper “4” range at pre-test and moved into the “5” range at post-test, indicating movement from having some strengths and some deficiencies into the normal range. In addition, there were statistically significant differences between the two placement status groups on the *view of corporal punishment* subscale. On average, families with children in out-of-home care ($M=4.999$, $se=.064$) had significantly higher scores than families with children remaining at home ($M=4.72$, $se=.080$, $p=.007$). For both groups average STEN scores were in the high “4” range, indicating some strengths and some deficiencies in appropriate parenting, but the out-of-home care group ($M=4.999$) was approaching the normal range of 5 to 6. There were no statistically significant group differences for the appropriate expectations, empathy, role reversal, or independence subscales. Further, there were no time by group interactions, suggesting that the two groups had similar patterns of improvement in parenting knowledge and attitudes.

The caregiver’s self-esteem pre and post intervention was measured using the Rosenberg Self-Esteem Scale. A repeated measures analysis was conducted to examine potential differences in self-esteem scores. The self esteem score was entered as the dependent variable, and the test assessed changes in time (pre and post intervention), group (in home and out-of-home), and time by group interaction (different pattern of change). All cases in which the caregiver completed the Rosenberg scale at both pre-test and post-test and the placement data were available (in home and out-of-home) were included ($N=999$, in-home $n=387$; out-of-home $n=612$). Assumptions were adequately met.

There was a statistically significant change between pre-test ($M=17.218$; $se=.168$) and post-test ($M=15.928$, $se=.158$, $p < .0005$). The declining scores suggest improvement in self-esteem over time. There was a statistical *trend* towards a time by group interaction ($F=3.448$, $p=.064$) and a *trend* towards a difference in the placement status groups ($F=3.447$, $p=.064$). Both groups improved over time, but parents with children in out-of-home care showed a trend toward having worse self esteem and a trend toward greater improvement (decrease in scores) than parents with children remaining at home. For parents in the out-of-home group, scores decreased more than 1.5 points ($M=17.62$, $se=.209$; $M=16.06$, $se=.196$) on average, while parents of children remaining home reported a decrease of less than one point ($M=16.81$, $se=.263$; $M=15.79$, $se=.247$). These trends should be viewed cautiously.

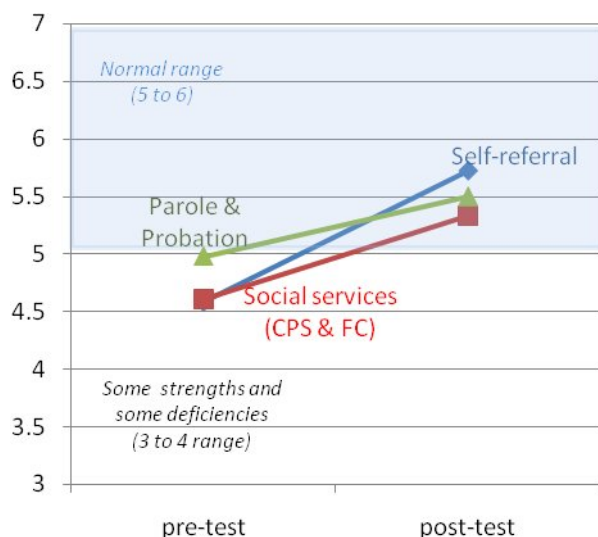
Outcomes by referrals source. Due to the presence of different populations in the program, inherent in having varied referral sources, further analysis was conducted to examine whether there are differences in the outcomes by referral source. The same set of risk and protective factors were examined as intermediate outcomes of the parenting program. All cases in which the referral source was known ($n=752$) and the caregiver completed the subscales at pre and post test were included in the analysis. The final sample size for these subscales ranged from $n=735$ to $n=740$, after cases with missing data were deleted (see Appendix B, Table 2). This analysis is merely exploratory due to the large amount of missing data for the referral source variable. Assumptions were adequately met.

Results from the repeated measures analyses are presented in Appendix B, Table 2. Like the analyses with the larger sample, there were statistically significant changes over time for all five of the AAPI subscales ($p < .0005$) (a main effect of time), suggesting that parenting

knowledge and attitudes improved between pre and post-test. For each of the five subscales average STEN scores began in the middle to upper “4” range at pre-test and moved into the “5”

range at post-test, indicating movement from having some strengths and some deficiencies into the normal range. In addition, there was a statistically significant Time x Group interaction on the subscale measuring appropriate developmental expectations ($F=3.938$, $p=.020$). On average appropriate expectations increased between pretest and posttest, but the increase for parents who self referred (1.14) was greater than the increase for families referred by DSS (.73) and parole and probation (.52). The average increase for this subscale was .78, moving from the area of some strengths and some deficiencies at pretest ($M=4.722$, $se=.078$) and to the normal range at post-test ($M=5.519$, $se=.087$; $F=102.415$, $p<.0005$).

Figure 1 Appropriate Developmental Expectations: Time x Group Interaction



In addition, on the empathy subscale there was a main effect of group ($F=5.930$, $p=.003$). Parents referred by parole ($M=5.183$, $se=.155$) & self-referral ($M=5.064$, $se=.184$) were, on average, in the normal range for empathy, while parents referred by DSS, on average, scored in the lower range, showing some strengths & deficiencies ($M=4.631$, $se=.088$).

Comparing Outcomes for Families Referred by Social Services, Parole, and Self-Referrals

Are risk factors reduced and protective factors enhanced at post-test?

- By post-test parents or caregivers' scores improved.
- Parenting knowledge and attitudes scores increase to the normal range for appropriate expectations of child development, discipline, family roles (less role reversal), empathy, and independence.
- Self esteem scores decrease, indicating more self-esteem.

Are there group differences in scores?

- Empathy scores differed by referral source. On average, families referred by parole and self-referral scored in the normal range, while families referred by social services scored lower, showing some strengths and some deficiencies.
- Families did not differ by referral source on other parenting measures.

Are there differences in change over time among these groups?

- Scores regarding appropriate child developmental expectations increased overall, but the increase for families who were self-referred was greater on average than the increase for families referred by social services and parole.
- For empathy, there is a trend toward a time x group interaction, where self-referred and social service families increased more than parole families.
- The three referral source groups have similar patterns of improvement over time on the corporal punishment, role reversal and independence subscales.

There was also a *trend* toward a Time x Group interaction on the empathy subscale ($F=2.932$, $p=.054$), where scores for self-referred and social service families increased slightly more than parole families. There was no Time x Group interaction for the corporal punishment, role reversal, and independence subscales, suggesting that participants who are self-referred and referred by social services or parole and probation have similar patterns of improvement over time on these subscales.

On the Rosenberg Self-esteem Scale there was a statistically significant change between pre-test ($M=17.349$; $se=.243$) and post-test ($M=16.069$, $se=.227$, $p<.0005$). The declining scores suggest improvement in self-esteem over time. There was no significant effect of group ($p=.200$) and no Time x Group interaction ($p=.920$) for self-esteem.

Discussion

The results of the first phase of this study suggest that some program goals are being achieved, in that protective factors were enhanced and a risk factor reduced among parents and caregivers after participation in the Positive Parenting Program in Baltimore City during 2002 through 2007. Parents and caregivers scored higher after intervention on all five subscales of the AAPI, suggesting improvements in the protective factors related to parenting knowledge and attitudes. Scores moved from below average (some deficiencies and some strengths) into the normal range, indicating more appropriate knowledge of child development and attitudes toward discipline, less oppression of the child's power and independence, less role reversal, and more empathy toward the child after the intervention. Likewise, the risk factor examined, low self esteem, appeared to be reduced after the intervention. Scores on the self esteem scale decreased, which is interpreted as an increase in self esteem after the intervention. These results are consistent with TFT's annual report of outcomes, which includes parents served in multiple counties (Bonham, 2007).

The analyses go a step further by examining outcomes for subgroups of participants. In the first set of repeated measures analyses, findings indicate a group difference on one subscale: parents and caregivers with at least one child in out-of-home care reported slightly more appropriate attitudes toward corporal punishment compared to parents with children remaining home. Since these are self-report measures, it is not clear whether there are actual differences in the behaviors and beliefs of these two groups of parents, or whether the out-of-home care group is reporting more socially desirable answers to increase their chance of successfully completing the parenting class and having their children returned. It is possible that parents with children in out-of-home care may have a greater awareness that certain behaviors and attitudes about corporal punishment may result in their children being removed from home, given their recent experience, and this could either motivate change in their own attitudes or perhaps instill fear that if they express certain views the children may not be returned home.

For the remaining scales there were no statistically significant differences between groups on the parenting scales (at the $p=.05$ level), and there were no statistically significant differences in the pattern of change over time for families with children remaining home compared to those with children in out-of-home care. This suggests similar patterns of improvement for the parents and caregivers with children remaining home and those with children in out-of-home care. This was counter to the hypothesis that families with children remaining home would improve more, since they have more opportunity to apply what they learn with the children. However, it is promising that the program could work equally well for both groups, at least in conveying socially acceptable attitudes and knowledge about parenting.

There was a *trend* toward a difference in the pattern of change for self esteem. Parents with children in out-of-home care reported marginally worse self esteem, and showed marginally greater improvement in self-worth by post-test. If these differences do exist, it would not be surprising that the group that has been judged to have abused or neglected their children and has had the children removed from home may feel less self-esteem. However, more research is needed to test whether in fact there is a difference and what accounts for the difference.

In the exploratory examination of program outcomes by referral source, parents and caregivers referred by social services, parole and probation, and self-referral have similar patterns of improvement over time on the scales measuring their view of corporal punishment, oppression of power and independence, and role reversal. At the same time, findings suggest that families who self-referred to the program showed a greater improvement in appropriate expectations of child development than families referred by social services and parole, although all improved. There were also group differences in reported empathy toward the child. On average, families referred by parole and families self-referred scored in the normal range for empathy, whereas families referred by social services scored lower, showing some deficiencies and some strengths. Tracking the empathy scores over the two time points, there was a *trend* toward caregivers who were self-referred and referred by social service increasing slightly more than caregivers referred by parole. The findings comparing referral source groups are just preliminary, and warrant discussion, but may not be generalizable to all program completers because the referral data were missing for a sizeable portion of the sample.

It is unclear what outcomes non-completers would achieve had they stayed in the program, as post-intervention measures were not available for this group. The differences in completers and non-completers included age, race, income, education, and some baseline scores on outcome measures. The finding that older participants and African American participants were more likely to complete the program while younger participants and white participants were less likely to complete the program is consistent with recent research on participation patterns in home-based family support programs but contrary to earlier research on center-based programs (Daro, McCurdy, Falconnier, & Stojanovic, 2003; McCurdy, Gannon, & Daro, 2003). The apparent differences in program completers and non-completers are discussed further in a discussion of retention, below.

Strengths and Limitations

The results of the current study are promising, particularly because little is known about the impact of parent training programs on families involved with child welfare services (Hurlburt et al. 2007). Unlike prior published studies of parent training programs (e.g. Chaffin et al. 2001), a high percentage of participants in this sample were referred by the child welfare agency. Also, many families in the sample had a child currently placed in out-of-home care, providing the opportunity to discern whether outcomes differed for families with children placed at home compared to out-of-home care.

However, based on the study design – a single group design, with no control group – we cannot rule out alternate explanations for the increase in positive parenting attitudes and improved self-esteem, such as other events or services in the lives of families or the testing effect. In other words, we cannot attribute the apparent improvements in parenting knowledge and attitudes and self esteem to the Positive Parenting Program intervention without a stronger study design. Nonetheless, this movement of scores in the desired direction is promising.

There are other limitations to consider as well. This is a convenience sample so we have no evidence that the findings here can be generalized to other parents and caregivers

participating in similar parent training programs in urban areas. Moreover, the analysis pertains only to parents and caregivers who completed the program. The findings cannot be generalized to those parents and caregivers who participated in but did not complete the program, nor to those who signed up but never attended a class. This is particularly important because there is a relatively high rate of drop out from the program (41%)—although not as high as encountered in some other parent education programs that have been studied (e.g. 46% in Chaffin et al. 2001). The descriptive analyses in this study also point to statistically significant differences in some demographic characteristics and on some baseline scores for the outcome variables for participants who complete the program compared to those who drop out; with this information it becomes clear that findings cannot be generalized to all program participants, since completers and non-completers are distinct in multiple ways.

Using the retrospective administrative data poses both strengths and limitations. The administrative data included data from scales known to be reliable and valid; this was a major strength of the study. At the same time, the database contained only the scores for the scales – and not responses to individual items on the measures – making it impossible to assess the internal consistency of the measures. Because this is a retrospective study the intermediate outcomes data were limited to self report data already available. However, the plan to use administrative records from the child welfare agency in the next phase of the study will provide another source of outcome information to evaluate the effectiveness of the program. It will also allow for the comparison of families who do and do not complete the program. With this retrospective design it is also difficult to assess consistency or variation in the implementation of the intervention. Some variation may exist depending on the specific site and facilitator, but the classes did reportedly consist of the same key components outlined in the logic model.

There is one potential statistical limitation in the repeated measures analyses, although it is unlikely to be a concern. One of the assumptions for the statistical test – the assumption of independence of observations – was assumed to be met based on discussion with staff but could not be tested or addressed prior to analysis. A data set with dependent observations – such as scores from family members participating in the same class who influence each other's responses on the measure – would yield invalid results when conducting analysis of variance with repeated measures. This problem of dependence can be avoided by retaining only one of the family members in the data set when more than one is present. However, in the existing data set it is not possible to identify these relationships. Dependence of observations is unlikely to be a problem if such dependence is a *rare* occurrence. The frequency of family members in the parenting classes was explored with program staff, who indicated that family members or couples infrequently participate in the same parenting class. Given this information, and the large sample size, the assumption of independence of observations was considered to be adequately met. Once complete data from the attendance logs are available this issue will be explored further.

Implications for Practice and Research

The primary purpose of evaluating the Positive Parenting Program is to assess whether the goals of the program are being achieved— to prevent future child abuse and neglect by strengthening families, reducing risk factors and enhancing protective factors – and to optimize service delivery to best achieve these goals. The findings from the first phase of the study, focusing on intermediate outcomes, suggest that five parenting related protective factors (appropriate expectations of child development, view of corporal punishment, power and independence, appropriate family roles, and empathy toward the child) were enhanced and one risk factor (low self esteem) was reduced after intervention. Thus, based on the parents' self-report, it appears that these intermediate goals of the program are being met for those

participants who complete the program whether their children are in out-of-home care or at home. At a minimum, for participants who complete the PPP program it appears to “raise parental awareness of socially acceptable attitudes, behaviors, and practices associated with effective parenting” – like prior evaluations of parent education programs (Johnson et al., 2008, p.210). Also, the apparent increase in self-esteem is consistent with findings from a recent qualitative study; in the study, parents involved with child welfare services expressed that a benefit of participating in a parenting intervention was that they were able to rebuild their sense of self-worth and confidence to parent their children (Russell, Gockel, & Harris, 2007). With these positive findings, the program should continue to be implemented and evaluated.

Future evaluations of PPP should balance the self-reported measures with other techniques of data collection – direct observation of parents and administrative records regarding maltreatment – to corroborate the findings, particularly regarding improvements in parenting attitudes and behaviors. These additional sources of data could help assess whether or not parents with children in out-of-home care really have more appropriate attitudes – perhaps a recent shift – or whether the out-of-home group is simply more aware of the socially desirable answers based upon their recent experience of removal. Introducing direct observation into future evaluations will also provide the opportunity to directly assess skill acquisition, an intended purpose of PPP. This is particularly important because some researchers suggest that education-based programs may do little to help parents actually acquire skills in addition to knowledge (Chaffin et al., 2001). For future evaluation several staff noted that parenting skills and parent-child interaction could possibly be observed during family events, at least for some participants. Another option could be observation of role plays before and after intervention, as seen in the Berard & Smith (2008) study. Also, additional methods to assess the reliability and validity of the findings could be put in place for self-report measures (e.g. enter individual items from the scales, which may be used to calculate scores and assess internal consistency reliability for the scales in this population).

A stronger research design in future evaluations – including control group to help rule out alternative explanations – would help infer whether these promising findings may be attributed to the program. It would be unethical to deny services to some parents in order to form a control group, but other options are available. Parents and caregivers could be randomly assigned to the PPP and to a second program with the same essential goals. The second program could either be an existing TFT program with a different approach to services (e.g. the home visiting program), or it could be an enhanced version of PPP. TFT staff have begun discussing ways to enhance PPP, including integration of community resources throughout the curriculum, among other changes. By randomly assigning parents to the two programs (e.g. PPP or enhanced PPP; or PPP and home visiting), the outcomes could be compared to determine whether or not one program is associated with stronger improvements in the intermediate or long term outcomes. This option would also allow for a cost-effectiveness analysis.

As staff discuss the program goals and future evaluation, a larger question emerges: How long does it take to move from a change in mindset to consistent behavioral changes at home with the child? In a time limited course – 10 to 12 weeks – it is a lofty goal to change behaviors that have been learned and reinforced for years, even lifelong. Nonetheless, the course provides “tools for change”, as one staff member stated. Parents gain an awareness that there is another approach to parenting, which staff believe many parents do begin to implement. Several staff suggested the possibility of a new follow up program and more efforts to connect participants with other TFT programs as a way to maintain and enhance gains from the parent training classes.

An ongoing challenge for PPP – and other parenting programs – is the retention of parents who do not complete the program. It is logical that court-ordered participants are more likely to complete the program. However, in order to better serve all PPP participants and meet the agency's goals, more information is needed to understand why slightly younger, white, lower income (in a very low income population), and less educated participants are more likely to leave, and how staff can better retain and serve the families in the program. McCurdy & Daro (2001) suggest that interventions with the flexibility to adjust the curriculum to fit the parents' needs may help maintain participant involvement. Discussion about how to better fit the goals of the PPP program with the needs of parents – particularly those more likely to leave – is warranted. The issue of differences between completers and non-completers was explored briefly with several staff. Staff suggested that transportation cost and accessibility may help explain the differences in completers and non-completers, particularly with lower income non-completers and white non-completers who may live further from the class locations. This theory is consistent with a prior report on obstacles to attending the PPP program, in which obstacles reported by service *decliners* included lack of transportation, inconvenient location, and inconvenient time (25% each), as well as family crisis (58%), lack of child care (42%), and a need for additional reminders to attend (42%), among others (Badolato, 2005). In the same report *non-completers* reported family crisis as their obstacle to attendance, but only four non-completers responded to the phone survey. When reviewing the results of the current study, staff suggested another potential issue regarding retention of program participants. Staff suggested that parents without a high school education may be more likely to leave the program due to a lack of fit between their lower levels of literacy and the classroom-like setting – which begins with written assessments, and may be a less engaging environment for participants who may not have succeeded in school. TFT staff also suggested that other factors that were not observed in the study – such as untreated substance abuse issues and individual instructor qualities – may also be important in retention of parents in the parent training program. Each of these potential explanations for attrition could be explored in future evaluation.

Continuing Evaluation

The apparent change in attitudes seen in these data is a positive step toward the goal of preventing future child abuse and neglect. At the same time, this phase of the study does not address whether or not maltreatment has been prevented. The long-term goals of the Positive Parenting Program are to increase child safety, stability, permanency, and well-being. The second phase of the study will provide the opportunity to examine safety, stability, and permanency outcomes in the 18 months following program initiation. Child protection and placement data from the statewide administrative database at Department of Human Services Social Services Administration (DHS/SSA) will be used to continue analysis to answer the three main research questions related to long-term outcomes of safety (subsequent child maltreatment reports), stability (removals from home), and permanency (children returned home), using survival analysis. In addition to assessing the proportion of families who experienced maltreatment reports and removals from home (negative outcomes) or returns home (positive outcome), the length of time to these events will be measured, as well as predictors. In addition, with access to maltreatment type data, we plan to examine whether there are potentially different intermediate outcomes for children reported for different forms of maltreatment, comparing families with prior physical abuse reports, prior neglect reports, prior reports with multiple maltreatment types, and families with no prior reports. Taken together, the first and second portions of the study will help illuminate the intermediate and long-term outcomes for families participating in the Positive Parenting Program in Baltimore City, and thus evaluate the extent to which TFT is meeting the intended goals of the program.

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Appendix A.

Logic Model

Appendix B.

Repeated Measures Analysis of Variance Summary Tables