Prevent Child Abuse Vermont

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Prevent Child Abuse Vermont's Programs
Results Based Accountability (RBA)
and Additional Evaluations

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The Results-Based Accountability Framework

Results-Based Accountability (RBA) is a practical guide for non-profit and government accountability. It is a method of making and tracking results of policy and programmatic decisions. The process begins with the identification of societal goals and then moves on to analyze the specific means of achieving those goals. These societal goals (sometimes called results) tend to be broadly-defined and not specific to particular programs (for example, healthy children or safe communities).

Quite often, the RBA process begins with a needs assessment to get first-hand knowledge of the problems that a government agency and/or non-profit are trying to address and those clients with whom they will work. This helps define current conditions and establish a baseline against which progress can be measured.

The next step is to identify indicators that will quantify the progress towards the intended result. For example, RBA practitioners would call the number of emergency room visits an indicator of child health, and incidence of violent crime an indicator of whether communities are safe.

RBA practitioners then analyze strategies that can be used to achieve the desired results. RBA practitioners define strategies as "coherent collections of actions which have a reasoned chance of improving results." For example, a particular agency program encouraging vaccination would be part of a strategy to prevent illness, advancing the goal of healthy children.

Programs are evaluated based on how much they do, how well they do it, and whether anyone is better off, in other words, whether the program actually contributes to achieving the societal goal identified in the first step of the process. The evaluation uses questions in the grid below:

	Quantity	***Quality***
Effort	How much did we do?	How well did we do it?
Effect	Is anyone better off (#)? How many people did we help?	Is anyone better off (%)? What proportion of the population did we help? What changed for the better?

The goal of the analysis is to look critically at how well the program worked, independent of how much effort was expended. The analysis focuses on the results of the program for particular people (referred to as client or customer results to distinguish them from the population-wide result being strived for). A program encouraging vaccination would therefore be judged based on how many children it served and the proportion of the population that has been vaccinated as a result of the program.

NURTURING PARENTING PROGRAMS (NPP) and CIRCLE OF PARENTS (COP) RESULTS

excerpted from the June 30, 2016 State Grant Report

Performance in a Results-Based Accountability Perspective

In keeping with the RBA framework, this report addresses three fundamental questions:
(1) How much did we do? (2) How well did we do it? (3) Is anyone better off?

(1) **How much did we do?**

In State Fiscal Year 2015-16, PCAVT conducted:
44 Nurturing Parenting Programs, serving 417 parents and 753 children for a total of 1170 people
15 Circle of Parents Support Groups, serving 354 parents and 598 children for a total of 952 people
In total, we implemented 59 parent education and support groups, serving 2122 people.

(2) **How well did we do it?**

We did it with excellent program quality and efficiency. We conducted well-established, evidence-based programs all around the State with a team of four staff (one Program Manager, three Regional Coordinators), 180 volunteers, and over 200 collaborating partners. We adhered to program structure with fidelity. We trained all volunteers in the philosophy and curricula, mandated reporting, group dynamics, and team building. We also employed process and outcome measures to assess how we and the program participants were doing. The primary outcome measures employed were scientifically validated instruments, namely the Adult Adolescent Parenting Inventory (AAPI) and the Protective Factors Survey.

(3) **Is anyone better off?**

The 2015-16 results showed a significant improvement on all five constructs by NPP participants:

- 14% increase in knowledge of child development and appropriate expectations for children
- 25% improvement in empathy
- 17% increase in knowledge of alternatives to corporal punishment
- 16% improvement in assuming appropriate family roles
- 10% improvement in appropriately encouraging children's independence.

For the Circle of Parents Support Groups participants said they experienced:

- 17% increase in improved family functioning
- 21% increase in greater social support
- 15% increase in positive parenting skills and knowledge of child development
- 12% experienced increased concrete support
- 19% increase in improved bonding and nurturing

These responses show that members felt more able to cope with challenges within their families, learned about child development, improved communications, and experienced improved bonding and connections.

SHAKEN BABY SYNDROME PREVENTION (SBS) RESULTS

excerpted from the June 30, 2016 State Grant Report

Performance in a Results-Based Accountability Perspective

In keeping with the RBA framework, this report addresses three fundamental questions:
(1) How much did we do? (2) How well did we do it? (3) Is anyone better off?

(1) **How much did we do?**

In State Fiscal Year 2015-16, PCAVT did:

- 183 Middle School and High School trainings serving 1838 students and 107 educators
- 9 Health Care providers were trained
- All 12 Hospital Maternity Units are engaged, 7 hospitals do parent trainings with signed pledge forms which have been shown to reduce incidences of SBS by 50% when used in combination with training.
- 9 trainings in corrections settings serving 86 participants
- 42 community based trainings to babysitting classes, home visitors, and parents participating in PCAVT's Nurturing Parenting Programs, serving 395 participants.

(2) **How well did we do it?**

Our reflective post-pre test measures participants reflections on the knowledge they've gain after the training as compared to their knowledge before the training. Participants continue to report large gains in knowledge from this training. Not all hospitals are utilizing the entire program with new parents but our Shaken Baby trainer meets with each hospital regularly to train new staff. Our school based trainings served 1838 students, which represents approximately 31% of high school freshman students.

(3) **Is anyone better off?**

The 2015-16 results showed a significant improvement in participants knowledge:

- 95% increased their knowledge of how to choose appropriate caregivers for infants and toddlers.
- 94% gained more knowledge on the reasons why babies and toddlers cry and safe ways to soothe them.
- 98% feel more comfortable on how to provide a safe sleeping space for an infant or toddler.
- 100% increased their knowledge about Shaken Baby Syndrome/Abusive Head Trauma and the possible outcome
- 62% stated that prior to the training they did not know of resources within their community that could help them with questions about child development and care.

Six months after participants attended a training, follow up contact was made to 92 adult participants:

- 99% said they would like us to return or would recommend this training to others.
- 94% had shared what they had learned from this training with parents, co-workers and their own spouse.

Key information that these participants recalled were:

- Stress Management Tips from the training
- It's Never Okay to Shake A Baby
- Babies communicate through crying
- It's Okay to ask for Help
- No baby has ever died from crying

SEXUAL ABUSE FREE ENVIRONMENTS FOR TEENS (SAFE-T) RESULTS

excerpted from the June 30, 2016 State Grant Report

Performance in a Results-Based Accountability Perspective

In keeping with the RBA framework, this report addresses three fundamental questions:
(1) How much did we do? (2) How well did we do it? (3) Is anyone better off?

(1) **How much did we do?**

In State Fiscal Year 2015-16 PCAVT:

- Conducted 5 faculty and staff trainings for 4 schools impacting 204 school staff members
- Partnered with 25 schools to implement the SAFE-T program during the year with 1535 students
- Sent parent newsletters to all schools using SAFE-T introducing the program and the approach to prevention
- Attended 64 on site school visits to respond to school needs for program planning meetings, staff trainings, parent events, and co-facilitation.
- Conducted 2 parent events
- Co-facilitated lessons in 6 schools for a total of 18 class sessions
- Trained 5 community trainers to bring the SAFE-T program, trainings and support to schools in their communities.

(2) **How well did we do it?**

Program fidelity is of utmost importance when implementing child sexual abuse prevention programming. PCAVT conducts ongoing process evaluations to assess program fidelity. Process evaluation efforts include quantitative and qualitative training assessments including training evaluations and attendee interviews, lesson observations, and ongoing check-ins with implementing educators. PCAVT works closely with implementing schools to ensure that educators receive appropriate curriculum training as well as ongoing support so that the SAFE-T program is utilized as intended and with fidelity.

(3) **Is anyone better off?**

All students complete pre- and post-assessments to assess knowledge, attitudes, and behaviors prior to the implementation of the SAFE-T Program and following the completion of the program.

A primary goal of the SAFE-T Program is to educate students on the dynamics of sexual abuse. This includes debunking common myths concerning abuse and increasing awareness of the potential for healing and change both on the part of those who have been victimized and those who have displayed sexually offending behaviors.

As part of PCAVT's evaluation efforts, t-tests are run for all student assessment questions to determine whether changes in student knowledge and behavior show statistical significance.

In the 2015-2016 academic year, the Knowledge of Sexual Abuse Dynamics construct showed statistical significance at the $p \leq .001$ level.

Strong connections with the schools during implementation and the all school staff trainings provides school communities resources, tools and knowledge for helping to provide safe and nurturing environments for youth.

CHILD SEXUAL ABUSE PREVENTION WORKSHOPS (CSAP) RESULTS

excerpted from the June 30, 2016 State Grant Report

Performance in a Results-Based Accountability Perspective

In keeping with the RBA framework, this report addresses three fundamental questions:
(1) How much did we do? (2) How well did we do it? (3) Is anyone better off?

(1) **How much did we do?**

In State Fiscal Year 2015-16:

119 trainings were conducted in PCAVTs 8 child sexual abuse prevention workshops

Training participants included licensed child care centers directors and staff, registered home child care providers, foster parents, guardians ad litem, teachers, school counselors, school principals, DCF professionals, Children's Intergrated Services professionals, nurse family partnership staff, parents, mental health professionals, and foster parents.

1037 participants were trained in our 8 workshops. Over 50% of the participants are actively working with children and families at high risk.

Participants reported that through their professional roles at work with children these trainings will positively impact the 11,526 children these professionals serve.

110 of the participants are also parents or foster parents themselves, extending the program's influence to their own children.

(2) **How well did we do it?**

All 8 of PCAVT's CSAP workshop trainings are implemented with a strong emphasis on fidelity and adherence to training objectives. Prior to all trainings, the training objectives are reviewed with participants. All training participants complete the state Common Evaluation to assess the impact of the training as well as how well the training achieved the objectives.

99% of all attendees reported that the trainings partially or fully met the training objectives.

100% of training participants reported that they liked the training.

100% of participants reported that attending the training was worth their time.

(3) **Is anyone better off?**

The 2016 results show significant increases in knowledge as compared to before attending these workshops. The following statistics are an averaged measure from the January – June 2016 period and July – December 2015 periods.

Act 1/Commit to Kids	**Before the Training**				**After the Training**			
	Excellent	Above Average	Average	Below Average	Excellent	Above Average	Average	Below Average
My knowledge of signs and symptoms of child sexual abuse	11%	42%	43%	5%	45%	50%	5%	0%
My knowledge of grooming signs	10%	21%	41%	29%	45%	49%	5%	1%
My knowledge of the Act 1 mandate as it pertains to early care and education providers.	8%	19%	40%	34%	43%	43%	14%	1%
I feel comfortable recognizing both touching and non-touching forms of child sexual abuse.	20%	63%	18%	1%	61%	38%	1%	1%
I feel comfortable making reports of suspected child abuse to DCF.	31%	53%	12%	4%	63%	36%	1%	1%
I feel comfortable hearing a child's disclosure of abuse.	30%	56%	12%	4%	65%	33%	2%	1%

CHILD SEXUAL ABUSE PREVENTION WORKSHOPS (CSAP) RESULTS

Nurturing Healthy Sexual Development	Before the Training				After the Training			
	Excellent	Above Average	Average	Below Average	Excellent	Above Average	Average	Below Average
My knowledge of normal, concerning, and very concerning sexual behavior in children.	6%	32%	55%	8%	37%	57%	7%	0%
My knowledge of the information a young child needs in order to nurture healthy sexual development.	5%	29%	54%	13%	37%	52%	12%	0%
My knowledge of the potential signs and symptoms of child sexual abuse.	10%	29%	53%	9%	38%	52%	10%	1%
I feel comfortable answering questions about sexuality.	15%	63%	19%	4%	46%	53%	2%	0%
I feel comfortable teaching children to use anatomically correct names for body parts.	42%	43%	13%	3%	62%	37%	2%	0%
I feel skilled in handling disclosures from children.	21%	60%	18%	2%	44%	54%	2%	0%

Strengthening Families Approach in Action	Before the Training				After the Training			
	Excellent	Above Average	Average	Below Average	Excellent	Above Average	Average	Below Average
My knowledge of positive ways to work with parents that will prevent child abuse.	1%	35%	56%	4%	30%	52%	12%	0%
My knowledge of strategies to prevent child sexual abuse.	4%	36%	52%	9%	29%	60%	11%	1%
My knowledge of resources available to parents (hand-outs, websites, Home Companion, etc.)	5%	22%	53%	14%	29%	54%	18%	1%
I feel comfortable modeling parenting skills for families	27%	64%	9%	0%	62%	36%	1%	1%
I feel that my work with families reduces the risk of child abuse.	30%	67%	4%	0%	63%	35%	2%	0%
I understand how my work with children builds their social and emotional competence.	40%	57%	3%	0%	74%	27%	0%	0%

CHILD SEXUAL ABUSE PREVENTION WORKSHOPS (CSAP) RESULTS

Care for Kids	Before the Training				After the Training			
	Excellent	Above Average	Average	Below Average	Excellent	Above Average	Average	Below Average
My knowledge of the adult's role in protecting children from sexual abuse.	23%	38%	39%	0%	33%	58%	9%	0%
My knowledge of how empathy, communication, and accountability help prevent the development of abusive behaviors.	23%	23%	54%	0%	33%	58%	9%	0%
My knowledge of how the Care for Kids program increases social and emotional development in young children.	7%	14%	29%	50%	30%	31%	31%	8%
I feel comfortable answering children's questions about sexuality.	23%	77%	0%	0%	58%	42%	0%	0%
I feel comfortable teaching children to use anatomically correct names for body parts.	54%	46%	0%	0%	77%	23%	0%	0%
I feel comfortable using non-blaming language while teaching about child sexual abuse prevention constructs.	31%	54%	15%	0%	54%	46%	0%	0%

Understanding and Responding to the Sexual Behavior of Children	Before the Training				After the Training			
	Excellent	Above Average	Average	Below Average	Excellent	Above Average	Average	Below Average
My ability to recognize healthy vs. abusive sexual behaviors in children.	6%	28%	60%	7%	29%	65%	7%	0%
My understanding of child-to-child sexual abuse and perpetration prevention.	3%	17%	65%	16%	23%	67%	11%	0%
My knowledge of communication, empathy, and accountability as universal goals for healthy sexuality.	6%	23%	59%	10%	33%	60%	8%	0%
I feel skilled in evaluating sexual interactions of children (consent, equality, coercion)	6%	55%	34%	6%	39%	60%	1%	1%
I feel skilled in mandated reporting.	23%	52%	21%	5%	49%	48%	3%	1%
I feel skilled in responding to children's sexual behaviors.	8%	57%	31%	6%	46%	58%	2%	0%

CHILD SEXUAL ABUSE PREVENTION WORKSHOPS (CSAP) RESULTS

Overcoming Barriers to Protecting Children From Sexual Abuse	Before the Training				After the Training			
	Excellent	Above Average	Average	Below Average	Excellent	Above Average	Average	Below Average
My knowledge of the behaviors that are considered sexual offenses.	9%	21%	63%	7%	33%	63%	4%	0%
My knowledge of facts about adults who sexually abuse children.	5%	27%	63%	5%	24%	72%	4%	0%
My knowledge of strategies to have an effective conversation with someone who crosses boundaries.	5%	12%	53%	30%	36%	54%	16%	0%
I feel comfortable speaking with someone who has crossed a line.	14%	46%	32%	8%	46%	42%	8%	0%
I feel comfortable making reports of suspected child abuse to DCF.	33%	46%	19%	2%	57%	39%	0%	4%
This training has increased my ability to access and use community resources and DCF.	25%	65%	10%	0%	59%	37%	0%	4%

APPENDIX:
PROGRAM DESCRIPTIONS:

Shaken Baby Syndrome/Abusive Head Trauma/ Safe Sleep Project Parents of newborns in Vermont are being informed about how to safely handle stressful times with infants, the dangers of shaking a baby and the risks of co-sleeping through the efforts of our SBS/AHT/Safe Sleep Trainer. Our goal is for all Vermonters to know how they can prevent child abuse as well as accidental harm.

SBS/AHT and co-sleeping are the most prevalent ways that infants die in the United States; excluding car accidents and illness. Since PCAVT adopted pediatric neurologist Dr. Mark Diaz's scientifically evaluated approach, Vermont has seen a dramatic decline in the number of incidents of SBS/AHT.

PCAVT's SBS/AHT /Safe Sleep Project, includes three components. The first is hospital based which involves a newborn's parents viewing a video, having a conversation with specifically trained nurses and then signing a certificate acknowledging receipt of the training about safe ways to comfort a crying infant, the dangers of co-sleeping and the dangers of shaking a baby. Parents are told that a carbon copy of the certificate is sent to PCAVT's office.

The second is PCAVT SBS/AHT/Safe Sleep Trainer going to high schools throughout Vermont to deliver a training designed to educate high school freshmen about SBS/AHT /Safe Sleep and how to safely care for a crying infant. These young adults are potential baby sitters, childcare providers and future parents.

The third is PCAVT SBS/AHT /Safe Sleep Trainer visiting pediatric offices to train physicians and staff nurses in SBS/AHT/Safe Sleep parent guidance on safe care of crying babies, during well child check-ups and how to sensitively check in with parents about their stress levels and give preemptive guidance about infant crying and safe sleep recommendations. All twelve hospitals with birthing centers have been trained in the Dr. Mark Diaz model by PCAVT's SBS/AHT Trainer assisted by pediatricians, Doctors Karyn Patno and Laura Murphy. Use of this program in birthing centers makes it possible to provide training to approximately 80%+ of newborn parents each year. PCAVT's SBS/AHT trainer is in contact with the nursing staff monthly to answer questions, schedule training of new staff and follow up on needs for new certificates and other materials that are provided by PCAVT at no charge.

Pre and post tests are administered for all community trainings for adults and youth to measure increases in knowledge. After 4-6 months, following a training, approximately 15% of adults are contacted by email, or mail, with a follow up series of questions to determine what the attendees recall from the SBS/AHT/Safe Sleep training, to see if they have changed any of their child care practices, retained what they learned and how many others they have spoken to about the training content.. The results from both forms of evaluation are positive and strong. Attendees show increases in knowledge and retention of stress management techniques. Since we convinced hospitals to use the Dr Mark Diaz model we have seen a dramatic decline, (90%) in the number of known SBS/AHT incidents.

Our objectives are:

- Parents/Students will be able to define SBS/AHT and identify signs and symptoms
- Parents/Students will formulate a plan for handling frustration, anger and stress with their child (or life events)
- Parents/Students will be able to identify available resources within their community for additional assistance and/or information
- Parents/Students will learn about the recommended sleep practices for infants and young children
- Parents/Students will understand "It's Never Okay to Shake A Baby"
- Physicians/Professionals will discuss, evaluate and determine the best practices for instructing parents on how to safely calm a crying baby
- Physicians/Professionals will discuss, evaluate and determine the best practices for instructing parents on safe sleep practices for infants and young children

Nurturing Parenting Programs focus on family life skills including healthy communication, non-abusive discipline, how to have family meetings, developing empathy, preventing child sexual abuse, substance abuse, dealing with anger, reintegrating into family life after serving in the military overseas, etc. Approximately 73% of participants came voluntarily; most were self-referred, but many also came at the suggestion of a professional, and 27% of participants were required by Family Court or DCF to take parenting education classes. Outcomes were measured that gauges participants' likelihood for child abuse or neglect in five constructs that are commonly found in abusive parenting. Participants demonstrate clear understanding of the concepts in the curriculum and left with a better understanding of child development, improved empathy, communication and parenting skills. Group test scores indicate participants have acquired more positive and nurturing parenting skills and a lower risk of abusive behaviors.

Prevent Child Abuse Vermont is expected to deliver a minimum of 50 Nurturing Parenting Program Evidence-Based Curricula/Circle of Parents Support Groups (with no fewer than 8 of the programs being offered within Correctional facilities) from the following list:

- Nurturing Father's Program (13 weeks)
- NPP for Families with Children 0 - 5 (16 weeks)
- NPP for Families with Children 5 – 11 (15 weeks)
- NP for Families in Recovery from Substance Abuse (18 weeks)
- NP for Teenage Parents (16 weeks)
- NP for Military Families (15 weeks)
- NP for Parents and Their Adolescents (12 weeks)
- Prenatal NPP (9 weeks)
- NP for Parents with Special Learning Needs and Their Children (17 weeks)
- NP for Foster and Adoptive Families (12 weeks)
- Inside Out Dad Program to the Northern and Northwest State Correctional Facilities (12 weeks)
- Circle of Parents Support Groups (Ongoing)

Circle of Parents Support Groups are professionally facilitated, peer led support groups. They provide an empowering, supportive environment where participants practice mutual self-help for the prevention of child abuse. Approximately 75% percent of all Circle members in 2014-15 were self-referred. Parents came because they wanted help and recognized that they needed it. Circles are evaluated through the Protective Factors Survey. Our results demonstrated that Circle of Parents Support Groups significantly improved on all five protective factors, including better parental resilience, social support, knowledge of child development, and nurturing and attachment. Research has documented that parent support groups stop child physical abuse faster than any other form of treatment. Emotional abuse decreases in direct proportion to the length of time a parent remains in the group.

PCAVT's Family Support Programs work closely with approximately 200 agencies, organizations, schools, mental health centers, and other community entities throughout Vermont to implement Nurturing Parenting Programs and Circle. It is our goal not only to provide quality programs, but to work together with each community to provide programs that will meet local needs. Our collaborating partners help us decide which particular programs to offer in specific communities and refer parents and families to programs, provide meeting space, help us find volunteers and become group facilitators, engage in advertising and promotion of programs, and help provide supplies and food for the program, according to their resources.

Child Sexual Abuse Prevention Early care and education providers choose from eight 2-3 hour workshops that count toward professional development through the Northern Lights Career Development Center. The Childcare Resource and Referral Network promotes these workshops, as do local coalitions. PCAVT trainers work with the local networks to schedule and advertise these workshops.

The workshops are:

Nurturing Healthy Sexual Development
Care for Kids: Early Childhood Sexuality and Abuse Prevention
Understanding and Responding to the Sexual Behavior of Children
Informed Supervision of Juveniles Who Have Sexually Offended
Plugged-in: Technology, the Internet and Child Safety
Overcoming Barriers to Protecting Children from Sexual Abuse
Act 1/Commit to Kids
The Strengthening Families Approach in Action: An Overview

The Sexual Abuse Free Environment for Teens™ (SAFE-T) is a child sexual abuse prevention program for grades 7 & 8 was first piloted in 1994. Since then SAFE-T has continued to develop in content, be scientifically evaluated, field studied and is now in its third edition. SAFE-T includes classroom instruction, training for school faculty and staff and a series of parent nights. The classroom component is structured around helping youth identify factors that puts them at risk for being hurt and for hurting others, as well as developing protective factors and enhancing resilience. The curriculum provides students with a safe space to develop skills in communication, interpersonal relations, gain an understanding of consent and decision making needed to promote healthy relationships free of sexually abusive attitudes and behaviors.

SUMMARY:

All of PCAVT's work is focused on meeting the Agency of Human Services State Outcomes:

- Children Live in Stable, Supported Families
- Youth Choose Healthy Behaviors.

Additionally, our work addresses the National Center for Injury Prevention and Control at the Centers for Disease Control's focus on Safe, Stable, Nurturing Families, Schools and Communities.

We integrate, collaborate, train trainers, and share knowledge and resources with State and community partners, individuals and institutions, eg. Our staff present at UVM, Norwich, Community College and State Colleges classes learning about child abuse prevention. We receive consultation from UVM researchers and researchers from around the country on our approach and evaluation methods and results. We accept many college interns as well as Reach-Up participants, Supported Employment workers, Vermont Associates clients and other volunteers. We present at community clubs, such as The Federation for Women's Clubs, Rotary and Kiwanis Clubs, etc.

In short, we do all we can with what we have to provide the most needed, accessible prevention programs in concert with State, local and national entities that we possibly can.

Thank you for seeking a deeper understanding of our work. Your interest and support is greatly appreciated by all of us at Prevent Child Abuse Vermont.

VERMONT CHILD ABUSE STATISTICS 1990-2015

THE FACTS:

- There has been a 60% decrease in the number of child sexual abuse cases compared to 1990.
- In 1992, there was a high of 811 cases of child sexual abuse. There has been a 62% decrease in the number of cases since then.
- Although the percentage of child sexual abuse perpetrators under age 20 is now (~31%), the number of young perpetrators decreased by 60% since 1990.

Sexual Abuse In 1990:

- 768 children were sexually abused
- 46% of all child abuse cases were sexual abuse cases
- There were 260 perpetrators of child sexual abuse under age 20
- 43% of perpetrators of child sexual abuse were under age 20
- 9% of sexual abuse victims were under age 3
- 55% of sexual abuse victims were between 4-12 years of age
- 32% of sexual abuse victims were 13 years of age or older

Sexual Abuse In 2012:

- 323 children were found to have been sexually abused
- 53% of all child abuse cases were sexual abuse cases or risk of sexual harm cases
- There were 116 (41%) individuals under 20 who perpetrated child sexual abuse
- 33% of sexual abuse victims were ages 5 and under
- 46% of sexual abuse victims were 6-13 years of age
- 22% of sexual abuse victims were 14 years of age or older

Sexual Abuse In 2015:

- 306 children were found to have been sexually abused
- 43% of all child abuse cases were sexual abuse cases or risk of sexual harm cases.
- There were 97 (31%) individuals under 20 who perpetrated child sexual abuse
- 12% of sexual abuse victims were ages 5 and under
- 50% of sexual abuse victims were 6-13 years of age
- 38% of sexual abuse victims were 14 years of age or older

VERMONT CHILD ABUSE STATISTICS 1990-2015 cont.

ALL FORMS OF CHILD ABUSE IN 1990:

- There were 2,580 reports of child abuse
- A total of 1,668 children were victims of child abuse
- 768 children were victims of sexual abuse
- 483 children were victims of neglect/risk of harm
  (In 1997, risk of harm and neglect were distinguished from one another)
- 417 children were victims of physical abuse

ALL FORMS OF CHILD ABUSE IN 2012:

- There were 2,536 reports of child abuse accepted for investigation
- Approximately 713 unique child victims were found to have been abused or neglected.
- 323 children* were victims of sexual abuse
- 399 children were victims of neglect/risk of harm (135 risk of sexual abuse; 225 risk of harm; 39 emotional/neglect)
- 126 children were victims of physical abuse

ALL FORMS OF CHILD ABUSE IN 2015:

- There were 2,675 reports of child abuse accepted for investigation
- Approximately 945 unique child victims were found to have been abused or neglected.
- 306 children* were victims of sexual abuse
- 397 children were victims of neglect/risk of harm (85 risk of sexual abuse; 283 risk of harm; 29 emotional abuse/neglect)
- 157 children were victims of physical abuse

***A child may be the victim of more than one type of abuse.**

Source: Vermont Department for Children and Families
www.dcf.state.vt.us

Family Development Resources, Inc.

Nurturing Parenting Programs®

Over 30 years of Evidence

History and Development of the Adult-Adolescent Parenting Inventory (AAPI) and the Nurturing Parenting Programs®.

Development of the Adult-Adolescent Parenting Inventory (AAPI)

In 1978, Dr. Bavolek developed the Adolescent Parenting Inventory (API) as a doctoral student at Utah State University. The Adolescent Parenting Inventory (API) was designed to assess the parenting beliefs and practices of abused and non-abused adolescents. Responses to the API would indicate the risk level of pre-parent teens in replicating the abusive and neglecting parenting practices they experienced during the process of growing up.

Critical to the study was identifying the parenting practices that represent child maltreatment. In essence, what are the practices of child abuse and neglect? Five specific behaviors were identified and validated from the on-going research with abused and non-abused teens. The constructs of child maltreatment are:

A. Inappropriate developmental expectations of children;
B. Parental lack of empathy for their own needs and for the needs of their children;
C. A strong belief in the use of corporal punishment as a means of punishing children for their disobedience;
D. Reversing parent-child roles leading to robbing the child of their childhood;
E. Oppressing children's power and independence.

The research findings of the study indicated that teens with verified histories of abuse and neglect did indeed express significantly ($P < .001$) more abusive parenting beliefs in all five constructs than teens without verified histories of maltreatment. Gender also indicated significant ($P < .001$) differences. Males as a population expressed more abusive parenting practices than females.

Research studies continued in assessing risk levels of adult and teen parent populations. Teen parents and adult parents charged with child abuse and/or neglect did indeed express significantly ($P<.001$) more abusive parenting beliefs and practices than adult and teen parents without verified charges of maltreatment.

Today, the Adult-Adolescent Parenting Inventory (AAPI-2) is widely utilized both nationally and internationally, having assessed nearly 3 million adults and teens since its initial development in 1978.

Development of the Nurturing Parenting Programs® (NPP)

In 1980, the National Institute of Mental Health (NIMH) funded a half-million dollar, six state research project to Dr. Stephen Bavolek while he was at the University of Wisconsin-Eau Claire. The purpose of the research was to develop and validate a proven program to treat and prevent child abuse and neglect. The grant was awarded to Dr. Bavolek for his years of research in developing and validating the Adult-Adolescent Parenting Inventory (AAPI-2).

The Nurturing Parenting Program® (NPP) was developed and validated in 1983 utilizing the five parenting constructs of the AAPI to form the foundation of the lessons of the Nurturing Parenting Program®. In this manner, the AAPI provided the level of risk assessment and the Nurturing Parenting Program® provided the treatment. The NIMH study showed remarkable and significant changes in positive family interactions. Findings of the three year project included:

- A retention rate of 83% of DSS/DCF families completing the 15 session group-based program.
- Significant posttest gains in positive personality characteristics, family functioning, parenting beliefs and knowledge of proper (non-abusive) parenting strategies.
- Most importantly, longitudinal follow-up on recidivism rates was 7% of the 95 families completing the program.

Important to recognize that in the mid-1980s, no valid or published parenting programs were available for families charged with child maltreatment. The Nurturing Parenting Program® was the first family-based program designed specifically for parents who were identified as abusive and/or neglecting of their children (treatment) or who were high risk for child maltreatment (prevention/intervention).

The Recognition of Evidence-Based Programs: Nurturing Parenting Ratings

Based on the findings of the initial NIMH study, the Nurturing Parenting Program® for School Age Children was recognized by the Office of Juvenile Justice and Delinquency Prevention (OJJDP), the Center for Substance Abuse Prevention (CSAP), and Substance Abuse, Mental Health Services Administration (SAMHSA), and other government and state agencies as an evidence-based program; the only parenting program for the treatment of child abuse and neglect.

In November 2000, OJJDP devoted an entire issue of their Newsletter to the quality of the Nurturing Parenting Program as a proven treatment program. Years later, the California Evidence Based Clearinghouse (CEBC) also recognized the research and findings of the Nurturing Parenting Programs® as evidence-based programs.

The National Registry of Evidence-based Programs and Practices (NREPP) developed as a branch of SAMHSA also recognized the research findings and the effectiveness of the Nurturing Programs® as evidence-based programs. Over the years, thirty-five additional programs and studies have been conducted. The results of these studies are available on line attesting to the effectiveness of the Nurturing Parenting Programs®. Links are provided to NREPP web site and to the Summary Research Report of the Nurturing Programs, and to the CEBC web site.

Changing Criteria for Evidence-Based Status: Randomized Control Trial (RCT) Research Design

The field of parenting education, particularly as it pertains to providing parenting education to families charged with child abuse and neglect, is witnessing a dramatic change in what is being recognized as an evidence-based program. In conducting research to support the effectiveness of a program, there are essentially two categories of research design that are acceptable in the field: Experimental and Quasi-Experimental Designs for Research. The design most used in experimental studies is called Randomized Control Trial (RCT).

A book written in the 1960s by Donald T. Campbell and Julian C. Stanley called Experimental and Quasi-Experimental Designs for Research remains a classic in the field. According to Stanley and Campbell, RCTs are best used to test the efficacy or effectiveness of various types of medical interventions within a patient population. The key feature of the RCT is subjects for the study are assessed for eligibly and recruitment. Assessment of study subjects is an attempt to control for differences. After each subject is assessed, those who are accepted for suitability are randomly assigned to two groups:

- One group is assigned to receive the treatment while;
- The other group does not get any treatment.

Quasi-experimental research designs have a history of extensive use in social services. The most common quasi-experimental research designs are simple pre-posttest, posttest only, pre-posttest comparison groups, and pre-posttest comparison groups with longitudinal follow up. All four of these models are very acceptable research designs, especially when measuring the effectiveness of a treatment, or parenting program.

The California Evidence Based Clearinghouse (CEBC) along with the Office of Juvenile Justice and Delinquency Prevention (OJJDP) are two organizations that have changed their criteria for what constitutes "strong evidence supporting the efficacy of a program." Both have adopted the RCT as their primary research model and their criteria for receiving the highest possible rating. CEBC has also included that the study's results be published in a peer review journal with a time contingent of two years which helps determine if the study is acceptable for evidence based recognition.

Prior to this change, the Nurturing Parenting Programs® were highly rated, evidence-based programs for families receiving services in Child Welfare. After the adoption of the RCT model as evidence of programs effectiveness the Nurturing Program for Parents and their Infants, Toddlers and Preschoolers® is no longer afforded that designation.

RCT is reserved for trials that contain control groups in which groups receiving the experimental treatment are compared with control groups receiving no treatment. Withholding services from families who are mandated by the courts to complete parent education is ethically inappropriate, in addition to jeopardizing the health and lives of children.

The Nurturing Program® Research and the RCT Design

In 1980-83 when the first Nurturing Parenting Program® was developed and validated, there were no proven and published programs for families charged with child maltreatment. In essence, there was nothing to compare the results of families attending the Nurturing Program®. Families involved with Social Services for child maltreatment were not receiving parenting education from a validated, evidence-based parenting program. There were not any validated parenting programs on the market. A decision was made to run a quasi-experimental pre-posttest, longitudinal research design instead to test the effectiveness of the Nurturing Program®. The results were phenomenal.

Since the validation for the first Nurturing Parenting Program for Parents and their School age Children®, twenty additional Nurturing Programs have been developed and validated using the pre-posttest longitudinal follow-up quasi-experimental design. See the NPP validation report.

In the pre-posttest, longitudinal design research model, the criteria for effectiveness are the proven cessation of child maltreatment and the elimination of recidivism. It did not matter if the NPP was any better than no program if the child abuse continued. In essence, the effectiveness of the NPP was measured against the practices of maltreatment. Were the practices of maltreatment replaced with the practices of Nurturing Parenting? And what was the recidivism rate among parent(s) completing the NPP? The stated goal was a recidivism rate of 0. The outcome was a recidivism rate of 9%. At the time, the recidivism rate among families completing treatment for child abuse was between 25% to 47%.

Agencies that Support the Effectiveness of the Nurturing Programs® without RCTs

- National Registry for Evidence Based Programs and Practices (NREPP) rate all the Nurturing Programs at or near their highest standard.

- **The United States Department of Defense (DoD)** has adopted the Nurturing Parenting Program for Parents and their Infants, Toddlers and Preschoolers® as their program of choice for their New Parent Support Program (NPSP). The Nurturing Programs® have been used by the military for over 20 years. Currently, all brands of the military are using the Nurturing Programs® worldwide. The data indicate families are making significant pre-post gains.

- **The First Five of California** program has also adopted the Nurturing Program for Parents and their Infants, Toddlers and Preschoolers® for all their sites statewide. First Five had tried and failed with other nationally recognized programs with RCT research for families in the Welfare system.

- Birth and Beyond Home Visitation program of Sacramento completed 4,600 home visitations with parents serving 9,752 children. They implemented the NPP for Parents and their Infants, Toddlers and Preschoolers between the years of 2010 and 2013. The recidivism rate of families dropped 85%; the percentage of families with substantiated CS reports dropped 88%; recidivism rates dropped 64%; and the data indicated that the more lessons the parents completed, the lower the levels of referrals to CPS post-program.

- The Nurturing Programs® are implemented throughout the State of Louisiana through the Department of Social Services. Analysis of the data conducted by Casey Foundation indicated dosage of sessions completed made a difference. The more sessions completed the less likely they were reported for child maltreatment six months after the completion of the program. Analysis of the data also found that program costs and cost savings were calculated with a benefit to cost ratio of 0.87 demonstrating that the Nurturing Program approaches cost-neutrality. The data also indicated a retention rate of 70% of program participants, a significantly higher rate than research on other programs implemented in child welfare systems.

- As of 2014, **the State of Arkansas** has received government funding to implement the Nurturing Programs for Parents and their School Age Children statewide through their **Department of Social Services.**

- **The Children's Trust Funds of Kentucky and Tennessee** are launching the Nurturing Programs statewide in the Spring/Summer/Fall of 2015. Colorado CTF for years has funded agencies within Colorado who implement the Nurturing Programs®.

- **Cook County in Chicago** is implementing a RCT study with the Nurturing Program® in their research to reduce the amount of out-of-home placements.

- **The State of Oregon** has also implemented an RCT study in implementing the Nurturing Program® testing whether Supervised Supervision with some families receiving the Nurturing lessons during supervision is more effective in preventing recidivism rates after reunification then families receiving traditional supervision.

- In a six year study from 1999 to 2005, **the Florida State Department of Children and Families (DCF)** conducted a statewide study designed to assess the effectiveness of parenting programs offered throughout the state to high risk families as well as families charged with child abuse and neglect.

  A total of 33,001 families and 22 programs participated in the study. Parents who completed the NPP for Parents and their Infants, Toddlers and Preschoolers had significantly higher posttest mean scores in each of the five parenting constructs of the AAPI than parents in the non-Nurturing Parenting Programs®.

- **The Center for the Study Social Policy** who embraces the trauma informed philosophy published an article on how the Nurturing Programs® link to the Strengthening Families Protective Factors Framework.

- **WHAT WORKS, WISCONSIN Evidence Based Parenting Program Directory**

Family Development Resources has been providing cost-effective, validated approaches to help treat and prevent child abuse and neglect for over 30 years. Families learn new attitudes and skills that reduce dysfunction in families, with follow-up studies indicating low rates of recidivism. The Nurturing Programs® have and will continue to make a significant contribution to the overall health and functioning of families.

The ratings remain very high for the Infant, Toddler and Preschooler Program as well as all the Nurturing Programs® as published in the National Registry of Evidence Based Programs and Practices (NREPP), the US Department for Defense and the hundreds of service providing agencies across the country.

Family Development Resources at 800.688.5822 or email us at fdr@nurturingparenting.com

Nurturing Parenting Program®

Validation Studies

1983 – 2014

NurturingParenting.com

The Nurturing Programs are recognized by the National Registry of Effective Programs and Practices (NREPP) and by the Substance Abuse and Mental Health Services Administration (SAMHSA).

The Nurturing Parenting Programs are also recognized by the Child Welfare League of America (CWLA) and the Center for Substance Abuse Prevention (CSAP).

The Nurturing Parenting Programs® are published by:

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Pre-Post Design

1. **Daire, Andrew P., Greenridge, Wendy L., The University of Central Florida "A Cross Cultural Investigation of the Nurturing Father's program Outcomes." 2014**
   Summary:
   The impact of having a nurturing father has been well documented in the literature. This study examined what differences existed in parental attitudes and behaviors among African-American, Hispanic, and White participants following participation in the Nurturing Father's Program. Results indicated that all three groups improved significantly in their parenting attitudes and behaviors, as measured by the Adult and Adolescent Parenting Inventory-2, upon completion of the program. However, White participants showed greater levels of improvement than African American participants and Hispanic participants showed greater levels of improvement than both African American and White participants in different AAPI-2 constructs. Practice implications and implications for future research are discussed.

2. **Daire, Andrew P., Greenridge, Wendy L., Johnson, Nicola, The University of Central Florida "Parental Attitudes and Behaviors of Participants in the Nurturing Father's Program." 2014**
   Summary:
   The presence of a nurturing father is crucial in fostering healthy child and adolescent development and overall well-being. This study examines the impact of the Nurturing Father's Program on parenting attitudes and behavior of its participants as measured by the Adult and Adolescent Parenting Inventory – 2. Results indicate that participants have significantly positive increases in overall parenting attitudes and behaviors along with significant increases in the five AAPI-2 subscales (expectations, empathy, corporal punishment, role-reversal, and power/independence). Education level is positively related to these gains, while age is negatively correlated. Additionally, married fathers show significantly greater gains in the program than fathers who are single or separated/divorced. The authors discuss the results and offer suggestions for future research.

3. **Brotherson, S., Saxena, D., Tichy, A. North Dakota State University – Fargo, ND. "Nurturing Parenting Program in North Dakota. Project Overview and Year-End Report for 2010-2011." March**

2012.

Summary:

The *Nurturing Parenting Program* (NPP) was selected by the state of North Dakota for usage as its primary parent training program with families involved in the child welfare system. The program operates at multiple sites across the state under the direction of a grant provided by the ND Department of Human Services - Children & Family Services Division. Currently, the program is implemented by the NDSU Extension Service, in partnership with the statewide network of Parent Resource Centers and local agencies. This project overview and report summarizes basic findings from the operation of the *Nurturing Parenting Program* in North Dakota during the 2010-2011 year of operation (July 1, 2010 to June 31, 2011).

A summary of the program and participation data, based solely on the AAPI summary measures, indicates the following:

- NPP operated at 10 sites in North Dakota in 2010-2011 (increase of 3 sites over 2009-10).
- 24 NPP program sessions were offered in 2010-2011 (increase of 7 sessions over 2010-11).
- The number of sessions offered at each site were: (1) Belcourt, ND – 4; (2) Bismarck, ND – 4; (3) Devils Lake, ND – 1; (4) Dickinson, ND – 1; (5) Fargo, ND – 2; (6) Harvey, ND – 1; (7) Jamestown,, ND – 2; (8) Jamestown, ND – TRCC – 4; (9) Minot, ND – 4; (10) Valley City, ND – 1
- Number of Families in Class Ages 0-5 Sessions = 87
- Number of Families in Class Ages 5-12 Sessions = 102
- Number of Families in Community-Based (TRCC) Class Sessions = 49
- Total Number of Families Enrolled in Sessions = 238
- Total Number of Families that Completed Sessions = 148
- Total Percentage of Families Completing Sessions = 62.2%

The data utilized here is from the AAPI measures used to evaluate the program; additional participation data may be available but was not accessible to the authors of the program report at the time of preparation.

4. **Bavolek, S., Keene, R., Miranda, G., Radcliff, J. Prevention and Early Intervention Component of Imperial County, "Implementation of the Nurturing Parenting Programs with Latino Families in Imperial County, California. 3 year report. June 2009-July 2012. January 4, 2013**

Summary:

Between July 2009 and June 2012, the Imperial County Office of Education located in El Centro, California, a rural county bordering on the Mexican border implemented a county-wide parenting initiative. The initiative became known as the Imperial Valley Nurturing Parenting Program, a cooperative effort between the Imperial County Office of Education (ICOE), Student Well-being and Family Resources and the Imperial County of Behavioral health Services, Children's Division.

From the fall of 2009 to the fall of 2012, Imperial County implemented three different Nurturing parenting programs:

- The Nurturing Parenting Program (NPP) for Parents and their Infants, Toddlers and Preschoolers, a 15 to 20 session group and home based program;
- NPP for Parents and their School-Age Children, a 15 session group-based program;
- NPP for Parents and their Adolescents, a 12 session group-based program.

These three programs were implemented a combined total of sixty-three times. Eight hundred and twenty-seven (357) families, 95% Hispanic, participated in approximately 1,014 group-based and home based parenting classes. With each class running approximately 2.5 hours, 2,535 hours of parenting instruction was provided families of Imperial County. A summary of the findings indicate:

- Posttest mean scores for the Adult-Adolescent Parenting Inventory (AAPI-2) all show positive increases compared to the pretest mean scores in each of the five sub-scales (Constructs).
- Three of the five AAPI Constructs displayed the biggest gains made by the parents' pre to posttest mean scores. The Constructs were B (Empathy), Construct C (Alternatives to Physical Punishment), and Construct E (Power and Independence.
- The single largest gain was made in Construct B: Empathy where the mean posttest score showed a significant positive gain (p.>.001). Empathy is the critical parental characteristic that allows positive nurturing parenting skills to be practiced. The second and third largest gains were in Alternatives to Physical Punishment (p.>.01) and Power and Independence (p.>.05).
- In a norm-referenced inventory, scores that fall into the 1 to 3 sten range reflect parenting practices that are high-risk for child maltreatment. Posttest data analysis measured a substantial drop in all five AAPI-2 posttest mean scores out of the high-risk range. Construct B: Empathy had an 18% drop in high risk scores. That is, the percentage of parents expressing high-risk parenting beliefs in Empathy at the pretest level was 23%. The posttest level was 5%.
- Construct C: Physical Punishment had the second biggest drop in the percentage of posttest mean scores from the high-risk 1 to 3 sten range. These differences were measured from a 14% pretest rate to a posttest 5.64% posttest rate representing an 8% difference.

The results show the successes that Imperial County achieved through their systematic efforts. Over 800 Hispanic families completed parenting education classes without being ordered by the courts to attend. This remarkable achievement challenges the widely held myth that parents won't attend parenting classes because of some stigma that parenting classes are only for families with problems.

5. **International Rescue Committee, Research and Validation, "Family based intervention against child abuse and neglect for young parents involved in a youth and livelihoods program in Liberia: A Pilot project to build evidence around the potential for parenting skills training to protect children from abuse, neglect and exploitation." International Rescue Committee. www.rescue.org. New York, NY. November 2011**

Summary:

"Family based intervention against child abuse and neglect for young parents involved in a Youth and Livelihoods program in Liberia" was a pilot project to address the family-based protection risks facing children in Liberia; advance the Child and Youth Protection and Development Unit's (CYPD) technical priorities; and respond to the gap in knowledge around the adaptability, acceptability, effectiveness, and scalability of parenting program models implemented in conflict, post-conflict and disaster affected settings.

Between December 2010 and April 2011, the pilot parenting program provided approximately 200 young mothers between the ages of 17 and 31 with a ten-session parenting program. This pilot parenting program utilized the Nurturing Parenting Program's (NPP) Easy Reader Curriculum and was implemented through the existing training and program structure of the IRC's Empowerment of Adolescent Girls and Young Women Program (EPAG), a three-year initiative supported by the World Bank, the Nike Foundation, the Government of Denmark, and the Government of Liberia.

The Adult-Adolescent Parenting Inventory (AAPI-2) assessment was the primary instrument used to collect quantitative data at baseline and endline regarding the parenting and child-rearing beliefs of adult and adolescent parent participants and trainers. The assessment was filled out by participants themselves using pencil and paper; each question was read aloud giving participants time to write the answer through a multiple choice methodology. The AAPI-2 assessment contains forty questions designed to identify parenting beliefs with a known correlation to abusive childrearing behaviors. These parenting beliefs fall into five constructs: (A) Inappropriate Parenting Expectations; (B) Lack of an Empathetic Awareness of Children's Needs; (C) Belief in the Use and Value of Corporal Punishment; (D) Parent-Child Role Reversal; and (E) Oppressing Children's Power and Independence. The AAPI-2 is a norm-referenced inventory. As such, raw scores are converted into sten scores (based on a standard sten scale), which identify "where an individual stands in relation to a normal distribution of scores" (Bavolek, 2005). Sten scores range from 1-10. Low sten scores (1-3) have been demonstrated to indicate a high risk for abusive parenting behaviors; scores ranging from 4-7 represent the "normal" range of parenting beliefs and moderate risk for abuse. High sten scores (8-10) indicate positive, nurturing parenting beliefs.

A comparison of pre and post AAPI-2 tests allows us to assess changes in beliefs that the NPP believes are required for changes in parenting behavior to occur. While participant scores were low overall, the majority of communities saw improvements in participant scores at post-test in all five AAPI-2 constructs.

During the AAPI-2 pre-test, the majority of participants fell into the high-risk category across all five constructs. While the majority of participants remained in the high-risk category at the time of the AAPI-2 post-test for each of the construct areas, an average of 15% of participants moved out of the high-risk category into the medium risk category for each of the AAPI-2 constructs.

A paired t-test of participant results pre- and post-test was done to examine the likelihood that the improvement in participant results was due to chance, rather than to the pilot parenting program. The results in all construct areas were either very or extremely statistically significant. Thus, we can report with a 95% confidence level, that the pilot parenting program is effective at promoting more positive parenting beliefs.

6. **Montañez, M., Devall, E., VanLeeuwen, D., "Social Capital: Strengthening Mexican-American Families through Parenting Education" Journal of Family and Consumer Sciences, 102, NO. 3, 2010.**

Summary:

Social capital can be a useful theoretical basis for understanding how to work with at-risk communities to increase their capacities across a range of family issues. Social capital has been described with an emphasis on resources linked to a network of individuals who have membership in a group (Bourdieu, 1986). In this view, social capital is an asset, the value of which is determined by the size of the network and the volume of the capital (Bhandari & Yasunobu, 2009). Social capital also has been defined with an emphasis on the relationships among members of the networks (Coleman, 1990) and marked by reciprocity, information channels and flow of information, and norms enforced by sanctions (Bhandari & Yasunobu, 2009); Putnam, 1993). In this study, the authors stress the importance of these definitions of social capital and demonstrate how incorporating each into parenting programs leads to greater knowledge of parenting and improved parenting skills of participants. The working definition of social capital in this study has two components. First, *capital* refers to commodities such as community access to expert resources and knowledge – the parenting classes as a community commodity or asset. Second, the concept of social capital incorporates the value of the relationships that exists among members of the family systems and members of larger social networks.

7. **Bavolek, S., "Nurturing the Families of Hawaii: Program to Build Nurturing Parenting Skills for the Prevention of Child Abuse and Neglect." Final Report for FY 2008-09 submitted to Department of Human Services, Honolulu, HI. August, 2009.**

Summary:

The Nurturing Program, evidence based parenting program, was modified and implemented to meet the specific needs of the families. Participation in the program is voluntary. Forty-four 12 session programs were implemented statewide. A total of 356 parents participated in the Nurturing the Families of Hawaii Parenting

program. A total of 1157 inventories were completed. Of this total, 220 parents (62%) completed all 12 program sessions. The data generated from the administration of the Adult Adolescent Parenting Inventory (AAPI-2) indicate that posttest mean scores in all five parenting patterns measured by the AAPI-2 showed significant increases. The data also show that parents who completed the 12 session program had significantly higher posttest mean scores than the pretest mean scores of parents who dropped out. Posttest mean scores show significant positive increases between the pre and posttest scores on the Nurturing Skills Competency Scale (NSCS) in knowledge of common parenting practices. Posttest mean scores show a significant increase in the frequency of use of appropriate, nurturing parenting practices.

8. **Bavolek, S., "Nurturing the Families of Hawaii: Three Year Program to Build Nurturing Parenting Skills for the Prevention of Child Abuse and Neglect. Final Report for FY 2005-08 submitted to the Department of Human Services, HI. February, 2009.**
   Summary:
   A three year, state-wide parenting project designed for the primary prevention of child abuse and neglect was implemented in Hawaii from July 2005 to June 2008. One hundred fifty-two 12 session programs were implemented statewide. A total of 1443 parents participated in the Nurturing the Families of Hawaii Parenting program. Of this total, 759 parents (53%) completed all 12 program sessions. Posttest mean scores in all five parenting patterns measured by the AAPI-2 showed significant increases. Parents who completed the 12 session program had significantly higher posttest mean scores than the pretest mean scores of parents who dropped out. Posttest mean scores show a significant increase in the frequency of use of appropriate, nurturing parenting practices.

9. **Devall, E., "Positive Parenting for High-Risk Families." Journal of Family and Consumer Sciences, 96(4), 2004**
   Summary:
   Teen, single, divorced, foster, abusive, substance affected, and incarcerated parents and their children participated in intensive parenting education classes lasting 8 to 24 weeks. Participants were primarily single (58%), Hispanic (60%), and female (60%). Parents showed significant increases in empathy and knowledge of positive discipline techniques, and significant decreases in parent-child role reversals, inappropriate expectations, belief in corporal punishment and oppression of children's independence following the learning experiences.

10. **Welinske, D., "Solano County California Family Strengthening Program" Final Report, 2003**
    Summary:
    The purpose of this project was to assist health, education, and human service leadership of Solano County in implementing best practice models that have been shown to reduce violence and substance abuse within the family and to reduce recidivism rates for formerly incarcerated parents. After analysis, the collaborative chose two models, the *Nurturing Parenting Program for Infants, Toddlers and Preschoolers* and the *Nurturing Program for Families in Substance Abuse Treatment and Recovery* (both for parents and children 0 – 5 years of age).

    Findings included significant increases in Appropriate Expectations, Empathy, Belief in Alternatives to Corporal Punishment, Appropriate Family Roles, and Empowering Children.

11. **Matlak, S., "A quantitative Analysis of Pikes Peak Family Connections Nurturing Parenting Program" Research Report, 2003**
    Summary:
    The purpose of the study was to assess the effectiveness of the Nurturing Parenting Programs in imparting positive parenting attitudes. A total of 140 parents completed classes started in 2002. The Adult-Adolescent Parenting Inventory (AAPI-2) was administered to the parents pre and post program. Statistically significant improvements ($p<.001$) were recorded in:

    Appropriate Parental Expectations
    Highly statistical significant changes (at the .001 level) were evident between pre and post testing. The mean scores rose from 5.5 to 6.8.

    Demonstrating Empathy Towards Children's Needs
    Highly statistical significant changes (at the .001 level) were evident between pre and post testing. The mean scores rose from 5.3 to 6.7.

    Alternatives to the Use of Corporal Punishment
    Highly statistical significant changes (at the .001 level) were evident between pre and post testing. The mean scores rose from 5.4 to 7.1.

    Avoiding Reversing Parent-Child Family Roles
    Highly statistical significant changes (at the .001 level) were evident between pre and post testing. The mean scores rose from 5.5 to 6.8.

    Valuing children's Will and Independence
    Highly statistical significant changes (at the .001 level) were evident between pre and post testing. The mean scores rose from 5.3 to 6.7.

    Reasons for Participation

34 voluntary (23.9%) and 105 system ordered or recommended (73%). There were not statistically significant differences (at the .05 level) between reasons for participation at the pretest level. This indicates that reason for participation had nearly negligible impacts in parenting attitudes for those participating in the program.

Overall Summary
Parents participating in the program during the 2002 year made highly statistically significant changes with regards to their attitudes and knowledge about parenting.

12. **Vespo, J.E., Capece, D., Behforooz, B., "Effects of the Nurturing Curriculum (Developing Nurturing Skills K-12 School-Based Curricula®) on Social, Emotional, and Academic Behaviors in Kindergarten Classrooms" Abstract, 2002**

Summary:
Researchers and educators argue that social and emotional development impact academic success and therefore should be targets for intervention. The purpose of this study was to evaluate the effectiveness of the Nurturing Curriculum, which is designed to improve emotional and social behaviors in the classroom.

Two schools, similar in demographic characteristics, from an inner city school district in the Northeastern United States, participated. Eight Kindergarten teachers administered the curriculum during the 2001-2002 academic years to 138 children.
The Nurturing Curriculum is a standardized curriculum published by Family Development Resources, Inc. The kindergarten curriculum has 71 lessons targeting self-image, self-awareness, appropriate expression of feelings, empathy, communication skills, and appropriate peer interaction. The lessons include both an informational and experiential (music, play, role-play, discussion) component. Each lesson is designed to take about 20 to 25 minutes. Teachers were asked to begin the lessons in the fall and continue them throughout the school year, with a target of two lessons per week. They were also asked to keep a checklist with feedback regarding each lesson.

Using a modified version of the Teacher Checklist of Social Behavior, a 7-point rating scale with items ranging from "Never" (1) to "Almost Always" (7), 6 of 7 scales from this instrument were used and 36 separate items were utilized. The scales included were: aggression, dominance, disruptive, socially insecure, academic immaturity, and prosocial behavior.

A series of mixed-model 2 (School) by 3 (Time) ANOVAS and follow-up comparisons revealed that aggression, dominance, disruptive behavior, social insecurity, and academic immaturity significantly decreased and prosocial behavior significantly increased from Time 1 to Time 2 and again from Time 2 to Time 3. These findings were generally consistent across children, classes, and schools. A stepwise multiple regression analysis revealed that seven variables significantly predicted academic immaturity at Time 3, accounting for 82% of the variance in these scores. Arguably, the improvements found could be due to developmental changes over time. To assess this possibility, current findings were compared to those of a control group from a small pilot study conducted in the same schools the year before. None of the measures changed over time in the control group. At the beginning of their respective years, measures were similar for the control group and intervention group, except for aggression, which was higher in the control group. At the end of their respective years, all measures were significantly different between the two groups, indicating greater improvements in the Nurturing Curriculum group, suggesting that these changes were not solely due to normal developmental processes.

13. **Cowen, P.S., "Effectiveness of a Parent Education Intervention for At-Risk Families." Journal of the Society for Pediatric Nursing, 6 (2), 73-82, 2001.**

Summary:
Although many parenting programs exist to prevent child maltreatment, few are supported by research evidence. This study explored whether parents who completed the Bavolek Nurturing Program improved their parenting attitudes.

Secondary analysis of data from a larger study involved a convenience sample of 154 families from 15 county child maltreatment councils.

On the pretest, parents demonstrated scores associated with maladaptive parenting practices. Posttest scores were consistent with nurturing parenting attitudes.

Effective and readily accessible parent education programs are highly indicated for prevention of child maltreatment. It is important for nurses to have the information either to provide effective parent education interventions or to be able to refer parents to effective programs.

14. **Baxter, R. & Chara, K., "The Nurturing Parenting Program: Evidence for the Success of a Parenting Program" Research Report, 1995**

Summary:
Thirty-three families referred for charges of child abuse and neglect by the Department of Human Services from a Midwestern town were ordered to attend the Nurturing Parenting Program. Pre and post testing was done on 21 parents (20 female; 1 male). Results from administration of the Adult-Adolescent Parenting Inventory (AAPI) found significant ($p<.005$) improvement in all parenting constructs measured by the AAPI: Expectations of Children; Empathy; Alternatives to Corporal Punishment; and Appropriate Family Roles.

15. **Alvy, K. & Steele, M., "AT&T sponsored Nurturing Parenting Program for Teen Parents" Research Report, 1992**

Summary:

During the 1991-92 school years, six school districts in southern California and 11 school districts in northern California implemented the Nurturing Parenting classes for teen parents. Results indicated that 16 of the 17 participating school districts/agencies showed a drop in the rate of teen pregnancies. Improved access to resources was reported in re-enrollment in GED or vocational programs, childcare programs, health care programs, housing services and legal services. School personnel indicated that there had been a noticeable reduction in abusive parent-teen interactions. Additional findings showed a significant increase in knowledge related to appropriate child-rearing techniques, and significant increases in Expectations, Empathy, Alternatives to Corporal Punishment and Appropriate Family Roles as measured by the Adult-Adolescent Parenting Inventory (AAPI).

16. **Bavolek, S.J., Henderson, H.L., and Shultz, B.B., "Reducing Chronic Neglect in Utah" Research Report, 1987**

Summary:

In January 1986, a program was implemented designed to reduce chronic neglect in families living in the Salt Lake City Metropolitan area. A total of six agencies throughout the Salt Lake Metropolitan Area implemented the Nurturing Parenting Program with families experiencing chronic child neglect during a two-year period. Four of the agencies were Division of Family Services; one Family Support Center; and one social services agency of the Church of Jesus Christ of Latter-Day Saints (LDS Social Services). A total of 125 adults began attending the 15-week Nurturing Parenting Program. A total of 103 adults completed the program for a participation rate of 82%.

A review of the data indicates the vast majority of the parents participating in the project and attending the Nurturing Parenting Program were females (73%), White (88%), approximately 30 years old, unemployed (47%), with some high school experience (58%), and a family income of under $8,000 (51%). A total of 37% of the mothers were currently married while 59% indicated they were divorced, single, widowed, or separated from their spouses. Seventy-two percent (72%) of the families had three or more children under the age of eight years.

Pre and post data gathered from the administration of the Adult-Adolescent Parenting Inventory (AAPI) indicate significant ($p<.001$) positive changes occurred in the parenting and child-rearing attitudes of neglecting parents. These changes reflect more appropriate expectations of children, increase in the empathic awareness of children's needs, a reduction in the belief of using corporal punishment, and more appropriate family role recognition of children and parents. A personality profile of the neglecting parents who participated in the study was developed.

Adults were requested to complete the 16PF Personality Inventory prior to (pre) and subsequent to (post) their participation in the Nurturing Program. A review of the data shows significant differences between personality characteristics of males and females attending the Nurturing Program ($p<.05$).

Females tend to be more shrewd, apprehensive, self-sufficient, but less careless of social rules than males. Males on the other hand tend to be more dominant, tough minded, but easily intimidated. Males also tended to be more impractical but more intelligent than females. Males and females both tended to be experimenting.

The Family Environment Scale (FES) was utilized to determine the impact of the treatment on the ways parents of neglected children perceived their interaction patterns. An analysis of variance was employed to test for treatment effect among and between parents over time. A review of the information indicated significant ($p<.001$) positive changes in family interaction patterns. Family cohesion, expressiveness, organization, independence, achievement, reaction, cultural and moral interactions increased while family conflict and control decreased. No significant differences were found between males and females and between males and females over time.

17. **Bavolek, S.J., "Building Nurturing Parenting Skills in Teen Parents: A Validation of the Nurturing Program for Teen Parents" Research Report, 1987**

Summary:

In the spring of 1986, a project designed to increase the nurturing skills of teen parents was undertaken. The purpose of the project was to develop and validate a home-based/group-based intervention designed to treat the abusive parenting practices of teen parents and to prevent the initial occurrence of abusive parenting practices in teen mothers identified as 'high risk" for physical and emotional maltreatment or neglect.

Eighty percent (80%) of the teen parents were single. Eighty-eight percent (88%) indicated they were unemployed. Twenty-one percent (21%) of the teens indicated they were abused or neglected by their mother; 22% indicated they were abused or neglected by their father. Of this group, 4% indicated they were sexually abused. In addition, 47% of the teens indicated they have been abused by their boyfriends and/or girlfriends.

Twenty-one percent (21%) of the teens indicated they were abused or neglected by their mother; 22% indicated they were abused or neglected by their father. Of this group, 4% indicated they were sexually abused. In addition, 47% of the teens indicated they have been abused by their boyfriends and/or girlfriends.

Parenting Attitudes
Pretest and posttest data gathered from the administration of the Adult-Adolescent Parenting Inventory (AAPI) indicated:

- Significant ($p<.001$) increases in age-appropriate parental expectations of children.
- Significant ($p<.001$) overall increase in the ability of teen parents to be empathically aware of the needs of their children.
- Significant ($p<.001$) decrease in the belief of corporal punishment as a means of disciplining children.
- Significant ($p<.001$) decrease in reversing parent-child family roles.

Parent Knowledge
Teen parents were administered an informal multiple choice quiz on behavior management. Pretest and posttest assessment indicated a significant ($p<.001$) overall increase in knowledge of appropriate techniques to manage the behavior of young children.

Program Evaluation
Teen parents were asked to complete an evaluation of the program at the completion of the final session. Ninety-seven percent (97%) of the teen parents indicated the program had an overall positive impact on improving their parenting skills.

18. **Bavolek, S.J., "Validation of the Nurturing Program for Parents and Adolescents: Building Nurturing Interactions in Families Experiencing Parent-Adolescent Conflict" Research Report, Winter 1987**

Summary:
In the fall of 1986, a three-year extensive research project was undertaken designed to assess and reduce parent-adolescent conflict in families referred for services for family dysfunction. Families reported to Departments of Social Services for adolescent abuse and/or neglect; families with adolescents identified by the courts as delinquent, or wards of the state; and families seeking services to reduce perceived parent-adolescent conflict, participated in the study.

Procedures
Fifteen sites throughout the country participated in the study. Parents and teens were asked to complete a battery of inventories to assess demographic characteristics, parenting attitudes, family intervention patterns, and knowledge of parenting practices.

Findings

1. A total of 152 parents and 155 adolescents from 15 national sites participated in the field testing of the program. Of this total, 18% were ordered by the courts to attend.

2. Seventy percent (70%) of the adults were female; 30% were male.

3. Forty-nine percent (49%) of the adolescents were female while 51% were male. Parenting Attitudes and Knowledge of Parents

Pretest and posttest data gathered from the administration of the Adult-Adolescent Parenting Inventory (AAPI) to adults indicated:

- Parents had significantly ($p<.001$) decreased their belief in corporal punishment and family role reversal, while significantly increasing ($p<.001$) their empathic awareness of teens' needs and appropriate developmental expectations.

- Parents had significantly ($p<.001$) increased their knowledge of appropriate strategies in behavior management as measured by the Nurturing Quiz.

Family Interaction Patterns
Parents and adolescents who participated in the field testing of Prototypes I and II of the Nurturing Parenting Program were requested to complete the Family Environment Scale (FES). Responses to the FES range from a low of 1 to a high of 10 with scores ranging from 4 to 6 somewhat average.

Adolescent posttest responses indicated a significant ($p<.002$) decrease in family conflict ($x = 6.2$ to $x = 4.1$) and in intellectual/cultural activities ($x = 5.2$ to $x = 2.9$). Other data tended to indicate an increase in family cohesion, independence, and control, while a decrease in family experiences although none of the increases were significant. Posttest responses by the parents indicated significant ($p<.001$) increases in family cohesion, expressiveness, independence, and intellectual/cultural activities. Parent responses also indicated significant ($p<.001$) decreases in conflict ($x = 4.2$ to $x = 3.2$) and intellectual/cultural activities ($x = 4.9$ to $x = 3.8$). Other areas tended to remain relatively the same.

Program Evaluation Questionnaire
Parents (98%) and adolescents (97%) who participated in the study overwhelmingly indicated the program had a positive impact in increasing the quality of their family relationships.

19. **Bavolek, S.J., "Validation of the Nurturing Parenting Program for Parents and Children Birth to Five Years: Increasing the Nurturing Parenting Skills of Families in Head Start" Research Report, 1985**

Summary:
In the fall of 1984 and spring of 1985, Families enrolled in Head Start programs in a seven-county area in Wisconsin participated in an innovative program designed to increase their parenting and nurturing capabilities and reduce the risk for child maltreatment. The Nurturing Parenting Program for Parents and Children Birth to Five Years was implemented by Head Start staff for both parents and their children birth to five years of age enrolled in home-based and center-based programs. Pretest and posttest data were gathered to assess the effectiveness of the program to increase the nurturing capabilities of both parents and children. Data generated from the pre and post testing indicate:

1. A total of 260 adults were pre-tested in home-based and center-based programs. Sixty-six percent (N = 171) participated in the posttest assessment.
2. Parents demonstrated a significant increase ($p < .05$) in their ability to be empathically aware of their children's needs.
3. Parents expressed a significant decrease ($p<.05$) in their beliefs regarding the value of corporal punishment as a means of punishing behavior, and in reversing parent-child role responsibilities.
4. Parents showed a significant increase ($p<.05$) regarding appropriate expectations they have toward the capabilities of their children.
5. Test results further indicate parents made significant increases ($p<.05$) in their knowledge of appropriate alternatives to corporal punishment.
6. On a four-point scale (4 = Strongly Agree), parents expressed favorable (X = 3.3) perceptions about the program's positive impact on their role as parents, and favorable (X = 3.1) perceptions about the program's positive impact on their children's social, emotional, and cognitive growth and development.
7. An overwhelming number of parents (97%) indicated they would recommend participation in the Nurturing Parenting Program to other parents.

Comparative Program Design Studies

1. **Bavolek, S.J., Keene, R., Weikert, P., "The Florida Study: A Comparative Examination of the Effectiveness of the Nurturing Parenting Programs" Research Report, 2005**

Summary:
In the fall of 1999, the Florida Department of Children and Families (DCF) initiated a statewide study designed to assess the effectiveness of parenting programs offered to high risk and abusive/neglecting families referred for parent education. A secondary goal of the study was to compare the outcome data from parents attending Nurturing Parenting Programs to families attending non-Nurturing Parenting Programs.

The Adult-Adolescent Parenting Inventory (AAPI-2) was selected as the common inventory all agencies receiving state funding for parenting programs would administer to the parents they were serving.

Highlights of the demographic data include:

- Approximately 76% of the parents were females; 24% were males.
- Approximately 64% of the parents were White; 25% Black; 9% Hispanic.
- Neglect (67%) was the most frequently reported referral for parenting; abuse constituted only 6% of the referrals.
- The vast majority of parents (55%) earned under $25,000 annually; 13% earned under $15,000.

Findings

1. In the first five years FY1999 – FY2004, 116 different agencies throughout Florida participated in the study.
2. A total of 22 agencies implemented the Nurturing Programs, totaling 9,147 matched pairs of data. Of this total, 8 agencies implemented the Nurturing Program for Parents and Their Infants, Toddlers and Preschoolers (Birth to 5) totaling 5,195 matched pairs. Fourteen (14) agencies implemented the Nurturing Program for Parents and Their School-Age Children (5 to 12) totaling 3,952 matched pairs.
3. Of the remaining 94 agencies, 66 agencies indicated they did not use a specific curriculum or made up their own programs from a composite of other programs. Twenty-eight (28) agencies utilized other published parenting programs.
4. A total of 33,001 Adult-Adolescent Parenting Inventories (AAPI-2) were completed and submitted for scoring and analyses. Of this total, 11,061 matched cases (pre and posttest) were utilized for comparison of program outcome data.
5. Parents who completed the Nurturing Program for Parents and Their Infants, Toddlers and, Preschoolers

(Birth – 5) had significantly ($p<.001$) higher posttest mean scores in each of the five construct areas of the AAPI-2 than parents in the non-Nurturing Program groups.

6. Parents who completed the Nurturing Program for Parents and Their School-Age Children (5-12) had significantly ($p<.002$) higher posttest mean scores in each of the five construct areas of the AAPI-2 than parents in the non-Nurturing Parenting groups.

2. **Veso, J.E., Cooper, D., Behforooz, B, "Effects of the Nurturing Curriculum on Social, Emotional, and Academic Behaviors in Kindergarten Classrooms" Journal of Research in Childhood Education 2006, Vol. 20, No. 4**

Abstract:
Researchers and educators argue that social and emotional development affect academic success, and therefore should be targets for intervention. It is strongly suggested that such intervention begin during kindergarten. The purpose of this study was to evaluate the effectiveness of the Nurturing Curriculum, which is designed to improve emotional and social behaviors in the classroom. Eight kindergarten teachers conducted the Nurturing Curriculum throughout the school year. Aggression, dominance, disruptive behavior, socially immature behavior, and academic immaturity decreased significantly over time. Prosocial behavior increased significantly over time. Comparison to a cohort not exposed to the Nurturing curriculum indicated that these improvements are not simply due to normal developmental changes in emotional and social behaviors. Collectively, the emotional and social behaviors measured accounted for 82 percent of the variance in academic immaturity at the end of the school year. Thus, the Nurturing Curriculum positively influenced social, emotional, and academic behaviors in kindergarten classrooms.

Pre-Post and Longitudinal Follow-Up Design Studies

1. **Brock, Donna-Jean P., Marek, Lydia I., Matteo-Kerney, Cheryl, Bagby, Tammy, "Open Groups: Adaptations in Implementing a Parent Training Program" 2013.**

Summary:
Background: Programs that focus on positive parenting have been shown to improve parental attitudes, knowledge, and behaviors, and increase parent and child bonding. These programs are typically conducted in a closed group format. However, when individual or community needs are more immediate, programmers sometimes opt for an open group format. To determine the effectiveness of this adaptation to an open group format, the present study compared both groups on parental outcomes.

Methods: Both closed and open group formats were offered and imple-mented between January 2009 and December 2012. Participants for both formats were recruited through similar means and the format placement for each family was determined by the immediacy of the need for an interven-tion, the time lapse until a new cycle would begin, and scheduling flexibility. Chi-Square analyses were conducted to determine demographic differences between the two groups and gain scores were calculated from the pre- and post-test AAPI-2 scales within a mixed MANOVA to determine group for-mat effectiveness.

Results: Though open groups contained higher risk families; parental out-come improvements were significant for both groups. All participants, re-gardless of group membership, demonstrated the same statistically signifi-cant improvements following completion of the program.
Conclusion: Findings provide support for adapting group formats when necessary to fit community and individual needs.

2. **LPC Consulting Associates, Inc. Birth & Beyond Home Visitation Program. *Nurturing Parenting Program Child Protective Services, Outcomes Report, July 2010 through June 2013.* Family Support Collaborative. Child Abuse Prevention Council of Sacramento, North Highlands, Ca. October 2013.**

Summary:
This report provides CPS outcome findings for families served between July 1, 2010 through June 30, 2013. During that three-year time period, Birth & Beyond served 4,600 home visitation families and 9,752 children. The 2010-2013 Outcomes Study for the Birth & Beyond Program has retained the same methodology used each year, with variations and enhancements as resources permitted.

CPS Outcomes, Post-Program

- The percent of families with referrals to CPS declined from 52% pre-program to 16% post-program, a drop of 70%.
- The percent of families closed for at least one year with referrals to CPS declined from 50% pre-program to 18% post-program, a drop of 64%.
- The percentage of families with substantiated CPS reports declined from 28% pre-program to 4% post-program, a drop of 88%.
- The percentage of families closed for at least one year with substantiated CPS reports declined from 27% pre-program to 4% post-program, a drop of 85%.
- The rate of referral to CPS declines dramatically from pre-program (52%), to the time during program services (20%), and continued to decline after families leave Birth & Beyond home visiting services (16%).
- Among the 934 families who entered the Birth & Beyond home visiting program with no prior CPS involvement (48% of study cohort), less than 1% had a substantiated report to CPS one year post-program.

- Rates of change for teen parents and for parents with substantiated reports of abuse and/or neglect when they were children are even more dramatic (from 41% pre-program to 3% post-program for teens; from 64% to 7% for parents abused as minors).
- Higher levels of NPP lessons correspond with lower levels of referral to CPS post-program.

Birth & Beyond is not only a form of primary prevention, but also early intervention and a resource for evidence based parenting education. These findings are particularly striking for young parents and for parents whose own childhood included referrals to CPS for abuse and/or neglect.

3. **Maher, E. J., Marcynyszyn, L. A., Corwin, T. W., & Hodnett, R. (2011). Dosage matters: The relationship between participation in the Nurturing Parenting Program for Infants, Toddlers, and Preschoolers and subsequent child maltreatment. *Children and Youth Services Review, 33*, 1426-1434. DOI: 10.1016/j.childyouth.2011.04.014**
   Summary:
   This article uses statewide data on caregivers of young children referred to the Nurturing Parenting Program (NPP) for allegations of abuse and neglect to examine the relationship between program dosage and subsequent maltreatment. At six months after participating in the program, caregivers who attended more sessions were significantly less likely to be *reported* for child maltreatment, holding other factors constant. At two years after participating, caregivers attending more sessions were significantly less likely to have a substantiated maltreatment incidence, controlling for other characteristics of families associated with maltreatment. These findings demonstrate the program can be effective for preventing short-term allegations and longer-term substantiated incidences of maltreatment for a child welfare population. By demonstrating the importance of participation in a promising program, we increase the evidence about effective programs for this population.

4. **Maher, E. J., Corwin, T. W., Hodnett, R., & Faulk, K. (in-press). A cost-savings analysis of a statewide parenting education program in child welfare. *Research on Social Work Practice*.** Summary:
   This article presents a cost-savings analysis of the statewide implementation of an evidence-informed parenting education program. Between the years 2005 and 2008, the state of Louisiana used the Nurturing Parenting Program (NPP) to impart parenting skills to child welfare-involved families. Following these families' outcomes through August 2010, increased program attendance was associated with significant reductions in substantiated incidences and re-reports of child maltreatment (Maher, Marcynyszyn, Corwin, & Hodnett, 2011). Program costs and benefits (cost savings) were calculated using program, workforce, and administrative data. The benefit-cost ratio of 0.87 demonstrates that the NPP approaches cost neutrality in a short time period, without the consideration of long-term benefits or benefits to other systems. A review of current cost analyses in child welfare and a framework for conducting this type of analysis in a child welfare setting are provided.

5. **Hodnett, R.H., Faulk, K., Dellinger, A., Maher, E, Evaluation of the Statewide Implementation of a Parent Education Program in Louisiana's Child Welfare Agency. August 2009**
   Summary:
   The study examines the effectiveness of the NPP, a 16-week group and home-based program that targets parents and other caregivers of infants, toddlers, and pre-school children involved in the child welfare system. OCS contracts with 10 community-based social service providers across the state of Louisiana to operate a Family Resource Center (FRC) through which parenting services are offered. Extensive training and technical support was provided to FRC staff on the NPP prior to implementation in 2006.

   The sample included 564 participants referred by OCS to the FRC for parent education and training related to their infant, toddler, or pre-school child. The findings of this evaluation provide overall support for the continued use of the NPP in a child welfare setting for parents and other caregivers of infants, toddlers, and pre-school children. Client retention ranged from 46 percent to 85 percent across providers, with an overall retention rate of nearly 70 percent of program participants (n=564). This rate is significantly higher than research on other similar programs implemented in child welfare systems (Gershater-Molko, Lutzker, & Wesch, 2003).

   Results demonstrated significant and positive improvements in all five Adult and Adolescent Parenting Inventory-2 subscales: (a) Inappropriate Parental Expectations, (b) Parental Lack of an Empathic Awareness of Children's Needs, (c) Strong Belief in the Use and Value of Corporal Punishment, (d) Parent-Child Role Reversal, and (e) Oppressing Children's Power and Independence. Furthermore, for all subscales of the AAPI-2, there was substantial movement from the high-risk category prior to participation to the low/medium-risk category following participation in NPP. Results also indicated that dosage does matter. For individuals who had high rates of attendance (attended at least 14 out of the 16 weeks), the odds of maltreating post-participation were 73 percent lower than for those with lower rates of attendance (OR=0.27).

6. **Palusci, V.J., Crum, P., Bliss, R. & Bavolek, S.J., Changes in Parenting Attitudes and Knowledge Among Inmates and Other At-Risk Populations After a Family Nurturing Program, *Children and Youth Services Review* 2007, doi: 10.1016/j.childyouth.2007.06.006**
   Summary:
   Parenting dysfunction can lead to child abuse and neglect, and parent education programs have been developed to improve parenting attitudes, knowledge and practices. We modified the Family Nurturing Program to be implemented among inmates, parents in substance abuse recovery and other at-risk populations and measured its effects on parenting knowledge and attitudes.

Multiple groups with 8-10 participants each were held in five different settings: county jail substance abuse rehabilitation program, county jail batterers intervention program, residential substance abuse treatment facility, general community referrals, and community parenting camp program. Baseline risk for potential child maltreatment was measured using the Child Abuse Potential Inventory, and parenting attitudes and knowledge were measured using the revised Adult Adolescent Parenting Inventory (AAPI-2).

Among 781 participants recruited, 484 were incarcerated. No significant differences in changes in parenting attitudes were noted based on location. Males showed greater improvement in AAPI-2 scores in all groups, with greater gains in knowledge about empathy, expectations and use of corporal punishment. Those with high abuse potential showed greater
improvements.

A parenting program based on the Family Nurturing Program results in improvements in parenting attitudes and knowledge in multiple at-risk populations. While program implementation at the locations was different, changes in scores were related to participant gender, number of classes and prior child abuse potential risk.

7. **Matteo-Kerney, C., Benjamin, S., "Rural Virginia Family Nurturing Project: Five Year Evaluation Results" Abstract, 2004**
Summary:

1. A total of 487 parents and 193 children participated in Nurturing Parenting Programs® implemented in 31 sites throughout rural Virginia. The purpose of the study was to assess the effectiveness of implementing the Nurturing Parenting Programs.

2. 80% of the participants were female; 20% male.

3. 41% of the participants were Caucasian; 51% African-American; 4% Hispanic; and 4% Other.

4. 34% were between 20-29 years of age; 33% were between 30-39 years of age.

5. 80% completed high school or above. 20% reported completing junior high or below.

6. 56% were unemployed while 30% indicated they earned less than $18,000 annually.

7. 63% of the parents in the community completed 50% or more of the classes. 28% of the parents in correctional facilities completed 50% or more of the classes.

8. The Adult-Adolescent Parenting Inventory (AAPI-2) was administered pre and post program completion. Significant ($p<.001$) changes were found in attitudes regarding appropriate expectations of children, increases in empathy, and in use of alternatives to corporal punishment. Significant changes ($p<.05$) were found in appropriate family roles.

9. Within 30 days after completing the program, 75% reported no alcohol use, 66% reported no tobacco use and 95% reported no marijuana use.

8. **Safe Child, Raleigh NC, "An Evaluation of the Nurturing Parenting Program at Safe Child" Executive Summary, 2002**
Summary:
The purpose of this evaluation is to provide information to Safe Child on the impact of the Nurturing Parenting Program on participants. Staff were interested in determining participants' satisfaction with the program, participants' retention of learning over time, and participants' ability to apply what was learned to difficult parenting situations.

A survey instrument was developed, aligned to the goals and objectives in the program, and validated for content (through expert review). The items on the instrument included four problem-solving vignettes. Using standardized telephone interviewing, twenty-six individuals were interviewed. Eighteen (28%) of those individuals were program participants and eight (64%) were individuals on a waiting list to enter the program.

The major findings include:

- Program participants were consistently able to suggest more positive parenting strategies when given difficult parenting situations (i.e. vignettes) than those on the waiting list.
- Participants reported an increase in self-esteem since beginning the program.
- Both groups (participants and those on the waiting list) were equally able to identify children's physical and emotional needs, developmentally appropriate discipline strategies, and emotions.
- All participants (100%) expressed satisfaction with the Nurturing Parenting Program and all (100%) would recommend the program to friends and families.

9. **Wagner, K.F., Parenting Education and Child Welfare Recidivism: A Comparative Study of the Nurturing Parenting Program Graduates and Non-Graduates of Fresno County Abstract, May 2001**
Summary:
This study examined data from 199 parents with active child abuse cases referred to the Nurturing Parenting Program (NPP) between April 1997 and July 1998 by the Family Reunification Program of Fresno County

Department of Children and Family Services (DCFS). The sample included 104 NPP graduates and 95 non-graduates. All parents were reunified or had ongoing unsupervised contact with at least one child in the family. A comparative study of the recidivism patterns of graduate and non-graduate parents was conducted. Data were analyzed to compare number of parents with recidivism, time sustained before recidivism occurred, differences in severity of the original and recidivism offenses, and the prevalence of parental substance abuse and domestic violence in the home at the time of each offense. Results showed significantly less recidivism within the graduate group as compared to the non-graduate group. Time sustained without recidivism was significantly longer for graduates than for non-graduates. Physical abuse was reduced by almost fifty percent (50%) for graduates with recidivism offenses. Findings suggest that the NPP graduates are at lower risk for repeated child abuse than non-graduates, appear to use less physical violence when recidivism does occur, and sustain longer without recidivism than non-graduates. Additional findings indicate that the Nurturing Parenting Program may have a mediating influence on parental substance abuse and domestic violence in the home.

10. **Family Service of Milwaukee, Milwaukee, WI, "Outcome Evaluation of Family Service of Milwaukee Parenting Education Programs" Technical Report, 1997**
Summary:
The study was administered to program graduates of Family Service of Milwaukee's Parenting Education Programs (the Nurturing Parenting Program (NPP) and Families and Schools Together (FAST) between 1994 and 1996. The project was conducted, in part, to determine the long-term effects of the parenting education programs on parents and children. Completed survey results were obtained for 94 participants. This represents a return rate of 43% (217 attempts were made). The final sample represents 77 Nurturing Program and 17 Families and Schools Together participants. Program participants had completed the 13-week Nurturing Parenting Program (designed to prevent child abuse and neglect) and the 8-week, school-based Families and Schools Together Program (designed to address drug and alcohol abuse) between 1990 and 1995. The sample was constructed to include "graduates" from both FAST and NPP. Representation in the sample was also partly determined by site of parenting program.

The 217 people in the original attempted sample represent more than 10 NPP and FAST programs. Entire programs were selected for inclusion in the sample, but within programs just under half of those who we attempted to contact were surveyed. Participants were contacted by telephone or in person at least six months after completion of the program, and may have been surveyed up to three years after completing the parenting programs. About one-quarter of the surveys were done in person and the rest over the phone. All data were self-reports of parents about themselves, their lives and their families.

Survey respondents were asked several specific questions regarding changes in the relationship with their child, whether their child was doing better in school, whether they were more involved in school activities and whether their child's and their own self-esteem had improved. Ratings were made using a five-point scale ranging from a "high" of 1 to a "low" of 5. Average scores for both FAST and NPP were positive, but an interesting pattern of results emerged. Though not significant, FAST received its most positive average ratings (1.71) in the item assessing improvement of their children's school performance and in improved knowledge and awareness of the effects of drugs and alcohol. The Nurturing Parenting Program received its most positive rating in the item assessing improvement in the parent's relationship with their child (1.74) and the least positive rating in increased school involvement (2.20).

11. **Broyles, G., Easter, L., Primak, K., Shackford, L., "Nurturing Program Follow-Up Study: Boulder County Department of Social Services Nurturing Program" Research Report, 1992**
Summary:
Parental violence directed toward children has existed for centuries, but social norms serving to define child abuse and set it apart from accepted forms of discipline have varied greatly over time. Only recently have laws and formal programs sought to establish a uniform definition of child abuse, monitor and report its incidence, and correct those conditions believed to be its root cause. One program designed to break the chain of abuse from one generation to the next is the Nurturing Parenting Program, a system of tests, curriculum and teaching methods, aimed at parents and children in homes where physical abuse is believed to be a present or potential problem. Boulder County, Colorado offers the Nurturing Parenting Program (NPP) as an intervention option in cases of substantiated or suspected child abuse. Fifty-three participants in the NPP class in Longmont, Colorado during 1991 and 1992 were sampled to assess that program's effectiveness. An interrupted time-series study was performed, spanning the interval from first observation through one year post-intervention. No substantial re-abuse was found in the study population during this one-year period. The observed rate of study is recommended to further assess program effectiveness and detect patterns useful in the prediction and prevention of child abuse.

12. **Primer, V., "Long-Term Impact of the Nurturing Parenting Program: A Comparison of Parenting Attitudes of Abuse and Neglectful Parents Pre-Program, Post-Program, and at One Year Post-Program Follow-Up" Research Report, 1991**
Summary:
The purpose of this study was to assess the immediate and sustained impact of the Nurturing Parenting Program on the parenting attitudes of abusive and neglectful parents who have come to the attention of Social Service Agencies. Such an assessment would lead to: 1) determination of short-term and long-term effectiveness as a component of a treatment plan for abusive and neglectful parents; 2) determination of program strengths and weaknesses, affecting conjunctive interventions in treating these parents; 3) determination of implications for continued use of the Nurturing Parenting Program in such treatment.

Utilizing the Adult-Adolescent Parenting Inventory (AAPI) to measure parenting attitudes and four constructs; Empathy, Role Reversal, Expectations, and Belief in Corporal Punishment, a pretest, post-test, and follow-up test one year after program completion were conducted. The results showed that the majority of parents exhibited statistically significant movement towards non-abusive parenting profiles on each construct at the completion of the program. Follow-up data indicated that the majority of those tested maintained their non-abusive profiles more than one year after completing the program. Moreover, nearly 50% showed continued statistically significant increases in positive parenting attitudes in each of the four constructs. A small percentage did not maintain non-abusive profiles on the constructs of Empathy and Role Reversal. Further inquiry into this reversal revealed difficult life circumstances and little support for positive parenting, indicating that existing appropriate attitudes toward parenting are strongly influenced by environment.

13. **Bavolek, S.J., McLaughlin, J.A., Comstock, C.M. "The Nurturing Parenting Programs: A Validated Approach for Reducing Dysfunctional Family Interactions" Final Report NIMH, 1983**
Summary:

The 15-week Nurturing Parenting Program® was field tested twice at each of six sites. Data analyses show that a total of 121 parents and 140 children began the program. Of this total, 101 parents (83%) and 118 children (84%) completed the program. Extensive pre/post data collection occurred with parents and their children. Although parents were allowed to bring their children two to twelve years of age to attend the program, only children six to 12 years of age were tested. Parents were administered the 16PF (personality inventory), the Family Environment Scale, The Adult-Adolescent Parenting Inventory (AAPI), the Nurturing Quiz, and a social history questionnaire. Children were administered the Children's Personality Questionnaire (CPQ) or the Early School Personality Questionnaire (ESPQ), the Children's Parenting Inventory (CPI) informal self-concept scale, and the Family Environment Scale.
Pre/Post analyses on parent measures show the following results:

1. Parents' posttest scores on the AAPI were significantly greater ($p<.05$) in all four constructs measuring appropriate expectations of children, increase in empathy, decrease in the use of corporal punishment, and a decrease in role reversal. These data indicate a positive and significant shift in attitudes and behaviors in parenting and nurturing children among parents.

2. As measured by the 16PF (personality inventory), parents overall show average intelligence, higher than average aggression, lower than average conservatism, undisciplined self-conflict, and disregard for rules. Pretest and posttest data show significant changes in decrease of anxiety ($p<.05$) and decrease in touch poise ($p<.05$).

3. Data generated from the administration of the Family Environment Scale to parents show significant ($p<.05$) increases in family cohesion, expressiveness, and independence, and a decrease in family conflict.

Pretest and posttest analyses on children measures show the following results:

1. Children's scores on the Children's Parenting Inventory (CPI) indicate a significant ($p<.05$) increase in age-appropriate behaviors, gains in empathy, and the use of alternative methods of punishment rather than corporal punishment. Children's scores, however, did indicate a significant shift ($p<.05$) in attitudes toward pleasing and meeting the needs of mom and dad (role reversal).

2. Personality changes measured by the ESPQ and CPQ show significant increases ($p<.05$) in assertiveness, enthusiasm, and tough poise.

3. Data generated from the Family Environment Scale show gains in family cohesion, expressiveness, and organization, and decreases in family conflict and independence. However, none of the changes were significant.

Data generated fro a year-long follow-up of abusive families completing the program indicated:

- Forty-two percent (42%) of the families are no longer receiving services from County Departments of Social Services for child abuse and neglect. Recidivism was only 7%; that is, only 7 of the 95 adults completing the program had been charged with additional counts of child abuse and neglect.
- Parents overwhelmingly reported that the program did a lot to help them learn new and more appropriate ways to raise children.

Running Head: Cost-Savings Analysis of the Nurturing Parenting Program

A Cost-Savings Analysis of a Statewide Parenting Education Program in Child Welfare

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Abstract

This article presents a cost-savings analysis of the statewide implementation of an evidence-informed parenting education program. Between the years 2005 and 2008, the state of Louisiana used the Nurturing Parenting Program (NPP) to impart parenting skills to child welfare-involved families. Following these families' outcomes through August 2010, increased program attendance was associated with significant reductions in substantiated incidences and re-reports of child maltreatment (Maher, Marcynyszyn, Corwin, & Hodnett, 2011). Program costs and benefits (cost savings) were calculated using program, workforce, and administrative data. The benefit-cost ratio of 0.87 demonstrates that the NPP approaches cost neutrality in a short time period, without the consideration of long-term benefits or benefits to other systems. A review of current cost analyses in child welfare and a framework for conducting this type of analysis in a child welfare setting are provided.

A Cost-Savings Analysis of a Statewide Parenting Education Program in Child Welfare

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Like many fields, child welfare is facing a demand for greater accountability. Funders, policy makers, advocates, program directors, and program participants want interventions with demonstrated effectiveness. Thus, evaluations that assess impact are needed (Wilson & Alexandra, 2005; Partnership to Protect Children and Strengthen Families, 2007). In addition, coupling program costs with effectiveness data to calculate savings is increasingly part of this demand for accountability and serves as a valuable tool for public policy and decision-making (Lee & Aos, 2011). Federal agencies, including the Centers for Disease Control and the Administration for Children and Families Children's Bureau are requiring or including cost analyses in the maltreatment prevention evaluations they fund (Brodowski & Filene, 2009; Corso & Filene, 2009). Yet, in the social work field, and especially child welfare, these analyses remain relatively rare (Mullen & Shuluk, 2010). This article outlines a *cost-savings* approach stemming from a previous evaluation that accounts for the real-world constraints of conducting this type of research, while still providing valuable and valid information for the field and a state child welfare agency. Similar case studies are emerging in child welfare that address the constraints, trade-offs, and challenges of cost analyses in this field (e.g., Boulatoff & Jump, 2007; Brodowski & Filene, 2009; Corso & Filene, 2009).

Definitions of Cost Analyses

After a program has demonstrated effectiveness in producing an outcome of interest, such as reducing child maltreatment, cost analyses are used to describe the program costs in relation to benefits. Two types of cost analyses are typically used—cost-benefit or cost-effectiveness. While both types of analysis monetize program costs, only cost-benefit studies analyze outcomes monetarily. For many child welfare programs, benefits can be difficult to

quantify and covert to a monetary benefit (e.g., improvements in parenting skills), and thus, cost-benefit studies are challenging to conduct (Lee & Aos, 2011; Selameab & Yeh, 2008). Instead, many studies perform cost-effectiveness analyses (see DeSena et al., 2005; Sharac, McCrone, Rushton, & Monck, 2011, for examples), which compare the costs and non-monetized outcomes of a program to the status quo or an alternative program (Corso & Lutzker, 2006).

Within each of these two types of cost analyses, a continuum of analyses are possible ranging from direct and immediate calculations of program costs and benefits from a limited perspective (such as an agency or program) to the economic modeling of costs and long-term societal benefits of an intervention over the lifetime of participants. This article presents the application of a form of cost-benefit analysis, called a cost-savings analysis, to a parenting program:

> Cost-savings analysis is restricted to the costs and benefits realized by the government as a whole or a particular funding agency. Only the costs to the government are taken into account, and the benefits are those expressible as dollar savings somewhere in the government. This kind of analysis is used to determine whether a publicly provided program "pays for itself" and is thus justified not only by whatever human services it may render but also on financial terms alone. (Karoly, Kilburn, Bigelow, Caulkins, & Cannon, 2001, p. xv)

Cost-Savings Analysis Approach

Despite the dearth of cost data and long-term impact studies for parenting education programs, evidence exists that these programs yield positive child outcomes and, in some cases, demonstrate cost-effectiveness (McGroder & Hyra, 2009). The cost-savings analysis approach used for this study is built upon an existing evaluation of a statewide implementation of an evidence-informed parenting program for all child welfare-involved families referred to

parenting education in Louisiana (Maher, Marcynyszyn, Corwin, & Hodnett, 2011). This evaluation was conducted in collaboration with Louisiana's Department of Social Services, Office of Community Services (DSS OCS).

The NPP for Infants, Toddlers, and Preschoolers (Bavolek, 2005) is a parenting education program designed to prevent maltreatment by developing positive parenting skills for caregivers of young children. The program was delivered statewide in Louisiana to parents referred by child welfare to parenting education with the goal of preventing maltreatment and foster care placement. The evaluation documented significant reductions in repeat maltreatment associated with higher levels of participation in the NPP. Specifically, caregivers who attended the average number of group or home sessions (18) of the NPP had a 35% lower likelihood of a substantiated maltreatment incident within two years of program participation compared to participants attending only three sessions (the bottom decile), controlling for other characteristics of caregivers that might be associated with participation or likelihood of repeat maltreatment (Maher et al., 2011). This cost-savings analysis calculates the savings associated with these reductions over time. Taking the perspective of savings to the child welfare agency providing the program, state administrative, service, and workforce data are used to monetize savings associated with this difference in the repeat maltreatment likelihood for a time period of up to four and a half years after participation in the program.

The purpose is two-fold. First, the intent of this cost-savings analysis is to illustrate both the value and practical considerations of conducting cost analyses in child welfare. As such, the cost-savings analysis faces many of the evaluation challenges documented by Bamberger, Rugh, and Mabry (2006) in terms of data, time, and resource constraints. These constraints and limitations in the approach are outlined later. In addition, a substantive contribution is made regarding the savings associated with a particular evidence-informed parent education program

and the use of such models in child welfare. The implications of these savings have relevance to federal finance reform for child welfare, which is also discussed.

A Review of Cost Studies in Child Welfare

Child welfare lacks extensive information on the societal costs of maltreatment as well as a rich menu of evidence-based programs that can prevent it (Corso & Fertig, 2010; Lee, Aos, & Miller, 2008; Plotnick & Deppman, 1999). Though estimates of societal costs are underdeveloped, the best available data provide a sense of the extensive national costs resulting from child maltreatment. A handful of studies have estimated the economic burden of maltreatment by examining the impact on many sectors of society over the lifetime of the victims: short-term medical costs, long-term medical costs, productivity losses, child welfare costs, special education, criminal justice costs, and/or quality of life costs (see Corso & Fertig, 2010 for a review of these studies). These cost estimates range from $7 billion (i.e., Daro, 1988) to $103.7 billion (i.e., Wang & Holton, 2007) annually. Corso and Fertig (2010) suggest that a more precise estimate of the annual societal cost of maltreatment is somewhere around $64.4 billion in 2007 dollars.

A few states have taken a similar societal approach to estimate the costs of maltreatment and savings from prevention for their respective states. Studies in Alabama (Watters, Odom, Ferguson, Boschung, & Edwards, 2007), Colorado (Gould & O'Brien, 1995), and Michigan (Caldwell, 1992; Noor & Caldwell, 2005) all concluded that given child maltreatment costs, even with conservative intervention cost estimates, prevention programs can be highly cost-effective. In Colorado, for instance, Gould and O'Brien (1995) estimated that over $400 million is spent annually by the state on child abuse and neglect, and that if a local home-visiting program was able to reduce child maltreatment expenses by only 6%, the program would pay for itself. In Michigan, Noor and Caldwell (2005) estimated that delivering a program where *every* family in Michigan having their first child received either a parenting

education or a home-visiting program, child maltreatment costs would only need to be offset by 2.7% to be cost-effective. Finally, Zerbe et al. (2009) found that a private model of foster care services, which provided longer-term, more intensive services, though more expensive to implement, could generate billions of dollars in savings for Oregon and Washington State compared to the respective state models of services.

Focusing on analyses of particular interventions, a recent review by Lee et al. (2008) on maltreatment prevention programs with monetizable outcomes, found that while some programs (e.g., Parent-Child Interaction Therapy) exhibit positive benefit-to-cost ratios, which indicate the savings are greater than the cost, others exhibit benefit-to-cost ratios that are negative (e.g., Healthy Families America) or inconclusive (e.g., Project KEEP). Nonetheless, measuring and monetizing the costs associated with interventions and societal savings from reductions in child maltreatment is an ambitious undertaking, which is why so few studies have done so.

Additionally, a handful of studies in child welfare have taken a more limited approach to conducting cost analyses. These studies either included only program costs and not benefits (e.g., Foster, Porter, Ayers, Kaplan, & Sandler, 2007) or the benefits are non-monetized (e.g., Foster, Jones, & the Conduct Problems Prevention Research Group, 2006; Goldfine, Wagner, Branstetter, & Mcneil, 2008; Sharac et al., 2011). One study, similar to the analysis presented here, examined the service costs of different types of out-of-home service models in relationship to children's length and number of placements to assess the value of a short-term group care program called SAFE Homes (findings indicated SAFE Homes was not cost-effective) (DeSena et al., 2005). These types of program-level studies reflect the growing demand for information on program costs and provide important information on maltreatment prevention.

This study expands on these by including program costs and monetized benefits from the perspective of the child welfare agency. As stated previously, the purpose is two-fold—to contribute to the literature on the cost-benefit of parenting education in child welfare for the

prevention of maltreatment and to provide a detailed summary of one approach to cost analysis. First, the evaluation on which the cost-savings analysis is based is described. Next, the steps taken to conduct the analysis are outlined in detail, with limitations identified along the way. Then, the benefit-cost ratio of the NPP is calculated and sensitivity analyses are conducted. Finally, the implications of this work, the contributions it makes to decision-making within child welfare, and appropriate cautions about relying on a cost perspective alone are discussed.

Methods

Economic cost modeling can be expensive and requires significant resources both in terms of cost and technical capacity. Ideally, cost analyses should be planned in advance so that the requisite data can be collected and limitations can be minimized. This approach highlights some of the limitations faced in terms of time and data, stemming from limited resources and the lack of initial plans for a cost analysis. In this section and the next, each step in the cost-savings analysis is outlined, the considerations and limitations, and the data sources used (similar to an approach taken by Farnham, Ackerman, & Haddix, 1996). These steps include:

Step 1. Determine the perspective of the cost analysis
Step 2. Define the sample and study population
Step 3. Describe the intervention
Step 4. Establish the outcome measure(s) for estimating savings
Step 5. Determine the data sources needed/available to conduct the cost analysis
Step 6. Calculate program costs
Step 7. Calculate costs associated with outcomes for estimating cost savings
Step 8. Calculate cost savings
Step 9. Calculate the benefit-cost ratio(s)
Step 10. Conduct sensitivity analyses for estimates

Step One: Determine the Perspective of the Cost Analysis

The perspective taken in a cost analysis will guide the next set of choices that need to be made. Resource constraints, in part, determined the perspective taken for this cost analysis – a short-term time horizon from the perspective of the child welfare agency. The results of the outcome evaluation, which found an inverse association with level of participation in the NPP

and the likelihood of repeat maltreatment, are supplemented with this cost-benefit analysis. Given the limited outcome data available, the perspective of the child welfare agency is taken in calculating program costs and savings for the time period which data were available. In other words, a simple and conservative approach to estimating the savings is used since costs associated with maltreatment to other systems are excluded, as were the longer-term enduring consequences of abuse and neglect. This more limited perspective, which is, in part, dictated by resources of budget, time, data, and foresight, has practical value to a child welfare agency, whose decision-making is often focused on the direct impact to their agency and short-term legislative budget cycles. Nonetheless, the choice of perspective taken (societal vs. agency), and the time horizon chosen, can result in cost-benefit findings that vary substantially (Plotnick & Deppman, 1999). For example, reductions in a social program, such as TANF or Medicaid, represent an immediate savings, or benefit, to the taxpayers (i.e., societal perspective) but a cost to recipients of welfare (i.e., individual perspective) (Foster & Holden, 2002). Similarly, if the effects of an intervention on only one segment of society are included, when there may be effects of equal magnitude on another segment, a benefit-cost ratio could greatly increase.

Step Two: Define the Sample and Study Population

To allow for valid inferential statements about program impact and the generalizability of the cost findings, the target population for the program and the sampling approach must be defined up front. This cost-savings analysis is based on the population of caregivers from the outcome evaluation, thus, a sample is not utilized. It includes all caregivers who attended the NPP between October 2005 and April 2008 in ten of the state's eleven family resource centers serving all of Louisiana's child welfare population. Caregivers served by the resource center in New Orleans were excluded because Hurricane Katrina required significant program modifications which limited comparability. With the exception of a very small number of families who were screened out across the state (approximately 50) for circumstances that prevented

constructive participation in the program (serious cognitive impairment, work barriers, substance abuse), all child welfare-involved families with infants, toddlers, or preschool-aged children in the state with child abuse or neglect allegations assessed as needing parent education were referred to the NPP at one of these resource centers. The study used data from 528 caregivers participating for the first-time in the NPP. Demographic characteristics of the population are summarized in Maher et. al. (2011). When a sampling approach is used, which is not the case for this study, the sample should adequately reflect the target population.

Step Three: Describe the Intervention

A detailed description of the intervention should accompany any cost analysis to logically link observed outcomes to the program and to capture all the program elements with implications for costs. The NPP (Bavolek, 2005) is based on social learning theory (Bandura, 1977; 1986) and the associated premise that most parenting patterns are learned during childhood and replicated later in life when the child becomes a parent. The program is designed to assess, prevent, and treat maltreatment by developing nurturing parenting skills as a counter to the key constructs of abusive and neglectful parenting including inappropriate expectations of the child, lack of empathy toward children's needs, use of corporal punishment as a means of discipline, reversal of parent-child role responsibilities, and oppressing children's power and independence (Bavolek, 2005). In particular, the NPP is built on the core principle that empathy is the foundation of responsive parenting, for which there is general agreement that promoting nurturing and empathic parenting practices is critical to the safety and well-being of children (Donald & Jureidini, 2004; Kochanska & Aksan, 1995; Laible, 2004). The NPP for Infants, Toddlers, and Preschoolers focuses on parental self-awareness and empowerment, the development of empathy, understanding child development and the role of discipline, emotional communication, behavior skills training, the importance of routines, and making good choices for child safety for parents of children birth to five years old (Bavolek & Dellinger-Bavolek, 1985).

The program is designed to be flexible in its application and involves lesson guides, DVDs, parent handbooks, assessment inventories, behavioral modeling, discussion, role playing, home visiting, and family activities to promote cognitive and affective learning. The NPP manual is written at the 5th grade level, and the state child welfare agency worked with the program developer to create an "Easy Reader" version of the materials for use with caregivers with more limited reading ability. Finally, the NPP is structured to involve children in the learning process where possible.

For the statewide implementation, Louisiana's DSS OCS provided funding to train Bachelor's or Master's level resource center staff to become NPP facilitators. In addition, front-line child welfare staff were also trained so they could become familiar with the program model. The NPP was administered as a 16-week group-based program, the minimum number of NPP sessions recommended for a child welfare population (S. Bavolek, personal communication, January 31, 2011). Group sessions lasted approximately two and a half hours. Home visits, averaging about an hour in length, were also used for multiple purposes. They were used as make-ups for missed group sessions in order to maximize participation, as compliments to the group sessions to reinforce concepts for parents who needed more time, and as supplemental sessions for parents who had other needs. To promote accessibility, the resource center staff were expected to assist caregivers in transportation plans to and from sessions as needed. Describing all of the features of the NPP program delivery is critical as how the program is delivered will affect the program costs.

Step Four: Establish the Outcome Measure(s) for Estimating Savings

The benefit portion of the cost-benefit ratio stems directly from the observed outcomes associated with the intervention. The outcomes selected for observation relate to the perspective taken for the cost analysis. Cost savings from an intervention are realized in one of two ways: the avoidance of future costs or the generation of monetary benefits. Savings are

calculated from the avoidance of the direct costs of child maltreatment to the child welfare agency. Indirect savings (e.g., reduced criminal justice involvement, greater educational attainment) and opportunity costs (e.g., foregone income for parents attending the intervention or lost lifetime earnings for maltreated children) are not included, but are typically recommended as part of a full economic analysis (Conrad, 2006; Lee & Aos, 2011; Wang & Holton, 2007).

Maher et al. (2011) demonstrated that greater participation in the NPP was associated with a reduction in short-term allegations and longer-term substantiated child maltreatment incidences – controlling for other characteristics of children and families that might be associated with participation or maltreatment (i.e., individual and household demographics, socioeconomic status, and risk factors for maltreatment, including prior maltreatment history for children and caregivers and parenting beliefs, such as the use of corporal punishment). For each additional session of the NPP, they found a significant decrease in both the likelihood of a maltreatment report within six months and the likelihood of a substantiated report within two years of completing the NPP. The more sessions caregivers attended, the more child safety improved. In other words, six months after the program's conclusion, caregivers were significantly less likely to be re-reported for child maltreatment for every additional NPP session attended. Two years after participating, caregivers who attended more sessions were significantly less likely to have a substantiated maltreatment incidence.

Post-estimation commands for logistic regression in Stata (Long & Freese, 2006) were used to produce predicted probabilities of repeat maltreatment for an 'average' caregiver at two illustrative levels of program attendance for each time period and type of report. The population average attendance (18 group and home sessions) was used in comparison to the lowest decile of attendance (3 sessions) from which predicted probabilities of repeat maltreatment were obtained. Attendance ranged from 1 to 32 group and home sessions. Figure 1 presents this information visually.

Step Five: Determine the Data Sources Needed/Available to Conduct the Cost Analysis

Once the perspective has been established, the study population defined, and the outcomes identified, data sources available or from which data can be collected to calculate program costs and savings needs to be determined. In this case, existing or easily obtainable data is relied on for calculating both the costs of administering the NPP (hereafter referred to as *program costs*) to Louisiana's child welfare population and the subsequent costs of maltreatment, which when averted, constitute the benefits (hereafter referred to as *cost savings*). A combination of existing data on program delivery, administrative maltreatment and service records, and workforce information is used to calculate the program costs and cost savings.

Program data.

Detailed knowledge about the components of an intervention and how it is implemented are necessary for estimating the costs of the intervention, as well as understanding how it is designed to work with the target population. These costs may be straightforward, such as the one-time purchase of training materials, or a bit more difficult to isolate, such as administrative costs or the cost of transportation, which may include time, the price of gas, bus fare, maintenance of a vehicle, and other considerations.

Researchers generally recommend using the "ingredient method," developed by Levin (1983) and enhanced by Chambers and Parrish (1983) to measure program costs (Corso & Lutzker, 2006; Plotnick & Deppman, 1999). Program costs are built up from all components and resources used to provide the service, including all personnel and non-personnel costs as well as donated, volunteer, and in-kind resources (Foster et al., 2007). Often, this involves primary data collection including time diaries from staff, which can be expensive, a burden to staff, and require significant engagement with program staff to identify all resources and time allocations (Brodowski & Filene, 2009).

Louisiana's DSS OCS collected information on program costs in 2008 from a convenience sample of five of the ten resource centers delivering the NPP. The centers provided estimates of staff time for group sessions and home visits (group and child facilitators, clerical support); associated salaries; expenses (transportation, supplies, food, photocopying); and, group size. Only one of the five agencies reporting cost information included supervision costs. DSS OCS also provided statewide contract amounts for ongoing training, technical assistance to the resource centers, and state oversight for quality assurance. This information is used to calculate an average per caregiver program cost. The start-up costs for training and infrastructure (e.g., "training the trainers") were not available and, thus, these costs are not included.

Another category of program costs that is not included in the calculation is overhead or non-personnel costs (e.g., governance and administration, rent, equipment; NPP material costs, which were donated; in-kind or volunteer resources; and, information systems or performance monitoring costs). To obtain precise estimates of the proportion of non-personnel costs dedicated to NPP, given that all centers provide other services as well, more in-depth interviews, data collection, and/or analysis of center budgets would be necessary.

While direct service personnel costs typically constitute the highest proportion of program delivery costs and are the bulk of costs included in this analysis, the extent to which the percent of program costs attributable to overhead could be estimated was examined, although the specific cost estimates (i.e., governance, administration, and other non-personnel costs such as facilities) were unavailable. Little direction was found in the child welfare services literature, other than two studies, which report that the proportion of non-personnel costs for service delivery of particular programs are about 24 – 26% (Corso & Filene, 2009; Foster et al., 2007). However, the budget categories in these studies do not directly align with this study, so they are not applied to the program costs. Thus, program costs in this study are

underestimated. (Overhead costs for the costs associated with maltreatment are not included either, and, if similar, these omissions on each side of the benefit-cost equation would cancel each other out. Those omissions are discussed next.)

Outcome data: Costs associated with maltreatment.

The data sources for the original outcome evaluation included NPP attendance data; the state child welfare Tracking and Information Payment System (TIPS), which is the state's administrative child welfare data system; and, the Adult-Adolescent Parenting Inventory-2 pre- and post-test surveys (Bavolek & Keene, 2001). Savings from reductions in maltreatment associated with level of participation in the NPP are measured in terms of the reduction in costs incurred following both maltreatment reports and substantiated incidences of child abuse and neglect. These costs include the daily costs of service (daily payment rates for foster care and personnel costs for social workers) and additional service costs stemming from a maltreatment incident. The TIPS administrative data from DSS OCS contained the duration of time children spent in foster care (to the day), the duration of in-home services provided, and the dates of investigations that resulted from both the reported incidences of maltreatment within six months and the substantiated incidences within two years following the NPP for every program participant.

DSS OCS provided the average daily payment rate for foster care per child. These costs are assigned to each day of service, for caregivers and children in the TIPS database. Average daily personnel costs for foster care, in-home services, and child protective investigations are calculated using the salary and caseload information for supervisors and case workers and applied to each service day and type. Finally, additional service expenditures are used for children in foster care or families receiving in-home services. For foster care, these include special board payments (for special needs children), clothing, respite care, transportation, evaluation, medical/treatment, school supplies, incidental expenses, and day care. For in-home

services and child protective investigations, service costs include payments from the preventive assistance fund and reunification assistance fund, transportation, evaluation, medical/treatment, and incidental expenses.

The expenditures for child welfare on behalf of families who received services with a repeat maltreatment incident are summed to calculate the aggregate cost for this population of caregivers since the first cohort completed the program to the time of the cost analysis (August 2010). The time frame for calculating service costs is not the same for all families, since the outcomes were from different cohorts of caregivers over the first two and a half years of program implementation. The window of opportunity for child welfare services receipt ranged from two years and four months for some families up to four and a half years for other families, depending on when they started and completed the NPP. If service costs were projected beyond the study time frame, the costs of maltreatment might be higher as services for some families extended beyond this cut-off point.

As mentioned previously, the costs associated with repeat maltreatment are underestimated due to the fact that only direct child welfare personnel and service expenditure costs are included. Costs to the state child welfare agency for governance, administration, and other non-personnel costs (rent, supplies, and equipment.) are excluded. If included, the total costs of service delivery may increase by approximately 25%. The savings from the prevention of maltreatment are further underestimated due to the unmeasured benefits associated with reductions in maltreatment excluded from this analysis, including: the cost of other services caregivers received through the resource centers (e.g., mentoring), service costs to other systems such as MEDICAID or education, and transportation costs incurred using state vehicles.

Results

In this section, the process of calculating program costs, costs associated with repeat maltreatment, cost savings, and benefit-cost ratios is outlined, as well as how sensitivity analyses are conducted.

Step Six: Calculate Program Costs

As stated previously, program data from five resource centers provided estimates of staff time (group and child facilitators, clerical support), expenses (transportation, supplies, food, photocopying), and group size, all of which are used to produce an average program cost per caregiver. Of course, program costs could vary significantly depending on staff qualifications, education, and compensation; differences in the numbers of group and home-visiting sessions administered; and, regional differences in cost. The average program cost per caregiver across all five centers in the sample is used to produce a statewide estimate. Sensitivity analyses are also conducted in a later step in order to demonstrate potential variation in these costs across the five centers.

For purposes of comparability, all program costs are adjusted to 2010 values using the CPI inflation calculator (U.S. Department of Labor, 2011). In 2010 dollars, the average program cost per caregiver amounts to approximately $1,258, which sums to an aggregate cost of $664,161 for all 528 caregivers who participated in the NPP between October 2005 and April 15, 2008. Program costs are not presented as an annual amount, as the number of participants varied each year. In addition, the estimated savings did not accrue at a constant annual rate during the study time frame.

Step Seven: Calculate Costs Associated with Outcomes for Estimating Cost Savings

The service costs associated with repeat maltreatment occurred between 2006 and 2010. As mentioned earlier, these costs are summed across caregivers to obtain an aggregate estimate of savings. A discount rate is used for all service costs that were incurred more than

one year following completion of the NPP. Total substantiated maltreatment costs (after discounting) totaled $1,637,819 during the child welfare service period ending August 2010.

Discounting is necessary because immediate benefits are worth more than future benefits. In other words, prevention of a maltreatment incident immediately following an intervention is of more value than prevention of a maltreatment incident at a later date. Benefits occurring at different time periods need to be made directly comparable by adjusting them to their net present value through the application of a discount rate (Plotnick & Deppman, 1999). Because the value of costs associated with maltreatment prevented earlier are at a premium, costs incurred more than one year following the NPP, and the subsequent cost savings, are discounted (reduced) back to their net present value during the year immediately following the NPP. An inflation rate is not typically applied to benefits because the discount rate would be adjusted by the same inflation rate, and thus, would result in a net cancellation (Plotnick & Deppman, 1999). As Burgess and Zerbe (2011) point out, there is little agreement on what discount rate to apply when estimating net present values; however, a discount rate of 3.5% is used for these calculations because this rate is commonly used and recommended in similar studies (Karoly et al., 2001; Moore, Boardman, Vining, Weimer, & Greenberg, 2004; Zerbe et al., 2009). Sensitivity analyses are performed around this discount rate for robust results.

Step Eight: Calculate Cost Savings

Table 1 presents the total program costs for the evaluation period in relationship to the estimated savings from reductions in maltreatment. As mentioned previously, Maher et al. (2011) demonstrated that caregivers attending 18 program sessions were 39% less likely to have a reported incidence of maltreatment within six months following the NPP, and 35% less likely to have a substantiated incidence of maltreatment within two years following the NPP, compared to caregivers that attended only three sessions. Using the percent reduction in reported and substantiated incidences, respectively, the savings associated with these

reductions in maltreatment from different NPP attendance levels for this population was $580,027.

Step Nine: Calculate the Benefit-Cost Ratio(s)

The benefit-cost (B-C) ratio is calculated by dividing the cost savings (savings stemming from reductions in substantiated maltreatment: $573,237 and re-reports of maltreatment: $6,790) by the program cost ($664,161). The B-C ratio calculated in this analysis equals 0.87; in other words, from the first two and a half years of program implementation Louisiana's child welfare agency could recoup at least 87 percent of the program costs within four and a half years of the completion date for the first cohort of participants (assuming average attendance levels). In effect, the NPP approaches cost neutrality (i.e., a B-C ratio of 1.0) within a short time frame based on the observable and measurable benefits of reductions in maltreatment incidences.

Step Ten: Conduct Sensitivity Analyses for Estimates

Since most cost analyses are subject to several assumptions, sensitivity analyses are typically conducted to demonstrate how these assumptions can lead to changes in the B-C ratio (Merrifield, 1997). For the sensitivity analysis, the following are examined: (1) the low- and high-end program costs from the resource centers in case the actual population average is closer to one of these ends, (2) the low- and high-end of the confidence interval around the predicted reduction in the probability of maltreatment per additional NPP session attended for participants, and (3) alternative discount rates.

Sensitivity analyses are conducted on the program costs since these estimates are based on a convenience sample. Findings reveal that variation in the NPP program costs at the resource centers and in reductions in the probability of maltreatment substantially affect the B-C ratio, whereas variation around the discount rate does not. First, in relation to the program costs, providing the NPP cost $1,072 per caregiver at the low end of the range and $1,597 per

caregiver at the high end of the range. The total program costs of delivering the NPP using these values (after inflation) is estimated at $573,255 and $853,998, respectively. The statewide average used in this analysis, based on the five resource centers from whom cost data was collected, can be anywhere within this range. Resource center costs vary by staffing structure (the number of facilitators), credentials, salaries, etc. The five resource centers may not be representative of all ten resource centers in the state. Using the highest resource center program costs, the B-C ratio drops to 0.68; using the lowest program costs, the B-C ratio increases to 1.01. While the latter estimate yields a positive B-C ratio from the NPP, this should not be interpreted as a reason to spend less on NPP delivery as lower program costs may affect the efficacy of program delivery and, concomitantly, contribute to increased maltreatment.

The results of the logistic regression demonstrated a significant association between program attendance and repeat maltreatment (Maher et al., 2011); specifically, the odds ratio for attendance of 0.97 (with a standard error of 0.01) suggests that for every additional session of the NPP attended by a caregiver, the probability of substantiated maltreatment for that caregiver within two years of program participation declined by approximately 3.3%, controlling for other caregiver characteristics. The confidence interval around this estimate indicates that (with 95% confidence) this decline in probability ranged between 1.1% and 5.5%. Similarly, the estimate of 0.96 (with a standard error of 0.01) suggests that for every additional session of the NPP attended by a caregiver, the probability of a re-report of maltreatment for that caregiver within six months of program participation declined by approximately 3.8%, controlling for other caregiver characteristics. The confidence interval around this estimate ranged between a 1.3% and 6.3% reduction in re-reports of maltreatment. Using the low or high ends of the confidence intervals results in a B-C ratio of .32 or 1.30, respectively—a substantial difference in results.

A sensitivity analysis is also performed around the discount rate—3.5%. Discount rates of 2% and 5% are used for the sensitivity analysis. Using a discount rate of 2%, the total

maltreatment costs are calculated to be $1,686,658. Using a discount rate of 5%, the total maltreatment costs equal $1,625,094. Using the more conservative discount rate of 5% for the maltreatment costs and resultant savings, the B-C ratio drops to 0.86; using the less conservative discount rate of 2%, the B-C ratio increases to 0.89. The use of different discount rates would have a larger impact on the B-C ratio if a longer time horizon was available to estimate savings. For outcomes observed in shorter time periods, the discount rate does not make a substantial difference.

These sensitivity analyses are reported to show the range of impact varying assumptions have on the B-C ratio. As demonstrated, variations in the program costs per caregiver, the predicted reductions in maltreatment, and the discount rate substantially affect the estimated B-C ratio. However, given the use of the average program cost, the mid-range value of the confidence interval around predicted reductions in the probability of repeat maltreatment, and a discount rate based on prior social science research, the B-C ratio of 0.87 most accurately reflects the potential savings of the NPP for the time period examined.

Discussion

In this article, the methods for conducting a cost-savings analysis in the context of real world constraints are showcased. Primarily, data readily available, or already collected, is relied on, and the analysis is built on previously published evaluation results. The NPP was delivered to all caregivers in Louisiana with prior maltreatment reports for whom parenting education was an appropriate intervention. Due to the large numbers of families served, the costs for program delivery were substantial. For the population of parents referred to parenting education in Louisiana, only a small percentage of caregivers had a second substantiated maltreatment incident (16.9%) and, among these, only a percentage resulted in foster care placements (40.4%). Yet, the NPP was provided to all families for whom parenting education was recommended. Thus, this cost-savings analysis was approached with the realization that it may

be difficult to observe statewide savings from maltreatment reductions for a small subset of families. However, the final B-C ratio, which approaches cost neutrality in a short time frame, is very promising.

The cost-benefit ratio of 0.87 is quite conservative for many reasons. First, it includes only one measurable outcome of maltreatment prevention – service and personnel costs avoided through reductions in maltreatment. If this outcome alone were tracked beyond the study period, the benefit-cost ratio would almost certainly exceed 1.0. Second, and most importantly, costs to other systems are excluded from the estimated savings stemming from other documented impacts associated with reductions in maltreatment for the children who experience it. These long-term savings could be substantial if reductions in repeat maltreatment result in fewer special education placements, higher educational attainment, less medical care use, less mental health therapy, greater earnings, or less incarceration. For instance, other state estimates of the costs of child abuse and neglect estimate that costs to child welfare may only account for between 29% (Noor & Caldwell, 2005) and 53% (Watters et al., 2007) of the total annual costs of child abuse and neglect to a state after taking into account impacts on other systems. If child welfare service and personnel costs comprise 29% to 53% percent of the total cost of child abuse and neglect in Louisiana, the B-C ratio would be somewhere between double and three and a half times greater than the current estimate.

Finally, other non-monetizable benefits such as increased parenting knowledge and skill, improved quality of parent and child interactions, and enhanced child development are not examined. These outcomes, while associated with child maltreatment, may result in other unmeasured benefits over time, some of which likely could be monetizable if resources were in place to track these relationships over time. A full economic analysis would include not only a full accounting of program costs, but an expansive range of benefits, not just in terms of costs

averted, but also intangible benefits – even those that are not easily monetizable (Foster, Dodge, & Jones, 2003).

Another limitation is the interpretation of the evaluation results, on which the cost-savings analysis are built, due to limitations in the study design. Economic analyses are considerably strengthened by the extent to which the research design can establish causation. The causal association between attendance and repeat maltreatment observed in the logistic regression models cannot be definitively determined due to the lack of a comparison group. Because the population database included all families referred to the NPP, no comparisons could be drawn between maltreatment outcomes for participants in the NPP and otherwise similar parents who received no parenting education. Given this, differences between average and low attendance levels were examined. While available factors that might be associated with attendance and repeat maltreatment were controlled for, it is possible that caregivers who attended more sessions may be qualitatively different than caregivers who attended fewer sessions in ways that were not accounted for.

The cost-savings approach detailed here is a reflection of the growing demand for greater accountability in terms of quality and effectiveness of service delivery and fiscal responsibility. The conservative, albeit limited, approach outlined here demonstrates that an evidence-informed parenting education program with a high level of participation will lead to realized savings for child welfare, and likely other systems in the short- and long-term. The B-C ratio approaches cost neutrality in a short period of time from the limited perspective of the child welfare agency despite the fact that, as Plotnick and Deppman (1999, p. 394) note, this method of calculating benefits "makes it much harder for an intervention to pass a fair benefit-cost test because most or all of the costs come up front, although benefits may accrue well into the future." In contrast to a societal level economic analysis, this type of cost-savings approach may, however, have more immediate utility for a child welfare department.

Understanding the effectiveness and the associated costs and benefits of parenting education programs in child welfare is critical as they are a common component of services provided to child welfare-involved families (Barth et al., 2005; Huebner, 2002; Waldfogel, 2009). If prevention services can demonstrate that they reduce foster care caseloads, thus saving money, a strong case for finance reform strategies that allow for reinvestment of foster care savings into prevention activities can be made (Casey Family Programs, 2010). These types of results position the field to advocate for child welfare finance reform.

Conclusions

In summary, given the expenses associated with out-of-home placements and in-home services, Louisiana's child welfare department should be able to absorb all costs of statewide program delivery by observed reductions in repeat maltreatment. If the program could be targeted to those families most at risk for repeat maltreatment, more savings could be realized. This targeted approach would, however, require better measures of risk, and would also prevent other families not at risk for reoccurrence of maltreatment from realizing other program benefits. Strategies to encourage a high degree of participation and retention in the NPP are also warranted. Providing incentives or outreach to increase participation is apt to pay off.

Families likely experience other benefits from participation in effective parenting education. Unmeasured benefits could include improved parenting, enhanced child development, and thus, improved well-being for both children and families. These outcomes likely result in families and children utilizing fewer services from other public systems and increased productivity in terms of employment, earnings, and, thus, additional tax revenue. However, economic incentives should be only one framework to justify service delivery. Beyond monetary benefits alone, the short- and long-term well-being of families is both a moral and ethical imperative for social service institutions and society in general.

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Table 1

Summary of Program Costs, Costs Associated with Maltreatment, Cost Savings, and the Benefit-Cost Ratio[a]

Costs and Savings Calculations	
Program costs:	$664,161
Total daily costs of substantiated maltreatment incidences occurring within two years of program participation[b]:	
Foster care	$1,160,480
In-home services	$21,227
CPS investigations	$57,589
Total cost of additional services on behalf of children in foster care stemming from substantiated maltreatment incidences[c]:	
Foster care	$342,214
CPS investigations	$16,649
Family services	$13,209
Services to parents	$26,451
Subtotal of costs associated with substantiated maltreatment incidences within two years of program participation:	$1,637,819
Cost of CPS investigations stemming from re-reports of maltreatment within six months of program participation:	$17,411
Subtotal of costs associated with re-reports of maltreatment incidences within six months of program participation:	$17,411
Cost savings from 35% reduction in substantiated maltreatment within two years of participation in NPP:	$573,237
Cost savings from 39% reduction in re-reported maltreatment within 6 months of participation in NPP:	$6,790
Benefit-cost ratio:	*0.87*

[a] All costs are reported in 2010 dollars.

[b] The daily costs of foster care include the average daily payment rate for care per child and the average social worker and supervisor wages. Daily costs of in-home services include the average social worker and supervisor wages per household. The cost of CPS investigations includes average social worker and supervisor wages paid over the average length of time for an investigation.

[c] Additional service costs for children in foster care or their parents, families receiving in-home services, and families receiving investigations included special board payments (for children with special needs), clothing purchases, respite care for foster parents, preventative assistance and reunification assistance (including heating and cooling expenses for income-eligible households), transportation expenses, evaluation services (including psychological testing or legal consultation), medical treatment, school supplies, incidental expenses (e.g., foreign language interpreting, substance abuse screening), and day care.

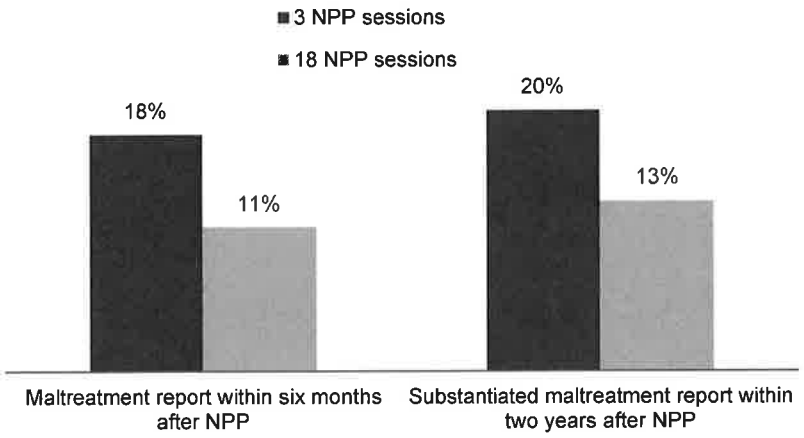

Figure 1. Likelihood of child maltreatment at two time periods by sessions attended. Adapted from "Dosage Matters: The Relationship between Participation in the Nurturing Parenting Program for Infants, Toddlers, and Preschoolers and Subsequent Child Maltreatment," by E. J. Maher, L. A. Marcynyszyn, T. W. Corwin, and R. Hodnett, 2011, *Children and Youth Services Review*, *33*(8), p. 1431. Copyright 2011 by Elsevier Ltd. Reprinted with permission.
Note. Eighteen sessions is the average number of group and home-visiting sessions attended. Three sessions is the lowest decile.

Evaluation of the Statewide Implementation of a Parent Education Program in Louisiana's Child Welfare Agency:

The Nurturing Parenting Program for Infants, Toddlers, and Pre-School Children

Final Evaluation Report

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August 2009

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Table of Contents

Introduction

Every year, nearly one million children are victims of abuse or neglect in the United States. Child abuse and neglect is a complex, multi-faceted problem, occurring in every corner of the nation and affecting every member of society, either directly or indirectly. It is estimated that costs associated with child abuse and neglect exceed $108 billion annually (Wang & Holton, 2007). In addition to the financial costs, the human toll of abuse and neglect is incalculable. Children who suffer abuse and neglect are at higher risk for a multitude of other problems including poor physical health, low cognitive achievement, depression, and aggressive behavior (Gaudin, 1993; Huebner, 2002; Thomlison, 2003).

Parent education is one of the most commonly used forms of intervention for abusive or high-risk parents in child welfare agencies across the country (Barth, Landsverk, Chamberlain, Reid, Rolls, et al., 2005; Huebner, 2002; Hurlburt, Barth, Leslie, & Landsverk, 2007). Yet, due to limited monitoring of implementation and evaluation of outcomes, we know very little about the effectiveness of parent education with child welfare populations and, particularly, as implemented within the limits of the child welfare system. These constraints commonly include limited financial resources requiring more reliance on whatever free or low-cost community-based services are available; pressure to comply with Adoption and Safe Families Act (ASFA) guidelines related to timely permanence while adhering to the recommended level of intervention sufficient to meet the needs of high risk parents; difficulty in arranging child participation in parenting classes so that parents have an opportunity to practice new skills; timely and appropriate services to parents with multiple, complex problems, which often requires prioritizing and sequencing of services so that issues such as substance abuse and mental health problems are dealt with first; and a lack of professionally educated and trained parent educators. Yet, there is a clear and legitimate expectation for child welfare agencies to move toward providing a more evidence-based array of parenting interventions.

Furthermore, while parenting programs are plentiful and may contain some of the same components, they can vary in significant ways. Many programs have been designed for a particular target population and have a specific goal or purpose. Programs often vary in content, intensity, duration, and teaching method and have different levels of evidence to support their effectiveness. While some programs clearly demonstrate effectiveness at changing certain behaviors within certain populations, others continue to be used with little to no evidence of effectiveness.

Unlike the fields of mental health and juvenile justice, child welfare has not generally identified or recommended evidence-based approaches for serving its target population to any great degree. The parenting programs with the strongest evidence of effectiveness have most commonly been studied in clinical

settings primarily focused on behavior-disordered children (Barth et al., 2005). Parenting models such as MultiSystemic Therapy (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998), Parent-Child Interaction Therapy (Eyberg & Robinson, 1982), The Incredible Years (Webster-Stratton, 2000), and Parent Management Training (Patterson, Reid, & Eddy, 2002) are primarily focused on preventing, reducing, and treating serious behavior problems in children. They have been touted as having the most promise for use in child welfare based on their empirical evidence with other high-risk populations (Barth et al., 2005). While behaviorally disordered children represent a portion of the child welfare population and these programs are a valuable resource to meet their specific needs, the majority of families (60 percent) involved in the child welfare system are facing allegations of parental neglect (including medical neglect), and 32 percent of all victims are age 4 years and under (Administration for Children and Families, 2007). Clearly, there needs to be an emphasis on parenting issues in addition to, and other than, those relating to serious behavior problems in children. The parent-child relationship, specifically as it relates to nurturing, attachment, empathy, and parental insight into the needs of the child, must play a key role in improving parenting practices for this population.

In their seminal analysis of parent-training programs in child welfare, Barth and colleagues (2005) made a compelling argument for the need to build the evidence base of parent training programs specifically used in child welfare agency settings. Four parent training programs Parenting Wisely (Gordon, 2003), Project 12 Ways (Lutzker & Rice, 1984), STEP (Adams, 2001), and Nurturing Parenting (Bavolek, 2002), are identified in the article as being commonly used in child welfare and possibly efficacious but lacking rigorous evaluation or implementation on a large enough scale within a child welfare system to withstand scrutiny.

In this study, we evaluate one of these models—Nurturing Parenting—as implemented on a statewide basis in Louisiana's child welfare agency. This study builds on the evidence base of parent training in child welfare systems in several important ways:

1. This is the largest sample size of a pure child welfare population using a parenting program designed for the specific target population, and the only evaluation of the Nurturing Parenting Program (NPP) that combines the Adult Adolescent Parenting Inventory-2 (AAPI-2) scores and agency data of repeat maltreatment.
2. This is the only evaluation of NPP that has information on a large number of parental characteristics in addition to outcomes, allowing for meaningful examination of which clients benefit most.
3. This is the first and only statewide implementation and evaluation of NPP in a state-run child welfare agency. The information learned in this process regarding issues of training, data gathering, assuring fidelity to the model, program costs, and logistics will be valuable to other state systems interested in moving towards a more consistent and evidence-based approach to parenting education.

Specifically, this study examined, through a pre-/post-test study design, the effectiveness of the NPP as implemented on a statewide basis within the Office of Community Services (OCS), Louisiana's child welfare agency. While pre- and post-test designs are not the gold standard in establishing effectiveness, they are typically the first step along a continuum for establishing a program's promise for a specified population. Typically, before embarking on a more rigorous (and resource intensive) study with a quasi-experimental or experimental design, researchers want to see some evidence of effectiveness, such as

statistically significant positive change for participants before and after an intervention.

This particular model of the Nurturing Parenting Program is a 16-week group and home-based program that targets parents and other caregivers of infants, toddlers, and pre-school children involved in the child welfare system. We examined two primary outcome variables: changes in parental attitude pre- and post-intervention, and incidences of post-intervention maltreatment. Additionally, descriptive data regarding parental attendance, satisfaction with the program, and implementation costs are reported. While the study does not fulfill the need for a randomized control trial, it does build on the existing knowledge base by analyzing the systematic, statewide implementation of one specific parenting intervention; providing an analysis of pre and post scores on the AAPI-2 in relation to numerous demographic variables thought to be correlated with abuse and neglect; and measuring the ultimate program outcome of post-intervention maltreatment.

Literature Review

This section provides a broad review of the literature on parent education for families involved in the child welfare system followed by a more in-depth review of the evidence on the Nurturing Parenting Program. Although the use of parenting interventions is documented as far back as the early 1800s (Sherrets, Authier, & Tramontana, 1980), research published on their effectiveness for abusive and neglectful families was not located prior to 1981 (Wolfe, Sandler, & Kaufman, 1981). A decade later, Azar (1989) reported very few effectiveness studies for this target population and those that did exist were primarily of single-case design and very narrowly focused. Yet another decade later, Morrison Dore and Lee (1999) reported "a dearth of well-designed outcome studies" in the child welfare literature (p. 314). Since that time, the research around parenting interventions has begun to grow, albeit slowly and without significant methodological rigor.

A meta-analysis of parent education programs to prevent child abuse conducted by Lundahl, Nimer, and Parsons (2006) reviewed 23 relevant studies; a systematic review by Johnson, Stone, Lou, Ling, Claassen, et al. (2006), using similar but expanded criteria, highlighted 70 studies. However, only three of the programs identified in these reviews have been widely discussed in the literature regarding parenting programs designed for parents of young children involved in the child welfare system: The Nurturing Parenting Program (Bavolek, 2002), Project 12 Ways/SafeCare (Lutzker & Bigelow, 2002), and Triple P (Sanders, Cann, & Markie-Dadds, 2003). Among the numerous reviews of evidence-based or promising programs that cite one or more of these three are California Evidence-Based Clearinghouse for Child Welfare, Center for Social Service Research, Research Response Team of the Bay Area Social Services Consortium (Johnson et al, 2006); FRIENDS National Resource Center for CBCAP, "FactSheet on Parent Education" (2008); "Evidence-Based Treatments in Child Abuse and Neglect" (Chaffin & Friedrich, 2004); and "Parent Training Programs in Child Welfare Services: Planning for a More Evidence Based Approach to Serving Biological Parents" (Barth et al., 2005).

In a systematic review of parent training programs discussed for use with the child welfare population, Barth et al. (2005) developed a four-level rating system based on an integration of criteria established by Chambless and Hollon (1998) and the Cochran Collaborative (Clark & Oxman, 2003). The Nurturing Parenting Program and Project 12 Ways were each rated as having a Level 2 rating of demonstrated program effectiveness because studies were limited to quasi-experimental or single-subject designs with the target child welfare population. Although evaluations of these programs use standardized measures, such as the AAPI-2 (Bavolek, 2002) for the Nurturing Program and the Eyberg Child Behavior Inventory (Eyberg & Pincus, 1999) for Project 12 Ways, the methodology of the studies did not warrant a Level

1 rating due to a lack of clinical trials that included maltreated children with evidence of effectiveness. Similarly, of the 10 parenting programs rated by the California Evidence-Based Clearinghouse for Child Welfare, only two were rated at the highest level for relevance to child welfare, Nurturing Parenting and SafeCare, but they were both only rated at a Level 3 ("Promising") on evidence of effectiveness.

Also worth noting is a study by Chaffin, Silovsky, Funderburk, Valle, Brestan, et al. (2004) evaluating Parent-Child Interaction Therapy (PCIT) (Eyberg & Robinson, 1982). This is the only available study evaluating parent training using a randomized control design with a pure child welfare population to study the efficacy of the program in preventing re-abuse. The study involved 110 families randomly assigned to one of three treatment groups: PCIT, enhanced PCIT (ECPIT), or a traditionally used parent education group. Each intervention consisted of 20 sessions but they varied in content, teaching methods, and the focus of the intervention. The results indicated that PCIT reduced rates of future maltreatment among physically abusive parents. At follow-up (median time 850 days), 19 percent of the PCIT group had a re-report for physical abuse compared to 36 percent who participated in EPCIT and 49 percent who participated in the standard parenting group. Outcomes for child neglect were not improved by PCIT. Repeat maltreatment was actually higher in the group receiving the ancillary services in the expanded model than the PCIT group, possibly suggesting that the focus on other issues detracted from the parent's attention to the primary program focus.

In addition, some research is available that isolates characteristics or components of effective programs. Key components commonly cited include sufficient intensity and duration relative to the severity of risk factors of the family; group and home-based sessions; inclusion of behavioral skills training; clear program goals and on-going program evaluation (Lundahl, Nimer, & Parsons, 2006; Thomlison, 2003); strengths-based perspective; family-based, targeting both parents and children; and utilization of interactive teaching techniques (Brown, 2005; Colosi & Dunifon, 2003; FRIENDS, 2008).

In the most recently published meta-analytic review of components associated with parent training program effectiveness, the authors found clear evidence that including training in positive parent-child interactions and offering an opportunity for parents to practice skills with their own child resulted in better parenting behavior outcomes and fewer child externalizing behavior outcomes (Kaminski, Valle, Filene, & Boyle, 2008). Additionally, when considered independently, teaching parents emotional communication skills had a significant positive impact on parenting skills and behaviors, and including parent training in the use of time-out had significant positive results on reducing child externalizing behaviors. This study also found that contrary to popular thinking, a larger effect size was not related to teaching parents about child development. Likewise, and similar to the PCIT study discussed previously, a smaller effect size was demonstrated when other ancillary services were included in parenting programs.

The Nurturing Parenting Program

The Nurturing Parenting programs (NPP) (Bavolek, 2002) are primarily based on social learning theory, which supports the widely accepted belief that most parenting patterns are learned during childhood and replicated later in life as the child becomes a parent. In developing a program to assess, treat, and prevent abusive parenting practices, Bavolek and colleagues (1999) conducted a literature review to distinguish specific patterns or constructs of abusive and neglectful parenting. The constructs that were identified center around parental expectations of the child, empathy toward children's needs, use of corporal punishment as a means of discipline, parent-child role responsibilities, and children's power and independence.

In addition, the NPP incorporates many characteristics associated with positive program outcomes, including teaching emotional communication and behavioral skills training and involving both parents and children so parents can practice skills learned with their own child.

Based on the theoretical framework and primary focus on reducing abusive or neglectful behavior, the California Evidence-Based Clearinghouse for Child Welfare rated the Nurturing Parenting Program as a Level 1 (highest level) for relevance to child welfare. However, despite reporting quasi-experimental studies, the lack of randomized control studies resulted in a scientific rating of Level 3, a Promising Practice, on evidence of effectiveness.

Numerous programs fall within the umbrella of the NPP, many designed for specific cultural groups or otherwise unique populations. The programs are customized in a variety of ways, including matching the recommended intensity and duration based on family risk factors and the age of the child. The specific program for parents of infants, toddlers, and pre-school children focuses on parental self-awareness and empowerment, the development of empathy, understanding child development and the role of discipline, emotional communication, behavior skills training, the importance of nurturing routines, and making good choices for child safety (Bavolek, 1985).

The validation study for the Nurturing Parenting Program for infants, toddlers, and pre-school children was conducted in 1984-1985. It involved 260 Head Start parents and their children ages birth to 5 years living in Wisconsin. The program was administered by Head Start staff and included 45 sessions occurring on a weekly basis, each lasting 1.5 hours and taking place in both the center and at home.

The Adult and Adolescent Parenting Inventory (AAPI) and the Nurturing Quiz were administered pre- and post-intervention. Additional data collected from parents and staff on a weekly basis throughout the 9-month study included a process evaluation questionnaire, participation of families, and perceived effectiveness of the program. The AAPI (Bavolek, Kline, & McLaughlin, 1979) is a valid and reliable instrument designed to measure parenting beliefs and attitudes. The Nurturing Quiz is an informal criterion-referenced inventory consisting of 25 multiple choice questions designed to assess a parent's knowledge of specific behavior management techniques such as time-out and ignoring. The process evaluations were completed each week following a home or center session and were designed to elicit information regarding the worth of a specific session, the combination of sessions to date, and recommendations for program improvement.

Sixty-six percent of the participants completed the program with attrition occurring for a variety of reasons. At post-test, a statistically significant and positive increase ($p<.05$) on all constructs of the AAPI was found, demonstrating that parents gained more positive, nurturing attitudes and beliefs as a result of participation. Age-appropriate expectations, empathic responsiveness, and a shift toward the belief in non-violent discipline techniques increased and the likelihood of reversing parent-child roles decreased. Similarly, scores on the Nurturing Quiz improved at a statistically significant rate ($p < .05$) indicating an increase in parenting knowledge of non-violent forms of behavior management.

The results of the parent questionnaire revealed a positive perception of the program's impact on the participant's role as a parent and favorable perceptions of the program's impact on their child's social, emotional, and cognitive growth and development. Furthermore, 97 percent of the parents who completed the program indicated they would recommend this program to other parents (Bavolek, 1985).

Despite these positive results, the study has some limitations. The lack of random assignment to a control

group prohibits conclusively attributing the noted changes to participation in the program. Also, the extent to which the findings can be generalized to other persons, settings, treatments, and outcomes must be considered (Shadish, Cook, & Campbell, 2002). Results of the program may not hold true for families who are not involved in Head Start or other similarly structured settings or those who have significantly different characteristics from those of these participants.

Various models of the NPP have been used alone or as part of a more comprehensive intervention with a range of high-risk populations, including child welfare clients, in numerous published and unpublished studies; however, none apply the methodological rigor required to imply causality. Two evaluations of the NPP implemented on a small scale in child welfare agencies (Licking County, Ohio; Fresno County, California) have been shared with the program's author but have not been published in peer-reviewed journals. In the Ohio study (Primer, 1991) 48 adults identified by the department as physically abusive or neglectful participated in the 15-week program. Post-test results on the AAPI indicated that between 75 percent and 93 percent of participants showed statistically significant positive change on AAPI constructs. Furthermore, 21 participants agreed to take part in a one-year follow-up using the AAPI. Of these participants, 68 percent to 76 percent continued to show positive gains from pre-test scores. Primer (1991) reported that the majority of participants who chose not to participate in the follow-up study stated that the department had successfully closed their case and they did not want further involvement with the child welfare agency. This might imply long-term positive improvement in these parents also as there had been no further agency involvement.

In a study by Wagner (2001) of the NPP in Fresno County, California, the recidivism pattern of 104 NPP graduates was compared to 95 non-graduates. All parents participating had active child protection cases and unsupervised access to at least one child. The results demonstrated lower rates of recidivism (substantiated, unsubstantiated, and inconclusive; only excluding unfounded) among program completers (23 percent) as opposed to non-completers (43 percent); when considering only substantiated cases, the rates were 9 percent and 23 percent respectively. Furthermore, survival analysis reflected a longer period of time before repeat maltreatment occurred for the graduates as opposed to the non-graduates.

Additionally, in a large study (Bavolek & Weikert, 2004) involving a pure child welfare population, the Florida Department of Children and Families mandated that all agencies receiving state funds for providing parent education to abusive, neglectful, or high-risk families referred to the department must administer the AAPI-2 pre- and post-intervention. Although the Department did not mandate which parenting program agencies must use, 22 agencies implemented the NPP (8 used Birth to 5; 14 used 5 to 12 years), 66 agencies did not use a specific curriculum, and 28 used established programs other than NPP.

Results of AAPI-2 pre-post tests (n=11,061) were reported for three groups: non-NPP, NPP Birth to 5, and NPP 5-12. Parents attending either NPP had significantly higher post-test mean scores than those attending a non-NPP. Furthermore, although all three groups had some post-test mean scores in the high-risk range (standardized scores of 1, 2, or 3), the percentage of scores from the non-NPP participants in this group was consistently higher than the scores of those attending the NPP.

Published evaluations of NPP all involve parents who have been determined to be at high risk for abuse or neglect. In one pilot study of pregnant and parenting adolescents, a group often cited as being at risk for abusive and neglectful behavior, Thomas and Looney (2004) found that using a modified version of the NPP (from 20 to 12 weeks), followed by a second phase of educational sessions focused on health, infant massage, and CPR, led to significant improvement in parenting attitudes and beliefs as measured

by the AAPI-2. The sample consisted of 41 adolescents in residential treatment or a rural alternative school. Another published study (Cowen, 2001), funded by the Iowa Department of Human Services, involved a convenience sample of 154 families from 15 Child Maltreatment Prevention Councils. Participants included parents who were self-referred as well as those who were court-ordered to participate. The program evaluated by Cowen (2001) consisted of 15 2.5-hour group sessions or 45 1.5-hour in-home sessions. The results indicated statistically significant improvement on all constructs of the AAPI from pre- to post-test.

Parenting Education in Louisiana

Louisiana's child welfare system, not unlike others across the nation, has struggled with the identification and implementation of consistent, high-quality parent education as an intervention for parents involved in the system. In 2000, a review of parent education programs supported by OCS revealed huge variation in the content, duration, intensity, format, and cost (Hodnett, 2000). Although Louisiana is a state-run system, there was no coordinated planning, monitoring, or evaluation of these programs.

These findings marked the beginning of a committed and diligent effort by OCS to work toward a more deliberate and systematic approach to implementing parent education programs with demonstrated effectiveness. Parents referred or ordered to participate in parenting interventions must be afforded the best opportunity possible for obtaining the knowledge and skills necessary to fulfill their parental responsibility. Furthermore, professionals in the field of child welfare have an ethical obligation to offer services appropriately tailored to the client's need and services that demonstrate predictable, beneficial, and effective outcomes, especially given a scarcity of resources and a need to be accountable for how those resources are spent.

Selection of Program

The process of selecting parenting programs that would be supported by OCS began in 2004 and took nearly a year to finalize. Beginning with a literature review to determine the most effective parenting programs being used with the child welfare population, a team of OCS staff and stakeholders accessed numerous resources including Internet searches, a review of peer-reviewed journal articles, and consultations with the staff of professional organizations such as Child Welfare League of America and the Administration for Children and Families, Office of Child Abuse and Neglect, among others.

Although the literature review revealed studies on specific programs (as discussed previously) with weak evaluation designs, it did prove valuable in defining criteria that, by consensus of many child welfare experts, were thought to be important. Ultimately, our criteria included the following:

1. The program should have a primary focus on preventing child abuse or neglect and some evidence of effectiveness within the child welfare population.
2. Training and manual materials should be available yet flexible and adaptable to accommodate special populations often involved in the child welfare system (i.e., parents with lower levels of cognitive functioning).
3. The program should be able to be implemented by professional, but not necessarily clinical-level, staff.
4. The program should include a component that allows the parent to demonstrate his or her ability to implement skills learned (involves parent/child interaction).

5. The program should reflect an intensity and duration consistent with recommendations for a treatment level of intervention.
6. The program should attend to different learning styles by incorporating a variety of teaching methods and settings.
7. The program should build on parents' strengths and be culturally sensitive.

Based on the fact that the NPP met all of the above criteria and the program's developer was willing to assist us with training and implementation issues, NPP was chosen as the primary program for use throughout the system. Also a factor in choosing the NPP was the program's philosophy of nurturing as a core principle in raising children. Research suggests that parental nurturing of children may be the most important factor in children's positive growth and development (Smith, Cudaback, Goddard, & Myers-Walls, 1994). In addition, there is general agreement that promoting nurturing and empathic parenting practices is critical to the safety and well-being of children (Bavolek, 2002; Donald & Jureidini, 2004; Kochanska & Aksan, 1995; Laible, 2004).

Two other programs, Strengthening Families and Effective Black Parenting, were also viewed as closely aligned with our criteria, and these were also approved for use within OCS. However, OCS management decided that for parents with children birth to 5 years, the NPP would be the only formal program offered through the OCS-funded Family Resource Centers, which is the primary service provider for families involved in the child welfare system. This decision was made for several reasons. First, children in this age group are among the most vulnerable so it was critical to pay close attention to the intervention being provided to these parents and its effectiveness in preventing repeat maltreatment. Second, given the limited resources available to evaluate the parent education interventions, it was only feasible to begin with one program and work to build internal capacity to eventually evaluate different programs and their effectiveness within Louisiana's child welfare population.

Implementation of the Nurturing Parenting Program

Sample selection. OCS contracts with social service providers in each region to operate a Family Resource Center (FRC) where specified services are provided to OCS clients. One of the primary services required of the FRCs is parent education. OCS required all FRC contractors to participate in a 3-day facilitator training with Dr. Stephen Bavolek, who developed NPP. This was done to increase fidelity in the delivery of the program.

In addition, OCS State Office Program staff provided training throughout the state for all first-line workers and supervisors on the core principals of the NPP, and the new policy regarding referrals to parent education. Specifically, the policy required that when a parent was assessed as needing parent education and skills training for a child age 0-5 years, the worker had to first consider a referral to the FRC for NPP. The policy did allow a worker to offer an alternate form of parent training if the parent's situation was such that it was not in the parent's best interest to be referred to the FRC for the parenting group. Examples of situations that might have justified an alternate referral include a parent whose work schedule would not allow participation or a parent who had mental, emotional, or behavioral disorders to the extent that group participation was not appropriate. In these cases, alternatives included individual work with the parent by either the FRC staff or OCS caseworker, or the addition of a parenting component to

other interventions the parent might be receiving such as mental health or substance abuse treatment.

Project implementation was to begin throughout the state on September 1, 2005. However, on August 29, 2005, Hurricane Katrina wreaked havoc on the coast of Louisiana, in particular the greater New Orleans area, and two weeks later, Hurricane Rita did the same to the southwestern part of the state. These hurricanes had a major impact on the child welfare system, including the FRCs and their ability to deliver services to families. Thus, not unexpectedly, the implementation plan as originally designed had to be modified significantly. Furthermore, as a result of the hurricane, the New Orleans FRC was forced to modify the NPP model used in the rest of the state so significantly that this center has not been included in this evaluation study.

Two sites did begin using the NPP in late fall 2005, but the remainder of the centers did not begin until the early part of 2006. Additional staff training was conducted during the summer of 2006 along with stakeholder meetings to discuss what aspects of the program were working well and what aspects were not. Slight modifications were made based on feedback from OCS staff and FRC facilitators. For example, the curriculum was initially broken down into two 8-week sections, one to focus on core parenting issues and the second to focus on more advanced skills. A pre- and post-test AAPI was administered at the beginning and end of each section. Facilitators reported that it was hard to motivate parents to continue into the second section and that the extra paperwork involved did not seem to be a good use of time. Also, facilitators reported that even though the vocabulary was written at a 5th-grade level, some of the concepts were difficult for some of the participants to grasp. As a result, we worked with Dr. Bavolek to streamline the curriculum into one continuous 16-week program with only one pre-/post-assessment and we also developed an "Easy Reader" version of the program. The content of the program was not changed, but for those participants with limited reading ability, the Easy Reader was an option.

In addition, OCS committed to conducting a statewide evaluation of this implementation examining both the process of implementation and fidelity to the model as well as analyzing outcome data gathered through the use of standardized measures. It was expected that all sites would implement the 16-week group and home-based model consistently, and a children's group component would be included with each parent group. In addition, each site was instructed to administer the AAPI-2 and Nurturing Parenting Competency Scale pre- and post-intervention and a "Nurturing Family Plan" was to be developed at the start of each program. This plan allowed for a certain amount of customization based on individual parental needs above and beyond those covered in the core lessons, and was also to be used to document parental demonstration of newly learned parenting skills during home visits. Unfortunately, but not entirely surprisingly, as statewide data were collected, it became evident that some sites complied fully with the expectations set forth by the state agency; some failed to follow some of the expectations, seemingly because they did not understand or value the importance of model fidelity or consistent, precise data collection; and others, accustomed to having free rein in program design, did things the way they wanted to with little regard for the expectations set by the state agency. For example, in the first year of implementation, some groups did not incorporate the children's group into the program because, reportedly, it was too hard to get the children there. Other centers, viewing only the parent as the client and only the parent's participation as important, kept detailed attendance logs on the adults but not the children. Therefore, a large portion of the data that we expected to analyze was either missing or its accuracy was too questionable to be included. We intended to include more than two outcome variables, but after close review of the data, we decided to limit the analysis to those outcome variables for which we had the most

reliable data. All centers used the same Nurturing Parenting program; however, there were varying degrees of fidelity to the model. Consequently, this study focuses on the statewide evaluation of the implementation of NPP in Louisiana using two primary outcome variables: change in AAPI-2 scores pre- and post-intervention, and incidents of maltreatment post-intervention. Our primary research questions were these: (a) What is the effect of NPP participation on parental attitudes in a child welfare population and how is this associated with characteristics of parents and families and their level of program participation? (b) What is the effect of NPP participation on incidences of maltreatment in a child welfare population and how is this associated with characteristics of parents and families and level of program participation? Finally, we also present data on parental satisfaction with the program and program cost.

Method

Overview of Research Design

The evaluation used a pre- and post-test design to assess changes in parental attitudes before and after participation in the program. In addition, as described later, child welfare administrative data were used to assess incidences of repeat maltreatment after the intervention. All procedures regarding confidentiality to protect client information were followed as outlined in OCS Administrative Policy 1:545 Confidentiality: Access to Information, Clients and Records for Research.

Sample

Louisiana has 64 parishes, which are divided into 9 OCS service regions. OCS contracts with 12 community-based Family Resource Centers (FRCs) to provide a menu of services to families that encounter the child welfare system because of allegations of abuse and/or neglect of their children. Each FRC serves designated parishes and all parishes in Louisiana are served by one of the FRCs. The contract between OCS and the FRCs requires that, when parenting education is an identified need for parents with children under age 6, NPP should be offered to the family unless specific reasons exist for screening out the parent (such as active substance abuse or serious cognitive impairment that prevents constructive participation in the program). Eleven of the FRCs include NPP as one of the parent education programs offered to families; however, as stated above, the New Orleans FRC was not included in the analysis. The remaining FRC primarily serves as a respite resource for foster and adoptive parents and was not part of the evaluation project. OCS case workers refer parents to FRCs for NPP based on case planning with parents who have suspected or confirmed allegations of child abuse or neglect. Some of the referred parents have had some or all of their children removed from their care and placed in foster care. Other referred parents receive services while also continuing to have custody and care of their children. All adults who were enrolled through an FRC in an NPP class on January 1, 2006 or who were enrolled any time between January 1, 2006 and December 31, 2007 were included as participants in the NPP evaluation study. NPP group begin dates ranged from October 12, 2005 to December 6, 2007, and group end dates ranged from January 25, 2006 to April 15, 2008.

Five hundred and sixty-four parents, guardians, other caregivers, and caregiver partners were enrolled in NPP during this time in the 11 FRCs. Of these participants, 304 were involved in this program while one or more of their children were in foster care, 147 were involved in services while their children remained in the home, and 113 participants had no OCS program affiliation at the time of NPP participation. It is

also worth noting that there were 129 participants with no prior history of substantiated child abuse or neglect in OCS records although referrals are accepted exclusively through the child welfare agency.

A conservative approach to handling missing data was employed in this initial report. In addressing the first research question, "What is the effect of NPP participation on parental attitudes in a child welfare population and how is this associated with characteristics of parents and families and their level of program participation," we limited the sample to those who remained in the program and completed a pre- and post-test AAPI-2. Twenty-five percent of cases were dropped for missing AAPI-2 data—our dependent variable in the multivariate models. For the multivariate analysis, the sample consisted of all caregivers for whom there was complete information on all variables included in the analysis. This resulted in a final sample size of 262, with 11% of cases dropped due to missing data on the independent variables. For the second research question, "What is the effect of NPP participation on incidences of maltreatment in a child welfare population and how is this associated with characteristics of parents and families and level of program participation," our sample consisted of those parents who did not have a child in foster care and for whom we had complete data on the independent variables. Thirty percent of cases were dropped due to missing data on the independent variable. Similar to Wagner (2001), we limited the sample to those participants without a child in foster care as these families are the ones that clearly have access to at least one child and have the opportunity for a repeat maltreatment incident. It is often the case that parents with one child in foster care are still responsible for the care of other children who were not removed from the home; however, we did not have sufficiently complete data within the timeframe of this study to include these parents. For the multivariate models, we only included cases with complete data on the independent variables of interest. This resulted in reducing our sample size by 80 participants.

Data Sources

Three data sources were used to construct the data file for this evaluation: the OCS Tracking Information and Payment System (TIPS), NPP attendance records, and the AAPI-2 pre- and post-test data. A brief description of each data source is presented below; a detailed explanation can be found in Appendix A.

TIPS Administrative Data

TIPS is the administrative data system used by OCS to capture information on caregivers who are or have been the subject of investigations of alleged child abuse and/or neglect. The TIPS system captures the validity finding of the investigation as well as demographic information on caregivers who receive extended services through an OCS program. TIPS data were also used to capture the child abuse/neglect history for NPP participants, including instances of substantiated repeat maltreatment. This data system was also used to identify the OCS program that was providing services to adult participants during the NPP group.

NPP Attendance Records

FRCs completed attendance records for each NPP group conducted during the time period of January 1, 2006 to December 31, 2007. The attendance records included the name and TIPS number of participants, the names of children who attended the children's group and were present for the parent-child interaction component of group sessions, names of facilitators and co-facilitators, notations indicating the dates each participant attended a group session and/or a home session, and notations regarding the

disposition of each participant's program attendance (whether graduated or reason for not graduating). NPP attendance records were used to construct variables related to group and in-home participation of adult participants, level of child participation, and graduation status (or if not graduated why if known) for each participant.

AAPI-2 Data

The NPP uses the AAPI-2 to evaluate changes in parental attitude from the beginning of the program to the end of the program. The AAPI-2 is an assessment of parenting and child-rearing attitudes across five parenting constructs derived from theory, research, and practice based on knowledge of abusive and neglectful parenting behaviors. Two variants are available for use. The AAPI-2 A (pre-test) and B (post-test) inventories are each comprised of 40 5-point Likert scale items from Strong Agreement to Strong Disagreement. The completed AAPI instruments were collected from participants by each site and entered into the AAPI Web site by FRC staff. The AAPI Web site can then be used to generate a printout of the results of one or both variants. The NPP attendance data, TIPS data, and AAPI-2 data were merged into one dataset. The data were reviewed following this process to verify that the merging of files maintained the integrity of the data from each source.

Variables and Measures

This section includes information about the variables used in this study. The variables are grouped into outcome variables and independent variables. A brief definition is included for each variable as well as a description of how the variable was measured in this study. A more detailed explanation is available in Appendix B.

The two outcome variables in this study were Change in Parenting Attitudes and Change in Parenting Behavior. Each variable is defined below.

Dependent Variable—Change in Parenting Attitudes

Change in Parenting Attitudes was defined as the difference between attitudes about parenting prior to program participation and after participation in NPP as measured by the AAPI-2 (Bavolek et al., 1979). Attitudes were measured along five dimensions: Inappropriate Parental Expectations, Parental Lack of an Empathic Awareness of Children's Needs, Strong Belief in the Use and Value of Corporal Punishment, Parent-Child Role Reversal, and Oppressing Children's Power and Independence.

Dependent Variable—Change in Parenting Behavior

Change in Parenting Behavior was defined as not having substantiated incidences of abuse/neglect after participating in the program. This was measured by data from TIPS indicating whether there were valid incidences of maltreatment after program participation.

Independent Variables

Independent variables for the multivariate models are listed in this section and described in detail in Appendix B. The independent variables were divided into parent characteristics including demographics, parent participation, and child participation. These variables were selected for inclusion into the model because they are hypothesized to be associated with the outcome and/or were variables of interest for understanding how outcomes differ for different types of families.

Independent Variables—Parent Characteristics

Parent characteristics and demographic variables included gender, race, education, income, marital status, number of children, history of maltreatment as a child, prior investigations, and AAPI-2 pre-test score.

Independent Variables—Parent Participation

Parent Participation was defined as the extent of participation in program offerings during a 16-week course.

Independent Variables—Child Participation

Child Participation was defined as the extent of participation in program offerings during a 16-week course

Independent Variables—Provider Controls

We also used a set of dichotomous variables representing each site to control for unmeasured differences between sites.

Analysis

Descriptive Statistics

We used descriptive statistics to produce means and standard deviations for all variables—for the full sample and for the analytical sample to address the separate research questions.

Bivariate Analyses

To determine if there were pre- and post-test differences in parental attitudes, paired samples t-tests were used with AAPI-2 subscale difference scores. We also tested whether there were significant differences in risk categories pre- and post-test as assessed by the AAPI-2. AAPI-2 standardized scores were categorized as high risk when the score on each subscale was 1, 2, or 3 and medium to low risk when the sten score was 4-10. We used chi-square tests for each subscale of the AAPI to assess significant differences in risk category before and after the intervention.

Multivariate Models

AAPI Difference Scores

Ordinary Least Squares (OLS) regression analysis was used to determine if there were statistically significant predictors of changes in parental attitudes. These models addressed the research question about whether changes in AAPI-2 scores are significantly different by parent demographics, participation levels, or other characteristics. Because participants were nested within providers or FRCs, Huber-White Sandwich Estimators (calculated in STATA 10) were used to correct standard errors for this clustering. Each subscale of the AAPI-2 was modeled separately. We took a hierarchical approach for building our models. First, we estimated the models with the parental characteristics variables, parental participation variables, and child participation variables (Model 1). Next, for Model 2, we added in the provider dichotomous variables to control for unmeasured differences between sites.

Post-Intervention Maltreatment Models

We used logistic regression to estimate predictors of repeat maltreatment. Again, robust standard errors were computed using Huber-White Sandwich Estimators in STATA 10. First. we ran models with the parental characteristics variables, parental participation variables, and child participation variables (Model 1). Model 2 adds the dichotomous variables for providers (FRCs) with one provider (FRC1) serving as the omitted reference category.

Analysis

Descriptive Statistics

We used descriptive statistics to produce means and standard deviations for all variables—for the full sample and for the analytical sample to address the reporter inclusion question.

Bivariate Analyses

To determine if there were pre- and post-test differences in parental investment, paired samples t-tests were used with ASPI-2 subscale difference scores. We also tested whether there were significant differences in risk categories pre- and post-test as assessed by the ASPI-2. ASPI-2 standardized scores were categorized as high risk when the score on each subscale was 1, 2, or 3 and resilient to low risk when the score was 4 or 5. We used chi-square tests for each subscale of the ASPI to assess significant differences in risk category before and after the intervention.

Multivariate Models

ASPI Difference Scores

Ordinary Least Squares (OLS) regression analysis was used to determine if there were statistically significant predictors of changes in parental investing. These models addressed the research question about whether changes in ASPI-2 scores are significantly different for parents demographic variables from levels in other characteristics. Reverse parameters were treated within predictors as TRC's, LTCFs, Home Visits with Reference Calculated in STATA 10) were used to control treated cases for risk clustering. Each subscale of the ASPI-2 was modeled separately. We took a hierarchical approach for building our models. First, we examined the models with the parental factor variables, parental psychological predictors variables, and child participation variables (Model 1). Next, for Model 2, we added to the parents' demographic variables to control for unmeasured differences between cases.

Post-Intervention Multivariate Models

We used logistic regression to estimate predictors of parent maltreatment. Again, robust standard errors were computed using Huber-White Sandwich Estimators in STATA 10. First, we ran models with the parental characteristics variables, parental participation variables, and child participation variables (Model 1). Model 2 adds the child-maltreatment variables for providers (TRCs) with non-provider (LTCFs) serving as the omitted reference category.

Results

Descriptive statistics

Descriptive statistics for study variables for the full sample of participants at the 10 provider sites are presented in Table 1. We report the descriptive statistics for the full sample before missing cases were dropped for each of the analytical models. This table also presents descriptive statistics for each of the analytical samples used in the multivariate models measuring predictors of change in AAPI and repeat maltreatment instances.

For the full sample, 75% of the participants were female and 58% were white. The two analytic subsamples did not differ substantially in gender from the larger study group; however, there were a greater percentage of white participants in these subsamples. Average income was almost $14,000 for the full sample and slightly higher in the subsamples. Of the full sample, 42% completed high school compared to 45% and 43% in the two subsamples. Study participants had, on average, 2.5 children, and this was similar for both subsamples. Of the sample, 36% were married or cohabitating, with only slight variation from this estimate for each subsample. The mean number of maltreatment incidences prior to participation was 1.22 (SD=0.99). About a third of the participants indicated that they had experienced abuse inside their own homes while 17% indicated experiencing abuse outside of their own homes, which is close to the subsample estimates as well. The overall retention rate of program participants (N=564) was 68% while 32% dropped out for various reasons.

Bivariate Comparisons

Matched pairs t-tests were conducted for each pair of pre- and post-test scores from the AAPI-2 subscales. Table 2 presents these results. Cohen's d is the mean difference between the pre- and post-test scores expressed as number of standard deviation units. For example, if two means differ by 4 points and the standard deviation for that difference is 3 points, then Cohen's d is 4/3=1.33. Results demonstrated significant and positive improvements in all five AAPI-2 subscales—Subscale A: Inappropriate Parental Expectations, Subscale B: Parental Lack of an Empathic Awareness of Children's Needs, Subscale C: Strong Belief in the Use and Value of Corporal Punishment, Subscale D: Parent-Child Role Reversal, and Subscale E: Oppressing Children's Power and Independence. The magnitude of positive change was largest for subscales A, B, and C, with these three subscales showing a percentage change pre- to post-test of 6, 9, and 9%, respectively.

To further examine changes from pre- to post-participation in NPP, AAPI-2 standardized scores (STEN scores) were used to group participants into abuse risk categories. STEN scores range from 1 to 10 and

have an average of 5.5 with a standard deviation of 2. Those with AAPI-2 subscale STEN scores of 1, 2, or 3 were coded as 1 = high risk on a particular subscale. Those with STEN scores between 4 and 10 were coded as 0 = medium/low risk of abusing based on that particular subscale. For each subscale, a Chi square analysis was performed to determine if there were differences in distribution of individuals in the high risk vs. low/medium risk categories from pre- to post- participation. These results are presented in Table 3. There was a statistically significant change in the proportion of individuals in high-risk categories for each of the AAPI-2 subscales at the 0.001 level.

For all subscales of the AAPI-2, there was substantial movement from the high-risk category prior to participation to the low/medium-risk category following participation in NPP. For example, Subscale E (Oppressing Children's Power and Independence) saw the greatest percentage of change with 24.1% of participants pre-participation scoring in the high-risk category while post-participation only 11.2% scored in the high-risk category. Of the 71 individuals with high-risk status on Subscale E, 55 or 77.5% of these individuals moved into the medium/low-risk category post-participation in NPP. Subscale C (Strong Belief in the Use and Value of Corporal Punishment) had 21.7% of participants in the high-risk category pre-participation with 10.8% in high risk after participation. Sixty-seven percent of individuals in the high risk category for Subscale C moved into medium/low risk at post-participation testing. Subscale A had similar results as Subscales E and C with 62% of those with high-risk scores on Subscale A moving into medium/low post-participation. Subscales B and D had lower percentages of movement at 53.2% and 52.7%, respectively.

Regression Models for Study Outcomes

AAPI-2 Change Models

The OLS regression models for the AAPI-2 change scores are presented in Table 4. As discussed previously, we present each subscale model with and without the provider variables included. We include models with the provider controls because the individuals are nested by provider, and some unmeasured contextual differences between providers could impact the relationship between the other variables of interest and the outcome variables.

To determine which predictors are of interest in explaining variation in outcome variables, several criteria were used. First, all models presented were statistically significant overall at the .001 level. Individual unstandardized regression coefficients were examined for statistical significance. Statistical significance of the change in R2 was examined when provider dummy variables were added to aid in explanation of results.

AAPI Regression Analysis

The descriptive statistics, presented earlier, demonstrated significant positive improvements between pre- and post-test for all AAPI-2 subscales. The regression models identify what factors contribute to changes in AAPI-2 scores. For all subscales, the pre-test score specific to that subscale was a statistically significant predictor of the difference score, as expected. The regression coefficients were negative in all models indicating that the higher one scored on the pre-test—or the less risk the participant was initially—the lower the difference score. Because there was a maximum score on each subscale, individuals with higher scores on all subscales of the pre-test were less likely to have greater change scores because there was little room for improvement in terms of numeric value on the subscale post-tests

("ceiling effect"). Also, across all the models, many, if not all, the provider variables are significantly associated with change in parental attitudes. This indicates that there are significant contextual effects and differences among providers that affect the outcomes. In some cases, when the provider variables were added to the subscale models, it changed the relationship between the other variables and parental attitudes, suggesting that some of the individual-level changes in parental attitudes were actually differences between sites.For other study variables, the results differed across subscales. Results are presented below by subscale.

Subscale A: Inappropriate Parental Expectations

Other than the Subscale A pre-test score, no other independent variables were statistically significant in both models with and without the provider variables. When providers (FRCs) were not included in the model, the extent of child participation was positive (greater gains) and statistically significant. Once providers were included in the model, this variable was no longer statistically significant, indicating that the effect might be more about differences in quality between providers who involved children and those who did not. All provider dummy variables were statistically significant indicating that each of the providers differed from the reference category provider (FRC1) in the change in AAPI-2 Subscale A scores. This means that overall, pre-test scores on Subscale A and provider differences appeared to be most useful in explaining Subscale A difference scores whereas demographic characteristics and parent and child participation variables were not. Thus, any changes in parents' attitudes toward parental expectations were explained primarily by the individual's pre-test performance and differences inherent in the providers of NPP.

Subscale B: Parental Lack of an Empathic Awareness of Children's Needs

As with Subscale A, the raw pre-test score on Subscale B difference scores was statistically significant and negative, meaning those who were less at risk on parental attitude scores improved less than their higher risk counterparts. Two other variables—income and child participation-- were statistically significant predictors of differences in empathic awareness of children's needs for both models with and without the provider variables. The higher the participant's income and the more children participated, the greater the gains in empathy. For every $1000 dollars of increase in income, on average there was a 0.09 point increase in change in Subscale B. For each additional session a child participates in, there is a 0.14 point positive increase in change in attitudes about empathic awareness of children's needs. Race (White vs. Non-White) had a significant and positive association with improvement in empathy, but this relationship disappeared once providers (FRC's) were controlled for in the model. Variation in the racial makeup of clients for the providers (see Appendix C) included in Model 2 may be responsible for negating the statistically significant race variable in Model 1. This means that race differences in change in empathy may have been due to differences in FRC. Several of the FRC variable regression coefficients were statistically significant and positive (all but FRC8) indicating that these particular providers had more positive results on Subscale B than the reference provider (FRC1).

Subscale C: Strong Belief in the Use and Value of Corporal Punishment

The results for pre/post changes in Subscale C scores are similar to Subscale A. Pre-test scores for Subscale C were statistically significant and negative. Extent of Child Participation, while statistically significant and positive in Model 1, was not statistically significant in Model 2 when provider dummy variables were included. Again, it is possible that differences across providers in the extent of

child participation might be responsible for the non-significant results in Model 2. No demographic or participation variables explained statistically significant variation in pre/post test change scores on Subscale C for Model 2.

Subscale D: Parent-Child Role Reversal

As with all subscales on the AAPI-2, a statistically significant, negative regression coefficient was found for the pre-test for Subscale D. For Subscale D, Parent-Child Role Reversal, there were several significant demographic and extent of participation coefficients in both Model 1 and Model 2. Being female or having a partner meant greater positive change in scores on Subscale D; difference scores for females, on average, were 1.70 points higher than for males, and difference scores for those with partners were 1.19 points higher than for those without partners. Extent of parent participation was a factor in explaining differences in Subscale D scores. Those who participated in at least 14 out of 16 weeks of sessions (either group and/or home sessions) had greater gains on Subscale D (by 1.06 points on average) than those who did not. Only in Model 1, having a high school education versus not graduating from high school was significantly and positively associated with gains on subscale D, but it was no longer significant once differences between providers were controlled for.

Subscale E: Oppressing Children's Power and Independence

As with all other subscales of the AAPI-2, pre-test scores on Subscale E were statistically significant and negatively related with Subscale E change scores. Variables with statistically significant regression coefficients in Model 1 were education (HS completion) and abuse of the parent as a child by someone living within the family. These same variables had statistically significant regression coefficients in Model 2 with an additional variable, household income, also becoming statistically significant in Model 2. As with the Subscale B difference score results, income was statistically significant, but the regression coefficient indicated a small positive change of 0.05 points in difference scores for each thousand-dollar increment in the predictor variable. A $20,000 increase in income then would be associated with a 1 point change, on average. For the education variable, having graduated from high school was associated with a positive 1.18 point difference in attitudes about Oppressing Children's Power and Independence compared to those without a high school diploma. Whether an adult participant was abused in the past by a person inside his or her family was associated with positive outcomes: those who indicated that they were abused by someone in their family had change scores, on average, that were 1.00 point higher on the Parent-Child Role Reversal subscale than those who did not so indicate. The type of abuse experienced within a family, which was not distinguished in this study, may be a factor that helps to account for this finding. For instance, we might expect that individuals who have experienced sexual abuse or certain types of neglect would be more likely to have high levels of parent-child role reversal. Additionally, those who score lower at pretest have a greater opportunity to demonstrate improvement than those who initially scored higher. It may be that those participants who experienced abuse benefited from learning about how to have more appropriate adult/child roles with their children through the NPP curriculum.

Changes in AAPI-2 scores: Summary of results

For four of five models with AAPI-2 subscales, including providers (FRCs) statistically improved model performance. The amount of additional variation explained was never more than 8% when providers were

included. The one exception was Subscale E where there were small differences between providers and the reference provider and model fit did not statistically improve.

In terms of the participation variables, the extent of child participation only had a significant relationship with gains in parental attitudes once provider variables were included for subscale B—Parental Lack of an Empathic Awareness of Children's Needs, and attending 14 or more sessions (high dosage) was statistically associated with improved scores on Subscale D—Parent-Child Role Reversal. We tested different thresholds in our models for participation and none of them had a significant effect on any other subscales. In other words, for most of the AAPI-2 subscales, it appears that the amount of participation did not impact the size of the change in attitudes among participants who completed the program.

Very few demographic characteristics of parents explained differences in attitude changes before and after the intervention. For Subscale B, being white and household income had some significant positive associations with gains. Income was also positively associated with gains on subscale E. Females were significantly more likely than males to have positive gains in attitudes about Parent-Child Role Reversal (Subscale D), but gender was not significantly associated with gains for other subscales. Having a high school diploma was significantly and positively associated with gains in attitudes about Parent-Child Role Reversal (Subscale D) and Oppressing Children's Power and Independence (Subscale E). Overall, the models developed for explaining changes in AAPI-2 scores performed well, were statistically significant, and had adjusted R2 values of between 19% and 45%.

Post-Intervention Maltreatment Logistic Regression

Table 5 contains the logistic regression results for predicting post-intervention maltreatment from a selection of study variables, also organized as rows in the table. Providers (FRCs) are controlled for in these analyses because individuals were nested within the centers providing services. In each of the regression analyses, two models were run, one without the provider variables included and the other with all variables—including the provider controls. Change in R2 was determined and evaluated for statistical significance. Since the outcome was dichotomous (1 = incidence of post-intervention maltreatment vs. 0 = no incidence of post-intervention maltreatment), logistic regression was used to predict whether occurrence of a post-program maltreatment incidence can be explained by any of the demographic, participation, or provider variables. Fourteen percent of participants in the analytic subsample had incidences of repeat maltreatment (12% for the full sample). As with the AAPI-2 change scores, we ran two models to include a comparison of how provider differences affect the other study variables in terms of ability to predict post-intervention maltreatment.

The results for Model 1 and Model 2 are similar. Therefore, only Model 2 will be discussed as it contains all of the independent and control variables. In Model 2, cases for some of the providers were dropped from the model because variation in the outcome among participants nested within those provider sites was lacking. In other words, participants within four of the sites were dropped because none (or relatively few) of them had a repeat maltreatment instance. These provider variables were also dropped from the model.

In Model 2, several independent variables predicted the likelihood of post-intervention maltreatment. A high rate of attendance (attended at least 14 out of 16 week sessions) was statistically significant' the odds of maltreating post-participation was 73% lower for those with high rates of attendance than for those with lower rates of attendance (OR=0.27). As with results in Model 1, results in Model 2 indicated that

those with partners (married/unmarried common law) had higher odds of maltreating after participation in NPP than those who were not married or cohabitating (OR=2.7). Odds of maltreating post-participation in NPP were 5.3 times greater for individuals who indicated that they had experienced abuse as a child outside of their home. Additionally, a one-incident increase in the number of prior incidences of maltreatment resulted in increased odds of maltreating post-participation (OR= 3.7). Overall, it appears that substantial participation (14 or more sessions) had a positive impact on reducing the odds of repeat maltreatment by parents.

Discussion

The purpose of this study was to evaluate the effectiveness of the NPP for parents of infants, toddlers, and pre-school children as implemented throughout Louisiana's child welfare system during 2006-2007. Results indicated statistically significant improvement from pre- to post-test in parental attitudes on all five sub-scales of the AAPI-2. In addition, our finding that a lower rate of repeat maltreatment among participants who attended at least 14 sessions of the 16 session program reaffirms the value of this program for use with a child welfare population assuming adequate participation and retention.

As is typically found in a child welfare population of parenting participants, the majority had been referred due to allegations of neglect, which makes these positive findings particularly valuable. Although PCITwas effective in reducing repeat maltreatment in a physically abusive population, the findings of Chaffin and colleagues (2004) suggested that neglectful parents did not demonstrate improvement after participation in PCIT.

Child participation in a parenting intervention has often been cited as "good practice" yet literature regarding the specific impact is scarce. This study demonstrated significant improvement in a participant's attitude about empathic responsiveness as measured in Subscale B (Parental Lack of an Empathic Awareness of Children's Needs) of the AAPI-2 in relation to Child Participation. Empathy may be one dimension of parenting that is particularly enhanced by interventions working closely with parents and children to build that relationship through direct practice.

As expected, participants with a prior validated instance of maltreatment were more likely to have an incident of repeat maltreatment. It was also hypothesized that a high dosage of treatment (at least 14 sessions) would reduce the likelihood of repeat maltreatment and, in fact, the odds of repeat maltreatment in this group were 73% lower than those with lower levels of attendance. Less predictable was the finding that participants who reported experiencing abuse outside of the home had a significantly greater increase of repeat maltreatment, but those who reported experiencing abuse inside the home did not. One possible explanation for this finding is that participants may be more likely to attribute treatment by others as abusive and may not view their own parents' behavior as abusive. Also, it may be harder for an individual to admit experiencing abuse within his or her own home than if it happened outside of the home; thus, the incidents of abuse inside the home may be underreported. Furthermore, it may be that even as an adult, admitting that one was abused or neglected at the hand of his or her own mother, father, or other relative is a memory one would rather deny. More research is needed to understand the differential impact of different types of maltreatment and sources of abuse.

Program implementation

As we noted throughout this report, implementing a statewide comprehensive parenting program with fidelity in a state child welfare agency is a monumental task. Although the FRCs all used the same curriculum, the inconsistencies in the process made it nearly impossible to detect what contributed to positive outcomes. Thus, closely monitoring model fidelity is a necessity.

We were also interested in understanding participation and satisfaction with this program for this population. Difficulty retaining parents in child welfare services is a common problem. For a statewide program to have an overal retention rate of 68% over a two-year period is remarkable and supports the rating by the California Evidence-Based Clearinghouse for Child Welfare for the NPP as a Level 1 for relevance to the child welfare population.

Another indication of parental satisfaction with the program stemmed from the results of program satisfaction surveys. At the end of each 16-week group program, parents were asked to complete a satisfaction survey. The one-page instrument consisted of true/false questions, multiple choice (circle all that apply), and open-ended questions for participant comments. Overwhelmingly, participants reported a high degree of satisfaction with the structure and content of the NPP. For parents whose children were in foster care, this was often viewed as a treasured "extra" visit with their child who was also attending the program, and 99% of the parents surveyed reported this was a factor that motivated them to continue to attend each week. In addition, when parents were asked "What keeps you coming back week after week?" the common reasons cited were "Because I wanted to learn more about being a good parent" and "Because I enjoyed the group." When given the opportunity to add comments, the most frequent comments related to a positive relationship with the facilitator.

We also wanted to understand the program costs and how these might vary by provider. Costs varied considerably from one FRC to another ranging from $580 to $910 per session for a group of 10-12 adults and up to 15 children. The average cost per FRC during 2006-2007 was $687.00 exclusive of one-time start-up costs. The single factor that had the greatest impact on cost was the number of paid staff used by the FRC. At a minimum, implementing the NPP required four facilitators: two for the parent's group and two for the children's group. Depending on the number of children, some groups required significantly more adult help. Including children in the intervention has the potential to increase costs significantly. Whether children's facilitators are paid or not, having children participate necessitates a larger facility for the groups with appropriately furnished children's space, transportation, snacks, and supplies. On the high end, one FRC utilized its entire staff of 10 for each weekly session, while the FRCs associated with a university tended to have a pool of unpaid student interns available to help with the children's group, which defrayed some of the human resource costs. As an example, Nicholls State University involved Master's-level early childhood development interns as co-facilitators and only utilized two paid agency staff; one lead facilitator for the parent's group and one for the children's group.

The second largest expense was transportation. Again this varied by FCR depending on whether it was in an urban or rural location. In urban locations, the clients are sometimes given bus tokens, which is much less costly than transportation in rural locations where FRCs must provide their own transportation, sometimes transporting 8-10 adults and 10 or more children 30 minutes one way. Additionally, materials such as parent handbooks, activity supplies, and snacks must be furnished for each session.

Other costs such as facilitator training and administrative and technical assistance support must be figured into the overall costs.

Limitations

As is the case with all field research, some limitations apply. First, the study is limited by missing data. It was expected that implementing a program on a statewide basis with multiple sites that were individually managed would result in some inconsistencies in program delivery and data collection; however, we did not anticipate the extent to which this would occur. In the two analytic samples used to assess the impact of participation and demographics on parental attitudes and repeat maltreatment, approximately 30 percent of the data was dropped due to missing outcome or demographic data. This amount of missing data certainly compromises the generality and representativeness of our findings. If those participants who had missing data are significantly different from those who didn't, our results may not be applicable to the target population we are investigating. This concern points to the importance of emphasizing thorough and complete data collection in comprehensive, standardized evaluations such as this. We plan to conduct future analyses using these data employing techniques for dealing with missing data.

Second, this study design did not incorporate random controlled assignment nor did it involve a comparison group, which limits the ability to infer causality or to generalize findings. However, as stated previously, this study represents a first step in the process toward establishing promise for implementing the NPP on a large scale within a typical state-run child welfare system. And the results demonstrate that the program shows promise in leading to positive changes in attitudes predictive of child abuse and neglect and instances of repeat maltreatment.

Recommendations

Recommendations and lessons learned

The lessons learned during the first few years of implementation are countless, and the value of the evaluation process over the past year has been immeasurable in terms of moving the agency forward in its mission to provide high-quality parent education and training. As is often the case, the work was more complex and time-consuming than anticipated, and we reaffirmed what we suspected: it takes significant human and financial resources to implement a statewide program effectively, and in such a way as to adhere to the fidelity of a program model. In addition, countless hours were spent collecting, merging, and entering data. A process spanning several months of tedious data review and cleaning was required before analysis could even begin. This involved frequent communication with each of the FRCs to complete and verify data submitted. Despite a strategically planned implementation process and full support of the agency, training of committed facilitators and staff, and a certain level of control over the delivery of the service, it is clear that ensuring an evidence-based service array of parenting interventions in child welfare that are implemented consistently across the state will require a long-term commitment of agency time and resources and a strong partnership with agency stakeholders.

While not perfect, we have made great strides in service delivery based on several lessons learned. Within the limits of this report, we outline the recommendations that we believe will provide the most significant benefit to other child welfare agencies in their quest to provide more effective parenting services.

Take training completion seriously

The completion of parenting classes is frequently tied to reunification of children in foster care with their parents or taken as a sign that a family receiving in-home services is ready to have their case closed. Yet agency workers are often forced to use a hodgepodge of parenting services, typically based on what happens to be offered in the community. It is critical that parenting interventions be taken seriously. The intervention should be carefully chosen for its demonstrated effectiveness with the specific target population, and be delivered by a knowledgeable and competently trained facilitator. With child safety and well-being at stake, families in the child welfare system deserve no less.

Insist on program fidelity

Program administrators must insist on fidelity to the components of a particular program model that have a demonstrated relationship to effective outcomes, while allowing enough flexibility to meet individual client needs. When implementing a new program, the size and scope of implementation must be in accord with sufficient administrative resources to include comprehensive monitoring, quality

assurance and technical support in order to assure fidelity to the model, oversight of data gathering, on-going evaluation, and feedback to stakeholders. Evidence-based programs such as Multisystemic Therapy and Nurse Family Partnership have been able to maintain fidelity to their models and achieve successful outcomes for good reason:they insist on highly trained providers, on-going consultation, and oversight of program implementation and monitoring of program effectiveness.

Implement changes in a strategic and realistic manner

A full scope of training, technical assistance, monitoring, and evaluation is required for effective, consistent, high-quality service delivery. In the absence of this level of support on a statewide basis, begin with a small-scale project and phase in additional sites as resources allow. If an agency feels the need to make some large-scale changes quickly, these should be limited to more general, overall processes. For instance, an agency might institute a policy that requires a face-to-face meeting between the caseworker, parent, and facilitator prior to beginning a class to insure that everyone is clear about the purpose of the intervention and the expectations for participation and successful completion.

Involve all key stakeholders

Implementing an evidence-based program with fidelity can be challenging under ideal conditions much less those often found in child welfare agencies. The process can be tedious and labor-intensive. It is helpful to involve all stakeholders in the process of program selection, identification of components that must be tracked and measured, initial and on-going training, and program evaluation. Although it may not be fiscally possible, in a multi-site program, regularly scheduled meetings of all key stakeholders (facilitators of parents and children's groups, OCS representative from each region, parent advocates, and program administrators) would likely have been a good investment of time and money.

Data completeness and accuracy are key

Emphasize the importance of complete and standardized data to assess outcomes and effectiveness—for accountability and sustainability. The more commitment staff has towards evaluation, since researchers often need to rely on them to collect and report the data, the better the quality of the data that will be obtained.

Tables

Table 1:
Parental Characteristics and Child and Parent Participation Variables for Participants and Analytic Subsamples

Type	Variable	All Participants n=564			AAPI Regression Sample n=262		Maltreatment Regression Sample n=181	
Demographic Variables		Mean	Standard Deviation	N	Mean	Standard Deviation	Mean	Standard Deviation
	Female (1=yes; 0=no)	0.75	0.43	562	0.77	0.42	0.73	0.45
	White (1=yes; 0=no)	0.58	0.49	562	0.66	0.47	0.68	0.47
	Income (thousands)	13.74	11.94	449	14.40	12.24	15.98	13.69
	High school completion (1=yes; 0=no)	0.42	0.49	465	0.45	0.50	0.43	0.50
	Number of children	2.54	1.45	468	2.54	1.46	2.67	1.61
	Have a partner through marriage or unmarried/common law (1=yes; 0=no)	0.36	0.48	531	0.39	0.49	0.38	0.49
	Experienced abuse in own family (1=yes; 0=no)	0.29	0.45	467	0.26	0.44	0.29	0.45
	Experienced abuse outside of family (1=yes; 0=no)	0.17	0.38	467	0.16	0.36	0.20	0.40
Other: Individual	Number of maltreatment investigations prior to program participation	1.22	0.99	564	1.24	0.97	0.99	0.77
	AAPI pre-test							
	Pre-test Subscale A (35 points)	19.69	4.61	468				
	Pre-test Subscale B (50 points)	36.96	6.37	468				
	Pre-test Subscale C (55 points)	39.58	7.71	468				
	Pre-test Subscale D (35 points)	23.46	5.38	468				
	Pre-test Subscale E (25 points)	19.63	2.99	468				
Parent Participation	Attended at least 14 out of 16 weeks of group and/or home sessions (1=yes; 0=no)	0.52	0.50	564	0.81	0.40	0.55	0.50
Participation: Children								
	Extent of Child Participation – number of sessions attended by children of individual	6.55	5.88	523	8.65	5.72	7.22	5.66

Table 2.
AAPI-2 Subscale Descriptive Statistics and Paired T-Test Results

Type	Variable	AAPI Sample (N=295)				
AAPI Subscales		Mean	Standard Deviation	Percent Change	t	ES*
Subscale A (35 points)	Pre-test	19.61	4.78			
	Post-test	21.80	5.00			
	Post- Pre-test difference	2.19	5.05	0.06	7.43***	0.45
Subscale B (50 points)	Pretest	36.80	6.59			
	Post-test	41.34	6.17			
	Post- Pre-test difference	4.54	6.02	0.09	12.95***	0.71
Subscale C (55 points)	Pre-test	39.42	7.85			
	Post-test	44.48	7.30			
	Post- Pre-test difference	5.05	7.31	0.09	11.87***	0.67
Subscale D (35 points)	Pretest	23.44	5.65			
	Post-test	24.57	5.61			
	Post- Pre-test difference	1.13	4.74	0.03	4.10***	0.20
Subscale E (25 points)	Pretest	19.63	3.02			
	Post-test	20.47	2.81			
	Post- Pre-test difference	0.84	3.32	0.03	4.35***	0.29

*Effect size is Cohen's d calculated at http://web.uccs.edu/lbecker/Psy590/es.htm.
***p< 0.001

Subscale A: Inappropriate Parental Expectations

Subscale B: Parental Lack of an Empathic Awareness of Children's Needs

Subscale C: Strong Belief in the Use and Value of Corporal Punishment

Subscale D: Parent-Child Role Reversal

Subscale E: Oppressing Children's Power and Independence

Table 3.
Chi Square Analysis of AAPI-2 Subscale Risk Categories Pre- and Post-Intervention (N= 295)

			POST-TEST			
			High Risk	Medium/Low Risk	X^2	Phi
Subscale A	PRE-TEST	High Risk % of total	27 9.2%	44 14.9%	26.80***	0.30
		Med/Low Risk % of total	25 8.5%	199 67.5%		
Subscale B	PRE- TEST	High Risk % of total	58 19.7%	66 22.4%	55.74***	0.44
		Med/Low Risk % of total	15 5.1%	156 52.9%		
Subscale C	PRE- TEST	High Risk % of total	21 7.1%	43 14.6%	40.78***	0.37
		Med/Low Risk % of total	11 3.7%	220 74.6%		
Subscale D	PRE- TEST	High Risk % of total	52 17.6%	58 19.7%	58.02***	0.44
		Med/Low Risk % of total	16 5.4%	169 57.3%		
Subscale E	PRE- TEST	High Risk % of total	16 5.4%	55 18.6%	12.12***	0.20
		Med/Low Risk % of total	17 5.8%	207 70.2%		

***p< .001

Subscale A: Inappropriate Parental Expectations

Subscale B: Parental Lack of an Empathic Awareness of Children's Needs

Subscale C: Strong Belief in the Use and Value of Corporal Punishment

Subscale D: Parent-Child Role Reversal

Subscale E: Oppressing Children's Power and Independence

Table 4.
Regression Analysis Results for AAPI-2 Subscales (n=262)

AAPI Subscale	Subscale A Inappropriate Parental Expectations				Subscale B Parental Lack of an Empathic Awareness of Children's Needs				Subscale C Strong Belief in the Use and Value of Corporal Punishment				Subscale D Parent-Child Role Reversal				Subscale E Oppressing Children's Power and Independence			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	b	SE[a]	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	B	SE	b	SE	b	SE
FRC2[b]			**6.14**	**0.41**			**6.43**	**0.44**			**9.08**	**1.37**			**3.49**	**0.55**			**0.89**	**0.89**
FRC 3			**3.15**	**0.51**			**6.66**	**0.53**			**5.74**	**1.03**			**1.08**	**0.44**			**1.39**	**0.52**
FRC 4			**3.01**	**0.39**			**3.10**	**0.60**			**3.66**	**0.86**			0.15	0.38			0.30	0.48
FRC 5			**1.18**	**0.33**			**2.89**	**0.46**			-0.11	0.82			-0.82	0.38			0.31	0.46
FRC 6			**1.52**	**0.49**			**3.97**	**0.58**			**3.26**	**0.91**			0.32	0.49			**-0.72**	**0.28**
FRC 7			**4.80**	**0.53**			**5.72**	**0.50**			**6.60**	**1.04**			**2.75**	**0.56**			**1.17**	**0.46**
FRC 8			**1.46**	**0.36**			0.19	0.72			0.84	0.78			**-2.42**	**0.24**			**1.39**	**0.30**
FRC 9			**2.88**	**0.45**			**3.92**	**0.55**			**5.56**	**1.04**			**2.60**	**0.43**			0.65	0.42
FRC 10			**3.25**	**0.43**			**4.30**	**0.49**			**2.29**	**1.03**			**1.28**	**0.45**			0.62	0.46
Female	0.27	0.60	0.37	0.58	0.62	0.70	0.85	0.70	-0.39	1.50	-0.11	1.60	**1.51**	**0.67**	1.70	0.64	-0.31	0.47	0.18	0.47
White	-0.28	0.58	-0.79	0.66	**1.41**	**0.64**	0.43	0.58	1.40	0.78	0.79	0.82	0.25	0.61	0.01	0.75	-0.17	0.16	-0.36	0.28
HS Grad	0.68	0.48	0.74	0.54	-0.09	0.57	0.09	0.57	0.83	0.66	1.08	0.85	**0.75**	**0.34**	0.69	0.37	**1.17**	**0.40**	**1.18**	**0.40**
Income	0.02	0.02	0.05	0.02	**0.07**	**0.02**	**0.09**	**0.02**	0.03	0.03	0.06	0.03	-0.00	0.02	0.02	0.02	0.03	0.02	0.05	0.02
Partner	-0.37	0.24	-0.55	0.26	1.23	0.66	1.00	0.54	0.80	0.91	0.57	0.99	**1.45**	**0.55**	**1.19**	**0.46**	-0.36	0.51	-0.43	0.53
Abuse In	-0.25	0.75	0.24	0.79	0.01	0.82	0.46	0.88	0.87	0.86	1.62	0.92	-0.72	0.49	-0.51	0.45	**0.77**	**0.19**	**1.00**	**0.23**
Abuse Out	0.31	0.55	-0.10	0.60	1.45	0.68	1.25	0.65	1.47	1.14	1.07	1.07	0.91	1.09	0.48	1.11	0.24	0.35	0.24	0.28
# Child	0.05	0.18	0.15	0.22	-0.21	0.20	-0.11	0.19	-0.45	0.21	-0.28	0.22	-0.06	0.16	0.07	0.12	-0.16	0.11	-0.12	0.12
Prior Invest	-0.24	0.27	-0.26	0.27	-0.10	0.24	-0.22	0.32	0.52	0.27	0.36	0.33	0.01	0.30	0.07	0.32	-0.16	0.20	-0.22	0.24
Pre-test on Subscale	**-0.52[c]**	**0.08**	**-0.54**	**0.09**	**-0.53**	**0.09**	**-0.57**	**0.09**	**-0.55**	**0.06**	**-0.62**	**0.06**	**-0.36**	**0.04**	**-0.39**	**0.04**	**-0.77**	**0.05**	**-0.74**	**0.05**
Attended 14+ sessions	-1.16	0.63	-0.81	0.73	0.01	0.67	0.40	0.62	-0.13	0.62	0.35	0.85	**0.87**	**0.39**	**1.06**	**0.47**	0.43	0.42	0.64	0.47
# of Sessions Child	**0.08**	**0.03**	0.02	0.02	**0.25**	**0.06**	**0.14**	**0.05**	**0.12**	**0.05**	0.06	0.10	0.06	0.06	-0.01	0.03	0.00	0.04	-0.01	0.05
Constant	**12.36**	**1.24**	**9.67**	**1.29**	**19.45**	**3.76**	**17.38**	**3.56**	**24.00**	**2.59**	**22.41**	**2.49**	**6.27**	**1.71**	**5.91**	**1.71**	**15.01**	**1.33**	**13.66**	**1.34**
Adj. R^2	0.21		0.26		0.36		0.44		0.31		0.38		0.19		0.25		0.44		0.45	
R^2 Change	**				***				***				***				ns			

a All standard errors (SE) are adjusted for 10 FRC clusters using robust standard error estimates (Huber-White Sandwich estimators) in STATA 10.

b FRC1 is reference category for dummy variable comparisons on providers.

c Bold regression coefficients are statistically significant at $p < 0.05$.

** Change in R2 is statistically significant at 0.01 level.

***Change in R2 is statistically significant at 0.001 level.

Table 5.
Logistic Regression Results for Post-Intervention Maltreatment Incidence

Variables	Post-Intervention Maltreatment					
	Model 1			Model 2		
	b	SE[a]	OR	b	SE	OR
FRC2[b]				n/a	n/a	n/a
FRC 3				1.14	0.67	3.13
FRC 4				n/a	n/a	n/a
FRC 5				0.32	0.26	1.38
FRC 6				**-3.51**	**1.32**	**0.03**
FRC 7				**-1.13**	**0.57**	**0.32**
FRC 8				n/a	n/a	n/a
FRC 9				n/a	n/a	n/a
FRC 10				-0.32	0.48	0.73
Female	0.58	0.43	1.79	0.66	0.55	1.93
White	0.36	0.69	1.43	0.28	0.83	1.32
HS Grad	-0.43	0.42	0.65	-0.48	0.54	0.62
Income	0.02	0.02	1.02	**0.04**	**0.02**	**1.04**
Partner	**0.91**[c]	**0.43**	**2.48**	**1.00**	**0.39**	**2.72**
Abuse In	-1.36	0.98	0.26	-1.82	1.16	0.16
Abuse Out	**1.33**	**0.41**	**3.78**	**1.67**	**0.72**	**5.31**
# Children	-0.06	0.12	0.94	0.11	0.23	1.12
Prior Investigations	**0.94**	**0.28**	**2.56**	**1.31**	**0.41**	**3.71**
Attended 14 + sessions	**-1.12**	**0.34**	**0.33**	**-1.30**	**0.59**	**0.27**
# of Sessions Child	0.06	0.05	1.06	0.09	0.09	1.09
Constant	**-3.87**	**0.92**		**-4.83**	**1.46**	
R^2	0.17			0.31		
N	181			152[b]		

a Standard errors were adjusted for clusters by FRC using Huber-White Sandwhich estimates in STATA 10.

b FRCs were dropped from analysis because membership predicted no post-intervention maltreatment incidence perfectly.

c Bold coefficients are statistically significant at $p < 0.05$.

Appendix

A: Data Sources

TIPS Administrative Data

TIPS is the administrative data system used by OCS to capture information on caregivers who have been or are being investigated for alleged child abuse and/or neglect. The TIPS system captures the validity finding of the investigation as well as demographic information on caregivers who receive extended services through an OCS program. TIPS data were also used to capture the child abuse/neglect history for NPP participants, including instances of substantiated repeat maltreatment. This data system was also used to identify the OCS program that was providing services to adult participants during the NPP group.

In-home services, offered through the Family Services Program (FS), are provided to families within which abuse or neglect has occurred and children remain in the custody and care of a parent or caregiver. Out-of-home services, the Services to Parent Program (SP), are provided to parents when abuse or neglect has occurred and some or all of the children have been removed from the home and placed in foster care. TIPS data are available from files stored in a data warehouse. These files are updated at least weekly and are routinely tested for accuracy and completion. These files were used to extract and export data sets to Excel, which were then converted to Microsoft ACCESS for manipulation and merging with the NPP attendance record data.

An extraction file was created containing all SP and FS cases that were opened for services any time between January 1, 2005 and June 30, 2008. The extraction file contained client TIPS number, client first and last name, client date of birth, race, marital status, date on which SP or FS case opened, reason SP or FS case was opened, date on which SP or FS case closed, and reason for case closure if case was closed for services. The TIPS number is a unique identifier that is assigned to an individual and is used each time that individual is entered ino any child protection program. A client in the TIPS system cannot be "open" in both the SP and FS programs at the same time. The SP/FS data file was linked to the NPP data file using the TIPS number and the SP/FS open and closure dates. The SP or FS record with an open date on or before the NPP group start date with a missing closure date or a closure date after the group start date was captured in the NPP attendance file for each participant who was receiving extended services through OCS.

A separate extraction file was created for all substantiated CPI investigations from July 26, 1980 (the

earliest date found for an investigation case) and June 30, 2008. The investigations file was limited to cases involving family investigations and captured only those members of investigation cases who were identified as being in a parent or caretaker role in the investigation. The investigations file was matched to the NPP data file in three phases. The first phase captured all investigations with an open date prior to the NPP participant's group start date. Phase two captured all investigations that occurred between the group start date and the group end date. Phase three captured all investigations that occurred after the NPP group end date. Each phase included counts of substantiated allegations for each of four categories: neglect, physical abuse, sexual abuse, and all other substantiated findings.

NPP Attendance Records

FRCs completed attendance records for each NPP group conducted during the time period January 1, 2006-December 31, 2007. The attendance records included the name and TIPS number of participants, the names of children who attended the children's group and were present for the parent-child interaction component of group sessions, names of facilitators and co-facilitators, notations indicating the dates each participant attended a group session and/or a home session, and notations regarding the disposition of each participant's program attendance (whether "graduated" or reason for not graduating). NPP attendance records were used to construct variables related to group and in-home participation of adult participants, level of child participation, and graduation status (or if not graduated why if known) disposition for each participant.

The NPP attendance records were completed on paper forms that were faxed or mailed to OCS central office for data entry. Each attendance record was reviewed for completeness and a Missing Information Report was prepared and emailed to the FRCs for completion. The Missing Information Report was grouped into the following five categories: group begin and end dates, group attendance record (adult and child), home visit record (adult and child), completion status (disposition), and AAPI identification number.

Follow-up phone calls were made to each FRC to further clarify issues identified in the Missing Information Reports and to assist in finalizing data collection. The attendance information was entered into a Microsoft ACCESS database created specifically for capturing NPP data. The database was comprised of five indexed tables: providers, groups, facilitators/co-facilitators, adults, and children. The database assigned unique identifiers to each group, adult participant, child participant, facilitator/co-facilitator, and FRC. In order to identify the adults who attended as couples and link them to child participants, the TIPS number of the primary parent was used as a family identification number for all family members.

Data Cleaning

Once the NPP attendance data were entered into the ACCESS database, the first phase of data cleaning and error detection was undertaken. In order to detect erroneous TIPS numbers in the NPP data files, the Adult and Child data files were matched against TIPS data using participants' TIPS numbers. The name and date of birth associated with the TIPS number in the TIPS system was captured in a file along with the name and TIPS number from the NPP database. The resulting data file was manually reviewed to verify that the name in the NPP database matched the name in the TIPS database. Slight variations in the spelling of names prevented an automated match process using names in combination with TIPS numbers. Cases in which the name from the NPP file did not match the name from TIPS were reviewed

to determine the source of the error. If the error could not be resolved by reviewing TIPS records and the paper NPP attendance records, the FRC was contacted to obtain additional information to aid in resolving the issue. Some examples of issues that were identified and corrected in the NPP data included data entry errors, attendance logs that contained incorrect TIPS numbers, attendance logs that recorded a child's TIPS number for the parent, and TIPS records where names had changed due to marriage or adoption.

The adult and child participant data files contained participants without TIPS numbers. A TIPS search was conducted for all these names to determine if a TIPS number could be found. FRCs were contacted to obtain additional identifying information such as names of other family members, social security number, and date of birth to help isolate the TIPS number for the participant. Confirmed TIPS numbers were entered into the NPP database. Some adult and child participants in the NPP did not have a record of involvement with child protective services. Examples of participants without TIPS numbers included relatives who were serving as caregivers but had not been involved in a child protection investigation, siblings of child victims who themselves were not identified victims of an investigation, and partners or spouses who had not been identified as participants of abuse or neglect.

Data queries were also constructed to identify children in the adult data file, adults in the child data file, and children who were not connected to any adult by a family TIPS number. These cases were researched and appropriate corrections were made in the NPP database. Data entry staff also manually reviewed randomly selected records in the database against paper attendance logs to check for accuracy of data entry.

Once the initial data clean-up steps were completed, a series of queries were crafted to construct a data file containing all adult participants, including group ID, number of participants in the group, number of group and in-home sessions attended by adult participants, NPP provider, region in which group was conducted, group facilitator and co-facilitator, start and end dates of the group, number of child participants linked to the adult, group sessions attended by any child linked to the adult, and total number of group sessions attended by any child linked to the adult.

AAPI-2 Data

The NPP uses the AAPI-2 to evaluate changes in parental attitude from the beginning of the group to the end of the group. The AAPI-2 is an assessment of parenting and child-rearing attitudes based on research of abusive and neglectful parenting behaviors. The AAPI-2 attempts to measure parenting attitudes across five parenting constructs derived from theory, research, and practice. Two variants are available for use. The AAPI-2 A and B inventories are each comprised of 40 5-point Likert scale items of Strong Agreement to Strong Disagreement. These items were derived from a larger pool of items that were developed from statements made by parents about children. Content validity was evaluated by submitting the items to professionals in different fields to review the items and rate them for clarity, construct fit, and respond to the items. The resulting inventories were administered by 53 different agencies in 23 states. Participants in agency services included both abusive and non-abusive adult parents, teen parents, and abused and non-abused adolescents. Factor analysis confirmed five subscales with internal consistency estimates (Cronbach's a) for the A and B variants ranging from .83 to .98.

Typically, the 'A' variant is used as the pre-test measurement of parental attitudes and the 'B' variant is used as the post-test measurement of parental attitudes. The pre-test AAPI-2 is usually administered to

adult participants during the first NPP group session. The post-test AAPI-2 is usually administered by the facilitator during the last scheduled group session. The completed AAPI instruments were collected from participants by each site and entered into the AAPI Web site by FRC staff. The AAPI Web site can then be used to generate a printout of the results of one or both variants.

Stephen Bavolek, co-developer of the AAPI-2 instrument, provided an extraction file of AAPI-2 data that had been entered by the FRCs. The AAPI-2 data were supplied in the form of an EXCEL spreadsheet that contained an identification number for each participant and participant responses on all items on the AAPI-2 instruments. The spreadsheet also included raw and standardized scores for each AAPI-2 item with appropriate items reverse-coded. The standardized scores range from 1 to 10 and are standardized with all other participants in the AAPI database. Each pre-test and post-test AAPI-2 response was contained in the spreadsheet as a separate record. The EXCEL file was imported to ACCESS and split into two separate tables, one containing pretest data and the other containing post-test data. The two files were then joined using the respondents' unique identification numbers so that each respondent had one record containing both pre- and post- variant data. NPP attendance records did not include the AAPI ID number and this was requested from the FRCs in order to match NPP participants to their pre- and post-AAPI-2 scores

Once the AAPI-2 data was modified into one record for each participant, another phase of data cleanup was initiated. Some individuals who were coded as "graduated" were found to have only the pre-test variant; some had only the post-test variant; some non-graduates had pre- and post- variants; some non-graduates had post- variants but no pre- variant. These cases were researched by reviewing the AAPI Web site and the paper attendance record and by contacting the FRCs to determine if any pre- or post- AAPI-2 instruments had not been recorded into the AAPI Web site. All newly identified pre- and post- AAPI-2 data were added to the joined AAPI-2 data file.

The cleaned NPP attendance data, TIPS data, and AAPI-2 data were merged into one data table containing all variables from each primary data source. The data were reviewed following this process to verify that the merging of files maintained the integrity of the data from each source.

Appendix B: Variables and Measures

This section includes information about the variables used in this study. The variables are grouped into outcome variables and independent variables. A definition is included for each variable as well as a description of how the variable was measured in this study.

There are two outcome variables in this study: Change in Parenting Attitudes and Change in Parenting Behavior. Each variable is defined and a description of measurement process is included.

Dependent Variable—Change in Parenting Attitudes

Change in Parenting Attitudes was defined as the difference between attitudes about parenting prior to program participation and after participation in NPP as measured by the AAPI-2 (Bavolek et al., 1979). Attitudes were measured along five dimensions as noted below. Variable names from the source data set are included in parentheses:

1. **Subscale A**: Inappropriate Parental Expectations (RawAdiff) can range from –28 to 28 with a negative value indicating a worsening of parental attitude, 0 indicating no improvement in attitude and 28

representing the maximum improvement. Improvement on this scale indicates better understanding of child growth and development, exhibiting expectations of the child that are more appropriate to the developmental level of the child, and a shift away from demanding and controlling attitudes toward being supportive of the child.

2. **Subscale B**: Parental Lack of an Empathic Awareness of Children's Needs (RawBdiff) can range from –40 to 40 with 40 representing the maximum improvement in parental attitude. Improvement on this scale indicates a better understanding of children's needs, recognition of children's feelings, and understanding how to nurture and encourage positive growth in children.
3. **Subscale C**: Strong Belief in the Use and Value of Corporal Punishment (RawCdiff) can range from –44 to 44 with 44 representing maximum improvement in parental attitude. Improvement on this scale represents a shift in attitude from a controlling, rigid disciplinarian and a strong belief in corporal punishment toward a more democratic view of family rules, use of alternatives to corporal punishment, and increased respect for children and their needs.
4. **Subscale D**: Parent-Child Role Reversal (RawDdiff) can range from –28 to 28 with 28 representing maximum improvement in parental attitude. Improvement on this scale indicates a shift away from viewing children as peers and using them to meet self-needs toward more appropriate family role expectations in which children are allowed to express their developmental needs and the parent finds support and companionship from other adults.
5. **Subscale E**: Oppressing Children's Power and Independence (RawEdiff) can range from –20 to 20 with 20 representing maximum improvement in parental attitude. Improvement on this scale indicates a change in attitude from one who expects strict obedience to his or her demands and restricts power and independence to one who encourages children to express their views and develop their abilities to problem-solve.

Dependent Variable—Change in Parenting Behavior

Change in Parenting Behavior was defined as not having incidences of maltreatment or abuse/neglect after participating in the program. This is measured by data from TIPS indicating whether there were valid incidences of maltreatment after program participation. The TIPS data was obtained through June 30, 2008. This dichotomous variable is indicated by a '1' if there was a post-intervention incidence of maltreatment and a '0' if not.

Independent Variables

Independent variables for the multivariate models are defined and described in this section. The independent variables are divided into Parent Characteristics including demographics, Parent Participation, and Child Participation. The independent variables used in the multivariate models to address the research questions are the same. These variables were selected for inclusion into the model because they are hypothesized to be associated with the outcome and/or were variables of interest to see how outcomes stemming from the intervention may or may not be different for different types of respondents.

Independent Variables—Parent Characteristics

Gender

Gender is defined as the participant's sex. The dichotomous variable is coded as 1 for female and 0

for male. Two of the data sources used for this project contained a gender variable: TIPS and AAPI-2. However, both sources contained missing information. The TIPS data was the most complete source of information. The TIPS gender variable is recorded based on client self-report and worker knowledge and observation. The AAPI-2 data contains client self-report of gender. TIPS gender was used as the primary source for this variable. If the value was missing, the pre-intervention AAPI-2 gender value was used. If both the TIPS gender and the pre AAPI-2 gender fields were missing, the post-intervention AAPI-2 gender value was used. If all values were missing, the variable was coded as system missing.

Race

Due to small sample sizes, we created a single dichotomous variable to represent white and non-white participants (Black/African American, Hispanic, Native American/Alaska Native, Pacific Islander/ Hawaiian Native, and Other). These values were coded '1' for white (56%) and '0' for non-white (44%). Two of the data sources were used to construct this variable: TIPS and AAPI-2. However, both sources contained missing information. The TIPS data were the most complete source of information. The TIPS race variable is recorded based on client self-report and worker knowledge and observation. The AAPI-2 data contain client self-report of primary racial or ethnic identity. If TIPS race was missing, the pre-intervention AAPI-2 race value was used. If both the TIPS race and the pre AAPI-2 race fields were missing, the post-intervention AAPI-2 race value was used.

Education

Education was derived from participant self-report on the pre-intervention AAPI-2. We created a dichotomous variable with '1' indicating high school graduate or higher and '0' for less than high school graduation. The variable was constructed from participant selections to indicate the highest grade completed from the following list of responses: grade school, 7th grade, 8th grade, 9th grade, 10th grade, 11th grade, high school graduate, some college, college graduate, and post-graduate or above.

Income

Income was derived from participant self-report on the pre-intervention AAPI-2. Participants were asked to indicate their current household income by selecting from the following list of responses: under $15,000, $15,001 - $25,000, $25,001 - $40,000, $40,001 - $60,000, and over $60,000.

Marital Status

Marital status is defined as whether the participant reported having a partner. This dichotomous variable was coded '1' for participants with a partner (married, unmarried partner, or common law partner) and '0' for participants who reported no partner (divorced, single, separated, widowed, and other). Two of the data sources used for this evaluation contained a marital status variable: TIPS and AAPI-2. However, both sources contained missing information. The TIPS marital status variable is recorded based on client self-report and other sources of information available to the child welfare worker. TIPS marital status was the most complete source of information and was used as the primary source for this variable. If TIPS marital status was missing, the pre-intervention AAPI-2 marital status value was used. If both the TIPS marital status and the pre-intervention AAPI-2 marital status fields were missing, the post-intervention AAPI-2 marital status value was used. If all values were missing,

the variable was coded as system missing.

Parent History of Child Maltreatment as a Child

This dichotomous variable was coded '1' for yes and '0' for no. The pre-intervention AAPI-2 was the source of this item. Participants completing the AAPI-2 instrument were asked to respond to the following question: As a child, did you experience any type of abuse by a person within your family?

Parent Experienced Abuse Outside of Home

This dichotomous variable was coded '1' for yes and '0' for no. The pre-intervention AAPI-2 was the source of this item. Participants completing the AAPI-2 instrument were asked to respond to the following question: As a child, did you experience any type of abuse by a person living outside your family?

Number of Children

The pre-intervention AAPI-2 was the source of this item. Participants self-reported the number of children they had. This number ranged from 0 to 10. It was not possible to determine the number of children residing in the home or the number of children who resided in the home who were below the age of 18.

Prior Investigations

Information used to construct this variable was drawn from the TIPS database by extracting all valid allegations for parents or caretakers in family investigations from January 1, 1980 through June 30, 2008 and matching these data to program participants by TIPS number. The variable indicates the number of validated incidents of abuse or neglect associated with each individual adult participant prior to the start date of the participant's NPP. The values for this variable ranged from 1 to 7.

AAPI-2 Pretest Subscale Scores

These variables are the raw scores as reported on the AAPI Web site for the pre-test inventory completed by program participants. There are two versions of the AAPI-2, an A version and a B version. Each version contains 40 items. The raw scores are composite scores computed from individual responses on the 40-item instruments. Each of the 40 items is associated with one of five parenting constructs. Each item on the instrument is scored from 1 to 5 to indicate degree of agreement with the item. Specific item responses are reverse-coded so that all items within a construct are consistently scored to represent more or less positive parenting attitudes. These responses are then summed to generate the raw score. A higher raw score is interpreted to represent a more positive parenting attitude, which is also associated with a lower risk of engaging in abusive behavior. The description of each construct and corresponding raw score range are as follows:

A_Raw	(inappropriate parental expectations)	7 to 35
B_Raw	(lack of empathy)	10 to 50
C_Raw	(physical punishment)	11 to 55
D_Raw	(role reversal)	7 to 35
E_Raw	(power and independence)	5 to 25

The A and B versions of the AAPI-2 were constructed with the same metric so either variant could be

used as the pre-test inventory or the post-test inventory. The difference between the pre-intervention AAPI-2 raw score and the post-intervention AAPI-2 raw score for each construct was computed to serve as a measure of change in parenting attitudes (described above in Outcome Variables).

Independent Variables—Parent Participation

Parent Participation was defined as the extent of participation by the adult caregiver in program offerings during a 16-week course. The variable, COVERAGE, a quantitative count of attendance at either a group and/or home session out of a total of 16 sessions, was used to indicate extent of coverage of curriculum. This variable was recoded into the dichotomous variable, which indicates whether an individual attended 14 or more group and/or home sessions during 16 weeks (coded as '1') or if the individual attended fewer than 14 out of 16 weekly group and/or home sessions (coded as '0'). In exploratory analyses, we tested several different thresholds of participation in our models, and this cut-off seemed to perform best as measured by a significant effect and overall model fit. Independent Variables—Child Participation

Child Participation was defined as the extent of participation in program offerings in terms of how many sessions a child of a participant attended. This variable, called CHILD PARTICIPATION, indicates the total number of sessions attended by at least one of the participant's children. Values ranged from 0 to 16 with 0 indicating that no child participated or no children's group was offered by the FRC as part of the program.

Provider

The 10 FRCs whose participant data were included in the analysis were dummy coded into 10 dichotomous variables of '1' to indicate a particular provider and '0' otherwise. The variables were FRC1 through FRC10 as follows:

FRC1: 1=Community Support Program; 0=otherwise

FRC2: 1=Discovery; 0=otherwise

FRC3: 1=ETC Resource Center; 0=otherwise

FRC4: 1=Family Connection/Family Matters ULM; 0=otherwise

FRC5: 1=Kingsley House; 0=otherwise

FRC6: 1=Nicholls Family Service Center; 0=otherwise

FRC7: 1=Positive Steps; 0=otherwise

FRC8: 1=Project Celebration Inc.; 0=otherwise

FRC9: 1=The Extra Mile; 0=otherwise

FRC10: 1=VOA Alexandria; 0=otherwise

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