

Community Counseling Centers of Chicago



An Evidence-Based Parenting Education Program for the Community: Results from an effectiveness study



Acknowledgements

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History of the Parenting Education Program (PEP)

In 1996, the Community Counseling Centers of Chicago (C4) launched their Parenting Education Program (PEP). Since its inception, PEP has served approximately 3,500 parents and caregivers. Through a universal parenting educational approach, PEP aims to enhance positive parenting behaviors and family relationships and address risk factors. PEP is a multi-component program that includes group-based parent education and skill training sessions, home visits, comprehensive referral services, a children's art group, and an on-going parent support program.

From Promising to Evidence Base Practice in Child Maltreatment Prevention

Since 2002, PEP partnered with researchers from the Center for Evaluation & Sociomedical Research (CIES), at the Graduate School of Public Health, University of Puerto Rico to conduct process and outcome evaluations. PEP was standardized and manualized through the collaborative efforts of the partners. Subsequently, the community-university partnership was awarded funding by private foundations for an initial non-experimental program outcome and process evaluation study. This evaluation examined four years (2004-2007) of process and outcome data. Pre-post measures demonstrated statistically significant increases in knowledge of child development and parenting skills while process measures indicated high client satisfaction. Recommendations arising from the process evaluation and parent suggestions were fed back as program modifications resulting in the current form of the intervention.

Based on these results, funds were obtained through community partners for a rigorous experimental test of the program. From January 2008-March 2009 the community-university partnership conducted an effectiveness study of PEP.

The purpose of the study was to determine whether the Parenting Education Program (PEP) improves: a) knowledge of child development and parenting skills (communication, problem solving and non-violent discipline); b) stimulation and support in home environments and; and c) children's overall adjustment, as compared to the participants in a comparison group of parents. Positive results would add to the growing support of PEP's status as an evidence-based positive parenting program for Illinois communities.

Need for Evidence-Based Parenting Education

While positive parenting strategies can promote adjustment and achievement, child abuse and neglect can interrupt healthy development in children and lead to maladaptive functioning.

- Each year, more than 3 million children are reported as abused or neglected in the United States.
- U.S. Department of Health and Human Services reported that nationally, an estimated 905,000 children were the victims of maltreatment, and at least 1,530 children died of abuse and neglect in 2006.
- Children under 3 years of age had the highest rates of victimization; over half of the victims were seven years of age or younger.

These findings have far-reaching implications for policy makers, service providers, and parents, and demand increased evidence-based services for strengthening families.

Methods

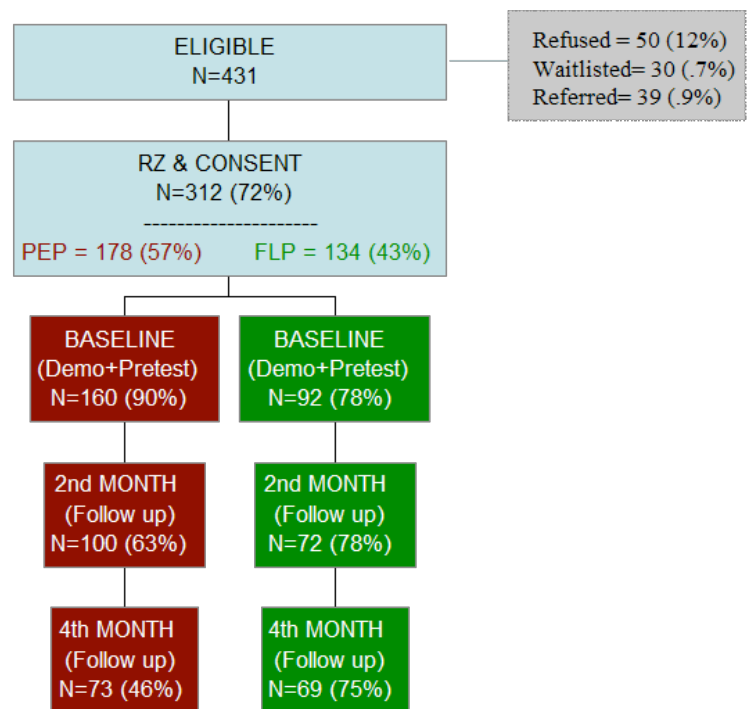
Research Design

An experimental design was used to compare main outcomes at the conclusion of the program (2nd month follow up), and two months after the end of the program (4th month follow up). After assuring eligibility, parents were randomized into the intervention group or into a comparison group. The intervention group (PEP) participated in an eight-week course with home visits (3-6) and case management (referrals). The comparison group participated in an eight-week course focused on Financial Literacy (FLP). The comparison between PEP and FLP groups allowed for the determination of whether parenting-related changes were due to the PEP intervention.

Recruitment & Randomization

Six hundred and fifty one parents contacted C4 interested in participating in parenting classes between 2007 and 2008. Some parents were mandated to participate by the Illinois Department of Children and Family Services (DCFS) or the court system; however, many parents voluntarily requested C4 services based on individual interest and agency referrals. Of these, 554 were reached by phone and invited to participate. Interested parents were screened for the following eligibility criteria: (1) no previous participation in PEP parenting class during previous 12 months, and (2) interest in participating in an intervention for parents of children ages 0 to 12 years old. Upon screening, 431 parents were deemed to be eligible to participate in the study. Of those, 312 were randomized; 134 (43%) were assigned to FLP and 178 (57%) to PEP using a mixed block randomization scheme, as previously described. Parents that did not meet the inclusion criteria or refused to participate in the study were given the option to be referred to similar services or waitlisted for PEP services upon completion of the study (see Figure 1).

Figure 1: Summary for the Enrollment
Follow-up of Participants



Parents chose the age group of interest (0-7, 7-12). If a parent had more than one child within the study age, one child was randomly selected following the Kish Method (Cochran, 1963, *Annual New York Academy of Sciences*, 107, 476-489). Although the Kish Method leads to a small under representation of the youngest of eligible people in houses with more than one individual, it is considered a true probability selection (Lavrakas, 1993, *Telephone Survey Methods: Sampling, Selection, and Supervision*, Sage Publishing).

Intervention Descriptions



Financial Literacy Program (FLP- Comparison)

Comparison group parents were offered the *All My Money* training. This curriculum teaches money management and consumer skills to limited resource audiences. There are eight two-hour sessions focusing on: (1) Making Spending Choices, (2) Envelope Budgeting, Planning Your Spending, (4) Understanding (5) Handling Credit Problems, (6) Building Consumer Skills, (7) Taking Consumer Action, and (8) Checks and Checking Accounts. The program was developed by the University Illinois Extension Service, and was taught by two trained PEP graduates in English and Spanish (*Todo Mi Dinero*).

Parenting Education Program (PEP- Intervention)

PEP is a multi-component program that includes: group-based parenting education/training sessions, home visits, comprehensive referral services, children's art group, and an on-going parent support group.

Three of PEP's components were evaluated in this study including; group-based parent education and skills training sessions; home visits; and comprehensive referrals. The core component of the program is the set of eight-week group sessions, which focus on positive parenting such as non-violent discipline, knowledge of child development, parent-child communication, and problem solving. Group sessions were led by a skilled parenting educator in either English or Spanish. Home visits were provided by educators to interested parents to discuss and practice parenting strategies, evaluate home environments, and provide additional support of associated issues. Parents were connected with other services they needed through comprehensive referral services. These include psychological, family, educational, recreational, community, and health services. Two age groups were included in the study: parents of children birth-7 years of age, and parents of children 7 through 12 years of age.

Human Protection and Informed Consent

The Institutional Review Board (IRB) of the Medical Science Campus at the University of Puerto Rico approved all forms, scripts, questionnaires, and procedures included in the study (IRB #A5450108). Parents were informed their participation was voluntarily and that they could refuse to participate at any moment. Intervention group participants received cash incentives for the 4th month follow-up. Comparison group participants received cash incentives at baseline and at 2nd month and 4th month follow-ups.

Measures

All participants were assessed before the first class (baseline), at the conclusion of the eight week courses (2nd month follow up), and 24 weeks post-baseline (4th month follow-up). Surveys were conducted in group settings by trained evaluators or program staff, or individually in the home or at a community location when necessary. HOME evaluations were included in at least three of the scheduled home visits in the 0-7 age group: 1) during the first home visit, before participating in the course or during first two weeks; 2) at the end of the classes (2nd month); and 3) at follow-up (4th month). Report of child's development and behavior was collected from parents in PEP and FLE groups at follow-up (4th month). All measures were available in Spanish or English. The following measures were used:

PEP pre-post test (PEP-PPT). PEP-PPT is a paper and pencil questionnaire with five vignettes and 15 to 17 multiple-choice questions that takes approximately 20 minutes to complete. Two versions of the questionnaire were developed (0-7, 7-12). The questionnaire was designed by Urban Networks Associates (UNA, 2003). All questionnaires have high reliability scores (0-7 α .92 and 8-12 α .96). PEP-PPT for the 0-7 age group included 16 items organized into five vignettes measuring the following constructs: non-violent discipline, communication, problem solving, child development, and positive parenting. PEP-PPT for the 7-12 age group included 17 items organized into five vignettes measuring the following constructs: non-violent discipline, communication, problem solving, child development and positive parenting.

Example: Your 5 year old is usually very tidy. Lately he has not been picking up after himself and that situation is driving you crazy. Because your child is 5 years old...: a) you cannot expect him to be neat and organized, b) you think not picking up after himself is normal for his age, c) you can expect him to pick up his toys after playing with them, d) not picking up is a permanent personality trait that has already developed, and cannot be changed

Additionally, parents were asked about gender, place of birth, years living in the United States, educational attainment, marital status, employment, child's age and gender, social status perception, number of children, and previous attendance to parenting classes.

The Home Observation for the Measurement of the Environment (HOME). The HOME (Caldwell & Bradley, 1984, *Home Observation for Measurement of the Environment*, Little Rock, AR, University of Arkansas at Little Rock) is a paper and pencil, standardized instrument designed to assess quality and quantity of stimulation

Example: Child's art work is displayed some place in house. (Yes/No)

and support available to a child in the home environment. HOME uses a binary-choice (yes/no) format and can be administered and scored during a 45-90 minute home visit. This measure has documented psychometric properties, with inter-observer agreement for each measure 90% or higher. The HOME has been used throughout North America and South America (including the Caribbean), in several European and Asian countries, in Australia, and in at least two African nations. Four versions comprise the standard versions of the HOME based on child age. Due to limited resources only parents with children on age group 0 to 7 were evaluated with this instrument.

Examples: Acts without thinking, Offers to help others, bullies others, Is nervous.

The Behavior Assessment System for Children, Second Edition (BASC-2).

BASC-2 is a well-known system used by psychologists, education professionals, physicians, and other clinicians to learn about a child's behavior and feelings (Reynolds & Kamphaus, 2004, *Behavior Assessment System for Children, Second Edition (BASC-2)*, Pearson Assessments, Bloomington, MN). It takes parents approximately 20-30 minutes to complete the paper-pencil measure which includes 134 question using a four point rating scale (never, sometimes, often, almost always). The Parent Rating Scales (PRS) were used to measure both adaptive and problem behaviors in the community and home setting at three age levels: preschool (ages 2 to 5), child (ages 6 to 11), and adolescent (ages 12 to 21). Due to the age range the BASC-2 covers, participants under 2 years old were not evaluated with this measure. The PRS scale is part of a comprehensive and developmental sensible set of rating scales that help understand the behaviors and emotions of children. The BASC-2 has been normed based on current US Census population characteristics.

Participant Satisfaction. Parents in both groups were asked to complete a survey of their satisfaction with the program during the last group session.

Example: I was given the opportunity to participate and discuss information with other parents.

Research Methods

Several strategies were used to ensure that data was collected reliably, that the PEP program was implemented with fidelity, and to derive recommendations for program improvement. These activities included: a) training teachers on evaluation protocols, b) 100% quality assurance of data entry, c) tracking class dosage, home visit dosage, and parent referrals, d) assessing participant satisfaction and feedback through anonymous surveys and parent testimonials, and e) conducting classroom and HOME assessment observations.

Program staff was trained to assure that evaluation protocols were implemented with fidelity. Training was conducted both during intensive multi-day sessions, as well as through bi-weekly and/or weekly meetings with the teachers. They were observed implementing program activities through the following activities: a) structured role-plays for HOME instrument implementation on each age group, b) pilot testing of HOME evaluations, c) joint creation of evaluation protocols between PEP and evaluation staff, d) creation of Frequently Asked Question fact sheets for each data collection tool, and e) provision of scripts for data collection. Additionally, all data were electronically registered and verified. A procedure of double entry of all forms and questionnaires was implemented.

To ensure the program was implemented with fidelity teachers were observed implementing the core components. Class observations were conducted, resulting in 20 classroom observations. All teachers were observed at least one time by two trained observers, both in English and Spanish classes for both age groups. Teachers were also observed implementing the HOME evaluation.

Analyses

Descriptive statistics were used to examine the socio-demographic characteristics of the participants. Bivariate analyses, tests of homogeneity (Chi-square tests) and independent group *t* tests were conducted to compare the randomized groups (PEP vs. FLP) in their baseline characteristics.

Groups were compared across outcome measures at three* points in time:

- Baseline (before classes)
- 2-month follow-up (at the end of classes)
- 4-month follow up (2 months after end of classes)

The outcomes included were:

- PEP-PPT scores
- HOME scores (only for parents in 0-7 age group)
- BASC scores* (only 4-month follow-up)

Multiple regression analyses were used to examine parent-training effects on outcome scores, adjusting for control variables such as age, gender, ethnicity, and income. Mann-Whitney tests were used due to the non-normal distribution of the outcome measures. Additionally descriptive statistics were calculated to explore participants' overall levels of satisfaction.

Statistical significance was set at $p < .05$. The SPSS (v.18) statistical package was used to conduct all statistical analyses.

Results

Of the 312 randomized participants, a total of 252 (81%) parents attended the assigned group: 160 to PEP (90%) and 92 to FLP (69%).

- The great majority of participants were females (184, 88%). Participants' mean age was 31 years old, and they had an average of two children.
- The participants were mostly employed (59, 36%), while 31% were homemakers, and 18% (29) were unemployed.
- Most parents had an educational attainment of less than high school (30%), or a high school diploma or equivalent (31%).
- Economic status was evaluated based on participants' self perception of social status. Most participants perceived themselves as living from check to check (51%) or living comfortably (26%).
- A total of 39 families (15%) had a court order to attend a parenting program and 56 (22%) had a case with the Department of Children and Family Services.

There was no significant difference at baseline between the intervention (PEP) and comparison (FLP) group in any of the demographic characteristics or in the primary outcome. Attrition effects were evaluated at the two and four-month follow up by comparing the randomized groups after removing those participants who had not participated in each follow-up wave. No statistically significant differences were found between the groups after removing those lost to follow-up.

Knowledge & Behavioral Intent (PEP-PPT)

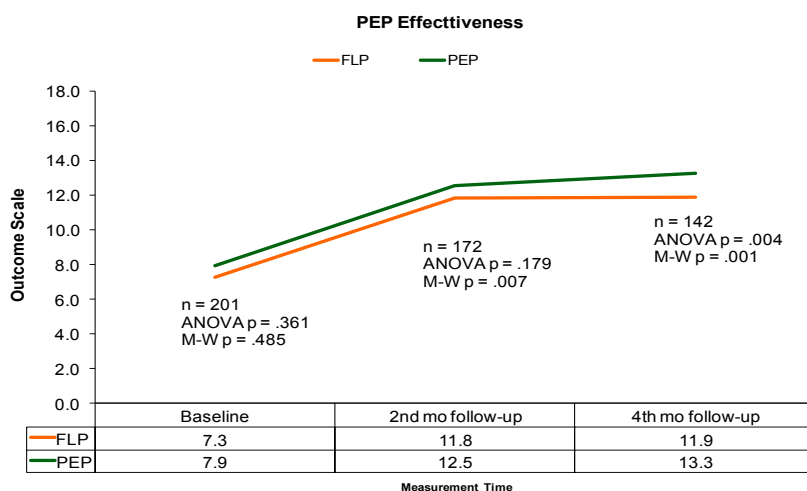
PEP parents had significantly higher scores on knowledge of child development and parenting skills (communication, problem solving, non-violent discipline) than comparison group parents at the 2-

month follow up [$z=2.67$, $p<.007$] and again at the 4-month follow up [$z=3.31$, $p<.001$] (see Table 1).

Table 1

Comparisons of Intervention and Comparison Group Participants in Main Outcome Measure

Time	Intervention GROUP (PEP)				Comparison Group (FLP)				p^*
	N	Mean	SD	95% CI	N	Mean	SD	95% CI	
Baseline (n=201)	122	7.92	4.99	7.03- 8.82	79	7.26	4.98	6.15-8.38	.485
2 nd mo Follow-up (n=172)	100	12.53	3.99	11.74-13.31	72	11.80	2.66	11.17-12.43	.007
4 th mo Follow-up (n=142)	73	13.27	2.83	12.61-13.93	69	11.89	2.72	11.24-12.55	.001



The change in the total score from baseline (Mean = 7.26 FLP, 7.92 PEP) to the 4-month follow up (Mean = 11.89 FLP, 13.27 PEP) was 4.6 points in FLP and 5.4 points in PEP. A small intervention effect size was found at the 2-month follow-up [$r= 0.10$, $d= .21$] and a medium effect size was found at the 4-month follow up [$r= 0.24$, $d= 0.49$]. An effect size of 0.49, like this, means that the score of the average person in the PEP group exceeds the scores of 66% of the FLP group.

Home Enrichment

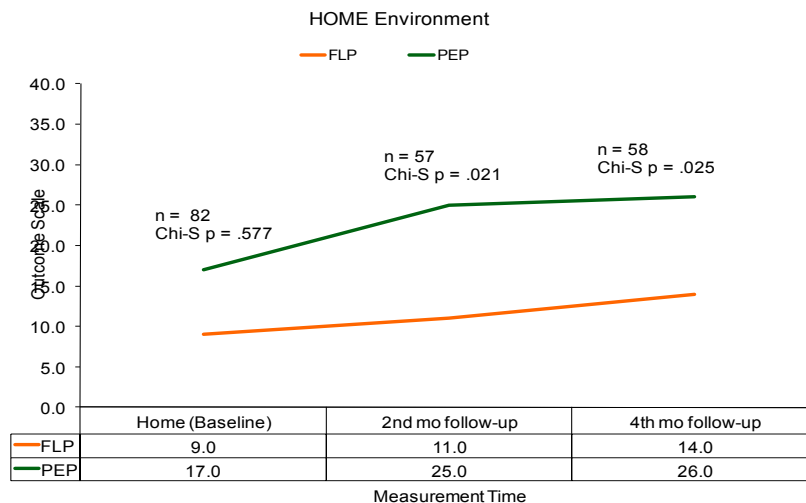
For the HOME evaluation, the quality and quantity of stimulation and support available to the child in the home environment was assessed for participants in the 0-7 age group (see Table 2). As a result, 68 (63%) families were evaluated in the PEP group and 34 (37%) in the FLP group. Both groups were similar at baseline and improved their home environment regarding quality and quantity of stimulation and support at follow-up. However, PEP participants had significantly higher scores compared to FLP families at 2-month follow up [75.8 vs. 45.8, $p<.05$] and again at the 4-month follow up [81.3 vs. 53.8, $p<.05$].

Table 2

HOME evaluation results among Intervention and Comparison Groups

Time	Intervention Group (PEP)		Comparison Group (FLP)		Sig.
HOME (Hi)	N	Mean	N	Mean	p^*
Baseline	17	34	9	28.1	.557
2 nd mo Follow-up	25	75.8	11	45.8	.021
4 th mo Follow-up	26	81.3	14	53.8	.025

Chi-Square test used for categorical variables

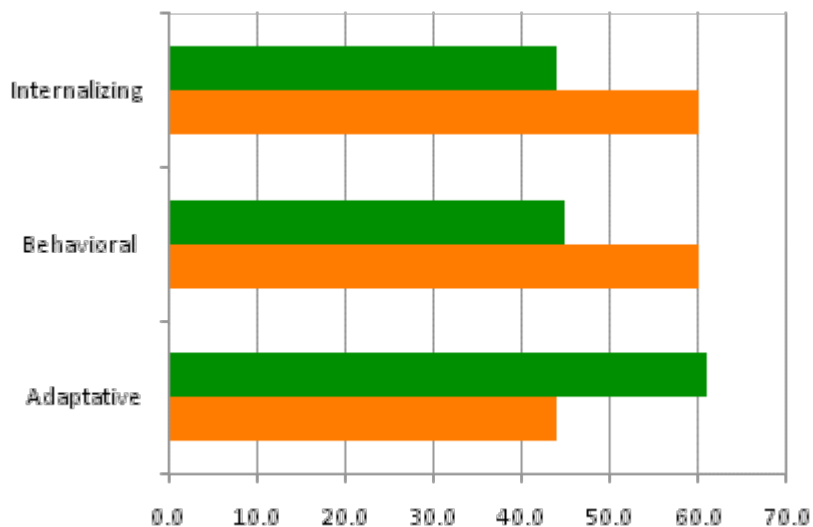


A medium intervention effect size was found at the 2-month follow-up [$r = 0.21$, $d = .438$], and a small effect size at the 4-month follow up [$r = 0.06$, $d = .129$]. An effect size of 0.12, like this, means that the score of the average person in the PEP group exceeds the scores of 54% of the FLP group.

Child Adjustment & Behavior

Children of parents in PEP scored higher on the Adaptive Skills composite of the BASC-2 than children of parents in the Financial Literacy Program at the 4-month follow up [$p < .01$]. However, children of parents in the FLP scored higher on the Internalizing Problems composite and the Behavioral Symptoms Index composite [$p < .01$]. No significant difference was found in the Externalizing Problems composite scores (see Table 3).

BASC-2 Results



Within the Adaptive scale, functional communication subscale (hi vs av), Behavioral (pep average for attention, FLP, at risk), Internalizing (average in depression, others at risk)

Participant Satisfaction

A total of 202 participants filled out consumer satisfaction surveys (see Table 4). Overall, parents were highly satisfied with PEP and FLP, and there were no significant differences between the satisfaction of parents in the two groups. Over 90% of parents agreed or strongly agreed that they 1) “learned a lot in the course,” 2) “will be able to apply what they learned,” 3) “thought the facilitator was knowledgeable,” and 4) “would recommend the course to other parents”.

Table 4 Responses to Parent Satisfaction Survey

	Total Sample		FLP*		PEP*	
	<i>N</i>	<i>M</i>	<i>n</i>	<i>M</i>	<i>n</i>	<i>M</i>
TOTAL SATISFACTION	201	3.74	44	3.64	157	3.76
I learned a lot in this course.	201	3.73	44	3.61	157	3.76
I will be able to apply what I learned in this course with my children.	200	3.65	43	3.49	157	3.69
I was given the opportunity to participate and discuss information with other parents.	199	3.71	44	3.61	155	3.74
This course was well organized.	201	3.75	44	3.64	157	3.78
I found the material distributed to be easy to read and follow.	199	3.65	43	3.53	156	3.69
The facilitator was knowledgeable about the material.	200	3.81	44	3.70	156	3.84
The facilitator addressed my questions and concerns.	201	3.78	44	3.70	157	3.80
I would recommend this course to other parents.	200	3.83	43	3.74	157	3.85
I felt comfortable participating in this course.	195	3.77	43	3.74	152	3.78
The homework exercises were helpful to enhance my parenting skills.	-	-	-	-	157	3.71

Note. Range is between zero and four, with four representing the highest score.

*No significant differences were found between Intervention and Control group means.

Participant Feedback

A qualitative analysis of the anonymous open-ended answers was conducted in addition to statistical analysis of the Parental Satisfaction Surveys responses. The following themes emerged from this analysis.

Overall, parents felt that learning concrete strategies, especially around non-violent discipline, was the most useful part of the PEP course. Many parents pointed out specific rules and techniques they learned in the course, and how this benefitted them. They discussed learning about time-outs, using consistent rules, providing options and consequences, how to disapprove of unwanted behavior, and how to deal with tantrums as useful aspects of the classes. One parent stated *"I liked learning about ACT, When and Then Rule, and I-Message. I think these are the basic rules for parents to be good parents."* Several parents revealed that before the class they did not know how to deal with their children without yelling and spanking, and did not know some of the negative impacts of spanking and hitting. The reported that they now know how to talk with their children without hurting them.

Parents liked the course materials. Parents liked the role plays and exercises, the videos, and the refreshments. Several parents highlighted the PEP manual and addendums as the most useful aspects of the course for providing information. Parents discussed referring to the manual at home when questions arose. Many parents discussed the video as an opportunity to see the strategies in action.

Parents discussed the importance of learning how to communicate better with their kids, and how to see situations from the child's perspective. Parents acknowledged the importance of listening and trying to understand their children, and said that the class taught them how to talk with their kids and better connect with them. They said they liked learning about reflecting feelings, I-messages, and how to build positive strengths. Parents also noted the importance of the parent-child relationship, and emphasized that the class helped them understand how special children are.

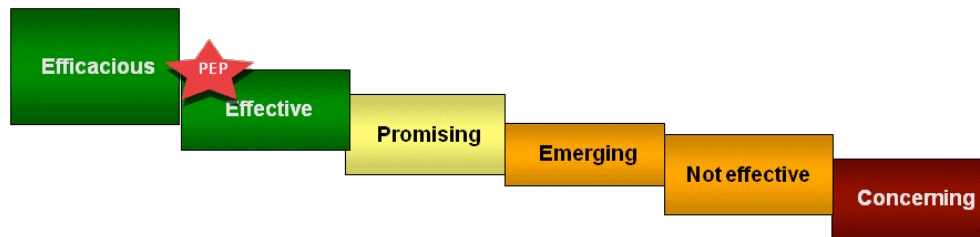
Parents enjoyed the support and discussion with other parents. Parents appreciated the open forum for discussing ideas, and discussed the usefulness of hearing other parents share their stories. One parent said that *“knowing and feeling that I wasn’t the only one and being able to talk to other parents,”* was one of her favorite things about PEP.



Implications

The Parenting Education Program (PEP) is an evidence-based positive parenting program.

- ★ PEP parents had more knowledge of child development and better parenting skills (communication, problem solving, non-violent discipline) than comparison group parents
- ★ PEP parents provided higher quality stimulation and support in their child's environment than comparison group parents.
- ★ PEP participant's children had higher levels of adjustment than comparison group children.



The study faced several limitations. Similar to other studies using community samples, retaining parents over time was difficult. However, the benefit of using a community samples (acceptability, transportability), outweighed the threats to validity. While all comparison group parents were invited to the FLP program, many of them preferred to be wait-listed to the PEP, and just participated in the data collection. Measures of parent-child interaction and external reports of child maltreatment would have strengthened the results; however, these measures were cost-prohibitive for this study.

PEP represents the kind of program that the Society for Prevention Research (2004) deemed ideal for rigorous randomized trials in the community setting. Certainly, the results of this effectiveness study make PEP a prime candidate for replication and dissemination among service providers. PEP achieved a medium effect size for parenting outcomes and outcomes related to the provision of stimulation and support in the home environment, which is consistent with other parenting programs with proven effectiveness. In terms of programmatic components and teaching approaches, PEP includes most of those recommended by the Centers for Disease Control and Prevention, National Center for Injury and Prevention (e.g. teaching emotional communication skills, consistency, teaching positive interactions). Additionally, given its 14 year history of implementation, PEP has already dealt with relevant issues of cultural competence, acceptability, and transportability.

More resources should be provided to disseminate positive parenting programs such as PEP throughout Illinois so that all parents have access to critical parenting strategies and supportive services.

This report was prepared by:

**Monica Adams, PhD
Marizaida Sánchez-Cesáreo, PhD
Edna Acosta-Perez, PhD**

**Division of Community Services
Center for Evaluation & Sociomedical Research,
Graduate School of Public Health, University of Puerto Rico.**

Contact Information

**Katharine Bensinger,
Parenting Education Program Director
Katharine.bensinger@c4chicago.org**

Phone 773. 769.0205

www.c4chicago.org

**Marizaida Sánchez-Cesáreo, PhD
Co-Principal Investigator
Marizaida.sanchez@upr.edu**

**Edna Acosta-Perez, PhD
Co-Principal Investigator
Edna.acosta2@upr.edu**

**Monica Adams, PhD
Project Director
Monica.adams@upr.edu**

Phone 787.758.2525 xt. 1422 or 1031