

## **Carolina Abecedarian Project (CAP)**

### Summary:

This project was conducted in 1972 through 1985 and recruited primarily low income African American infants with several risk factors for developmental delays and school failure. The program involved two components, a preschool intervention and a school age intervention. The preschool intervention included high quality child care from early infancy to age three with a main goal of creating an educational, stimulating and structured environment to promote growth and learning and enhance school readiness. At three years of age, children received a more structured set of educational curricula. Children attended this component 6 to 8 hours a day, five days a week, fifty weeks per year.

The school-age intervention began at kindergarten entry and continued through the first three years of elementary school. A CAP resource teacher taught parents activities to use with their children at home to reinforce and supplement school activities, tutored children directly, and advocated for the children and families. The CAP resource teacher also offered summertime support.

### Research Summary with selected outcomes:

*The program was implemented in Chapel Hill North Carolina and was studied through a Randomized Controlled Trial (RCT). At program entry, children and families were matched on risk status and then randomized to receive the preschool CAP intervention (57 infants) or be in the control group (54 infants). At kindergarten entry, children in the preschool intervention and preschool control groups were matched on IQ scores, with one in each pair randomly assigned to the school-aged CAP intervention and the other to the school-aged control group, resulting in a total of four groups studied (full intervention group, pre-school CAP only, school-aged CAP only, no intervention).*

*Children have been studied through age 21 with many of the results being published in peer-reviewed journals. The strongest results were seen for children that received the CAP preschool intervention (the first two groups) compared to those that did not, with significantly higher IQ's, test scores, and other indicators of academic achievement maintained over time. Children receiving preschool CAP were much more likely to go to a four year college and not to have become teen parents.*

- Children receiving preschool CAP services scored consistently higher than children in the preschool control group on IQ and several other tests of mental and skill development given at several intervals prior to kindergarten entry. Effects on IQ were strongest for children of the mothers with the lowest IQ's.
- At age 8, 50% of the children that received no CAP intervention had failed at least one grade, compared to 38% of children that received school-aged CAP only, 29% that had received pre-school CAP only, and 16% that received both pre-school and school-aged CAP. A similar pattern was observed at age 12 (57% of no intervention students had failed at least 1 grade, compared to 52% of those that received only school-aged CAP, 38% who had only received pre-school CAP, and 32% who had received both).
- At ages 8, 12, 15, and 21, participation in preschool CAP was associated with higher overall Weschler intelligence test scores. (There was no significant effect for children participating in school-aged CAP.)
- At age 21, children who participated in preschool CAP, compared to those that did not, were less likely to have been teen parents (26% vs. 45%), had completed more average years of education (12.2 versus 11.6), were more likely to be or have attended a four year college (36% vs. 14%), and were less likely to self-report recent marijuana use or regular cigarette smoking. However, no significant effects were found regarding high school graduation, current employment, or conviction/incarceration rates.

### Population:

Low socioeconomic, at risk African American infants. CAP was done in the 1970's/early 80's in a relatively affluent university town and has not been replicated at other times/places. It is unclear whether results would be replicated in current times and/or with other populations.

### Implementation Details:

- Probable implementers include child care programs and elementary schools.
- Teacher-child ratio in preschool intervention was 1:3 initially and gradually increased to 1:6 in the last preschool year. All had extensive experience in working with children. Pediatric care was provided on-site by a team of research nurses and pediatricians, and social workers were available to assist parents. Several curricula were used and are listed on the Promising Practices Network website. At least some of the materials are available for purchase on the program website.
- For the school-aged intervention, resource teachers were graduate level teachers with backgrounds in primary education who worked with about 12 children per year. No specific curricula were used as the teachers worked with classroom teachers of the CAP children and developed specific activities to reinforce classroom content.
- Average cost of program per year per child estimated at \$13,900 in 2002 dollars.

### Cost Benefit Analysis:

- One analysis performed by Masse and Barnett as described on the Promising Practices Network website estimated that benefits outweighed costs by four dollars for every one dollar spent.
- Rand's "Early Childhood Interventions: Proven Results, Future Promise" estimates the total cost per child as \$42,871 and the total benefits as \$138,635, with a return of \$3.23 for every dollar spent.

### Ratings on Evidence Based Program websites:

- Promising Practices Network- Proven

### References:

- Program website: <http://www.fpg.unc.edu/~abc/#home>
- <http://www.childtrends.org/Lifecourse/programs/CarolinaAbecedarianProgram.htm>
- <http://www.promisingpractices.net/program.asp?programid=132>
- RAND cost-benefit analysis: [http://www.rand.org/pubs/monographs/2005/RAND\\_MG341.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG341.pdf)

## Child-Parent Center (CPC)

### Summary:

This program was founded in Chicago in 1967 to serve families in high poverty neighborhoods not being served by Head Start or similar programs. The program provides services from preschool through 3<sup>rd</sup> grade to promote scholastic success. The program provides a half day two year preschool, a half or full day kindergarten program, and an all day service in the primary grades. The school program concentrates on basic reading and math skills delivered in small class sizes with a high number of adult supervisors to promote individual attention. Preschool classes have a teacher and an aide, average teacher to child ratio is 1 to 8. Kindergarten and primary grade classes average 25 children, with a staff-to-child ratio of 1 to 12. Parents are required to spend at least ½ day per week in the center during preschool and kindergarten; parental involvement activities include serving as a classroom aide, accompanying field trips, using the parent resource room, and participating in reading groups with other parents. Additionally, a full-time staff member provides outreach to CPC families and refers them to community services as appropriate (i.e. employment training, mental health treatment, welfare).

### Research Summary with selected outcomes:

A longitudinal quasi-experimental study followed low-income CPC participants and a comparison group for a total of 15 years (95% African American, 5% Latino). The CPC group included 1,150 students that were enrolled in CPC's with both preschool and kindergarten components. The comparison group included 389 students who participated in a full-day kindergarten for low-income kindergarteners; some of these children may have received CPC services in grades 1 through 3. There were few significant differences between the two groups at the start of the study and the differences that existed were controlled for statistically.

- Children that attended CPC preschool compared to comparison group children who did not attend preschool:
  - scored higher on cognitive school readiness tests at kindergarten entry.
  - at the completion of 8<sup>th</sup> grade, scored higher on reading and math tests, were less likely to have ever been retained a grade (24% vs. 32%), and spent fewer years in special education (0.51 vs. 0.87 yrs).
  - at the 15 year follow-up, were more likely to have completed high school (50% vs. 39%).
  - had fewer arrests of any type (17% vs. 25%) and were less likely to have had any violent arrests (9% vs. 15%).
- Children that had any CPC involvement compared to those with no CPC exposure:
  - at the completion of 8<sup>th</sup> grade, were less likely to have been retained a grade (25% versus 37%).
  - spent fewer years in special education (0.9 vs. 0.6 yrs).
- Participation in the CPC program for all six years compared to participation in kindergarten and preschool only was associated with:
  - higher reading and math scores, lower grade retention (7% vs. 32%) but no significant differences in special education placement at end of 8<sup>th</sup> grade.
- CPP school-age participation (with or without preschool participation) at the 15 year follow-up:
  - was associated with lower rates of special education (15% vs. 21%) and fewer children ever being retained a grade (24% vs. 34%).
  - yielded no improvement in educational attainment or juvenile arrests.

### Population:

African American low income families with preschoolers.

### Implementation Details:

- Each center has a head teacher who acts as program coordinator, parent-resource worker, school-community worker, and classroom teachers and aides.

- The program has no prescribed curriculum; it focuses on a broad range of activities, including individualized and interactive learning, small group activities, and frequent teacher feedback.
- Each year of preschool program is estimated at about \$5000 and each year of extended grade school program at \$1,600 in 2002 dollars.
- No set curriculum.
- Operated through Chicago public schools; not clear whether training is available for those outside this system.

Cost benefit analysis:

- Rand's "Early Childhood Interventions: Proven Results, Future Promise" estimates the cost per child as \$6,913 and the total benefits as \$49,337, or \$7.14 per dollar expended, in 2003 dollars.
- The principal researcher estimates that the cost savings to government averages \$22,897 compared to a cost of \$11,387 per child for six years of programming, in 2003 dollars.

Ratings on Evidence Based Program websites:

- Office of Juvenile Justice and Delinquency Prevention: "Effective" (highest rating exemplary, then effective, then promising)
- Promising Practices Network (PPN)- "Proven"

PPN notes that it gave CPC a "proven rating", despite the fact that the study did not use an experimental design, due to the strength of the design (sample size, rigorous empirical methods) and the sizeable and significant gains in several outcome areas over 15 years.

References:

- Longitudinal study website: <http://www.waisman.wisc.edu/cls/>
- Chicago Early Education website: <http://www.ecechicago.org/programs/ece/cpc.html>
- <http://www.promisingpractices.net/program.asp?programid=98>
- [http://www.dsgonline.com/mpg2.5/TitleV\\_MPG\\_Table\\_Ind\\_Rec.asp?id=52](http://www.dsgonline.com/mpg2.5/TitleV_MPG_Table_Ind_Rec.asp?id=52)
- RAND cost-benefit analysis: [http://www.rand.org/pubs/monographs/2005/RAND\\_MG341.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG341.pdf)

## **Child-Parent Psychotherapy (CPP)**

### Summary:

Child-Parent Psychotherapy is an intervention for children five and younger (including infants) who have

- 1) witnessed or been victims of trauma, including domestic violence and child abuse and neglect;
- 2) who display related symptoms, including Post Traumatic Stress disorder, anxiety, withdrawal, poor attachment to the parent(s), and defiant behaviors; and/or
- 3) a mother with a major depressive disorder.

CPP involves weekly sessions for up to twelve months with the parents and the traumatized child. The goals of treatment include improving the parent-child relationship and restoring the child's mental health and normal developmental progression, which have been disrupted by exposure to trauma.

### Research Summary with selected outcomes:

*Outcomes include improvements in maternal and child mental health symptoms and mother-child attachment and interactions. Has been tested with families exposed to domestic violence, child maltreatment, and maternal depression.*

### Randomized Controlled Trial(RCT) in California with mothers and children 3-5 who witnessed marital violence:

- 75 mother-child pairs randomized to group that received CPP and control group that received case management and referral to individual treatment in the community. Group was of mixed ethnicity: 37% Latina, 24% Caucasian, 15% African American, 11 % Asian, 13% mixed/other.
- At end of treatment, CPP children showed significant decline in traumatic stress symptoms and behavior problems and mothers showed significant reductions in avoidant symptoms compared to the control group.
- Six months after treatment, the CPP children showed significant reductions in problem behaviors and the mothers showed significant improvement in distress levels while control group did not.

### RCT with mothers with history of child maltreatment and children 4-5 (76% ethnic minorities)

- Involved 122 mothers and their preschool children. Families with a history of maltreatment were recruited and randomly assigned to three groups: one group received CPP, one received psycho- educational home visitation, and one received usual care. A fourth group of low-income families with no history of maltreatment also included for comparison purposes.
- At end of treatment, CPP children showed greater decrease in negative self-representations compared to all three groups.
- CPP mother/child expectations also became more positive compared to the non-maltreated and home visitation groups.

### RCT with depressed mothers with toddlers (average age 20 months-ethnicity not given)

- Depressed mothers randomly assigned to CPP (63 mothers) and no intervention control group (45 mothers). Also included a third group of mothers from the same community with no prior mental health diagnosis for comparison purposes.
- At baseline, both the CPP group and no-intervention control group had a higher percentage of insecurely attached children than the non-depressed mothers. At the end of the intervention, the percentage of CPP group's insecurely attached children had decreased to the point where no longer significantly different from those in the non-depressed group. The depressed group that received no treatment showed an increase in percentage of insecurely attached children.
- At baseline, children in all three groups did not differ in cognitive abilities. At end of treatment, CPP children's cognitive abilities were significantly higher than those of depressed mothers not receiving treatment and did not differ significantly from children of the non-depressed mothers.

### RCT with low income Latino immigrants and infants (11 to 14 months) with attachment issues

- Mother-infants pairs that were anxiously attached randomly assigned to CPP group (34 pairs) and non-intervention control group (25 pairs). A third group of 34 securely attached pairs was also included.
- At the end of treatment, CPP toddlers were significantly lower than the no treatment control group in avoidance, resistance, and anger. CPP mothers were higher in empathy and interaction with their children. However, they did not differ significantly on attachment security.
- Although the securely attached comparison group still had higher scores in secure attachment than the CPP pairs, the two groups did not differ significantly on other outcomes.

#### RCT with mothers with history of child maltreatment and children 12 months (74% ethnic minorities)

- 137 12-month old infants from maltreating families and their mothers were randomly assigned to receive CPP, psycho educational home visitation, or usual care. About two-thirds of the infants had directly experienced abuse/neglect; the remainder were living in families where siblings were known to have experienced abuse/neglect. A fourth group of 52 low-income mother-child pairs with no history of maltreatment also included for comparison purposes.
- At baseline, infants in the first three groups had significantly higher rates of disorganized attachment compared to infants in the fourth group where no family history of maltreatment was present.
- At end of treatment, the percentage of infants showing disorganized attachment significantly decreased and the percentage showing secure attachment significantly increased in the groups of infants receiving CPP and psychosocial home visitation. There were no significant improvements in secure attachment in the maltreated group receiving “care as usual” or in the comparison group with no history of maltreatment.

#### Population:

Mothers and infants/young children with attachment issues or other problems, particularly those resulting from exposure to violence. Appears to have been tested with different ethnic groups; no differential outcomes on the basis of race/ethnicity reported.

#### Implementation Details:

- Implementers need to have master’s level training, with supervisors having the additional requirement of one year of training in this intervention.
- Training available at UC-San Francisco and onsite at community agencies; also will be available through National Child Traumatic Stress Network. Training consists of 3 day intensive training followed by biweekly case specific telephone consultation and 8 hour in person booster sessions every three months for a year. Cost of training \$1500 per day.
- There are at least two training manuals available.

#### Cost benefit analysis:

- None found.

#### Ratings on Evidence Based Program websites:

- California Evidence Based Clearinghouse: Level 2-“Supported by research” ( 1 is well-supported research of benefits; 6 is does more harm than good)

#### References:

- National Child Traumatic Stress network factsheet:  
[http://www.nctsn.org/nctsn\\_assets/pdfs/promising\\_practices/Child\\_Parent\\_Psychotherapy\\_CPP\\_fact\\_sheet\\_3-20-07.pdf](http://www.nctsn.org/nctsn_assets/pdfs/promising_practices/Child_Parent_Psychotherapy_CPP_fact_sheet_3-20-07.pdf)
- <http://www.cachildwelfareclearinghouse.org/program/10/detailed#relevant-research>
- Cicchetti, D., Rogosch, F.A., & Toth, S.L. (2006). Fostering secure attachment in infants in maltreating families through preventive interventions. *Development and Psychopathology*, 18, 623-650.

## **Dare To Be You (DTBY): version for parents of children 2 to 5**

### Summary:

The program focuses on improving parenting skills in order to promote children's resiliency to problems such as alcohol, tobacco and other drug use. Parents, their children 2-5, and siblings attend a series of simultaneous 10 to 12 weekly, 2.5 hr workshops. Sessions focus on improving parenting techniques, enhancing decision-making skills, increasing family communication skills, and child development. Parents also have the option of attending annual reinforcing workshops after conclusion of the series.

### Research Summary with selected outcomes:

*Outcomes include improvements in parenting practices and child developmental levels and behaviors that were greater than those observed in the control groups, some of which were still apparent one to two years later.*

*Study 1:* Randomized Controlled Trials (RCT's) at 4 diverse sites in Colorado community (1 Native American community, 1 rural agricultural, one semi rural, 1 urban); sites chosen because of high prevalence of risk factors/behaviors (i.e. high degree of substance abuse, teen pregnancy, child abuse, poverty, etc.) The vast majority of families recruited had family risk factors. About 42% were Caucasian, 26% Native American, and 23% Latino. All families pre-tested; DTBY families were post-tested immediately after the program's end; all families were post-tested at 1 year and 2 years after the program began.

*Study 2:* Little details given beyond demographics (49% Caucasian, 27% Native American, and 12% Latino) and some outcomes on National Registry of Evidence-based Programs and Practices (NREPP) site; randomized controlled trial.

The results of the first study were published in at least one peer-reviewed journal; the second do not appear to have been.

### Results:

- Harsh punishment decreased, effective discipline/limit setting increased in intervention group, with scores showing improvement through 2 year follow-up period. Tests showed no significant changes among control group parents (Study 1). In study 2, harsh parenting decreased in both groups and differences between the two groups were not statistically significant.
- DTBY kids had greater average increases in their development and age appropriate behaviors, both when compared to their pre-test levels and in comparison with the control group children. Oppositional misbehavior decreased significantly among DTBY children compared to control children (study 1).
- DTBY parents significantly increased confidence in parenting skills from pre-to-post and had higher levels of self-esteem than parents in control group at one and two year follow-up. (Study 1). DTBY parents increased self-efficacy and use of nurturant child-rearing practices when compared to controls at 1 year follow-up (Study 2).

Study 1 appeared to have about 30% attrition rate- NREPP states that not clear how missing data handled and this may have biased results. However, Promising Practices Network states that there were few significant differences between dropouts and completers.

### Population:

- At-risk families with children 2-5.
- Although this program does not appear to have been tested extensively with African Americans, Child Trends notes that "few site differences were observed, suggesting the program was effective across a range of racial and social groups".

### Implementation Details:

- Appropriate implementers: community based organizations in high-risk communities. Training and program materials available through Colorado State University Cooperative Extension.
- Costs estimated as \$40,000 for 150 family members (not including siblings), about \$266 per person. Start up costs include \$5,100 to \$5,500 for a trainer plus travel/per diem.

Cost benefit analysis:

- None found.

Ratings on Evidence Based Program websites:

- Promising Practices Network: Proven (highest)
- Office of Juvenile Justice and Delinquency Prevention: Exemplary (highest)
- National Registry of Evidence-based Programs and Practices/Substance Abuse and Mental Health Services Administration (scale of 0.0- 4.0):
  - Quality of research: 2.7 to 2.8 dependent on outcome
  - Readiness for Dissemination: 2.8

References:

- Program website: <http://www.coopext.colostate.edu/DTBY/>
- [http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM\\_ID=79](http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM_ID=79)
- [http://www.dsgonline.com/mpg2.5/TitleV\\_MPG\\_Table\\_Ind\\_Rec.asp?id=319](http://www.dsgonline.com/mpg2.5/TitleV_MPG_Table_Ind_Rec.asp?id=319)
- <http://www.promisingpractices.net/program.asp?programid=100>
- <http://www.childtrends.org/Lifecourse/programs/DTBY.htm>

## **Healthy Families New York (HFNY)**

### Summary:

This is a home visitation program that targets mothers at risk of abusing or neglecting their children. Goals include preventing child maltreatment, promoting positive parenting, promoting prenatal and child health, and increasing parents' self-sufficiency. The program targets expectant parents and those with infants younger than three months. Paraprofessionals conduct visits every other week during pregnancy and weekly from birth until the infant is six months; then the schedule is slowly decreased until the child enrolls in preschool or turns five. Home visits focus on child development, addressing family issues, improving the child-parent relationship, and developing self-sufficiency. There is no set curricula; some programs use Parents as Teachers.

### Research Summary with selected outcomes:

*One well implemented Randomized Controlled Trial (RCT) showed significant improvements in self-reported physical and emotional maltreatment, with stronger effects in pregnant first time teen mothers and psychologically vulnerable mothers.*

An RCT (using Intent to Treat analysis<sup>1</sup>) involving 1173 women from 3 sites (one that served primarily women from inner city neighborhoods); all women were identified as at risk of child maltreatment using the Family Stress Checklist. Almost half were African American, a third were Caucasian, and one fifth Latina. About a third were under nineteen, half were first time mothers, half had not completed high school or GED, and 4/5's had never been married. About half were assigned to receive HFNY; the other half served as controls (these women were referred to other programs based on a needs assessment).

- Full group:
  - Year 1: HFNY parents reported significantly fewer acts of very serious physical abuse, minor physical aggression, and psychological aggression in the past year and harsh parenting practices in the last week compared to controls.
  - HFNY families reported ¼ as many acts of serious physical abuse at Year 2 (0.01 vs. .04).
  - Child Protective Services (CPS)-substantiated reports did not differ significantly at Year 1 and Year 2. This may be due to greater surveillance of HFNY families - by nature of program participation, they come into more frequent contact with mandated reporters, so any acts of maltreatment are more likely to be detected compared to control families. HFNY families that self-reported serious maltreatment were more than twice as likely to have a CPS report than control parents that did, leading credence that maltreatment by HFNY families was more likely to be detected and reported.
- pregnant mothers that entered at least two months before birth: Control group mothers were significantly more likely to have low birth weight babies than HFNY ones (8.3% vs. 3.3%).
- first time mothers under 19 who entered at 30 weeks gestation or earlier:
  - HFNY mothers less likely to report committing minor physical aggression against children than control mothers (51% versus 70%) at Year 2.
  - HFNY mothers were less likely to self-report engaging in harsh parenting in last week (41% versus 62%) at Year 2.
  - No significant difference in frequency of self-reported or CPS substantiated maltreatment.
- Psychologically vulnerable mothers (high levels depressive symptoms/low levels mastery at entry):

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<sup>1</sup> Once a woman was assigned to be receive HFNY, she was treated as part of the experimental group and her data included in analyses, whether or not she enrolled, dropped out early, or completed services. This preserves random assignment and is a more rigorous study design than one that just includes program completers.

- HFNY mothers one-fourth likely to report engaging in acts of serious abuse or neglect (5% vs. 19%); the average number of reports was also significantly less (0.02 versus 0.62) at year 2.
- Frequency of psychological aggression among HFNY mothers was less than that of control group mothers (1.95 vs. 8.57) at Year 1.
- No significant difference in frequency of self-reported or CPS substantiated maltreatment.

*Most of results recently published in article that appeared in a peer-reviewed journal.*

Population:

- Pregnant parents/those with infants under 3 months at risk of committing child maltreatment. Tested with Caucasians, African Americans, Latinos, with one site primarily inner city- no differences in effects by ethnicity noted. Strongest effects in the study were for persons pregnant and under 19 at enrollment and/or psychologically vulnerable.

Implementation Details:

- Costs range from \$3000 to \$3500 per year per family.
- Home visitors are trained paraprofessionals (although college not required, in practice, about a third are college graduates).
- Probable implementers: public health and social welfare agencies.
- Prevent Child Abuse NY provides training, curriculum development, and on site quality assurance/support services.

Cost benefit analysis:

- None found.

Ratings on Evidence Based Program websites:

- Promising Practices Network- Proven (highest)

References:

- Program website: <http://www.healthyfamiliesnewyork.org/>
- <http://www.promisingpractices.net/program.asp?programid=147>
- <http://www.childtrends.org/Lifecourse/programs/hfny.htm>
- K. DuMont *et al.* "Healthy Families New York (HFNY) randomized trial: Effects on early child abuse and neglect". *Child Abuse & Neglect* 32 (2008), pp. 295–315.

## Healthy Start

### Summary:

This initiative was established in 1991 by the Health Resources and Services Administration to reduce infant mortality and improve maternal and infant health in at-risk communities. 15 demonstration projects were funded at 13 urban and 2 rural sites across the country. Certain core elements were required (i.e. a focus on reducing infant mortality, assessment of local needs, development of a package of innovative health and social services), but each participating service area had a great deal of flexibility in designing its own program. As of 2002, 96 programs were being funded.

### Research Summary with selected outcomes:

*Some of the demonstration sites experienced improvement in birth outcomes and/or improvement of prenatal care utilization when contrasted with comparison sites.*

14 of the sites were matched to two comparison sites similar in terms of infant mortality rate and trends, and race/ethnicity (the 15<sup>th</sup> site had one comparison site). Selection of intervention sites did not involve random assignment.

- 3 program sites had significantly lower rates of Low Birth Weight (LBW) babies than their comparison sites; 3 had significantly lower rates of very LBW babies.
- 4 program sites had significantly lower pre-term birth rates (decreases ranged from 1.3% to 2.9%)..
- 8 sites had higher rates of adequate or better prenatal care.
- 4 sites had higher rates of initiation of prenatal care by 4<sup>th</sup> month of pregnancy.

### Population:

- Communities with high rates of infant mortality, low birth weight, pre-term birth rates.

### Implementation Details:

- Grants for demonstration programs ranged from 13.8 to 30M, but may have included costs of evaluation. Reduced funding given following the demo phase.
- No set curriculum; nine “typical” intervention models.
- Unclear if training available; membership in National Healthy Start Association limited to federally funded programs.

### Cost benefit analysis:

- None found.

### Ratings on Evidence Based Program websites:

- Promising Practices Network(PPN): Promising

PPN gave them a promising not proven rating due to methodology limitations and mixed findings. No single program showed consistent improvements over all outcome areas, and it is not clear which program features led to which outcomes.

### References:

- Program website: <http://www.healthystartassoc.org/>
- <http://www.promisingpractices.net/program.asp?programid=118>

## **Incredible Years (IY)**

### Summary:

The Incredible Years parent training programs focus on improving parenting skills to promote children's social competence and reduce problem behaviors. The BASIC parent program educates parents of 2 through 8 year olds on social learning and child development and focuses on strengthening parenting competencies, including positive discipline techniques. The program uses videotaped vignettes as an integral learning tool, and is offered in 12 to 14 two hour sessions. BASIC can be followed by the ADVANCE program, which targets parents of 4 through 10 year olds, and includes 8 to 10 two hour sessions that emphasize parents' interpersonal skills, including effective communication, anger management, and problem-solving. Both of these components are offered in small group format. Additional programs include child training using the Dinosaur curriculum. The Dinosaur classroom curricula can be offered over multiple years from preschool to second grade, and focuses on improving peer relationships and reducing aggression. The Dinosaur treatment curriculum focuses on children 4 through 8 with conduct problems and is offered in small groups in weekly two hour session for 20 to 22 weeks. The treatment version focuses on anger management, empathy, and interpersonal problem solving.

### Research Summary with selected outcomes:

*Incredible Years has been extensively and rigorously evaluated and shown to produce significant improvements in positive parenting and reductions in negative discipline for the parents, with improvements in their children's social skills and problem behaviors.*

The BASIC program has been evaluated extensively as a treatment program for families with children diagnosed with conduct problems. Six randomized trials involving over 800 children showed that the program improved parental attitudes and parent child interactions, reduced parent's reliance on violent forms of discipline, and reduced children's conduct problems, with effects sustained up to three years after the intervention. The ADVANCE program has shown in a randomized study to promote parental use of effective-problem solving and communication skills and increase children's social and problem-solving skills, with effects above and beyond those achieved by BASIC alone. Additional studies combining the two components have also replicated these findings and shown effects lasting up to one year. The BASIC program has also been evaluated as a prevention program with high risk families in two randomized trials with over 500 low income Head Start families (50% minority). The studies found that parent skills and child social competence of IY families significantly improved compared to controls, with most of the improvements maintained one year later. Independent replications of the parent training components (three with children with conduct problems, three for at-risk families in low income child cares serving primarily African American children in Chicago, one with Spanish-speaking Head Start families in New York, and one with a multiethnic group of Head Start families in Massachusetts) have confirmed these findings.

The Dinosaur treatment program for conduct disordered children was evaluated in two randomized control trials. The first showed that children that received the Dinosaur training had significantly better social skills and conflict management strategies than those whose parents received parent training only or no intervention at all. The second study also showed that children receiving the Dinosaur training had improved peer conflict management skills compared to untreated children that received the parent training only.

### Population:

Parents with children ages 2-10 who are at risk for, or are exhibiting conduct problems. Tested with Hispanic, Asian/Pacific Islander, Caucasian, and African American in urban, suburban and rural communities.

### Implementation Details:

- Programs should be delivered in a group setting and the minimum provider qualifications should be Master's level (or equivalent) clinicians.
- Cost varies depending on the amount of training and number of series to be implemented.

- One time start-up costs of leader training- \$400-500 in Seattle or \$1,500 on site plus travel expenses (training not required but highly recommended).
- One time start-up program materials for parent training- \$1,500 per series.
- On-going costs for parent groups-\$476 per parent (includes child care, food, leader compensation and materials) and \$775 for each child in child treatment groups (costs include snacks, leader compensation and materials).
- On-going consultation- minimum of \$500 per leader each year recommended (includes videotape review and consultation services).
- Likely implementers include public and private preschool programs, Head Start and other similar child care centers.

#### Cost Benefit Analysis:

Washington State Institute for Public Policy's "Benefits and Costs of Prevention and Early Intervention Programs for Youth" specifically mentions the Incredible Years as a program it is unable to calculate a cost-benefit for, as its outcomes are not easily monetized.

#### Ratings on Evidence Based Program websites:

- Promising Practices Network-Proven (highest)
- California Evidence- Based Clearinghouse Scientific Rating of 1-Well Supported by Research (highest out of 1 through 6; 1 is well-supported research of benefits; 6 is does more harm than good)
- Office of Juvenile Justice Delinquency Programs (OJJDP) – Exemplary (highest)
- Blueprints for Violence- Model Program (highest)
- NREPP/Substance Abuse and Mental Health Services Administration (scale of 0.0- 4.0):
  - Quality of research: 3.6 to 3.7 dependent on outcome
  - Readiness for Dissemination: 4.0

#### References:

- Program website: <http://www.incredibleyears.com>
- <http://www.childtrends.org/Lifecourse/programs/IncredibleYearsSeries.htm>
- <http://www.cachildwelfareclearinghouse.org/program/1/detailed#references>
- <http://www.promisingpractices.net/program.asp?programid=134>
- <http://www.colorado.edu/cspv/blueprints/model/programs/IYS.html>
- [http://www.dsgonline.com/mpg2.5/TitleV\\_MPG\\_Table\\_Ind\\_Rec.asp?id=343](http://www.dsgonline.com/mpg2.5/TitleV_MPG_Table_Ind_Rec.asp?id=343)
- [http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM\\_ID=131](http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM_ID=131)
- WSIPP cost-benefit analysis: <http://www.wsipp.wa.gov/rptfiles/04-07-3901.pdf>

## **Infant Health and Development Program (IHDP)**

### Summary:

IHDP is a comprehensive early intervention to reduce developmental and health problems of Low birth Weight (LBW) premature infants from birth to age three involving home visiting, center based services, parent group meetings and other services. Home visits occur weekly during the first year and biweekly for the next two years and involve educating the parents on child health and development, teaching them activities to promote their child's development, and helping parents manage problems. Beginning at twelve months and continuing until 36 months, the children attend child development centers five days per week for at least four hours per day; the curriculum is adapted from the Carolina Abecedarian Project. Teacher child-ratios are 1 to 3 for children 12 to 23 months and 1 to 4 for children 24 to 36 months. Parent groups meet every two months starting when the children are twelve months; topics include health, safety, and child raising.

### Research Summary with selected outcomes:

*A multi-site Randomized Controlled Trial (RCT) showed significant cognitive and behavioral effects for LBW infants; with significant differences still observed for heavier LBW children (2000 to 2500 grams) at age 8.*

RCT in eight cities involving 985 infants and families. 262 were heavier LWB (2000 to 2500 grams) and 623 lighter LBW (less than 2000 grams). The average age of the mothers was 25 at enrollment and about 40% had less than a high school education. 52% were African, 11% Latino, and 37% Caucasian or another race. Infants in both groups received assessments and referrals for health care and other services, with the IHDP families additionally receiving home visits, center care and parent group meetings.

- At age 2, IHDP children had significantly higher IQs and vocabulary, receptive language, and visual-motor skills, with stronger effects for heavier LBW than lighter LBW infants and African American children than Caucasian or Latino ones. Stronger effects on IQ were also observed for children of non-college educated mothers.
- At age 3, IHDP children had higher mean IQ's, scored higher on several tests of cognitive functioning, and had fewer behavior issues. On some of the tests, stronger effects were seen for heavier LBW than lighter LBW infants. The strongest effects for receptive language were seen in Latino children and the strongest effects for picture vocabulary and visual-motor spatial skills for the African American children.
- At age 5, the heavier IHDP LBW children still had higher IQs and higher picture vocabulary scores than their counterparts in the control group. However, no significant differences in these areas were seen comparing lower LBW IHDP children and those in the control group.
- At age 8, the heavier LBW children still had higher IQ's and picture vocabulary scores than their control group counterparts; these children also scored better in mathematics achievement. Differences were smaller than that seen at age three. Again, no significant differences were seen in these areas in the lower LBW IHDP and control group children.

### Population:

- Caucasian, African American, and Latino LBW infants and their families. Strongest and longest lasting effects appeared in heavier LBW children (2000 to 2500 grams).

### Implementation Details:

- Could not find any details re: whether training, curricula, etc available. The research on the children's long-term outcomes continues, with the investigators currently analyzing data on the children at age 18. It's not clear if and when it will move beyond the research stage to the dissemination and replication one.
- In 1997, costs were estimated at \$9000 to \$15,000 per child per year. Washington State Institute for Public Policy (WSIPP) estimates the total program cost as \$49,021 in 2003 dollars.

Cost benefit analysis:

Washington State Institute for Public Policy's (WSIPP) "Benefits and Costs of Prevention and Early Intervention Programs for Youth" estimated the benefits of the program at \$0 in 2003 dollars. Rand's "Early Childhood Interventions: Proven Results, Future Promise" notes that the WSIPP analysis only included certain outcomes in its monetarization of benefits, most of which were not measured in the evaluation of IHDP.

Ratings on Evidence Based Program websites:

- Promising Practices Network- Proven (highest)

References:

- Website re: research project: <http://www.policyforchildren.org/earlycare03.html>
- <http://www.promisingpractices.net/program.asp?programid=136>
- <http://www.childtrends.org/Lifecourse/programs/InfantHealthDev.htm>
- WSIPP cost-benefit analysis: <http://www.wsipp.wa.gov/rptfiles/04-07-3901.pdf>
- RAND cost-benefit analysis: [http://www.rand.org/pubs/monographs/2005/RAND\\_MG341.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG341.pdf)

## **Interpersonal Psychotherapy (IPT)**

### Summary:

Interpersonal psychotherapy is a structured, manual-based intervention that several research studies have shown to be effective in decreasing depression for adults and adolescents. It is generally offered in 12 to 16 weekly hour-long sessions (longer when used as a maintenance treatment), individually or in groups, and addresses interpersonal issues in depression, with a focus on improving the individual's problem solving skills. IPT is appropriate for adults and adolescents exhibiting depression due to bereavement; poor, dysfunctional, or insufficient interpersonal relationships; and stressful changes in life circumstances.

### Research Summary with selected outcomes:

*Outcomes include improvements in depression systems, greater rates of remission, and improvements in functioning when compared to placebo, no treatment, or treatment as usual.*

### Review of randomized control trials studying efficacy of IPT for depressive disorders

- The authors reviewed 13 randomized control trials (RCT's) of IPT used to treat depressive spectrum disorders such as major depressive disorder, dysthymic disorder, and recurrent depression. Two of the studies were limited to adolescents, two included patients over 60, and one study was of women suffering from postpartum depression.
- The review used a meta-analysis (pooling of results from applicable studies) to specifically investigate whether IPT is superior to Cognitive Behavioral Therapy (CBT) or a placebo, and whether IPT with antidepressants is more effective than antidepressants alone.
- IPT compared to a placebo was found to be significantly more effective in preventing the recurrence of depression and led to a significantly higher decrease in depressive systems when used as an acute treatment of depression.
- IPT compared to CBT lead to a significantly higher decrease in depressive systems when used as an acute treatment of depression.
- IPT compared to medication alone was not significantly different in rate of depression remission (both when used as an acute and maintenance treatment) or recurrence of depression (when used as a preventive treatment).
- IPT plus medication compared to medication alone did not show any statistically significant differences in rate of depression remission (both when used as an acute and maintenance treatment) or recurrence of depression (when used as a preventive treatment).
- The authors concluded that IPT's efficacy was superior to a placebo, similar to medication, and did not increase when combined with medication, and was overall more efficacious than CBT.

### Analysis of IPT outcomes in an RCT by race (white/African American)

- Researchers had previously conducted an RCT studying IPT compared to medication with 160 patients meeting criteria for current major depression in 4 urban primary care practices. This analysis examined whether outcomes varied by race.
- 68 African Americans and 92 whites were involved in the study. Participants did not differ significantly on age, education, socioeconomic status, and gender, psychosocial functioning, and two scales of depression at study start. However, African Americans were significantly less likely to be married or employed, and to have reported prior outpatient mental health treatment. Additionally, they reported more stressful life events in the six months prior to the study and had higher depressive symptoms on a third depression scale.
- Depressive symptoms in all four groups (African Americans treated with medication, African Americans treated with IPT, whites treated with medication, whites treated with IPT) declined significantly from start of treatment to eight months later.
- 50% of whites and 41% of African Americans had fully recovered from depression at 8 months; differences were not statistically significant.

#### RCT with 63 depressed NYC adolescents (ages 12 to 18) in school-based health clinics:

- Students who met eligibility criteria (including diagnosis of major depression or other depressive disorder) were randomized into two groups; 34 students received a version of IPT adapted for adolescents (IPT-A), 29 received treatment as usual from the health clinic staff and served as the control group. 84% of the sample was female and 71% was Latino; students were predominantly of low socioeconomic status.
- Students receiving IPT-A showed significantly fewer clinician-rated depressive symptoms, better global and overall social functioning, greater clinical improvement, and greater decrease in clinical severity compared to those receiving treatment as usual.
- The largest treatment effects occurred in the older (15-18) adolescents and/or most severely depressed adolescents.

#### RCT with 41 youth (ages 11 to 16) in 3 NYC Catholic schools

- Students who met eligibility criteria (including elevated symptoms of depression but not in a current depressive episode, no existing diagnosis of depression or certain other psychiatric conditions) were randomized into two groups. 27 adolescents received IPT-Adolescent Skills Training (IPT-AST), a modified version of IPT-A that includes two individual sessions and 8 group sessions, and 14 adolescents to school counseling, which served as the control group. 85% were female, 93% were Latino, 66% lived in a single parent household, and half had an income of \$25,000 or less.
- Adolescents in both groups showed an improvement in depression symptoms and overall functioning from start of treatment until the end of treatment, three months later, and six months later. However, the improvement in the IPT-AST group was significantly higher in each area (symptoms and functioning) and each data point (end of treatment, 3 month follow-up, and 6 month follow-up) compared to the group that received school counseling.
- Study limitations include the relative small sample size.

#### RCT with 50 NYC depressed pregnant women

- Pregnant women with major depression randomized to two groups: 25 received IPT specifically adapted to meet needs of pregnant women, 25 received a parenting education program. Majority of women involved in study were Dominican immigrants with few support systems and low economic status.
- 38 women that completed at least one session of assigned intervention included in data analysis. No significant differences found between the groups at start of treatment.
- Women on average decreased in depression by the end of treatment in both groups; however, the ones receiving IPT improved significantly more.
- Study limitations include small sample size; relatively high attrition.

#### RCT with African Americans and Caucasian Americans with completed grief

- 19 African Americans and 19 Caucasians matched by age, sex, and baseline grief severity. Participants received either standard IPT or IPT enhanced with specific grief-related components. Because of the small sample size, participants receiving either treatment were combined according to ethnicity and outcomes compared.
- At end of treatment, no differences by ethnicity were found. 37% of African Americans and 42% of Caucasians were much improved/very much improved, with the difference not being statistically significant.
- Studies limitations include small sample size.

#### RCT with impoverished Ugandan villagers

- 30 villages were randomly sorted into 15 blocks for male participants and 15 for female, then randomized so that eligible males at 8 villages and eligible females at 7 village received group IPT (adapted for Ugandan culture), with eligible males at 7 villages and eligible females at 8 serving as controls. Eligible persons included those that met DSM-IV for major depression or subthreshold depression (fell short of a major depression diagnosis by a single criterion). 341 participants were

eligible (163 in intervention villages and 178 in control ones). A total of 107 persons participated in IPT and follow-up; 117 of the control participants completed follow-up.

- Two weeks after the end of treatment, decline in depression and improvement in functioning was significantly higher for IPT participants compared to controls. (This effect was seen both looking at only the participants completing the study and using an-intent-to team analysis of all 341 eligible participants.)
- Six months later, 103 persons that received IPT and 113 that served as controls were reassessed. IPT participants maintained the declines in depression and improvements in functioning observed at two weeks after the end of treatment; both outcomes continued to be significantly better than controls. The rate of major depression was significantly lower for IPT participants than controls (12% vs. 55%).

#### Population:

Adults and adolescents with current or history of a variety of depressive disorders or elevated symptoms of depression. Has been tested and found to be effective across a range of ethnic and socioeconomic groups.

#### Implementation Details:

- Implementers need be master's level's clinicians.
- Two day intensive training available from Institute of Interpersonal Psychotherapy for \$495 at different locations in the U.S. and Canada.
- On going supervision of IPT trainees available; trainees submit weekly taped sessions and are given feedback during telephone supervision sessions- cost is \$150 per hour in Canadian dollars. Once a trainee has completed two to three supervised cases (depending on degree of prior experience, s/he can apply for certification (application fee is \$250-\$350 U.S. dollars).
- There are at several training manuals available specific to the different IPT adaptations.

#### Cost benefit analysis:

- None found.

#### Ratings on Evidence Based Program websites:

- None found.

#### References:

- IPT website: <http://www.interpersonalpsychotherapy.org/>
- Feijo de Mello, M. et al. "A Systematic Review of Research Findings on the Efficacy of Interpersonal Therapy for Depressive Disorders". *European Archives of Psychiatry and Clinical Neuroscience*, 255 (2005), pp. 75-82.
- Brown, C. et al. "Effectiveness of Treatments for Major Depression in Primary Medical Care Practice: a Post Hoc Analysis of Outcomes for African American and White Patients". *Journal of Affective Disorders*, 53 (1999), pp. 185 -192.
- Mufson, L. "A Randomized Effectiveness Trial of Interpersonal Psychotherapy for Depressed Adolescents". *Archives of General Psychiatry*, 61 (2004), 577-584.
- Young, J. et al. "Efficacy Of Interpersonal Psychotherapy-Adolescent Skills Training: An Indicated Preventive Intervention For Depression". *Journal of Child Psychology and Psychiatry*, 47:12 (2006), pp 1254-1262.
- Spinelli, M. et al. "Controlled Clinical Trial of Interpersonal Psychotherapy Versus Parenting Education Program for Depressed Pregnant Women. *American Journal of Psychiatry*, 160 (2003), pp. 555-562.
- Cruz et al. "Clinical Presentation and Treatment Outcome of African Americans with Complicated Grief." *Psychiatrics Services*, 58 (5), May 2007, pp. 700-702.
- Bolton, P. et al. "Group Interpersonal Psychotherapy for Depression in Rural Uganda: A Randomized Controlled Trial". *Journal of American Medical Association*, 289: 23 (2003), p. 3117-3124.
- Bass, J. et al. "Group Interpersonal Psychotherapy for Depression in Rural Uganda: 6-Month Outcomes". *British Journal of Psychiatry*, 188 (2006), 567-573.

## **Nurse Family Partnership (NFP)**

### Summary:

NFP provides home visits by registered nurses to first-time, low income mothers, beginning in pregnancy and continuing through the child's second birthday. The home visitors are highly trained registered nurses who follow specific protocols during each visit and carry a maximum of 25 cases. Home visitors involve family members and friends in the program and help families to use other community health and human services. The nurse visits occur weekly, biweekly, or monthly (dependent on point in pregnancy/age of child) with visits typically lasting 60 to 90 minutes.

The program has three primary goals: (1) improve pregnancy outcomes by promoting health-related behaviors; (2) improve child health, development and safety by promoting competent care-giving; and (3) enhance the parent life-course development by promoting pregnancy planning, educational achievement and employment. The program also has two secondary goals: to enhance families' material support by providing links with needed health and social services, and to promote supportive relationships among family and friends.

### Research Summary with selected outcomes:

*This program has been evaluated in three major experimental trials. Outcomes include improvements in prenatal health behaviors, reductions in childhood injuries and poisonings, reduced reliance on welfare and increased maternal employment, and increased in children's cognitive and behavioral functioning, with many outcomes being strongest for mothers at higher risk.*

### Randomized controlled trial in Elmira NY (1970's) using intent-to-treat analysis

- 400 primarily low-income Caucasian pregnant (less than 26 weeks gestation) women, randomized to four groups: 1) control group that received developmental screening and referrals 2) control group that received screening, referrals, and transportation to medical appointments 3) NFP group that received the previous listed services for group 2 plus prenatal nurse home visitation 4) NFP group that received the services listed for group 3 plus infancy nurse home visitation. Anyone bearing her first child was allowed to register, but recruitment focused on poor, unmarried and teenage women.
- Prenatal/pregnancy outcomes were assessed by comparing the averages of the two NFP groups with the averages of the two control groups; post-natal outcomes compared group 4 (families receiving home visitation prenatally and until child turned two) with the averages of the two control groups.
- Nurse-visited women that smoked at program entry decreased smoking more and had 75% fewer pre-term deliveries than their control counterparts that smoked. Young (14 to 16) adolescents who were nurse visited had significantly higher birth weight babies than their control group counterparts.
- During the first two years, children born to low-income unmarried nurse-visited teens had 80% fewer verified child maltreatment cases (marginally statistically significant,  $p=.07$ ), exhibited less punishment and restriction of their children on average, and provided more appropriate play materials than their comparison group counterparts. During the second year, there were also significantly fewer emergency department visits for injuries and ingestions among children born to poor, unmarried mothers. Effects on reducing child abuse and emergency room visits were strongest for those mothers who had little belief in control over their lives at program registration.
- At age 3 and 4, nurse visited families had better quality home environments and fewer safety hazards.
- Nurse visited children of poor, unmarried mothers had significantly fewer injuries and ingestions noted in the medical records of their children from ages 25-50 months.
- When the children were 15:
  - NFP mothers had significantly lower arrests, lower conviction rates, fewer days incarcerated, and were 48% less likely to have been identified as child maltreatment perpetrators, with the strongest effects seen in women that were poor and unmarried at the start of the program.
  - NFP mothers that started the program poor and unmarried had fewer subsequent births, greater intervals between their first and second births, greater employment, and less reliance on welfare.

- The 15 year old NFP children were significantly less likely to have arrested or adjudicated in family court under a Person in Need of Supervision (PINS) petition, with the strongest effects seen on the children of mothers that were poor and unmarried.

#### Randomized controlled trial in Memphis TN (1980's):

- Designed to determine whether the Elmira results could be replicated with primarily low income urban African American women served through the health department. Pregnant women with no previous live births that met at least two risk conditions (unmarried, less than 12 years education, unemployed) were eligible.
- 1,139 were enrolled in the study and randomized into 4 groups: 1) control group that received transportation to prenatal care 2) control group that received screening, referrals, and transportation to prenatal care 3) NFP group that received the previous listed services for group 2 plus prenatal nurse home visitation and 2 visits after child birth 4) NFP group that received the services listed for group 3 plus infancy nurse home visitation that continued until child turned 2. Prenatal outcomes based on contrasting the two control groups with the two NFP groups; postnatal effects by contrasting group 2 with group 4.
- 92% were African American, 65% were 18 or younger, 98% were unmarried; 85% had incomes at/below poverty level.
- Nurse visited women had fewer instances of pregnancy-induced hypertension; those with hypertension had less severe cases compared to their counterparts in the control group. No program effects on birth outcomes such as low birth weight or preterm delivery.
- During their first two years, NFP visited children had 23% fewer detected injuries and ingestions and were hospitalized overall for fewer days than control group children for injuries/ingestions; with the strongest effects seen in children of women that started the program with few psychological resources (i.e. limited sense of mastery, low intellectual functioning, higher mental health symptoms).
- Age 6 follow-up results:
  - NFP mothers had fewer and more widely spaced pregnancies and fewer months use of welfare or food stamps; no statistically significant differences regarding maternal educational achievement or employment.
  - NFP children had higher intellectual and behavior functioning.

#### Randomized controlled trial in Denver Colorado (1990's):

- 735 pregnant, low income, young (average age 20) pregnant women with no prior live births were randomized to three groups, all of whose children received developmental screening and appropriate referrals. The control group did not receive additional services. One intervention group also received nurse home visits during pregnancy and until the child turned two; the other intervention group was provided home visiting over the same time period by paraprofessionals.
- 45% Latina, 34% Caucasian, 16% African American.
- Nurse visited smokers had greater reductions in smoking compared to their control group counterparts by the end of pregnancy. During the first two years of the children's lives, nurse visited mothers interacted more responsively with their children and their children were less likely to exhibit language delays, with strongest effects seen in the mothers starting the program with low psychological resources.
- When children were 4, nurse visited mothers reported greater intervals between the birth of their first and second children and less domestic violence. Children of nurse visited women starting the program with low psychological resources had more advanced language and better behavioral adaptation than their control group counterparts; the nurse visited mothers with low resources also provided home environments more conducive to learning than their control group counterparts.
- There were few statistically significant effects for paraprofessional visited families compared to controls on prenatal health behavior, maternal life course, or child development. Significant effects observed included paraprofessionally-visited women working more and reporting greater mental health and sense of mastery than controls when children were 4. Paraprofessionally visited women

with low psychological resources interacted with their children more responsively than their control group counterparts when children were 2 and had higher quality home environments when their children were 4 than control group counterparts.

#### Population:

First time low income mothers and their children, particularly those mothers who have additional risk factors (unmarried, teen, and/or having low psychological resources.)

#### Implementation Details:

- Probable implementers include public health departments and visiting nurse associations.
- Nurses and their supervisors must be registered nurses with at least a baccalaureate degree.
- National office determines who will be allowed to replicate the program and requires compliance with standards designed to maintain program fidelity, including target population served (low income first time mothers who must enter program at or prior to 28<sup>th</sup> week of pregnancy), case loads, compliance with program model, etc.)

#### Cost Benefit Analysis:

- Washington State Institute for Public Policy's (WSIPP) "Benefits and Costs of Prevention and Early Intervention Programs for Youth" estimates the costs per family of the total program at \$9,118 and the benefits at \$26,298, for a return of \$2.88 per dollar invested.
- Rand's "Early Childhood Interventions: Proven Results, Future Promise" estimates the cost per child for the higher risk sample as \$7,271 and the benefits as \$41,419, with a return of \$5.70 per dollar spent, in 2003 dollars.

#### Ratings on Evidence Based Program websites:

- Promising Practices Network- "Proven" (highest rating)
- California Evidence Based Clearinghouse: Rated 1-"Well-supported by research" (highest of 6 levels; 1 is well-supported research of benefits; 6 is does more harm than good)
- OJJDP: exemplary (highest rating)
- Blueprints for Violence Prevention: Model Program (highest rating)

#### References:

- Program website: <http://www.nursefamilypartnership.org/index.cfm?fuseaction=home>
- <http://www.childtrends.org/Lifecourse/programs/NurseHomeVisitingProgram.htm>
- <http://www.cachildwelfareclearinghouse.org/program/93/detailed#references>
- <http://www.promisingpractices.net/program.asp?programid=16>
- <http://www.colorado.edu/cspv/blueprints/model/programs/NFP.html>
- [http://www.dsgonline.com/mpg2.5/TitleV\\_MPG\\_Table\\_Ind\\_Rec.asp?id=368](http://www.dsgonline.com/mpg2.5/TitleV_MPG_Table_Ind_Rec.asp?id=368)
- Olds, David L. "Prenatal and Infancy Home Visiting by Nurses: from Randomized Trials to Community Replication". *Prevention Science*, 3 (3), 2002, pp. 153-172.
- Olds, David L. et al. "Programs for parents of infants and toddlers: recent evidence from randomized trials. *Journal of Child Psychology and Psychiatry*, 48 (3/4), 2007, pp. 355-391.
- Interview with Dr. David Olds regarding his reanalyzed findings. January 23, 2006. <http://www.nursefamilypartnership.org/resources/files/PDF/DavidOldsinterview1-24-06.pdf>
- WSIPP cost-benefit analysis: <http://www.wsipp.wa.gov/rptfiles/04-07-3901.pdf>
- RAND cost-benefit analysis: [http://www.rand.org/pubs/monographs/2005/RAND\\_MG341.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG341.pdf)

## **Parent-Child Home Program (PCHP)**

### Summary:

The program targets at-risk children and seeks to increase the verbal and language skills of one to three year olds. Trained paraprofessionals provide twice weekly half hour home visits over two years designed to stimulate parent-child interaction, reading and educational play. The home visitors provide books and educational toys that they use to model reading, conversation and play activities; the visitors also model positive parenting behavior.

### Research Summary with selected outcomes:

*Outcomes include improvements in maternal-child interactions, child academic and IQ scores, and (marginally significant) improvement in child graduation rates.*

*Study 1 (1998 Pittsfield):* Randomized Controlled Trial (RCT) that followed students (ethnicity unknown) recruited at the age of 2 from 1976 to 1980; all had at least 5 out of 8 risk factors including poverty, single parent family, and IQ under 100. A small, randomized control group was formed during the last two years (21 parent child dyads out of 209). 41% of the original students were lost to follow-up; those included in the analysis did not differ significantly from the original sample in terms of sex, age, or IQ at baseline. 77% of the PCHP students no longer in school graduated compared to 54% of the controls, just below statistical significance using a rigorous Intent to Treat analysis. Study limitations: small control group and limited baseline demographic academic information.

*Study 2 (New York City):* RCT involving four separate cohorts. Three of the cohorts assigned participants to PCHP or no intervention; one assigned participants either to PCHP or a control group that received educational materials but no home visits. All participants qualified for low income housing, lived in rental housing, parents all had 12<sup>th</sup> grade education or lower or job level of semi-skilled or lower. 88% of children were African American; ages ranged from 21 to 33 months. Short-term program effects included higher levels of desirable behaviors in maternal interactions and in one cohort, higher scores on IQ test and an achievement test. There were no effects on any cohort at 3 year follow-up. Authors suggest increased availability of preschool groups diluted effects.

*Study 3 (Bermuda):* RCT with intervention/control group for two year old children. Only two outcomes found significant at two year follow-up: PCHP children performed better at sorting task and were rated higher by mothers on communication skills. Reason suggested for lack of effects was that a high proportion of Bermudan children receive preschool program experiences similar to those provided by program.

There are at least two other studies (one that compared to PCHP children with a comparison group, one that compared them to population data) that show effects such as 1) higher first grade skill test pass rates of PCHP African American children and children receiving free lunch compared to children statewide in these subgroups, and 2) comparable social emotional skills at kindergarten entry of PCHP kids that were more at risk than the comparison group utilized, but these are study designs are not as strong as RCT's.

### Population:

- At-risk families with children age one to three. One RCT done primarily with African Americans; other two ethnicities unknown.

### Implementation Details:

- PCHP requires that sites be certified; requirements include a Site Coordinator trained by the national site and that sites provide minimum of 46 home visits of services per program year. Site Coordinators train the home visitors. Sites can be operated by schools, community based organizations, health centers, etc.
- Costs not included on website; startup packet available on request.

- Washington State Institute for Public Policy (WSIPP) estimates the total program cost per child as \$3,890 in 2003 dollars.

Cost benefit analysis:

- Washington State Institute for Public Policy's (WSIPP) "Benefits and Costs of Prevention and Early Intervention Programs for Youth" estimated the benefits of the program at \$0 in 2003 dollars.

Ratings on Evidence Based Program websites:

- California Evidence Based Clearinghouse: "Promising" (level 3 out of 1 through 6; 1 is well-supported research of benefits; 6 is does more harm than good)

References:

- Program website: <http://www.parent-child.org/>
- <http://www.childtrends.org/lifecourse/programs/ParentChild.htm>
- <http://www.cachildwelfareclearinghouse.org/program/94/detailed#references>

## **Parents as Teachers (PAT)**

### **Summary:**

The goals of Parents as Teachers include increasing parenting knowledge and practices, providing early detection of developmental delays and health issues, increasing children's school readiness and school success, and preventing child abuse and neglect. The program is designed to be implemented with each family prenatally or at birth until age three (or to kindergarten entry for some programs). Parent educators conduct monthly home visits (or more frequently if the family has higher needs) that include education on child development and parenting practices and engage in parent-child activities including book reading. Children are given at least one screening per year assessing developmental progress and vision, hearing, and health. Parent educators host monthly group meetings that include information on similar topics to the home visits and give parents a chance to meet and support each other. Parent educators also connect PAT families with appropriate community resources, including early intervention for developmental delays.

In 1999, Parents as Teachers began using the Born to Learn curriculum, which revised an earlier curriculum to infuse recent neuroscience information. The curriculum was updated in 1995 to add emphasis on human diversity and sensitivity to cultural differences.

### **Research Summary with selected outcomes:**

*PAT has been evaluated several times with both experimental and quasi-experimental designs, with stronger effects generally exhibited in the latter. Effects seen in quasi-experimental designs include increased parental knowledge on child development and appropriate parenting techniques, more parental involvement in school and home-based learning activities such as reading to children, improved child development, better school readiness scores for children, and higher math and reading scores in the early elementary school grades. These studies were done with children receiving PAT prior to implementation of Born to Learn.*

*The results of 4 Randomized Controlled Trials (RCT's) of PAT are summarized below (1 utilizing Born to Learn) and one quasi-experimental study with Born to Learn. The quasi-experimental design utilizing Born to Learn with high risk Chicago families showed significant improvements/increases in parent knowledge, self-reported behaviors and parenting attitudes. The RCT showed more modest outcomes, with PAT children demonstrating higher mastery and social assertion skills, and low socioeconomic status PAT children demonstrating higher levels of cognitive behavior and adaptive behaviors at age 2 and better social skills at age 3.*

### **RCT in agricultural area of Northern California primarily with Latino families (pre Born to Learn)**

- 298 families were assigned to PAT; 199 to the control group. The control group received toys and developmental screenings (and were referred to appropriate services if delays observed) but did not receive any additional services. About 4/5's were Latino; the remainder Caucasian. Almost half spoke mostly Spanish, and almost half were headed by single mothers.
- Utilizing multivariate analyses that controlled for some differences in the PAT and control group at program start (despite randomization), PAT children had significantly higher cognitive development, social development, and self-help development scores than control children. There were no statistically significant effects for parenting outcomes.
- Breaking out the sample into non-Latino mothers, Spanish speaking Latinas, and English/bilingual Latinas:
  - English-speaking/bilingual Latina mothers scored significantly higher than their control counterparts in parent efficacy.
  - Spanish-speaking Latina's children scored significantly higher on two tests of cognitive development, a vocabulary test, social development, and one test of physical development.
  - Non-Latina mothers actually had significantly worse scores on several measures of parent behavior and their children scored significantly worse on one test of cognitive development

and one test of physical development. (Authors suggest this is attributed to higher divorce rate among non-Latina PAT parents compared to non-Latina controls).

- Attrition rate very high (data only available for 73% of study families at child's third birthday; 43% of families assigned to receive PAT dropped out of services); however, no significant differences between remaining parents and original sample. PAT families on average received much less than intended intensity of services.

#### RCT with Teen Parents in 4 Californian Counties (pre Born to Learn)

- Teens under 19 that were either pregnant or had an infant less than six months old were recruited and randomized into 4 groups: PAT, case management services alone, PAT plus case management, and control group that received toys and developmental screenings and referrals (groups ranged from 174 to 178 teens). About half were African American and about a quarter Latina and quarter Caucasian.
- A multivariate analysis showed that children receiving PAT plus CM and CM alone had more advanced cognitive development than the control group. There were no significant differences relating to parenting outcomes.
- PAT plus CM families had 0 open child maltreatment cases, a significantly significant difference from the control group (2.4%).
- Attrition rate very high (data only available for 52% of study families at child's second birthday); however, no significant differences between remaining teen parents and original sample. PAT families on average received much less than intended intensity of services.

#### RCT in three urban sites (pre Born to Learn)

- Three urban sites serving a large proportion of low-income families certified by PAT national center as implementing model with high fidelity and quality. Sample was 58% African American, 29% white, 9% Latino, 3% other.
- Families that were pregnant/had child under 8 months old were recruited; 275 were assigned to PAT; 290 to control group. Results were analyzed for very low income families (less than \$15,000) and moderate income families (\$15,000 or higher). Parents were assessed on their children's 1<sup>st</sup> and 2<sup>nd</sup> birthdays; children on their second birthdays. (The original design called for the study to continue until the children were 3 but it was terminated early due to high attrition.).
- Parenting attitudes: When children were two, moderate income PAT parents were significantly more likely to self-report happiness caring for their child (large effect size) and greater acceptance of child behavior (moderate effect size) than moderate income controls.
- Parenting behaviors: At Year 1, low income parents were significantly more likely to read aloud to their child (moderate effect size) and at Year 2, very low income parents were significantly more likely to tell stories, say nursery rhymes, and sing with child (moderate effect size).
- The authors suggest that low level of effects may be due to PAT families on average participating at less than intended intensity and high attrition rate that forced them to conclude study early.

#### RCT in eastern suburbs of Cleveland utilizing Born to Learn

- Parents and full-term infants up to nine months were randomized to receive PAT or to control group (which received a monthly parent discussion group, free classes, and access to facilities at community center). 459 families total (227 in PAT; 232 control.) Families with infants with serious health and developmental delays excluded.
- About 30% of the families were of lower socioeconomic status. About 29% of the full sample was African American, about 2/3 white, with a small percentage of other races.
- PAT families overall compared to control group:
  - Children demonstrated higher mastery motivation (spontaneous problem solving and persistence on novel tasks) on selected measures at 2 years and 3 years old.
  - Children demonstrated higher social assertion skills at age 3 based on teachers' reports.
  - No overall effect on cognitive development or conceptual skills, early reading readiness, or expressive language.

- No significant difference among parents in parental knowledge or sense of competence.
- Low socioeconomic (combines both income and education) PAT families:
  - Children demonstrated higher levels of cognitive development and more adaptive behavior at 2 years old than low SES control group. However, the control group showed significantly higher adaptive behavior than the PAT children at 3 years.
  - Children demonstrated higher cooperation, assertion, and overall social skills at 3 years old based on teacher reports. (very small sample- 11 PAT, 16 comparison, however, large effect sizes).
  - The lower SES sample was about 4/5's African American.
- Moderate/higher SES families:
  - Children demonstrated higher social skills at age 3 based on parent reports.
- Overall attrition lower than on other studies (75% still involved at completion of study); again, PAT families on average participated at less than intended intensity.

#### Comparison group design with high needs families served by Chicago public schools with Born to Learn

- 265 PAT families; 99 comparison group (not randomly assigned). All families met the selection criteria and the two groups did not differ significantly at baseline.
- Parent educators recruited from welfare-to-work women; very high turnover which author thinks contributed to very high attrition rate (61% of participants did not complete 18 month assessments.) Families that remained in study did not differ significantly from the full study sample at baseline.
- PAT parents made significant gains in and scored significantly higher on tests of neuroscience knowledge and general knowledge, self-reported appropriate behaviors, and parenting attitudes compared to non-PAT families.

Note: Some results of the multi-site study were published in a peer-reviewed journal; the other 4 were not.

#### Population:

The program is designed for pregnant families and those with young children up age 5, and has been used with populations of various demographics. There are three curriculums (prenatal-3 years old, 2-5 years, 3-5 years), however, all of the evaluations found focus on prenatal-3. Although PAT markets itself as a universal prevention program, the strongest effects in recent evaluations are among low SES families.

#### Implementation Details:

- Implementers may be nurses, teachers, social service staff and trained paraprofessional parent educators.
- Project staff must complete the PAT training program which requires 32 hours of pre-service training and continuing in-service training.
- Likely implementers include parenting organizations, school districts, child care centers, public health and social service agencies and religious organizations
- In 1999, average program costs \$646 per family annually. Program start up cost were approximately \$475 per parent educator (not including cost of the educator's time).
- Offer a variety of trainings in curricula and specialized topics at different U.S. sites and will travel to provider sites.
- Program has quality standards and a self-assessment guide for programs with on-line tools.

#### Cost Benefit Analysis:

- Washington State Institute for Public Policy's (WSIPP) "Benefits and Costs of Prevention and Early Intervention Programs for Youth" estimates the costs per child of the total program at \$3,500 and the benefits at \$4,300, for a return of \$1.23 per dollar invested.

#### Ratings on Evidence Based Program websites:

- Promising Practices Network- "Promising" (highest rating proven, then promising)

- California Evidence Based Clearinghouse: “promising” (level 3 out of 1 through 6; 1 is well-supported research of benefits; 6 is does more harm than good)
- Office of Juvenile Justice Delinquency Programs (OJJDP) – “promising” (highest rating exemplary, then effective, then promising)

References:

- <http://www.parentsasteachers.org>
- <http://www.childtrends.org/Lifecourse/programs/ParentsAsTeachers.htm>
- <http://www.cachildwelfareclearinghouse.org/program/95/detailed#references>
- <http://www.promisingpractices.net/program.asp?programid=88>
- [http://www.dsgonline.com/mpg2.5/TitleV\\_MPG\\_Table\\_Ind\\_Rec.asp?id=378](http://www.dsgonline.com/mpg2.5/TitleV_MPG_Table_Ind_Rec.asp?id=378)
- Wagner, Mary M. and Clayton, Serena L. “The Parents as Teachers Program: Results from Two Demonstrations”. *The Future of Children, Vol. 9 (1), Spring/Summer 1999, pp. 91 to 115.*
- Drotar, Dennis L. et al. “The Cleveland Eastern Suburban Born to Learn Program: Final Report”. August 2006.
- McGilly, Kate. “Chicago Born to Learn Neuroscience Project Final Report to Robert R. McCormack Tribune Foundation”. April 2000.
- Wagner, Mary et al. “The Effectiveness of the Parents as Teachers Program with Low-Income Parents and Children”. *Topics in Early Childhood Special Education, 22(2), pp. 67-81.*
- WSIPP cost-benefit analysis: <http://www.wsipp.wa.gov/rptfiles/04-07-3901.pdf>

## **Perry Preschool Project (PPP)**

### Summary:

This project was conducted in 1962 through 1967 and involved African American three and four year olds with starting IQ scores between 70 and 85 and of low socioeconomic status. The intervention provided two years of preschool for 2.5 hours a day, 5 days per week, for 30 weeks of the year. The program utilized certified teachers with a ratio of one teacher for every 5.7 students. The program did not use a set curricula but a framework based on the principles of psychologist Jean Piaget that emphasized an active learning approach where children were encouraged to engage in play activities that involve making choices and solving problems to develop their intellectual, social, and physical development. The program also involved weekly home visits by the classroom teachers to promote use of the program's methods at home.

### Research Summary with selected outcomes:

*The program was implemented in Ypsilanti Michigan and was studied through a Randomized Controlled Trial (RCT) with 58 children receiving PPP and 65 serving as the control and receiving no preschool at all. Children have been studied through age 40 with many of the results being published in peer-reviewed journals. Children receiving PPP outperformed children in the control group in many different areas (academic, crime and delinquency, employment and earnings), including:*

- PPP participants scored significantly higher on nonverbal intellectual performance tests at the end of the first year of preschool and through the age 9 (last year test given), although the difference in scores narrowed as the population grew older.
- At age 14, PPP participants significantly outscored the control group in the total score and all subtests of the California Achievement Tests.
- PPP participants showed less antisocial behavior and misconduct during elementary school and at age 15.
- At age 19, a significantly higher percentage of PPP participants were receiving postsecondary academic or vocational training (38% vs. 21%).
- By age 27, 71% of participants had obtained a high school diploma or GED compared to 54% of control group participants. These effects were concentrated in the females (84% PPP females got a graduated vs. 35% control females.)
- At age 40 PPP participants:
  - were less likely to have been arrested for violent crimes (32% vs. 48%), property crimes (36% vs. 58%) and drug crimes (14% vs. 34%).
  - were more likely to be employed (76% vs. 62%) and had higher annual median earnings (\$20,800 vs. \$15,300).

### Population:

Low socioeconomic African American three and four year olds with lower IQ's. PPP was done in the 1960's in a town and not replicated at other times/places. It is unclear whether results would be replicated in current times and/or with other populations.

### Implementation Details:

- PPP offers an intensive 20 day course (cost of \$2,850) designed to aid teachers in full implementation of the preschool curriculum in Ypsilanti, Michigan. On-site training also available (costs not given).
- Original program utilized teachers certified to teach in elementary, early childhood, or special education settings, with a teacher-to-student ratio of one teacher for every 5.7 students.
- Rand's "Early Childhood Interventions: Proven Results, Future Promise" estimates the cost of the program as \$14,830 in 2003 dollars.

### Cost benefit analysis:

- Program developers estimate \$16.14 returned for every dollar invested in 2000 dollars.
- Rand's "Early Childhood Interventions: Proven Results, Future Promise" estimates the cost of the program as \$14,830 per child in 2003 dollars with total benefits as \$253,154, or \$17.07 per dollar spent.

Ratings on Evidence Based Program websites:

- Promising Practices Network: "Proven" (highest)
- Office of Juvenile Justice Delinquency Prevention: "Exemplary" (highest)
- Blueprints for Violence Prevention- "Promising" (two ratings- model is highest, promising is second highest)

References:

- Program website: <http://www.highscope.org/Content.asp?ContentId=63>
- <http://www.promisingpractices.net/program.asp?programid=128>
- <http://www.colorado.edu/cspv/blueprints/promising/programs/BPP11.html>
- [http://www.dsgonline.com/mpg2.5/TitleV\\_MPG\\_Table\\_Ind\\_Rec.asp?id=338](http://www.dsgonline.com/mpg2.5/TitleV_MPG_Table_Ind_Rec.asp?id=338)
- WSIPP cost-benefit analysis: <http://www.wsipp.wa.gov/rptfiles/04-07-3901.pdf>

## **Positive Parenting Program (Triple P)**

### Summary:

This is a multi level parenting and family support program for families with children from birth to age 16. It was developed and primarily evaluated in Australia and is currently used in several countries. Level 1 provides parents with parenting and self-help information via a media campaign and publicizes other levels of the program and community parenting resources. Level 2 provides one or two 20 minute sessions for parents with children with mild behavior problems and Level 3 provides 4 brief sessions for parents of children with moderate behavior problems. Level 4, which can be delivered individually or in groups, includes active skills training for parents of children with more serious behavior problems and lasts 8 to 10 sessions totally about 10 hours. Level 5 is designed for families with additional risk factors complicating parenting such as marital conflict and depression, and adds an average 3 sessions to Level 4. The program involves training and utilizing the existing professional workforce.

### Research Summary with selected outcomes:

*Randomized Controlled Trials (RCT's) of different levels of Triple P, primarily in Australia, have shown improvements in parenting and child behavior in different populations, with some effects lasting up to a year later. A Centers for Disease Control (CDC)-funded replication of the full program in South Carolina has initial results that indicate significantly less child maltreatment at the county level for counties implementing Triple P compared to those that did not.*

- RCT with 305 Brisbane at-risk families (maternal depression, relationship conflict, low income and/or single parent) of 3 year olds with behavior problems:
  - Three experimental groups (group 1- level 5, group 2- standard level 4, group 3- self-help level 4) and one control group.
  - At the end of the program, Groups 1 and 2 showed lower levels of disruptive child behavior (as measured by independent observers) and lower levels of dysfunctional discipline compared to Group 3 and the control group, with the strongest effects for behavior observed in Group 1.
  - One year later, all three Triple P groups had achieved similar levels of improvement in parent-reported child behavior. (These were compared to baseline data, not the control group).
- RCT with 69 parents of Hong Kong children 3 to 7
  - Intervention group received group Triple P (not clear which level).
  - At the end of the intervention, Triple P parents reported lower levels of dysfunctional parenting styles, lower levels of child behavior problems, and higher sense of competence than the control group.
- RCT with 42 families of Queensland university staff with children 3 to 9 with behavior problems:
  - Intervention group received group Triple P (not clear which level).
  - At the end of the intervention, Triple P parents reported lower dysfunctional parenting styles, low levels of child behavior problems, and higher levels of self-efficacy in managing home and work. These differences were maintained 4 months later.
- RCT with 47 Western Australian families with children 2 to 7 with developmental disabilities
  - Intervention families received a version of Triple P adapted for parents of developmentally disabled children.
  - Triple P families showed fewer child behavioral problems (both as reported by mothers and by independent observers), improved parenting style, and decreased maternal stress.
  - Positive effects were maintained at 6 months follow-up; however, study had high attrition.
- RCT with 51 indigenous Australian families with parenting/behavior concerns and children 1 to 13
  - Utilized a culturally adapted version of a group Triple P program.

- Triple P parents reported lower rates of problem child behavior and less reliance on some dysfunctional verbal parenting practices. No differences seen on parental authoritarian behavior, anger displays or permissiveness.
- Effects primarily maintained 6 months later.
- RCT with low income Australian families with children 2 to 6:
  - Utilized level 3 Triple P.
  - Triple P parents reported fewer child behavioral problems than the control group parents.
  - Triple P mothers reported less use of dysfunctional parenting strategies, reported greater satisfaction with parenting and lower anxiety and stress than control group mothers.

#### Population:

This program has been primarily tested in Australia. However, results with different populations (i.e. Hong Kong preschoolers, indigenous Australians, children with developmental disabilities) suggest that at least the group level interventions (with appropriate adaptations) may have positive effects in improving child behavior and parenting in populations of varying demographics.

The CDC study in South Carolina randomized 18 moderately-sized counties (9 to receive the full Triple P intervention, 9 to serve as controls) to test effects at the population level. The investigator shared with UW staff that large effect sizes were found for substantiated child maltreatment, child out-of-home placements, and child maltreatment injuries at the county level. The full study is in the final stages of peer review and should be available in September 2008.

#### Implementation Details:

- According to the National Registry of Evidence-based Programs and Practices (NREPP), costs to implement for a service provider to prepare for Triple P implementation range from \$900 to \$1,500 depending on level.
- Triple P America provides training in Levels 2 to 5 and adaptations- could not find costs, but does mention that need to pay training fee, flat course fee for up to 20 participants, and materials.
- Practitioner's kits cost from \$130 to \$175 (dependent on level/version), parent workbooks from \$9 to \$28, and positive parenting tip sheets from \$8 to \$11 (10 per pad).

#### Cost benefit analysis:

- None found in U.S. dollars.

#### Ratings on Evidence Based Program websites:

- California Evidence Based Clearinghouse: Rated 1-“Well-supported by research” (highest of 6 levels; 1 is well-supported research of benefits; 6 is does more harm than good)
- NREPP/Substance Abuse and Mental Health Services Administration (scale of 0.0- 4.0):
  - Quality of research: 2.9 to 3.0 dependent on outcome
  - Readiness for Dissemination: 3.8

#### References:

- American program website: <http://www.triplep-america.com/>
- [http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM\\_ID=218](http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM_ID=218)
- <http://www.cachildwelfareclearinghouse.org/program/8/detailed#references>
- <http://www.childtrends.org/Lifecourse/programs/TripleP-PositiveParentingProgram.htm>
- Overview of South Carolina research design: [http://espace.library.uq.edu.au/eserv/UQ:94423/UQ\\_AV\\_94423.pdf](http://espace.library.uq.edu.au/eserv/UQ:94423/UQ_AV_94423.pdf)
- Personal correspondence with Ronald J. Prinz, Principal Investigator of the South Carolina study

## **Primary Project (PMHP) /Primary Mental Health Project (PP)**

### Summary:

This is a school-based program designed for early detection and prevention of school adjustment difficulties in children ages 4 through 9, in preschool through third grade. The program screens children to identify those with problems such as mild aggression, withdrawal, and early difficulties that interfere with learning. Eligible children engage in one-on-one 30-40 minute sessions with trained paraprofessionals weekly for 10-14 weeks, and engage in expressive play sessions. School mental health professionals (e.g., psychologist, social worker) provide training and supervision for the paraprofessional child aides.

### Research Summary with selected outcomes:

*Outcomes include improvements in learning problems, aggressive behaviors, and social skills among children with mild/moderate problems that could interfere with learning.*

### Study 1: Randomized Control Trial (RCT) with students in grades 1 to 4 in two rural California schools

- Relatively small study (data reported for 35 of 39 participants). 69% white, 23% Latino, 5% African American, 3% other/unspecified. Ages 6 to 10.
- Group 1 received the intervention during the fall semester; group 2 received it during the spring semester and served as the control group.
- All children were evaluated at the beginning of the fall semester- Time 1 (before group 1 began PP), and the beginning of the second semester- Time 2 (after group 1's last session and before group 2 began PP), and at the end of the second semester-Time 3.
- At Time 2, (12 weeks after group 1 had completed PP and before group 2 began it), group 1 had significantly improved teacher rated scores compared to baseline in shy/anxious, learning problems, assertive social skills, task orientation, and peer social skills, while group 2 declined.
- For both groups, test scores in the above five areas improved from pre to post intervention (Time 1 to Time 2 for group 1; Time 2 to Time 3 for group 2). Post-intervention scores were in the range of non-referred children.
- For group 1, scores declined somewhat from Time 2 to Time 3, but were still significantly higher than baseline scores.

### Study 2: Control group design in 18 California school sites

- Also used an immediate intervention group that received services in the fall and a "delayed intervention group" that served as control and received services in the spring. Although the evaluation was designed as a random control trial, the report notes that some assignments to either group were not random. However, analysis of pre-test scores of the groups indicate that they were not statistically significantly different.
- A total of 1,334 students were selected: 55% were male, 45% female. 47% were Latino, 40% white, and 7% African American. Almost all of the students were in kindergarten through 3<sup>rd</sup> grade and 57% received free/reduced lunch (i.e. lower income).
- All students were tested in the fall before the immediate intervention group received services and a second time, after this group completed services but before the second group began them. Pre and post test scores utilizing the T-CRS indicate that the children who received PP significantly decreased school problem behavior (acting out/shy anxious/learning skills) and improved competencies (frustration tolerance, assertive social skills, task orientation, peer social skills) compared to the group that had not yet received services. (Note: a total of 669 students were included in these results, 379 that had received PP; 290 in the delayed intervention or control group. The report does not explain the difference from the 1,134 selected for the study.)

### Study 3: Comparison design in Rochester area urban and suburban schools

- 36 students (2<sup>nd</sup> to 5<sup>th</sup> graders) from 4 urban and 4 suburban schools were given 12 session version of PP over period of two weeks. They were compared with 60 students from 4 (2 each) different,

demographically comparable urban/suburban schools. A second group of 48 children drawn from children that had previously participated in a longer (average 25 session) version of PP was also used for comparison purposes. Statistical analyses showed the three groups to not be significantly different on adjustment, behavior, gender, minority status and place of residence at start of services.

- Teacher ratings indicated that children receiving both versions of PP significantly improved in acting out, shy anxious behaviors, adaptive assertiveness, and frustration tolerance at the end of the interventions compared to the no intervention group, which showed little change. There were no significant differences in degree of improvement between the groups receiving shorter and longer versions of PP. Additionally, the group receiving the shorter version of PP also improved significantly compared to the no intervention group in rule following.
- Six weeks after the end of the intervention, students receiving shorter PP showed significant improvements in acting out, shy-anxious behaviors, learning problems, adaptive assertiveness, rule following, and frustration tolerance compared to the no intervention group.

Note: Studies 1 and 3 were published in a peer-reviewed journal (Nafpaktitis et al and Winer Elkin et al articles referenced below); Study 2 was not (Duerr evaluation).

#### National Registry of Evidence Based Programs and Practices (NREPP) website summary:

Concludes that:

- multiple evaluations consistently indicate that Primary Project is effective at improving task orientation, adaptive assertiveness, and peer sociability.
- mixed results related to behavioral control – i.e. acting out, tolerance for frustration, disruptive behavior, however, most evaluations show improvement on most elements of behavioral control.

Note: NREPP reviewed 5 studies (three of which were published in journals, two were not) and notes that they are a mix of experimental, quasi-experimental, and pre-experimental (i.e. on group pretest-post-test) without identifying which is which, so some caution is warranted in interpreting their findings.

#### Population:

Elementary school children with mild-moderate school adjustment problems. Program is used extensively in districts across the country with varying demographics. No differential outcomes based on demographics (i.e. ethnicity, location, income) reported.

#### Implementation Details:

- Average annual cost less than \$500 per year per child.
- Program developmental manual and implementation handbooks and DVD training materials available.
- Children's Institute provides training, consultation, scoring, and evaluation services for a fee.
- Recommended outcome measures and screening protocol available to support quality assurance.

#### Cost benefit analysis:

- None found.

#### Ratings on Evidence Based Program websites:

- OJJDP: “promising” (highest rating exemplary, then effective, then promising)
- NREPP/Substance Abuse and Mental Health Services Administration (scale of 0.0- 4.0):
  - Quality of research: 3.2 to 3.3 dependent on outcome
  - Readiness for Dissemination: 3.3

#### References:

- Program website: <http://www.childrensinstitute.net/programs/primaryProject/>
- [http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM\\_ID=106](http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM_ID=106)
- [http://www.dsgonline.com/mpg2.5/TitleV\\_MPG\\_Table\\_Ind\\_Rec.asp?id=396](http://www.dsgonline.com/mpg2.5/TitleV_MPG_Table_Ind_Rec.asp?id=396)

- Nafpaktitis M, Perlmutter B. School-Based Early Mental Health Intervention With At-Risk Students. *School Psychology Review* [serial online]. September 1998;27(3):420. Available from: Academic Search Premier, Ipswich, MA. Accessed August 3, 2008.
- Duerr, M. (1993). *Early mental health initiative: Year-end evaluation report*. Chico, CA: Duerr Evaluation Resources, California Department of Mental Health.
- Winer Elkin, J. I., Weissberg, R. P., & Cowen, E. L. (1988). Evaluation of a planned short-term intervention for school children with focal adjustment problems. *Journal of Clinical Child Psychology*, 17, 106-115.