

Return on Investment for ParentCorps as an Enhancement to Pre-K Programs in High-Poverty Urban Schools

ParentCorps

ParentCorps is a family-centered, school-based program to help all young students develop the foundational skills for learning. ParentCorps is implemented as an evidence-based enhancement to Pre-K programs serving large numbers of low-income students. ParentCorps includes three key components that synergistically strengthen **home-school connections** and help teachers and parents provide **high-quality environments** that are safe, predictable and nurturing to ensure that all students develop the **social, emotional and behavioral regulation skills** that are foundational for learning. ParentCorps creates supportive and inspiring spaces in which parents, teachers and school staff feel valued, respected and motivated to work together to help children succeed.

Three Key Components

- Program for Pre-K Students (“Friends School”), a 14-week curriculum on social, emotional and behavioral regulation skills.
- Program for Parents of Pre-K Students (“Parenting Program”), a 14-week program to enhance the use of evidence-based practices for promoting social, emotional and behavioral regulation skills.
- Professional Development for Pre-K and Kindergarten Teachers, Mental Health Professionals, Parent Coordinators, and Leadership to enhance the use of evidence-based practices and prepare for implementation of the ParentCorps Programs.

ParentCorps builds on the strengths of culturally-diverse families and helps schools engage parents as partners.

ParentCorps focuses explicitly on cultural values, beliefs and norms, and recognizes the challenges of raising and educating children in low-income communities.

The Evidence for Impact

ParentCorps has been rigorously evaluated in two randomized controlled trials as an enhancement to Pre-K programs in schools serving low-income communities in NYC. The evidence below is from the second trial, which included 1050 Black and Latino children.

ParentCorps improves learning. Compared to students in randomly-assigned control schools, those in ParentCorps schools scored significantly and substantially higher on reading, writing and math achievement tests.

The magnitude of the effect on achievement grows even larger, once schools are implementing ParentCorps “at full capacity” and if students’ families participate in the Parenting Program. This pattern is seen most clearly for reading test scores. (See Figure)

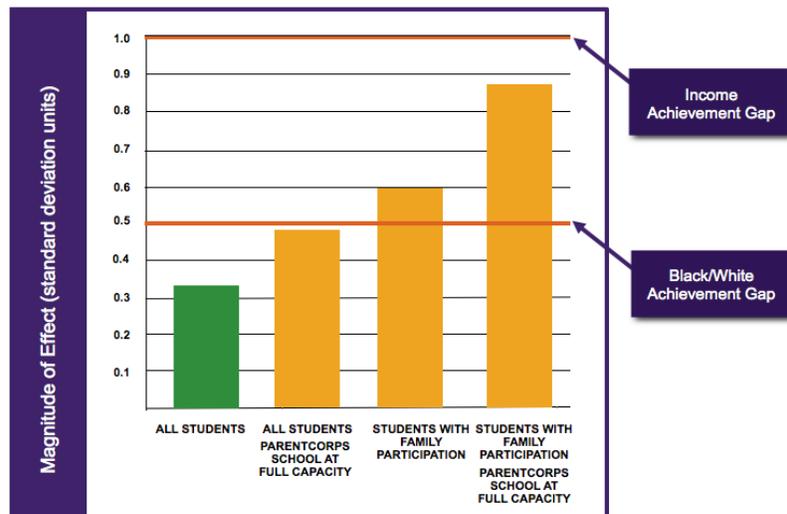
At full capacity, the impact on reading achievement in kindergarten is comparable to the 0.50 standard deviation achievement gap documented nationally between Black and White kindergarten students, suggesting the potential of ParentCorps to help close the gap.

At full capacity, among students whose families participated, impact approaches the magnitude of the gap between students from low- and high-income families.

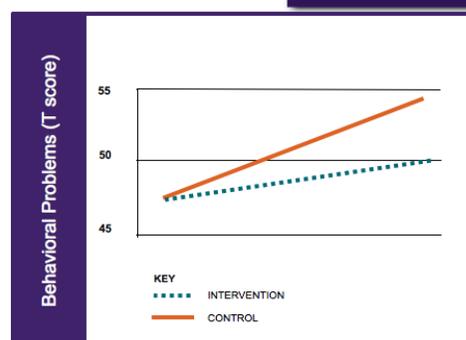
ParentCorps prevents the development of behavioral health problems from early childhood through second grade.

For both behavioral and emotional problems, ParentCorps impact grew over time. As shown in the Figure, problems increased substantially for children in control schools from Pre-K through second grade; in contrast, among children in ParentCorps schools, behavioral problems grew at a much slower rate and emotional problems remained stable and low.

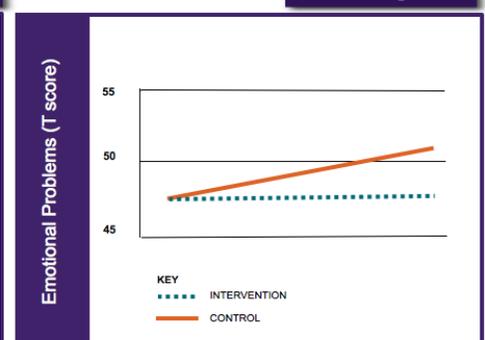
ParentCorps Impact on Reading Achievement



ParentCorps Impact on Teacher-Rated Behavioral Health Problems



ParentCorps Impact on Teacher-Rated Emotional Health Problems



These diverging trajectories resulted in children in control schools having significantly higher levels of problems than those in ParentCorps schools in first and second grade, with the program impact of nearly one-third standard deviation at the end of second grade.

ParentCorps prevents physical health problems.

Young children who have not yet developed adequate social, emotional and behavioral regulation skills are at high risk for a range of problems, including obesity. In this high-risk group, ParentCorps resulted in lower rates of sedentary behavior (such as TV viewing) in girls, increased physical activity in boys, and substantially lower rates of obesity (BMI > 95th percentile) in both girls and boys. (See Figure)

The Evidence for Cost Savings and Increased Quality of Life

ParentCorps is estimated to be both cost saving and to yield substantial long-term health benefits in terms of life expectancy and quality of life based on analyses that considered the magnitude of impacts in the second randomized controlled trial of ParentCorps and a comprehensive accounting of program costs.

A mathematical model was developed to project long-term impact of ParentCorps on costs and health benefit outcomes as compared to standard Pre-K education. A hypothetical child enters the model as a 5-year-old and, after exposure or no exposure to ParentCorps in Pre-K (age 4), and transitions through different possible scenarios over the life span. Based on well-established links between early childhood achievement, behavior problems and obesity, and later positive or negative outcomes (e.g., high school graduation, diabetes), events are recorded for each child and aggregated into a calculation of his/her life expectancy and Quality Adjusted Life Years (QALYs).

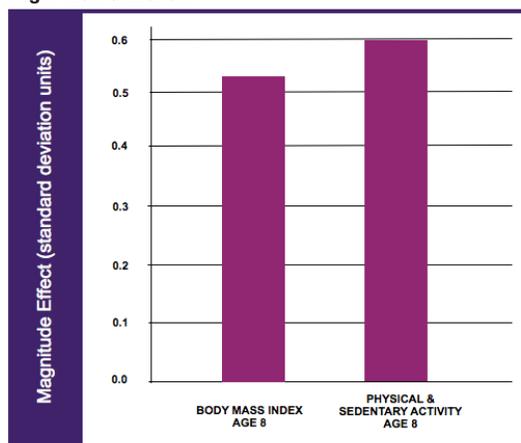
ParentCorps results in cost savings over the life course based on ParentCorps' observed impacts on achievement, behavior problems and obesity in childhood which are expected to result in lower likelihood of: 1) unemployment; 2) interaction with the criminal justice system; 3) drug abuse and/or its health sequelae; and 4) developing diabetes and/or its health sequelae.

ParentCorps costs are per school and assume four classes of 18 Pre-K students (n = 72 students). Costs include capacity building (primarily Professional Development in the first year) for schools to implement ParentCorps with fidelity (necessary to replicate impact); and annual recurring costs associated with implementing four cycles (14, 2-hour sessions) of programming each year with resources to serve all Pre-K children (i.e., 72) and 60% of their parents. The cost of capacity building is \$100,000, and is conservatively estimated to last for 5 years before requiring substantial additional investment. Annual recurring costs of programming are \$40,000. Therefore, over a 5-year period, it costs \$300,000 to serve 360 children (72 per year) resulting in \$833 in program expenditures per student.

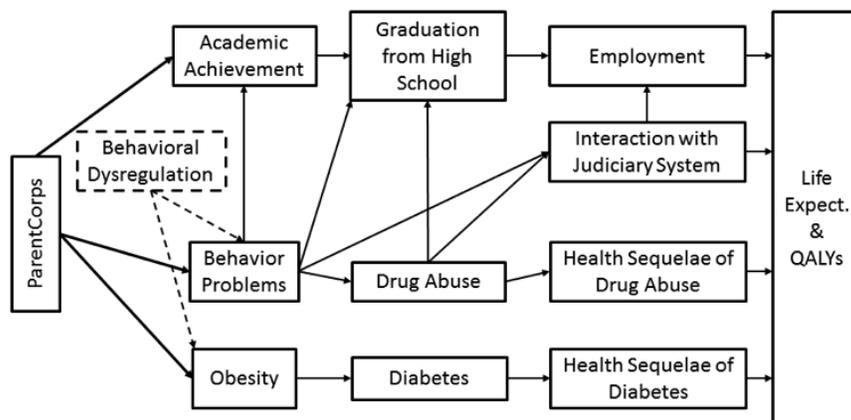
Source Publications and Reports by Brotman and ParentCorps Team

- Promoting effective parenting practices and preventing conduct problems among ethnic minority families from low-income urban communities. *Child Development*, 2011.
- Family intervention in early childhood and long-term obesity prevention among high risk minority youth. *Pediatrics*, 2012.
- A cluster (school) randomized trial of ParentCorps: Impact on kindergarten academic achievement. *Pediatrics*, 2013.
- A population-level approach to promoting healthy child development and school success in low-income neighborhoods: Impact on parenting and child conduct problems. *Prevention Science*, 2014.
- A randomized controlled trial of ParentCorps: Promoting high-quality early childhood classrooms in schools serving low-income urban neighborhoods. Unpublished report 2014.
- Does a family-centered early childhood intervention have sufficient value to move toward scale? Unpublished report 2014.
- Grants from the NIH and IES to Brotman, PhD supported the randomized controlled trials.
- A contract from the NYS Office of Mental Health to Brotman, PhD and Kamboukos PhD supported benefit-cost analyses carried out by Braithwaite, MD, MS, Hajizadeh, MD, MPH, Applegate, MSN, NP and Stevens, MPH

ParentCorps Impact on Physical Health Among High-Risk Children



Influence Diagram Showing the Constructs Embedded in the Mathematical Model



ParentCorps saves money and increases quality of life. ParentCorps saves more than \$2,500 per child in health, criminal justice, and productivity expenditures, after factoring in the costs of capacity building and annual programming. In addition, ParentCorps substantially increased each child's quality-adjusted life expectancy (by .06 QALYs). The projected cost savings and increased quality of life are primarily attributable to ParentCorps' benefits for children who are at the highest risk for long-term problems (those who have not yet developed adequate social, emotional and behavioral regulation skills; estimated to be 25% of children in high-poverty schools) — including impacts on obesity and subsequent diabetes, and behavior problems and subsequent interaction with the criminal justice system and unemployment. Notably, the potential cost savings are underestimated because analyses have not considered the cost savings in childhood of decreased need for academic remediation, special education services or mental health services.

Benefit-cost analyses find that this family-centered, early childhood intervention has the potential to substantially save costs when implemented under a range of plausible scenarios in high-poverty urban schools serving large numbers of Pre-K students.

ParentCorps is a copyrighted program developed by LM Brotman, EJ Calzada and S Dawson-McClure

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