

# Poverty and Early Childhood Intervention

*In the spring of 2006, UNC's Center on Poverty, Work and Opportunity hosted a competitive process to support original research by UNC faculty members in the form of policy briefs. Each brief was authored by a UNC faculty member and was reviewed by two experts—an academic and a practitioner in the field that the brief addresses. This Snapshot summarizes the brief on Poverty and Early Childhood Educational Intervention.*

**O**VER AND OVER AGAIN research has shown that children living in poverty suffer in a multitude of ways. Childhood poverty is associated with higher rates of academic failure, grade retention, school drop-outs, teen parenthood, and smoking and illegal drug use. Children growing up in poverty are more likely to have employment difficulties as adults. Research also shows that these outcomes are preventable.

Findings from the Abecedarian Project—a 30-year old project at FPG Child Development Institute—demonstrate that intensive early childhood educational intervention can have lasting positive effects for children raised in poverty. What's more, the program resulted in decreased government spending. Yet children living in poverty today do not have access to this type of initiative.

## What Happens to Children Living in Poverty

Children raised in poverty:

- Have poorer academic achievement outcomes than other children.
- Are less likely to attend college. While 88 percent of affluent students attend college, only 36 percent of children raised in poverty do so.
- Are more likely to become a teen parent.
- Are more likely to smoke and use illegal drugs.
- Are more likely to be unemployed.

## Existing Research on Early Educational Programs for Poor Children

Numerous early childhood programs have been created over the years to attempt to redress the negative consequences of poverty. Below is a brief summary of research on some of these efforts.

### Head Start

Research in the early nineties which seemed to show that Head Start had no lasting impact on poor children's school performance received much attention, despite significant problems with the study's methodology. A more recent study which met standard research protocols showed that after participating in Head Start for a year, children had some improvement in language and pre-reading outcomes and access to health care; and no significant effect for math.

### Consortium for Longitudinal Studies

The consortium included researchers from several early childhood programs from the 1960s. They followed up with participants six to ten years later and found that these children were less likely to use special services in school and had fewer grade retentions. However, intellectual gains eroded within three to four years after the program and academic gains were largely gone by five to six years in school.

### Chicago Child-Parent Center Program

This program was center-based and offered child and family support services to a sample of families living in high-poverty neighborhoods. Children attended half-day preschool and received additional support through first grade. Participants had higher achievement scores during elementary school than those who did not receive the intervention. By age 20, these same children had lower incidence of crime and higher rates of high school graduation.

### Infant Health and Development Program

Study participants were low birth weight babies. Participants were randomly assigned to receive services typically offered for such babies or to receive home-based educational intervention during their first year followed by two years of center-based child care. At age eighteen, those who had been heavier at infancy had higher cognitive scores and fewer reported behavior problems. There were no long-term benefits for the lighter weight infants.

### Perry Preschool Program

Children attended a half-day preschool program for two years. By second grade, participants had significantly higher achievement scores and were less likely to receive special education services. By age 27, participants were more likely to have graduated from high school, had significantly higher earnings, own homes and second cars, and were less likely to receive welfare or be involved in crime. By age 40, participants were more likely to be employed, have higher salaries, own homes, and have savings accounts. They were less likely to have committed a crime or used illegal drugs.

## The Abecedarian Project: A One-of-a-Kind Experience

This project represents the most intensive early childhood program offered for children from poor families. It is the only program to have had full-day, year-round, center-based care in infancy and continue until kindergarten entry. The study methods used meet the highest standards of research. The program enrolled 111 infants between 1972 and 1977 with 57 randomly assigned to receive center-based early educational intervention and 54 in a control group.



### The Intervention

The curriculum involved educational “games” that emphasized development skills in cognition and language. For example, infant games were age appropriate adult-child interactions that included talking to the child, showing pictures or toys, and offering infants a chance to react to their environment. Activities were individualized for each child. As children aged, the “games” became more conceptual and skill-based, but the program always emphasized individual development. Children also received their healthcare on site from a staff pediatrician.

### Result Highlights

Those who received the intervention:

- Scored 1.8 grade years higher in reading and 1.3 years higher in math as young adults.
- Were more likely to attend a four-year college (36 percent versus 14 percent).
- Were more likely to have a skilled job (47 percent versus 27 percent).
- Were less likely to have had their first child at age 18 or younger (26% versus 45%).
- Tended to smoke less (39 percent versus 55 percent).
- Were less likely to use marijuana (18 percent versus 39 percent).

### Cost-Benefit Analysis

Independent economists calculated cost-benefit ratios for the Abecedarian Project based on:

- Earnings and benefits of participants,
- Earnings and benefits of future generations,
- Maternal earnings,
- Elementary and secondary education cost-savings,
- Improved health,
- Higher education costs, and
- Welfare use.

The estimated cost-benefit ratio was 2.5:1—meaning for every dollar spent on the program, taxpayers saved \$2.50 as a result of higher incomes, less need for educational and government services, and reduced health care costs.

### Conclusions

Abecedarian Project findings show that intensive early childhood educational intervention made a dramatic difference in long-term outcomes for children raised in poverty. Individuals in the study currently are participating in an age 30 follow-up study. ■

### To Learn More

Pungello, E. P., Campbell, F. A., & Barnett, W. S. (2006, December). Poverty and early childhood educational intervention (Policy Brief No. 1). Retrieved April 18, 2008, from The University of North Carolina at Chapel Hill, Center on Poverty, Work and Opportunity web site: <http://www.law.unc.edu/PDFs/Poverty/PungelloandCampbellPolicyBrief.pdf>