

EARLY CHILDHOOD POVERTY AND ADULT ATTAINMENT, BEHAVIOR, AND HEALTH



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a research update from the INSTITUTE FOR CHILDREN AND POVERTY

Background

Over 4.2 million infants, toddlers, and preschoolers lived in poverty in the United States in 2007. For a single mother with two children, this meant that total income was less than \$16,075, though many poor families had incomes significantly lower than that. Poverty and its accompanying stressors can shape a developing child in powerful ways, which may lead to poorer outcomes later in life. Poverty in early childhood specifically can affect adult attainment, behavior, and health indirectly through parental material and emotional investments in children's learning and development.

Many descriptive studies show that, relative to non-poor children, poor children will be less successful in school and as adults in the labor market, will have worse health, and will be more likely to commit crimes and engage in other forms of problematic behavior. Despite these associations, research is still mixed on to what extent poverty is the cause of these negative outcomes. This research update highlights the findings from a published paper that seeks to obtain relatively unbiased estimates of the effects of early childhood economic conditions and adult outcomes over several dimensions.

Data and Methods

The analysis uses data from the Panel Study of Income Dynamics, which has followed a nationally-representative sample of families and their children since 1968 (<http://psidonline.isr.umich.edu>), to examine the consequences of poverty between a child's prenatal year and fifth birthday for several adult achievement, health, and behavior outcomes, measured as late as age 37.

Children who were born between 1968 and 1975, and followed until 2005 when they were 30 to 37 years old, were included in the analysis. The PSID high-quality edited measure of annual total family income was averaged across three periods of a child's life: the prenatal year through the calendar year in which the child turned five; ages six to ten; and ages 11 to 15. The association between income in these various stages of childhood and adult outcomes was examined in a multivariate framework. Adult outcomes examined include various domains of achievement, health, and behavior. Specific outcomes included years of completed schooling, annual

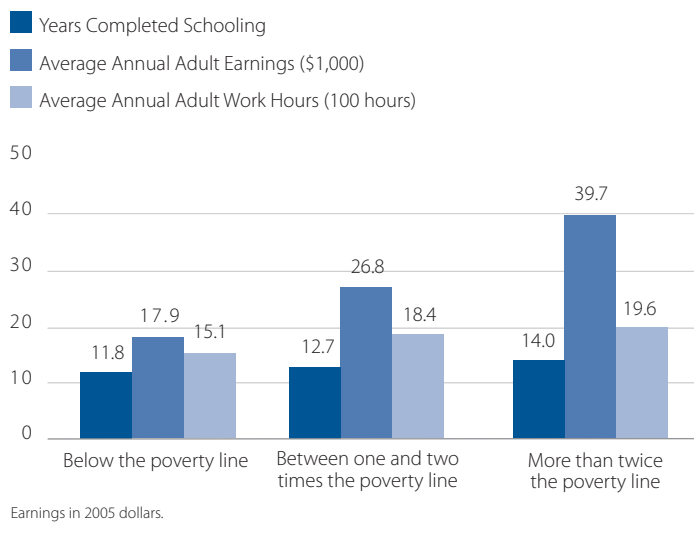
hours worked, annual earnings, food stamp and cash welfare participation, self-rated health, psychological distress, criminal activity (males only), and non-marital teen childbearing (females only).

The analysis uses a multivariate regression model to examine the association between income in the three childhood periods and the various adult well-being dimensions. Other variables included in the model are controls for: birth year, race, sex, whether the child's parents were married and living together at the time of the birth, the age of the mother at the time of the birth, whether the child lived in the South at the time of the birth, the total number of siblings born to the child's mother, whether the child was the first born, years of completed schooling of the household head in the birth year, and the household head's score on a sentence completion test administered in 1972.

Results

Figure 1 illustrates the average years of completed schooling, average adult earnings, and average adult work hours by poverty status between the prenatal year and the age of five. Specifically, these averages are presented for children whose prenatal-to-age-5 incomes averaged: i) below the official

Figure 1
WEIGHTED DESCRIPTIVE STATISTICS OF ADULT ATTAINMENT
OUTCOMES BY PRENATAL TO AGE 5 OFFICIAL POVERTY



poverty line (<100%); ii) between one and two times the poverty line (100%–200%); and iii) more than twice the poverty line (>200%). This figure shows striking differences in adult outcomes depending on where childhood income prior to age six was with respect to the poverty line. Compared with children whose families had incomes of at least twice the poverty line during their early childhood (group iii), poor children (group i) complete two fewer years of schooling, earn less than half as much and work 451 fewer hours per year.

Multivariate results show that the timing of economic deprivation during childhood indeed matters. Holding constant parental education, family structure and a host of other demographic conditions at birth, additional income for poor children during the prenatal to age five period is associated with significantly higher adult earnings and work hours. On the contrary, additional income for non-poor children does not show this association. For example, an additional \$10,000 each year between prenatal and their fifth birthday for poor children increases their average annual adult earnings by 68.2%, compared with only a 5.1% increase among the non-poor for the same additional \$10,000.

Table 1

OLS Spline Regression Coefficients for Early Childhood Income			
	Years Completed Schooling	Average Annual Adult Earnings	Average Annual Adult Work Hours
Additional \$10,000 in annual income for a poor child between prenatal and age five	.19	68.2% *	507**
Additional \$10,000 in annual income for a non-poor child between prenatal and age five	.03	5.1%	21*

* $p < .05$; ** $p < .01$ Income and earnings in 2005 dollars.

Conclusions and Policy Implications

This is the first study to link high-quality income data across the entire childhood period with outcomes in middle adulthood. It finds that economic conditions in early childhood matter more than economic conditions in later periods for labor market success, a result that corroborates the growing body of intervention evidence linking enriched early childhood environments to long-run successes. The findings suggest that a \$3,000 annual increase in income during early childhood (well within the magnitude of past policy changes such as the federal Earned Income Tax Credit) translates into 19% higher earnings in adulthood and a 135-hour annual increase in work hours. Reductions in childhood poverty could have large impacts, not only when children are young, but could persist well into adulthood and have a positive influence on labor force participation and economic well-being

30 years later. This analysis indicates that policy makers might do well to focus interventions involving deep and persistent poverty early in childhood.

This research update was adapted from “Early Childhood Poverty and Adult Attainment, Behavior, and Health” by Greg J. Duncan, Kathleen M. Ziol-Guest, and Ariel Kalil (in *Child Development*, January/February 2010, Volume 81, No. 1, pp. 292–311).

The Institute for Children and Poverty (ICP) is an independent non-profit research organization based in New York City. ICP studies the impact of poverty on family and child well-being and generates research that will enhance public policies and programs affecting poor or homeless children and their families. Specifically, ICP examines the condition of extreme poverty in the United States and its effect on educational attainment, housing, employment, child welfare, domestic violence, and family wellness. Please visit our Web site for more information. www.icpny.org

