



Children at Risk

Consequences for School Readiness and Beyond

Parents, policymakers, business leaders, and the general public increasingly recognize the importance of the first few years in the life of a child for promoting healthy physical, emotional, social, and intellectual development. Yet many children face deficiencies in the years leading up to school entry in terms of emotional support, intellectual stimulation, or access to resources—due to low income or other factors—that can impede their ability to develop to their fullest potential.

As part of a recent study to examine the role of early childhood interventions, RAND researchers identified what is known from the research literature about the number of children at risk of school failure and the consequences for their performance in school and subsequent life outcomes. We summarize those findings here.

A companion research brief highlights the study’s findings with respect to the role that high-quality early intervention programs can play in compensating for early disadvantages. By providing additional supports for the parents, children, or the family as a whole, investments in early intervention programs can alter a child’s developmental trajectory during the school age years and beyond. The changes associated with effective programs can generate lifelong benefits for the participating child and further economic benefits for society as a whole that can more than repay the upfront investment.

Disparities in Early Childhood

Although most children experience a supportive home and neighborhood environment with access to sufficient financial and nonfinancial resources to support healthy development, many other children do not. A few indicators illustrate some of the resource disparities in early childhood:

- Poverty has been shown to be particularly detrimental in early childhood in terms of children’s subsequent educational and other life course

Key findings:

- A substantial percentage of children are disadvantaged in terms of resources available for healthy physical and mental development. One-fifth of children under age 6 live in poverty, and nearly half of all children face one or more risk factors associated with gaps in school readiness.
- These disadvantages translate into shortfalls in academic achievement, prosocial behavior, educational attainment, and, eventually, greater rates of unemployment and criminality.

outcomes. In 2003, 4.7 million children under age 6 lived in families with income below the poverty line (defined as \$18,660 for a family of four or \$14,824 for a family of three, each with two children). While the poverty rate is 20 percent overall for children under 6, the rate is 53 percent among children that age living in a female-headed household, 39 percent for African-American children, and 32 percent for Latino children.

- Research has demonstrated that neighborhoods of concentrated poverty (typically defined as those with a poverty rate exceeding 20 percent) provide more limited opportunities for young children in terms of social interaction, positive role models, and other resources, such as quality child care, health facilities, parks, and playgrounds, that are important for healthy child development. Data from the 2000 Census reveal that 22 percent of children under 5 live in neighborhoods of concentrated poverty.
- Healthy child development is supported by regular access to health care, such as well-child visits. These visits can provide opportunities for health care providers to conduct developmental

RAND RESEARCH AREAS

- THE ARTS
- CHILD POLICY
- CIVIL JUSTICE
- EDUCATION
- ENERGY AND ENVIRONMENT
- HEALTH AND HEALTH CARE
- INTERNATIONAL AFFAIRS
- NATIONAL SECURITY
- POPULATION AND AGING
- PUBLIC SAFETY
- SCIENCE AND TECHNOLOGY
- SUBSTANCE ABUSE
- TERRORISM AND HOMELAND SECURITY
- TRANSPORTATION AND INFRASTRUCTURE
- WORKFORCE AND WORKPLACE

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

Corporate Headquarters

1776 Main Street
P.O. Box 2138
Santa Monica, California
90407-2138
TEL 310.393.0411
FAX 310.393.4818

© RAND 2005

screenings and to encourage parental behaviors that promote strong social, emotional, cognitive, and physical child development. Nevertheless, among children less than 2 years old in 2002, 12 percent had not had a well-child checkup in the last year. That fraction rises to 16 percent among children ages 2 to 3 and 18 percent among those ages 4 to 5.

- Early home literacy-building activities that are associated with better school performance in kindergarten and beyond include reading to a child regularly (3 or more times a week); teaching children letters, words, and numbers; and telling stories or teaching songs and music. Among children ages 3 to 5 in 2001, 16 percent are not read to regularly at home. Among children whose mothers have less than a high school education, that fraction rises to 31 percent, compared with just 7 percent for children whose mothers have a college degree.

Consequences for School Readiness and Beyond

These early indicators of disadvantage, which affect as many as one of every five children, have implications for how prepared children are when they first enter school at kindergarten. While there is no single definition of school readiness, experts agree that readiness is a multifaceted concept that goes beyond academic and cognitive skills to include physical, social, and emotional development, as well as approaches to learning.

A series of assessments for a recent nationally representative kindergarten cohort indicate that disadvantaged children enter school lagging behind their more advantaged peers in terms of the knowledge and social competencies that are widely recognized as enabling children to perform at even the most basic level. Substantial gaps are evident for disadvantaged children in measures of reading and mathematics proficiency, in prosocial behaviors and behavior problems, and in readiness to learn. For example, although 18 percent of children overall are not familiar with basic conventions of print or writing (e.g., knowing that English is read from left to right and top to bottom, or where a story ends), that fraction is 32 percent for children whose mothers have less than a high school education but only 8 percent for children whose mothers have a college degree or higher. Other risk factors include being in a single-parent family, a family that has received welfare, or a family that does not speak English at home. Thirty-one percent of this kindergarten cohort had one of these four risk factors; another 16 percent faced two or more of them.

These measures indicate that children from more enriched environments enter school better prepared. Data that follow children

over time reveal that these early differences expand as children progress through school. In other words, disadvantaged children do not progress at the same rate as their more advantaged peers, so achievement gaps tend to widen over time.

As a result, many children from disadvantaged backgrounds fail to meet grade-level expectations on core subjects. For example, national educational assessments at grades 8 and 12 show that about 50 percent of children from at-risk backgrounds (e.g., low parental education or low family income) score below the “basic” level of reading and math achievement, indicating that they have less than partial mastery of the knowledge and skills “fundamental for proficient work” at that grade level. Other manifestations of problems in school achievement for disadvantaged children include higher rates of special education placement, grade repetition, and dropping out of school.

Ultimately, limited skills and low educational attainment increase the likelihood of undesirable outcomes in adulthood. Low educational attainment is associated with reduced rates of employment and with lower earnings for those who are employed. Use of social welfare programs is also higher among those with low educational attainment, as are crime and incarceration rates.

These adverse outcomes during childhood and adulthood have consequences that extend beyond the lost potential (near- and long-term) for the affected children. Government outlays are higher as a result of higher special education costs, greater participation in social welfare programs, and higher rates of crime and delinquency. Government revenues are lower as a result of lost employment and earnings potential. These economic costs can be sizable, especially when they are considered in the context of the full life course. Estimates indicate, for example, that a high school dropout costs society \$243,000 to \$388,000 in present-value dollars over his or her lifetime, and societal costs for a typical career criminal are \$1.3 to \$1.5 million in present-value dollars.

A Role for Early Intervention

High-quality early interventions are designed to combat the factors that threaten child development. If learning begets learning, then interventions at younger ages have great potential to generate cumulative benefits by altering a child’s future developmental trajectory. Even if only a portion of the detrimental consequences facing at-risk children in the school-age years and in adulthood can be averted, the benefits from effective early intervention programs can be substantial. ■

This research brief describes work for RAND Labor and Population documented in *Early Childhood Interventions: Proven Results, Future Promise* by Lynn A. Karoly, M. Rebecca Kilburn, and Jill S. Cannon, MG-341-PNC (available at www.rand.org/publications/MG/MG341), 2005, 200 pages, \$24, ISBN: 0-8330-3836-2. MG-341 is also available from RAND Distribution Services (phone: 310-451-7002; toll free 877-584-8642; or email: order@rand.org). The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND’s publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark.

RAND Offices Santa Monica • Washington • Pittsburgh • New York • Doha • Berlin • Cambridge • Leiden



LABOR AND POPULATION

THE ARTS
CHILD POLICY
CIVIL JUSTICE
EDUCATION
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INTERNATIONAL AFFAIRS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
SUBSTANCE ABUSE
TERRORISM AND
HOMELAND SECURITY
TRANSPORTATION AND
INFRASTRUCTURE
WORKFORCE AND WORKPLACE

This PDF document was made available from www.rand.org as a public service of the RAND Corporation.

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

Support RAND

[Browse Books & Publications](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore [RAND Labor and Population](#)

View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use.