Research Brief #2: Head Start

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WHAT IS HEAD START?

Head Start is a national program that provides comprehensive child development services to disadvantaged children ages three and four in an effort to break the cycle of poverty. Local agencies, operating under direct federal grants, provide preschool education; medical, dental, and mental health care; nutrition services; and services for parents. The majority of children enrolled in Head Start are poor and 12 percent of enrolled children are disabled. Most children attend half-day center-based programs during the academic year, although some programs are full-day or year-round and some provide home-based services. Quality varies considerably across the more than 1,600 Head Start grantees.

In 2006, federal spending per child averaged $7,200 for an estimated 909,000 enrolled children.[1] In 1995, a separate Early Head Start program was established to serve children from birth to three years.[2]

This research brief is one in a series of research briefs on the impacts of early childhood programs. See the websites for First Focus (www.firstfocus.net) and the Brookings Center on Children and Families (www.bookings.edu/ccf) for the full series including an overview and briefs on State Pre-K, Head Start, Early Head Start, Model Early Childhood Programs, and Nurse Home Visiting.

WHAT IS THE IMPACT OF HEAD START ON CHILDREN AND FAMILIES?

A national random-assignment evaluation of Head Start found small to moderate positive effects for children assigned to Head Start compared to a control group of children not assigned to the program, similar to earlier studies that found short-term positive impacts.[3]

Cognitive and School-Related Outcomes: There were small to moderate positive impacts for children assigned to Head Start in pre-reading, pre-writing, vocabulary, and literacy skills.[4] Impacts were not significant, however, in the areas of early math skills or oral comprehension. Even after enrollment in Head Start, three- and four-year-old children in the evaluation fell below national norms for school readiness.

- Children enrolled in the program know more letters, are better at naming colors, and have higher vocabularies than children who did not participate in Head Start. For example, Head Start four-year-olds could identify an average of 2.3 more letters than control group children.
- Although Head Start children fell below national norms, enrollment in Head Start helped them cut the achievement gap in half (45 percent) in letter-word identification (pre-reading skills) and one-fourth in pre-writing skills.

Behavioral and Socio-emotional Outcomes: There were relatively few impacts on children's behavior or social skills. There was a small reduction in problem behaviors among certain subgroups of Head Start enrollees:

- Three-year-olds assigned to Head Start were less likely to exhibit behavior problems, such as hyperactive behavior, one year later than children in the control group.
- Head Start four-year-olds also had fewer behavior problems than control group children, although this reduction was limited to those from English-speaking families.

Health and Safety Outcomes: Head Start was associated with small to moderate positive impacts on parent reports of children's access to health care, health status, and use of dental care. Health

outcomes were slightly more positive for children who were enrolled at age three than those who enrolled at age four.[5]

- Head Start enrollment increased use of dental care by 16 to 17 percentage points (73 percent of four-year olds and 69 percent of three-year olds in Head Start saw a dentist compared to 57 and 52 percent of children in the control group).

- An earlier study comparing children in Head Start to children on the wait list suggests that Head Start children were more likely to be up-to-date on immunizations.[6]

In addition, a longitudinal study of child mortality rates by county found evidence that mortality rates for children ages five to nine resulting from certain causes and diseases fell in counties with strong Head Start enrollment in the 1960s and 1970s, suggesting that health improvements were dramatic enough to reduce death rates.[7]

Outcomes for Parents: The program had modest success in teaching Head Start parents to engage in educational activities with their children and to reduce the use of physical discipline:

- Head Start participation led to a 7 percent increase in the average number of times parents read to their four-year old children in a week.[8]

- Parents of Head Start children were less likely to spank their children than parents in the control group, although the reduction in spanking was small and limited to parents of three-year-old children.[9]

Long-Term Outcomes: Follow-up data from the Head Start Impact Study are not yet available. A number of earlier studies of Head Start found that the program's positive impacts on cognitive development, including IQ and school readiness, faded over time, largely disappearing by third grade.[10] There is some debate over the fadeout findings, with some researchers suggesting the fadeout would be less if school achievement results were appropriately adjusted for the lower rates of special education placement and grade retention among Head Start participants[11] and other researchers pointing to the negative impact of subsequent schooling, particularly for Black children went on to attend poorer schools than White children.[12] The earlier literature does find some evidence of long-term positive outcomes such as reductions in grade repetition, high school dropout rates, and teen pregnancies.[13]

In addition, some recent, sophisticated analyses of historical data suggest that Head Start has had long-term positive impacts on education and crime, with some impacts varying by race:

- Whites who participated in Head Start in the 1970s were 22 percentage points more likely to finish high school and 19 percentage points more likely to attend college than siblings who were not in Head Start. Black young adults who participated in Head Start did not see the same educational impact, but were about 12 percentage points less likely to have been booked or charged with a crime than non-participating siblings.[14]

- Another study found that educational attainment of both Blacks and Whites ages 18 to 24 increased by a half year in counties with higher levels of Head Start funding in the 1960s and 1970s.[15]

HOW DO HEAD START IMPACTS VARY?

Age of Child. The Head Start Impact Study found more positive impacts for children assigned to Head Start at age three than for four-year-old children, based on observations one year after enrollment.

Primary Language. Larger effects were found for children whose primary language was English than children whose primary language was Spanish. For English-speaking children, there were positive impacts in all areas (cognitive outcomes, socio-emotional outcomes, health outcomes, and parental behavior). Positive impacts for Spanish-speaking children were primarily in the area of health; there were fewer effects on cognitive skills.[16]

Race and Ethnicity. There was more evidence of positive impacts on African-American and Hispanic

children than for White/Other children, particularly for those assigned to Head Start at age three. See above for differences in long-term outcomes among Blacks and Whites.

HOW STRONG IS THE EVIDENCE BASE FOR HEAD START?

There have been hundreds of studies of Head Start, providing a large body of evidence of positive short-term outcomes. However, most of the earlier studies suffered from methodological problems, including the lack of an appropriate comparison group.[17] The best evidence comes from the recent Head Start Impact Study, which was based on a large, nationally representative sample of 4,700 Head Start applicants (ages three to four) who were randomly assigned to a Head Start group or a control group. The evaluation did not focus on a few model programs, but encompassed 84 programs, capturing much of the diversity of quality that is found in local programs and allowing results to be generalized to the entire Head Start program.[18]

The use of random assignment, combined with the national scope of the sample, provides a very strong evidence base for evaluating Head Start. It is important to note however, that a large proportion of the "untreated" control group was enrolled in other center-based programs, and so the "Head Start impact" is the impact of the program above other center-based programs in the community, not compared to a non-intervention alternative.[19] The effects found in the national study would be larger if results were adjusted to reflect the fact that some children in the experimental group did not enroll in Head Start and some children in the control group did receive Head Start services.[20]

IS HEAD START GENERALLY VIEWED AS EFFECTIVE?

Debate over the effectiveness of Head Start continues even after completion of the Head Start Impact Study. While the study did find positive impacts, many of the observed effects are small, particularly compared to the larger impacts on cognitive skills of certain model preschool programs and state pre-K programs.[21] Moreover, Head Start children still lag very far behind national norms after enrollment and there is concern that immediate impacts may fade after a few years of elementary school.[22]

Despite these concerns, the program has been shown to improve the cognitive development and general school readiness of low-income children, compared to the alternative services available in the community. Moreover, even small to modest impacts such as those observed in the Head Start Impact Study can generate significant benefits over the long term. A recent comprehensive review of the literature on Head Start's impacts concludes that small short-term impacts could generate benefits that exceed costs in the short- and long-run, just as occurred in the well-known Perry Preschool program.[23]

WHAT FEDERAL LEGISLATIVE ACTION LIES AHEAD FOR HEAD START?

Head Start was just reauthorized in December 2007, after several years of legislative debate, and so future legislative action will focus on the annual appropriations battle over funding levels. Increases are needed if the program is to keep pace with inflation, fund the quality improvements authorized in 2007, and/or expand to serve more eligible children in both the three to four (Head Start) and birth to three (Early Head Start) age groups. Congress will also be interested in implementation of the recent reauthorization, which includes provisions to expand Head Start and Early Head Start and invest in Head Start quality.[24]

NOTES:

[1] See Office of Head Start, Head Start Program Fact Sheet, Fiscal Year 2007, http://www.acf.hhs.gov/programs/ohs/about/fy2007.html. Head Start funds are awarded directly to local grantees, which must contribute a 20 percent match in cash or in-kind benefits. Melinda Gish, Head Start: Background and Issues (Washington, D.C.: Congressional Research Service, 2008).

[2] See I*mpacts of Early Childhood Programs*, Brief #3: Early Head Start.

[3] U.S. Department of Health and Human Services, Administration for Children and Families, *Head Start Impact Study: First Year Findings*, (Washington, D.C.: Westat and others, 2005), http://www.acf.hhs.gov/programs/opre/hs/impact_study/reports/first_yr_finds/first_yr_finds.pdf.

[4] Small to moderate impacts reflects the fact that effect sizes were 0.2 to 0.3 for many impacts. Effect sizes of < 0.2 are generally considered small; effect sizes of 0.2 to 0.5 are generally considered moderate. The largest impacts (0.19 to 0.34) were for pre-reading skills and literacy skills. There were small impacts (about 0.2 effect sizes) for direct assessments of pre-writing and vocabulary. Note that pre-reading, pre-writing and vocabulary were based on direct measures while literacy skills were reported by parents.

[5] Three-year-olds had positive gains across all three health-related impacts. Among four-year-olds, there were increases in access to health care and dental care but no observed differences in health status (DHHS, 2005).

[6] Martha Abbott-Shim, Richard Lambert, and Frances McCarty, "A Comparison of School Readiness Outcomes for Children Randomly Assigned to a Head Start Program and the Program's Wait List," *Journal of Education for Students Placed at Risk* 82 (2003): 191-214.

[7] Note that Head Start is unlikely to have as dramatic an impact on child health and mortality rates today as forty years ago because of overall improvements in child immunization rates and access to health services. Jens Ludwig and Douglas L. Miller, "Does Head Start Improve Children's Life Chances? Evidence from a Regression Discontinuity Design," *The Quarterly Journal of Economics* 122 (2007): 159-208.

[8] The average number of times parents read to their four-year-olds increased from 2.8 to 3.0 times per week. There was a slightly smaller increase, from 2.8 to 2.9 times, among parents of three-year-old children.

[9] The effect size was -0.10 for this age group. There was no effect on spanking for children enrolled in Head Start at age four.

[10] William T. Gormley., "Early Childhood Care and Education: Lessons and Puzzles," *Journal of Policy Analysis and Managemen*t 26 (2007): 633-671.

[11] Steve Barnett, "Does Head Start Fade Out?" *Education Week* May 19, 1993.

[12] See Janet Currie and Duncan Thomas, "School Quality and the Longer-Term Effects of Head Start," *The Journal of Human Resources* 35 (2000): 755-774.

[13] Janet Currie and Duncan Thomas, "Does Head Start Make a Difference?" *The American Economic Review* 85 (1995): 341-364 and Barnett, 1993.

[14] See Currie and Thomas, 1995 and Eliana Garces, Duncan Thomas, and Janet Currie, "Longer-Term Effects of Head Start," *The American Economic Review* 92 (2002): 999-1012. The Currie studies were based on comparisons between siblings, leading to questions about how parents choose which sibling to send to Head Start. If parents choose to send the more promising sibling or the slower learner to Head Start, then impacts might be lower or higher than those observed. In addition, siblings who do not attend Head Start might benefit from spillover effects. Currie has argued that her estimates are likely to be lower bounds on the true positive effects of Head Start (Janet Currie, "How Should We Interpret the Evidence about Head Start?" *Journal of Policy Analysis and Management* 26 (2007): 673-689).

[15] Ludwig and Miller, 2007.

[16] FACES, a longitudinal study comparing Head Start children in the fall and spring, did find evidence of increased English vocabulary skills for Spanish-speaking children. These results are limited to children who had sufficient English to pass the English-language screener in both the fall and spring. U.S. Department of Health and Human Services, *FACES Findings: New Research on*

Head Start Outcomes and Program Quality (Washington, D.C.: Department of Health and Human Services, 2006), http://www.acf.hhs.gov/programs/opre/hs/faces/reports/faces_findings_06/faces_findings_bw.pdf.

[17] Gormley, 2007 and U.S. General Accounting Office, *Head Start: Research Provides Little Information on Impact of Current Program*, GAO/HEHS-97-59, (Washington, D.C. U.S. General Accounting Office, 1997), http://www.gao.gov/archive/1997/he97059.pdf.

[18] Programs operating less than two years were excluded from the study, as were programs operating in areas where a control group could not be formed because there was sufficient space in Head Start centers to serve all new applicants. Head Start grantees exclusively serving migrant children, Native Americans, or children under Early Head Start also were excluded. Even with these exclusions, the sample represents 85 percent of all Head Start children. (DHHS, 2005).

[19] The proportion of non-Head Start children enrolled in center-based settings was 43 percent of three-year-olds and 48 percent of four-year-olds. This includes 18 percent of four-year-olds in the control group who ended up in Head Start. Also note that 14 percent of the four-year-old children in the experimental group did not end up enrolling in Head Start, further diluting impacts (DHHS, 2005; Jens Ludwig and Deborah Phillips, "The Benefits and Costs of Head Start," *Social Policy Report* 21 (2007): 3-19.

[20] If all of the children assigned to Head Start enroll in Head Start, but all of the children in the control group also enroll in Head Start, and assuming the average quality of the Head Start programs attended by children in both groups is the same, the effects of being assigned to Head Start would be zero. This does not mean that Head Start has no impact on children; the impact would have been larger if the control group children had not enrolled in Head Start. Ludwig and Phillips, 2007.

[21] Most effect sizes were 0.20 and smaller. See Ron Haskins, *Testimony for the House Committee on Education and Labor*, January 23, 2008, http://www.brookings.edu/testimony/2008/0123_education_haskins.aspx.

[22] See Gormley, 2007 and Douglas J. Besharov and Caeli A. Higney, "Head Start: Mend It, Don't Expand It (Yet)," *Journal of Policy Analysis and Management* 26 (2007): 673-689.

[23] Small short-term impacts means effect sizes of 0.1 to 0.2. Ludwig and Phillips, 2007.

[24] The reauthorization allows grantees to serve children between 100 and 130 percent of poverty. In addition, the bill requires all Head Start teachers to have an associate's degree by 2011 and half of all teachers to have a bachelor's degree in early education and experience teaching preschoolers by 2013. The bill also introduces more competition into the grant application process in an effort to cut funding from low-performing grantees and provide incentives for all grantees to maintain high quality programs. The reauthorization bill improves collaboration with states by maintaining and expanding Head Start Collaboration Offices in each state and requiring states to create State Advisory Councils on Early Education and Care to develop recommendations for coordination between early childhood programs.

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- Low-income working families and policies designed to improve their economic prospects;
- Economic mobility and opportunity in the United States and investments in children, such as preschool programs, that could improve their chances to get ahead;
- The key role of education at all levels in creating the skills needed to promote opportunity and reduce poverty;
- The growth of single-parent families caused by early unwed childbearing and the decline of marriage; and
- The growing fiscal problems at the federal and state levels and steps that might be taken to ensure fiscal responsibility while minimizing cuts in effective programs targeted to this low-income families and children.

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