EARLY CHILDHOOD HIGHLIGHTS

Child TRENDS

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Research-based Responses to Key Questions about the 2010 Head Start Impact Study

QUICK FACTS

What is Head Start? Based on a "whole child" approach to development, Head Start is a comprehensive early care and education program for low-income children between the ages of three and five and their families. Head Start promotes school readiness by providing education, health, vision, hearing, mental health, nutrition, social and other services to children and their families. Significant emphasis is placed on the involvement of families, as programs engage parents in their children's learning and help them make progress toward their own educational, literacy, and employment goals.

With the structured early education curriculum provided to children, Head Start also provides transportation and home visits to families, developmental and health screenings, and family literacy and vocational supports for parents. It connects families to other services available from community partners. **Early Head Start**, a sister program to Head Start, was created in 1995 and strives to promote healthy prenatal outcomes for pregnant women, healthy family functioning, and enhance the development of children from birth to age three.

Since 1965, Head Start has provided comprehensive services to help prepare the nation's most disadvantaged three- to five-year-old children for school and to strengthen their families. In 1998 Congress instructed the Department of Health and Human Services (DHHS) to conduct an evaluation of Head Start to determine its impact on child development and to identify which children enrolled in Head Start benefit the most. This evaluation, the 2010 Head Start Impact Study (HSIS or Impact Study), adds to a growing body of rigorous research on Head Start and other early care and education (ECE) programs and helps identify the program's strengths and weaknesses.

The Impact Study began in the fall of 2002 when researchers began collecting data on nearly 5,000 three- and four-year-olds who were entering Head Start programs. The Impact Study tracked children over time, with findings on children's outcomes at three points–referred to throughout this document as Wave 1, Wave 2, and Wave 3. Wave 1 assessed children's outcomes at the end of their first year of participation in Head Start in 2002 (for groups of three- and four-year-olds). Wave 2 reported on outcomes at the end of kindergarten or first grade year, and is the most recent data available from the Head Start Impact Study. Wave 3, which is currently being analyzed and has not yet been released, will show findings on children's outcomes at the end of third grade.

This document provides background information on the Head Start program and discusses key findings from the Impact Study through a series of a questions and answers. It concludes with commentary on the Impact Study from a research perspective, highlighting key policy and practice considerations relating to supporting developmentally appropriate and effective early childhood interventions, specifically noting that:

POLICY & PRACTICE

HEAD START'S WHOLE CHILD PROGRAM MODEL is research-based and developmentally appropriate for promoting school readiness.

Starting early makes a difference.

Head Start seems to be contributing to **measurable development gains for subgroups of at-risk children**.

Consider factors that contribute to more **successful transitions** from early learning settings to elementary school.

Head Start Impact Study findings should be considered in **context** of other research on Head Start.

- Head Start's whole-child program model is research-based and developmentally appropriate for promoting school readiness and strengthening families.
- Starting early with high-quality interventions makes a difference.
- The Impact Study shows how Head Start is contributing to measurable developmental gains for certain subgroups of disadvantaged children. However, rigorous program improvement is needed to improve Head Start's overall effectiveness in supporting the developmental needs of disadvantaged children and their families.
- In considering program improvements, decision makers would benefit from a better understanding of factors that contribute to successful transitions from early learning settings to elementary school.
- Findings from the Impact Study should be considered alongside other research on Head Start and early childhood.

What is Head Start?

Based on a "whole child" approach to development, Head Start is a comprehensive early care and education program for low-income children between the ages of three and five and their families. Head Start promotes school readiness by providing education, health, vision, hearing, mental health, nutrition, social and other services to children and their families.[1] Significant emphasis is placed on the involvement of families, as programs engage parents in their children's learning and help them make progress toward their own educational, literacy, and employment goals. [2]

Along with the structured early education curriculum provided to children, Head Start provides transportation and home visits to families, developmental and health screenings, and family literacy and vocational supports for parents. It also connects families to other services available from community partners.[3] Early Head Start, a sister program to Head Start, was created in 1995 and strives to promote healthy prenatal outcomes for pregnant women, healthy family functioning, and enhance the development of children from birth to age three.

Who does Head Start Serve?

Head Start serves disadvantaged three- to five-year-old children from families with incomes below the federal poverty level, or children from families receiving public assistance, such as Temporary Assistance for Needy Families or Supplemental Security Income. Children in foster care

QUICK FACTS

COLLECTIVELY, HEAD START AND EARLY HEAD START HAVE SERVED OVER 27 MILLION LOW-INCOME CHILDREN AND FAMILIES ACROSS THE UNITED STATES, including the District of Columbia, the territories and American Indian tribes.

ELIGIBILITY FOR HEAD START
Head Start serves disadvantaged three- to five-year-old children from families with incomes below the federal poverty level or children from families receiving public assistance, such as Temporary Assistance for Needy Families or Supplemental Security Income. Children in foster care are and homeless children are also eligible. Additionally, Head Start programs are required to fill up to 10 percent of their enrollment slots with children that have special developmental needs or disabilities, such as mental retardation, health impairments, and emotional disturbance.

and homeless children are also eligible. Additionally, Head Start programs are required to reserve up to 10 percent of their enrollment slots for children that have special developmental needs or disabilities, such as mental retardation, health impairments, and emotional disturbance. Collectively, Head Start and Early Head Start have served over 27 million low-income children and families across the United States, including the District of Columbia, the territories and American Indian tribes. In 2009, over 900,000 children attended a Head Start or Early Head Start program. Of these, 39 percent were Caucasian, 34 percent were Hispanic, and 31 percent were African American. Most children who attended Head Start in 2009 were from homes where English was the primary language (72 percent); 24 percent of children were from homes where the family primarily spoke Spanish. Twelve percent of children attending Head Start in 2009 had a disability, 99 percent of whom received special education services.

While Head Start serves a broad and diverse population, it does not have the capacity to serve all eligible children and their families. U.S. Census data are most often used to estimate the number of eligible children for Head Start. In 2009, there were 5.98 million children nationally under age 6 and living below the poverty line.

Who provides Head Start services and how are services funded?

Federal Head Start grants are provided annually to local-level organizations, called grantees or delegates. These organizations can be private or public, non-profit or for-profit. In Fiscal Year 2009, there were 1,591 Head Start grantees. A single delegate or grantee can operate several individual Head Start programs. The federal grants are administered by the Office of Head Start within the U.S. Department of Health and Human Services, and grants are made directly to local-level grantees. In FY2010, Head Start received $7,234,783,000 in federal funding. In FY2009, the average cost per child was $7,600.[4] The federal allocation contributes 80 percent of Head Start funding; local communities are required to contribute 20 percent. Though they are not required to do so, 17 states provide supplemental funding to help local communities meet the 20 percent match, increase access, or improve program quality.[5]

What is the Head Start Impact Study and what are its goals?

The Head Start Impact Study is a Congressionally-mandated, federally-sponsored evaluation of the Head Start program. Through legislation enacted in 1998, Congress instructed DHHS to conduct a rigorous evaluation of the Head Start program to address two key questions:

1. What is the impact of Head Start on children's school readiness and on parental practices that affect child development; and
2. Under what circumstances does Head Start help the most and for which children?[6]

What is the evaluation design and methodology of the Impact Study? Are there limitations to the study's design?

The Impact Study has a rigorous and sound research design; even so, understanding its methodology is important for understanding the key findings. Led by the research arm of DHHS, the study followed the same children over time in order to determine the program's effectiveness in preparing them for school, and whether impacts vary among subgroups of children. The Impact Study differs from other evaluations of early childhood programs in several ways. First, the Impact Study was designed as a randomized controlled study so that researchers could compare a "treatment" and "control" group and determine what differences can be attributed to the interventions provided through the Head Start program. In addition, the Impact Study used a nationally representative sample of Head Start programs and children,[7] which enables generalizing the results to the national set of Head Start programs, not just the programs that participated in the study. Finally, the study compares the overall impact of Head Start on a broad set of child outcomes—cognitive development, social-emotional development, health status and services, and parenting practices.[8] The Impact Study does not include Head Start programs serving special populations such as tribal families, and the 15 percent of Head Start programs that had enrollment shortages; these were excluded from the sample.[9] Understanding these design attributes of the Impact Study are important for understanding how its findings can and should be used.

WORTH NOTING

Treatment Group - The Impact Study utilized two cohort groups that received treatment in order to analyze whether starting in the program "earlier" made a difference in terms of children's outcomes.

Control group - Approximately 60 percent of children in the control group participated in another child care or early education program, including another Head Start program, and the remaining 40 percent received care at home from a parent. A small but notable proportion of the control group enrolled in another Head Start program: 14 percent of the four-year-olds and 18 percent of the three-year-olds.[47]

Who are the children in the Study?

Understanding the treatment and control groups is important for interpreting results.

Treatment group. The treatment group is comprised of two groups (or cohorts) of randomly assigned three- and four-year-old children who participated in Head Start. The three-year-olds were studied through two years of Head Start and followed through kindergarten and first grade. The four-year-olds were studied through one year of Head Start and followed through kindergarten and first grade. By following three- and four-year-old children newly entering Head Start, the Impact Study is able to assess outcomes over time for each group and determine if different outcomes can be associated with the age at which the child began Head Start. [10]

Control group. The control group was similar to the treatment group, but children in the control group were not enrolled in the Head Start program to which they applied. Rather, the parents of these children pursued other care arrangements, such as center-based child care, family child care, or parent or relative care. Approximately 60 percent of children in the control group participated in another child care or early education program, including another Head Start program, and the remaining 40 percent received care at home from a parent. A small but notable proportion of the control group enrolled in another Head Start program: 14 percent of the four-year-olds and 18 percent of the three-year-olds.[11] Understanding that the majority of children in the control group participated in nonparental care, which was often center-based care, is important for interpreting the findings.

The sample was comprised of 4,667 three- and four-year-old children newly entering Head Start in 2002. This includes 2,559 three-year-olds and 2,108 four-year-olds from 23 states. The 383 participating Head Start centers were randomly selected from 84 randomly selected Head Start grantees. [12]

What have we learned from the Head Start Impact Study about how the program is helping children prepare for school?

The Impact Study measured four domains relevant to child development: cognitive, social-emotional, health status and services, and parenting practices. It evaluated outcomes in these areas for both the treatment and control groups. Additionally, the Impact Study assessed special

subgroups of children to determine which children benefited most from the program.

Overall, the most recent findings from the Impact Study were mixed. Wave 2 findings (assessed at the end of third grade) showed few differences between the treatment and control groups in overall outcomes. Wave 2 found that many of the gains identified in the first assessment (Wave 1 – assessed at the end of kindergarten and first grade) faded between the end of the Head Start year and the end of kindergarten or first grade. For example, children who enrolled in the treatment group as four-year-olds demonstrated improved language and literacy outcomes at the end of the Head Start year, and children who enrolled in the treatment group as three-year-olds demonstrated improved language, literacy, math, social-emotional, and improved parent practices at the end of the Head Start year. By the end of first grade, there were few statistically significant outcomes for the three-year -old and four-year-old cohorts.

However, Wave 2 results do show measurable gains for several subgroups of children in the treatment group, particularly those with high levels of risk for school failure, which are described in more detail below. In short, the findings vary based on the child's age, the child's circumstances, and the outcomes being measured.

Tables 1 and 2 provide a complete overview of the Impact Study's findings of benefits for the general population. Tables 3 and 4, discussed later, summarize findings for key subgroups.

What should we make of the "fade-out" issue?

The fade-out of developmental gains for some groups has motivated discussion about what program improvements are needed to strengthen Head Start's effectiveness. Those efforts are critically important; however, understanding the experience of the control group is also important to consider. A report by the Center on the Developing Child at Harvard University discusses how children in the control group "caught up" to the children in the treatment group in terms of the achievement measured. The report highlights how many of the children in the treatment and control groups have similar early learning experiences.[13]

Who benefited the most from Head Start and under what circumstances?

Although the outcomes for Head Start treatment group overall show mixed results, a number of specific subgroups of children showed significant and enduring benefits from their Head Start experience. For example:

- Children in the lowest academic quartile demonstrated improved social-emotional skills and children from high-risk households[†14] displayed improved cognitive abilities. These effects were sustained through the end of first grade for both sub-groups.[15]

- Children with special needs demonstrated sustained improvements in their math abilities and social-emotional skills through the end of first grade.[16]

- Dual language learners experienced significant health benefits at the end of first grade.[17]

- Children in non-urban settings showed cognitive gains though the end of first grade, along with some social-emotional benefits during their participation in Head Start.[18]

In addition, the findings demonstrate that different circumstances may have affected the outcomes evaluated in the study. For example, the length of time a child spent in Head Start appears to be important. Wave 2 data collected on the three-year-old cohort suggest that up to 18 months of participation may contribute to stronger and longer-lasting outcomes. The three-year-old cohort demonstrated more numerous and sustained outcomes in areas such as cognition, social-emotional development, health factors, and supportive parenting practices.

Interpreting the Results

For decades, the Head Start program has helped to support young children and their families by providing a comprehensive set of educational, health, and social services to help boost the skills necessary to achieve success in school and life. Based on a whole-child model of development, the Head Start program is a research-based approach to cultivating positive child outcomes. However, the most recent findings from the Impact Study (Wave 2) show many similar outcomes between

the treatment and control groups by the time the children enter school. The few significant gains for the treatment group – the children who received Head Start services starting at either age 3 or age 4 – raise a number of critical questions about the program's effectiveness, the experiences of children in the control group, and the experiences of children when they enter school.

The Impact Study prompts a series of important considerations for decision makers charged with developing and improving policies and implementing programs, particularly within the context of what is known about effective, evidence-based program models and practice strategies. Some of these considerations are discussed below.

Head Start's whole-child program model has benefitted children in non-cognitive areas of development that contribute to school success.

The Head Start program model is based on a "whole child" approach to child development – a model the early childhood research community considers to be critical for helping young children develop the full set of skills needed to succeed in school and thrive in life.[19] Though cognitive development and literacy skills are commonly recognized as important components of school readiness, research in early learning underscores the importance of other key factors, including children's physical and socio-emotional health, and social competence.[20] Studies have found that temperament, aggression, and good interpersonal skills are also linked to higher levels of school readiness.[21] Physical factors such as birth weight, immunization status, and nutrition are also important for children to achieve educational success. Positive relationships between young children and the adults in their life is another area associated with higher self-esteem, fewer psychological and behavioral problems and the use of positive coping techniques.[22]

At the end of their participation in Head Start, the three-year-old cohort demonstrated statistically significant gains in all four domains that were evaluated: health, cognition, social-emotional development, and parenting practices.[23] The four-year old cohort demonstrated gains in the cognitive and health domains.[24] Positive outcomes in this set of broad domains suggests that Head Start is achieving results not just on a narrow set of outcomes for young children, but rather on multiple fronts, by embracing the whole-child approach to child development While Wave 2 of the Impact Study shows an evening out of the cognitive gains that appeared after the first year of Head Start for the control group, the gains

that were sustained in the non-cognitive areas by the treatment group should not be ignored.

Starting early makes a difference.

The difference in outcomes for three- and four-year-olds suggests that the number of years of participation in Head Start matters, and that starting Head Start earlier is associated with better outcomes. This finding is supported by what science has discovered about early childhood brain development, which shows that experiences and interactions a child has in the first few years of life are critical for establishing a healthy brain architecture and setting children on the path for life-long learning and success.[25] New research on children's cognitive, social, behavioral, and health outcomes finds disparities, based on factors such as family income, race/ethnicity, home language, and maternal education emerge among children as early as nine months, and grow larger by 24 months of age.[26] Other studies on a nationally representative sample of young children have confirmed that children who participated in a center-based program between age two and three demonstrated the strongest cognitive and developmental outcomes at school entry.[27] These findings suggest that interventions designed to address gaps in learning and development need to begin early in life. Additionally, research demonstrates that changing the trajectory of poor outcomes for low-income children and families, especially the most vulnerable, requires a continuum of high-quality and developmentally appropriate interventions over a sustained period of time.[28]

Children from high risk households, having special needs or living in non-urban settings showed measurable gains as a result of their Head Start participation

In examining the strengths and weaknesses of the Head Start program that emerge as a result of the Impact Study, we note the measurable gains made by certain subgroups of children considered to be especially disadvantaged, including children from high-risk households[29], children with special needs, and children in non-urban settings. These sub-groups demonstrated sustained cognitive gains through the end of first grade.[30] Similarly, black children and children in the lowest academic quartile demonstrated favorable social-emotional gains through the end of kindergarten and first grade, respectively, when compared to the control group.

QUICK FACTS

SPECIFIC ACTIONS IN THE 2010 HEAD START ROAD MAP TO EXCELLENCE INCLUDE:[1] Head Start Roadmap. http://eclkc.ohs.acf.hhs.gov/hslc/Head%20Start%20Program/Director/Head_Start_Roadmap_to_Excellence.pdf

- Holding programs accountable through re-competition for funding and program monitoring;
- Raising expectations for Head Start teachers by increasing the emphasis on their early literacy, math, and science skills;
- Promoting effective learning experiences at home by increasing family engagement efforts; and
- Providing more support to Head Start programs through new national resource centers and improving state training and technical assistance systems.

See the **Office of Head Start** YouTube video that announces the Roadmap to Excellence: http://www.youtube.com/watch?v=KG8lIZzD-qs

See the **National Head Start Association** toolkit for grantees that explains the new re-competition rules: http://www.nhsa.org/files/static_page_files/AAF61C88-1D09-3519-ADC7FDB3A8EFF07A/HeadStartReCompetitionToolkit.pdf

Wave 2 results also underscore the need for rigorous program improvement. Targeted improvements to Head Start are already underway.

In recent years, public policymakers have wisely invested in evaluations to help assess the effectiveness of policies and programs. Program evaluations are an important mechanism for revealing any potential negative implications or effects of a program early on, for documenting when positive outcomes are being achieved, and perhaps even more importantly, for identifying areas for improvements. The Head Start program has already benefited from the Impact Study findings, with many improvements underway.

DHHS has initiated a number of steps to improve the quality and accountability measures of the Head Start program. Unveiled on January 13, the 2010 Head Start Road Map to Excellence describes several specific actions that DHHS has put in place to accelerate efforts to improve school readiness outcomes for children and integrate Head Start into a continuum of high-quality care from birth to age eight. Several of these steps build on revisions made to Head Start as part of the 2007 reauthorization of the program. It is important to note that data collection in Waves 1, 2 and 3 of the Impact Study was completed prior to the implementation of 2007 Head Start reauthorization provisions. Therefore, changes such as higher teacher educational attainment standards, revised monitoring standards, and the re-competition of all Head Start grants, resulting in some poorly performing programs losing their funding, were not yet underway during the Impact Study's data gathering periods.[31]

The characteristics of the elementary schools children attended after Head Start may have important implications for children's ability to sustain gains.

Approximately 80 percent of children in both the treatment and control groups attended public elementary schools with higher levels of poverty and higher proportions of minority students than found in schools nationwide.[32] The math and reading proficiency levels of the children in the study ranged from 55 to 64 percent across the schools the children went on to attend.[33] These schools, deemed to be of "middle quality," may or may not provide the type of environment children need to capitalize on the developmental gains they achieve in Head Start. Wave 3 of the Impact Study follows children through the third grade, and

QUICK FACTS

ADDITIONAL RESOURCES:

The National Forum for Early Childhood Policy and Programs–*Understanding the Head Start Impact Study*: http://developingchild.harvard.edu/initiatives/forum/

Working with the Brookings Institute, Craig Ramey and Sharon Ramey–*Head Start: Strategies to Improve Outcomes for Children Living in Poverty:* http://www.brookings.edu/~/media/Files/rc/reports/2010/1013_investing_in_young_children_haskins/1013_investing_in_young_children_haskins_ch5.pdf

The Department of Education's What Works Clearinghouse–Head Start Evaluation profile: http://ies.ed.gov/ncee/wwc/publications/quickreviews/qrreport.aspx?qrid=153

Ed Ziegler–*Putting the National Head Start Impact Study into a Proper Perspective*: http://www.wsaheadstarteceap.com/documents/NISfollowup11112pdf.pdf

The National Head Start Association–Head Start Impact Study Findings in Context: http://www.nhsa.org/files/static_page_files/E398DB0A-1D09-3519-AD10D7F1E4509DED/HeadStartImpactStudyinContext3.pdf

James Heckman, Nobel Laureate, University of Chicago–Letter to Commission on Fiscal Responsibility and Budget Reform (see pgs. 7-11): http://www.heckmanequation.org/system/files/Federal-Commision_9-1-2010FINAL%20_3_.pdf

involves the collection of detailed information on the school environment, teacher and classroom characteristics, and classroom activities of participants' schools.[34] This information will be important for understanding how school characteristics influence the sustainability of outcomes through third grade.

We already know from research that schools and parents play an important role in supporting young children's transition from early care and education to full-time school.[35,36] For example, parents' positive beliefs about their children's abilities have been a stronger predictor of school performance than children's actual abilities as measured by standardized test scores.[37] Similarly, the support schools offer to children transitioning from preschool programs to school settings plays an important role in sustaining early benefits.[38] Schools that ease the transition to first grade by maintaining high expectations for young students, stress remediation strategies over grade retention, and help children develop positive peer support networks could also help ease the stress encountered in the early elementary years that may detract from early cognitive and developmental gains.[39]

Findings from the Impact Study should be considered alongside other research on Head Start and early childhood.

The Advisory Committee on Head Start Research and Evaluation, a prestigious group of researchers and practitioners who developed the blueprint for the Head Start Impact Study, recommended that the "research findings should be used in combination with the rest of Head Start research in an effort to improve the effectiveness of Head Start programs for children and families."[40] With this in mind, it is important for decision makers to take into account the body of research on Head Start. Highlights from research on Head Start include, but are not limited to:

- **Collaborations with Head Start can improve Child Care and Pre-K Quality.**

  The presence of Head Start in communities over the years has fostered the creation of learning collaboratives that have resulted in quality improvements in a variety of early childhood learning settings even beyond the Head Start environment. Research finds that child care centers that partner with Head Start provide higher quality care than do non-partnering programs, which may be attributed to partnering centers' efforts to meet Head Start's national standards for quality.[41] Results are similar for state-

funded preschool programs that partner with Head Start.[42] Many states are choosing to create collaborations between their state programs and Head Start, to take advantage of Head Start's quality standards, infrastructure, and content.

The provision of comprehensive child and family services is a keystone of Head Start's mission. Child care programs that partnered with Head Start were also more likely to provide comprehensive services to children and families.[43] Pre-k programs that collaborate with Head Start also provided more comprehensive services including developmental and health screenings, social services, and meals than state pre-k classes alone.[44] Head Start collaborations can continue to play an important role in improving the accessibility, quality, and comprehensiveness of state pre-k programs.

- **Head Start improves children's vocabulary, early writing, and early math skills.**

In 1997, Head Start conducted the first wave of the Family and Child Experiences Survey (FACES), a national study of a stratified sample of Head Start programs, centers, classrooms, children, and parents. The FACES study is designed to assess child outcomes and Head Start program quality. FACES differs from the Impact Study in that it does not compare the outcomes of children in Head Start to a control group. So far, five waves of data collection have occurred: in 1997, 2000, 2003, 2006, and 2009. A summary of FACES findings from the first three waves indicates that children showed statistically significant expansions of their vocabulary, early writing, and early math skills at the end of the Head Start year. However, children's skills at the end of Head Start were still lower than national norms.[45]

The FACES study also found that children in Head Start also demonstrated improvements in their social-emotional development, as indicated by an increase in cooperative classroom behavior and a decrease in withdrawn behavior as rated by classroom teachers. By the end of kindergarten, children who participated in Head Start made further progress toward national averages in vocabulary, early writing, and early math scores. In fact, the gains children made in Head Start were predictive of their achievement levels at the end of

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The **Early Childhood Highlights** series is intended to provide a snapshot of the latest research on early childhood released by Child Trends and other leading researchers working on young children's issues. Child Trends is a national nonprofit, nonpartisan research center that studies children at all stages of development. Our mission is to improve outcomes for children by providing research, data, and analysis to the people and institutions whose decisions and actions affect children, including program providers, the policy community, researchers and educators, and the media. Each brief summarizes a particular area of research based on longer academic paper(s). More detailed information and additional resources are available from Child Trends. The Highlights series is supported through funding from the Birth to Five Policy Alliance.

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4301 Connecticut Avenue, NW, Suite 350, Washington, DC 20008

Tel (202) 572-6000 Fax (202) 362-8420

www.childtrends.org

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kindergarten—the larger their Head Start gains, the higher their kindergarten achievement.[46]

Moving Forward

The latest phase of the Head Start Impact Study, released in 2010, found positive outcomes for children from the highest risk households and mixed results for other cohorts of children. Policymaker and early childhood researchers can use these findings to help inform decisions about how to strengthen and improve the program. Although the study, in addition to other important research and evaluation on the Head Start program, is an important tool for evaluating the success of the Head Start program, policymakers may also need to consider other important variables that affect children's long-term academic success. As mentioned above, these include factors such as parental involvement, the quality of schools and teachers from kindergarten through twelfth grade, and other socio-economic factors. The Impact Study should be viewed as an important source of information for identifying what aspects of the program are working and for whom, specifically demonstrating that Head Start improves educational outcomes for certain subgroups of children.

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FOR MORE INFORMATION

Marci McCoy-Roth
Senior Director of Public Policy and Communications
202.572.6102 or
mmccoy-roth@childtrends.org

Table 1: Effects of Head Start on Four-Year-Old Children's Cognitive Abilities, Social-Emotional Skills, Health, and Parent Practices over Time

Four-Year-Olds	End of Head Start Year (Age 4)	End of Kindergarten	End of First Grade
Cognition			
Language and Literacy			
Vocabulary	Positive effect		Positive effect
Letter-word identification	Positive effect		
Spelling	Positive effect		
Cognitive			
Pre-academic skills	Positive effect		
Color identification	Positive effect		
Letter naming	Positive effect		
Social- Emotional Development			
Teachers' reports			
a) Shy and hesitant			Negative effect
b) More problematic student-teacher interactions			Negative effect
Parents' reports			
Children were less withdrawn			Positive effect
Health			
Parents' reports			
Received Dental Care	Positive effect		
Health Insurance Coverage		Positive effect	Positive effect
Excellent or good health status		Positive effect	
Parenting Practices			
No time outs in the last week	Positive effect		

Table 2: Effects of Head Start on Three-Year-Old Children's Cognitive Abilities, Social-Emotional Skills, Health, and Parent Practices over Time

Three-Year-Olds	End of Head Start Year (Age 3)	End of Head Start Year (Age 4)	End of Kindergarten	End of First Grade
Cognition				
Language and literacy				
Vocabulary	Positive effect			
Letter word identification	Positive effect			
Sound and print awareness	Positive effect	Positive effect		
Letter naming	Positive effect			
Pre-academic skills	Positive effect			
Oral comprehension				Positive effect
Math				
Applied Problems	Positive effect			
Teachers' reports				
Math skills			Negative effect	
Social- Emotional Development				
Parents' reports				
Hyperactive behaviors	Positive effect		Positive effect	
Total problem behaviors	Positive effect			
Positive approaches to learning		Positive effect	Positive effect	
Social skills		Positive effect	Positive effect	
Closeness				Positive effect
Positive relationships				Positive effect
Health				
Parents' reports				
Received Dental Care	Positive effect	Positive effect		
Health Insurance Coverage			Positive effect	
Excellent or good health status	Positive effect			
No injury in last month		Negative effect		
Parenting Practices				
Parents' reports				
Spanked child in last week	Positive effect		Positive effect	
Read to child in last week	Positive effect			
Family cultural enrichment scale	Positive effect			
Authoritarian parenting styles		Positive effect		Positive effect
Having used time out in last week			Positive effect	Positive effect

Table 3: Benefits of Head Start for Select Subgroups of Four-Year-Old Children's Cognitive Abilities, Social-Emotional Skills, Health, and Parent Practices over Time

Four-Year-Old Cohort	End of Head Start Year (Age 4)	End of Kindergarten	End of 1st Grade
Children of parents with mild depressive symptoms			
Cognition			
Language and literacy	Positive effects		Positive effects
Math	Positive effects		Positive effects
Dual Language Learners			
Health benefits			
Health insurance coverage	Positive effect	Positive effect	
Receipt of dental care			Positive effect
Children in the lowest academic quartile at baseline			
Social-emotional			
Parents' relationship with child	Positive effect		
Teachers' reports:			
a) Teacher's relationship with student		Positive effect	Positive effect
b) Oppositional behavior		Positive effect	Positive effect
c) Peer interaction		Positive effect	
d) conflict		Positive effect	
Black children			
Social-emotional			
Inattentiveness		Positive effect	
Structured learning		Positive effect	
Peer or teacher interactions		Positive effect	
Cognition			
Spelling	Positive effect	Positive effect	
Basic reading skills	Positive effect		

Table 4: Benefits of Head Start for Select Subgroups of Three-Year-Old Children's Cognitive Abilities, Social-Emotional Skills, Health, and Parent Practices over Time

Three-Year-Old Cohort	End of Head Start Year (Age 3)	End of Kindergarten	End of 1st Grade
Children with special needs			
Math			Positive effect on four measures.
Social-emotional			
Inattention-hyperactivity			Positive effect
Problems with structured learning			Positive effect
Conflicts with teachers			Positive effect
Positive teacher relationships			Positive effect
Children of parents with no depressive symptoms			
Cognition			
Language and literacy	Positive effect	Positive effect	Positive effect
Math	Positive effect		Positive effect
Social-emotional	Positive effect	Positive effect	Positive effect
Parenting	Positive effect	Positive effect	Positive effect
Children from high-risk households			
Cognition			
Language and literacy	Positive effect	Positive effect	Positive effect on five measures.
Children in non-urban settings			
Cognition			
Language and literacy	Positive effect on four measures. (end of age 3 year)	Positive effects on one measure.	Positive effects on six measures.
Math	Positive effect (end of age 4 year)		Positive effect
Social-emotional	Positive effect		

Endnotes

[1] http://www.acf.hhs.gov/programs/ohs/about/index.html#mission

[2] http://www.acf.hhs.gov/programs/ohs/about/fy2008.html

[3] http://eclkc.ohs.acf.hhs.gov/hslc/About%20Head%20Start

[4] http://eclkc.ohs.acf.hhs.gov/hslc/About%20Head%20Start/fHeadStartProgr.htm

[5] http://nieer.org/yearbook/pdf/yearbook.pdf.

[6] U.S. Department of Health and Human Services. (2010). Head Start Impact Study: Final Report, January 2010. Washington, DC: Administration for Children and Families, Office of Planning, Research and Evaluation. Page i. Retrieved from http://www.acf.hhs.gov/programs/opre/hs/impact_study.

[7] U.S. Department of Health and Human Services. (2010). Head Start Impact Study, Executive Summary, p. ii.

[8] U.S. Department of Health and Human Services. (2010). Head Start Impact Study, Executive Summary, p. ii.

[9] U.S. Department of Health and Human Services. (2010). Head Start Impact Study, Executive Summary, p. vi.

[10] U.S. Department of Health and Human Services. (2010). Head Start Impact Study, Final Report, p. 2-7.

[11] U.S. Department of Health and Human Services. (2010). Head Start Impact Study, Final Report, p. 3-9 (four-year-old cohort); p. 3-11 (three-year-old cohort).

[12] U.S. Department of Health and Human Services. (2010). Head Start Impact Study, Executive Summary, p. v.

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[16] U.S. Department of Health and Human Services. (2010). Head Start Impact Study, Executive Summary, p. xxiv.

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[22] Ibid.

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[29] High-risk households were defined by the Head Start Impact Study. A household risk index was created from the baseline parent interview and includes the following indicators: (1) receipt of TANF or Food Stamps, (2) neither parent in household has high school diploma or a GED, (3) neither parent in household is employed or in school, (4) the child's biological mother/caregiver is a single parent, and (5) the child's biological mother was age 19 or younger when child was born. A child's family score could range from 0 to 5 points. Three categories were created: low/no risk (0-2 risk factors), moderate risk (3 risk factors), and high risk (4-5 risk factors).

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[44] Gilliam, p. 43.

[45] http://www.acf.hhs.gov/programs/opre/hs/faces/reports/faces_findings_06/faces_findings.pdf

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[47] U.S. Department of Health and Human Services. (2010). Head Start Impact Study, Final Report, p. 3-9, 3-11.