



Research Questions on Head Start Effectiveness

Given its long history and large scale, Head Start is one of the most studied social programs in the United States. The following table lists the research questions associated with a selection of recent Head Start data sources and studies with rigorous descriptive and evaluation designs. These studies represent the largest and most well-known Head Start studies or surveys (Program Information Report, Family and Children Experiences Survey and Head Start Impact Study) as well as smaller-scale evaluations of program enhancements within the Head Start program (Head Start Research-Based, Developmentally Informed (REDI) project, Head Start Hip Hop to Health Jr., I Am Moving/I Am Learning, and Head Start Classroom-based Approaches and Resources for Emotion and Social (CARES) skill promotion Demonstration).¹ When reviewing these evaluation studies, as well as more descriptive Head Start data sources, it is important to assess what research questions have been asked, or should be asked, about Head Start. The research questions asked about Head Start performance and effectiveness determine the evidence base that policymakers use to assess whether Head Start is effective at achieving its goals. Although the research questions below cover many topics and areas of interest, there still remain **important equity-focused questions for Head Start research to ask and answer**.

Data Source or Study	Research Questions
<p>Program Information Report (PIR)</p>	<p>The PIR is an annual census of all Head Start programs required by the Office of Head Start (OHS). PIR data has been compiled for use by a broad array of stakeholders, including the Head Start community, their partners, Congress, and the general public.² However, since the primary purpose of the PIR survey is to provide administrative data on Head Start, it is designed to provide descriptive information about programs and children served rather than to answer a specific set of research questions. In addition, PIR data is reported at the Head Start program level and therefore does not provide information for individual centers. Nevertheless, it is a valuable source of descriptive information for researchers, who may use PIR data to investigate questions related to Head Start population composition, staff qualifications, and service delivery at different geographic levels. For example, PIR data can shed light on questions about program quality or capacity such as:</p> <ul style="list-style-type: none"> • What is the racial/ethnic composition of children participating in different types of Head Start programs? • What is the structural quality of Head Start programs? What is the teacher-child classroom ratio and how many Head Start

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	<p>teachers have a post-secondary degree or credential?</p> <ul style="list-style-type: none"> • How has the composition of Head Start participants or Head Start structural quality changed over time? <p>Notably, the PIR survey collects few measures of child school readiness, so this data source is not designed to answer questions about the effects of Head Start on child outcomes.</p>
<p>Family and Child Experiences Survey (FACES)</p>	<p>FACES is a nationally representative survey of Head Start programs, centers, classrooms, families and children that occurs every three years. In the most recent cohort, FACES 2009, the study surveyed 3,349 three- and four-year olds at baseline. FACES follows Head Start children through the end of kindergarten and collects a wide range of information including child school readiness outcomes, family characteristics and home environments, Head Start classroom quality, teacher characteristics and qualifications, and program management. The survey is designed to answer a broad array of research questions, including those that explore 1) characteristics of children and families entering Head Start, 2) characteristics of Head Start programs, classrooms and teachers, and 3) relationships across program, classroom, and teacher characteristics and child and family outcomes. For example, FACES data can be used to investigate the following issues related to Head Start quality, effectiveness, and school readiness:³</p> <p>School Readiness-Related Questions:</p> <ul style="list-style-type: none"> • What are the cognitive and social skills of Head Start children at the beginning and end of their first year in the program? Has Head Start children’s school readiness improved over time? • Do the gains in cognitive and social skills that Head Start children achieve carry over into kindergarten? Do larger gains (or greater declines in problem behavior) translate into higher achievement at the end of kindergarten? • Are any Head Start program, classroom or teacher characteristics associated with greater or lesser gains in participating children’s cognitive or social skills? • What developmental progress is made by children who are Dual Language Learners (DLLs) in Head Start? <p>Head Start Quality/Effectiveness Questions:</p> <ul style="list-style-type: none"> • What is the observed quality of Head Start classrooms as early learning environments? How has quality changed over time? What factors (as measured by FACES) account for variation in classroom quality?

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- What professional development activities are available for education staff and does teacher participation in these activities affect classroom quality?
- What is the relationship between classroom quality and children’s outcomes and developmental gains?
- What are the qualifications of and languages used by staff serving DLL children in Head Start?

Notably, FACES does not collect information on Native American/Alaska Native Head Start programs or Migrant and Seasonal Head Start programs, so FACES data cannot be used to research issues related to these unique Head Start populations. Additionally, because FACES does not include a comparison group or a randomly assigned control group of children who did not receive Head Start services, the data can only be used to investigate associations, and cannot establish causality or be compared to children who are exposed to other preschool programs.

Head Start Impact Study (HSIS)

Authorized by the Head Start Act of 1998 and begun in 2002, the Head Start Impact Study was a randomized controlled trial that assessed the impact of an offer of Head Start services (treatment) compared to no offer of Head Start Services (control). HSIS followed 4,667 randomly assigned three- and four-year olds through the end of third grade and collected data on child school readiness outcomes, family and home environments, Head Start classroom quality and teacher qualifications, and kindergarten learning settings. HSIS was designed to be nationally representative of Head Start programs and newly entering Head Start participants, and to allow for an assessment of the *causal* impact of Head Start services on child school readiness outcomes and learning environments. In particular, HSIS investigated the following research questions:⁴

- **What is the direct impact of an offer of Head Start on children compared to no offer of Head Start** (including cognitive development, social-emotional development, and health)?
- **What is the impact of Head Start on parenting practices and parental support for school readiness** (including parenting styles, safety practices, parent-child activities, and parent communication or involvement with school)?
- **Under what circumstances did Head Start achieve the greatest impact and for whom?**
 - Is there variation in impacts by child characteristics (including a child’s age, primary language, special needs status and

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Head Start Impact Study (HSIS), continued

- pre-academic skills)?
- Is there variation in impacts by parent and household characteristics (including parents' race/ethnicity, level of depressive symptoms, as well as the level of household risk)?
 - Is there variation in impacts by community characteristics (including whether a child's family lives in an urban area or not, and the level of crime)?
 - Is there variation in impacts by quality of the Head Start center (including teacher qualifications, classroom environment, and the frequency of academic activities)?
- **How did Head Start impact children's educational experiences?** Specifically, what impact did Head Start have on the educational settings and services that children received during preschool, kindergarten, and early elementary school?

A federally-sponsored secondary analysis of HSIS data, called Secondary Analysis of Variation in Impacts of Head Start Center, is currently re-analyzing the HSIS data to investigate the following question:

- ***“How are features of Head Start centers associated with variation in program impacts on key child outcomes with respect to cognitive functioning, social-emotional skills, and health status?”***⁵

This secondary analysis digs deeper into the average impact findings of the initial HSIS report by considering how variation in the implementation of early childhood care experienced by treatment and control group children may have affected their school readiness outcomes.

Notably, HSIS did not collect information on Native American/Alaska Native Head Start programs or Migrant and Seasonal Head Start programs, so HSIS data cannot be used to research impacts for these unique Head Start populations.

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Head Start Research-Based, Developmentally Informed (REDI) Intervention

The Head Start REDI program was designed to promote children’s social-emotional, language and emergent literacy skills by integrating a research-based enrichment dual curriculum focused on literacy and social-emotional skills and professional development in Head Start programs that used either High/Scope curriculum or Creative Curriculum. The intervention used the [Preschool PATHS curriculum](#) to develop social-emotional skills through specific curriculum-based lessons and weekly activities such as role play and social-emotional behavior modeling. A collection of other curriculum materials were used to promote child literacy through activities such as interactive reading, sound games, and letter-learning. The professional development component focused on training teachers to use the enrichment curriculum so as to ensure implementation fidelity. To evaluate the program’s effectiveness, in 2002 the REDI project conducted a randomized controlled trial of 356 four-year old children in 44 Head Start classrooms in Pennsylvania. Children were assessed after receiving one year of either the REDI intervention or “usual” Head Start services. The impact study contained an intervention implementation component which assessed the fidelity and quality of program implementation. Research questions included:

- **Does the REDI intervention model enhance four-year old Head Start participants’ school readiness?**
School readiness factors assessed include social-emotional competencies and language and early literacy skills. Targeted skill acquisition domains included language development (e.g. vocabulary, syntax), emergent literacy (e.g. phonological awareness, print knowledge) and social-emotional skills (e.g. emotional understanding, social problem solving). Researchers also assessed whether the REDI model improved learning engagement and socially-competent behavior, reduced aggressive behaviors and improved later school adjustment.⁶
- **Do other factors mediate or moderate the intervention effects on child outcomes?**
Researchers assessed whether children’s initial executive functioning skills moderated their response to the Head Start REDI intervention. They also assessed whether the REDI intervention improved children’s executive functioning skills, and if these improvements in turn mediated child cognitive or social-emotional outcomes.⁷
- **How did REDI implementation impact child outcomes and what factors were associated with REDI implementation fidelity?**



	<p>Researchers assessed the impact of variation in implementation of the curriculum on school readiness outcomes in the areas of social-emotional development and language and literacy skills.⁸ Teacher-driven factors such as years of education, emotional exhaustion, personal resources, perceptions of the work environment, and openness to consultation were assessed to determine whether they impacted REDI implementation fidelity. Note that teachers were evaluated on a monthly basis over the course of the intervention and given fidelity ratings.⁹</p> <ul style="list-style-type: none"> One year later, how did kindergarten context impact REDI intervention effects? What were the REDI intervention effects at the end of kindergarten? How did the kindergarten context of children who participated in the REDI project affect the sustainability of REDI intervention effects; in other words, did different kindergarten experiences allow the control group to catch-up in social-emotional development and language and literacy skills to the REDI intervention group? Which specific effects were moderated by kindergarten context, and how did the quality of kindergarten contexts influence this moderation?¹⁰ <p>Note that the REDI intervention compared a program enhancement to usual program services; therefore it is not an assessment of Head Start impacts (which would entail a treatment group exposed to Head Start compared to a control group that was not). Additionally, the study was not nationally representative, since all children in the study were located in Pennsylvania.</p>
<p>Head Start Hip-Hop to Health Jr. Intervention</p>	<p>Hip-Hop to Health Jr. was a randomized controlled trial between 1999 and 2003 designed to assess the impact of “a culturally proficient dietary/physical activity intervention on changes in body mass index” in Head Start children.¹¹ Children who received the Hip Hop to Health treatment participated in a 14-week healthy eating and exercise curriculum that was complemented by related weekly parent newsletters and homework. Control group children received a 14-week general health intervention that did not cover diet or physical activities, with a corresponding weekly parent newsletter. The intervention was conducted in two separate cohorts, the first consisted of 12 predominately black Head Start centers and the second consisted of 12 predominately Latino Head Start centers.¹² Between both cohorts, a total of 824 children were assessed at baseline. The main research question of this study was:</p> <ul style="list-style-type: none"> Does the Hip-Hop to Health Jr. program change African American and Latino Head Start children’s trajectory toward

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	<p>obesity?</p> <p>Researchers assessed changes in children’s Body Mass Index (BMI) as the primary child outcome of interest. They also assessed dietary habits including the percent of total calorie intake from fat and saturated fat and grams per 1000 kcal of fiber, frequency and intensity of weekly physical activity, and hours per day of television viewing.</p> <p>Note that the Hip Hop to Health Jr. intervention assessed the impact of a specialized diet and exercise curriculum on Head Start children, rather than the impact of Head Start itself. Additionally, the study was not nationally representative, since the participants were all minority children from Chicago, IL.</p>
<p>I Am Moving I Am Learning (IM/IL) – Head Start Implementation Evaluation Project</p>	<p>I Am Moving I Am Learning (IM/IL) is an obesity prevention approach intended to increase and improve Head Start children’s daily physical activity and healthy food choices. The initiative is designed to be implemented by training Head Start educators on how to integrate obesity prevention activities into their existing practices. In 2006, 53 Head Start programs from Region III participated in a two and a half day ‘training of trainers’ event to learn how to incorporate IM/IL enhancements into their programs. The IM/IL implementation evaluation was a two-year study of the implementation of IM/IL enhancements in Region III, designed to answer the following main research question:¹³</p> <p>To what degree did Head Start grantees who received IM/IL training implement the IM/IL approach in their programs?</p> <p>Researchers used five sub-questions to guide their evaluation of the implementation of the IM/IL program:</p> <ul style="list-style-type: none"> • “What is the theory of change employed by the Head Start programs using IM/IL?” • How do programs translate the training-of-trainers (TOT) model into the implementation of IM/IL? • What determinants are associated with program implementation of activities in the classroom and/or with parents and families? • What are the requirements for sustainability of IM/IL throughout the year? • What challenges and/or supports the implementation of IM/IL in Head Start programs?” <p>Note that this study was an implementation evaluation of the IM/IL initiative and did not evaluate IM/IL impacts on child</p>

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	outcomes.
<p>Head Start Classroom-based Approaches and Resources for Emotion and Social skill promotion (CARES) Demonstration</p>	<p>The Head Start Classroom-based Approaches and Resources for Emotion and Social skill promotion (CARES) demonstration is an ongoing large national evaluation of three different types of social-emotional program enhancements in Head Start. The study randomly assigned 104 Head Start centers to one of the three social emotional curricula or to a “usual Head Start” comparison group. In total, 3,927 children participated at baseline in 2009. The impact study is complemented by an implementation study of Head Start CARES, including an examination of the use of teacher coaching to fully support the delivery of program models.¹⁴</p> <ul style="list-style-type: none"> <p>What are the effects of different social-emotional program enhancements implemented through CARES compared to current practices within Head Start settings?</p> <p>Researchers will assess the impact of the following three program enhancements on various social-emotional child outcomes: Incredible Years Teacher Classroom Management Program, Preschool PATHS (Promoting Alternative Strategies) and Tools of the Mind.</p> <p>How do the effects of CARES enhancements vary by characteristics of Head Start children?</p> <p>Researchers will assess whether the CARE enhancements differentially impact Head Start children with different characteristics.</p> <p>What characteristics and features of Head Start settings are associated with successful implementation of CARES enhancements?</p> <p>Researchers will assess whether particular aspects of Head Start settings are advantageous or detrimental for CARES enhancement implementation.¹⁵</p> <p>This project has completed its second year of implementation and a report on impact results is expected in 2014. Study children will continue to be tracked through the end of third grade.¹⁶ Note that the CARES demonstration assesses the impact of specialized social-emotional program enhancements on Head Start children, rather than the impact of Head Start itself. Also, the</p>

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focus of the enhancement does not include academic outcomes.

Alongside Head Start CARES, a related project, Migrant and Seasonal Head Start (MSHS) CARES, is being conducted to meet the unique needs of MSHS children and to better understand how to tailor social-emotional programming into MSHS settings. The MSHS CARES study will produce an implementation report to assess the successes and challenges of adapting CARES social-emotional program enhancements in MSHS programs.¹⁷

Sources & notes:

- ¹ Note that this table presents a selection of evaluations of program enhancements in Head Start, but is not an exhaustive list of Head Start program enhancement studies.
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- ⁴ Puma, M., Bell, S., Cook, R., Heid, C., Broene, P., Jenkins, F., ..., Downer, J. (2012). *Third grade follow-up to the Head Start Impact Study final report*. (OPRE Report 2012-45). Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services; Puma, M., Bell, S., Cook, R., Heid, C. & Lopez, M. (2005). *Head Start Impact Study: First year findings*. Washington, DC: Administration for Children and Families, U.S. Department of Health and Human Services.
- ⁵ Secondary Analysis of Variation in Impacts of Head Start center. (n.d.). Institute of Human Development and Social Change, Steinhardt School of Culture, Education, and Human Development, New York University. Retrieved from <http://steinhardt.nyu.edu/ihdsc/research/headstart/>.
- ⁶ Bierman, K.L., Domitrovich, C.E., Nix, R.L., Gest, S.D., Welsh, J.A., Greenberg, M.T.,..., Gill, S. (2008). Promoting academic and social-emotional school readiness: The Head Start REDI program. *Child Development*, 79(6), 1802-1817.
- ⁷ Bierman, K.L., Nix, R.L., Greenberg, M.T., Blair, C. & Domitrovich, C.E. (2008). Executive functions and school readiness intervention: Impact, moderation, and mediation in the Head Start REDI Program. *Development and Psychopathology*, 20, 821-843.
- ⁸ Domitrovich, C.E., Gest, S.D., Jones, J., Gill, S., & Sanford DeRousie, R. (2010). Implementation Quality: Lessons learned in the context of the Head Start REDI trial. *Early Childhood Research Quarterly*, 25(3), 284-298.
- ⁹ Domitrovich, C.E., Gest, S.D., Gill, S., Jones, D. & Sanford DeRousie, R. (2009). Individual factors associated with professional development training outcomes of the Head Start REDI Program. *Early Education and Development*, 20(3), 402-430.
- ¹⁰ Bierman, K.L., Nix, R.L., Heinrichs, B.S., Domitrovich, C.E., Gest, S.D., Welsh, J.A., & Gill, S. (2013). Effects of Head Start REDI on children's outcomes 1 year later in different kindergarten contexts. *Child Development*, doi: 10.1111/cdev.12117.
- ¹¹ Fitzgibbon, M. L., Stolley, M. R., Schiffer, L., VanHorn, L., KauferChristoffel, K. & Dyer, A. R. (2005). Two-year follow-up results for Hip-Hop to Health Jr.: A randomized controlled trial overweight prevention in preschool minority children. *Journal of Pediatrics*, 145(5), 618-625.
- ¹² Fitzgibbon, M. L., Stolley, M. R., Schiffer, L., VanHorn, L., KauferChristoffel, K. & Dyer, A. R. (2006). Hip-Hop to Health Jr. for Latino preschool children. *Obesity*, 14(9) 1616-1625.
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- ¹⁴ Lloyd, C.M. & Modlin, E.L. (2012). *Coaching as a key component in teachers' professional development: Improving classroom practices in Head Start settings* (OPRE Report 2012-4). Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- ¹⁵ Fishman, M. (2009). *Classroom-based approaches and resources for emotion and social skill promotion: Supporting children's social and emotional development in Migrant and Seasonal Head Start classrooms*. Retrieved from http://www.headstartresourcecenter.org/assets/files/MSHS_CARES_Presentation.pdf.
- ¹⁶ MDRC. (n.d.) *Head Start CARES project: Design, sites, and data sources*. Retrieved from http://www.mdrc.org/project/head-start-cares-project#design_site_data_sources.¹⁴ Fishman, (2009), op. cit.
- ¹⁷ Fishman, M. (2009), op.cit.