

# Online Appendix: Evidence on Head Start Effectiveness

Table A1: Summary of Key Studies on Head Start Effectiveness

<i>Panel A. Quasi-Experimental Studies</i>			
Study	Research Design	Context & Time Frame	Findings
Bailey, Sun, & Timpe (2021), “Prep School for Poor Kids: The Long-Run Impacts of Head Start on Human Capital and Economic Self-Sufficiency,” <i>AER</i>	Difference-in-differences	Geographic rollout, 1965–1980	Greater educational attainment and economic self-sufficiency in adulthood
Barr & Gibbs (2022), “Breaking the Cycle? Intergenerational Effects of an Anti-Poverty Program in Early Childhood,” <i>JPE</i>	Difference-in-differences	Geographic rollout, 1965–1970	Improved long-run outcomes for children of those exposed to Head Start, capturing intergenerational benefits
Bauer & Schanzenbach (2016), “The Long-Term Impact of the Head Start Program,” <i>Hamilton Project economic analysis</i>	Family fixed effects	CNLSY data, 1974–1994	Improvements in educational attainment and greater use of positive parenting practices in adulthood
Carneiro & Ginja (2014), “Long-Term Impacts of Compensatory Preschool on Health and Behavior,” <i>AEJ: Policy</i>	Regression discontinuity	CNLSY data, 1981–2000	Reductions in behavioral and health problems in adolescence and lower likelihood of criminal engagement and idleness in young adulthood, for males

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Study	Research Design	Context & Time Frame	Findings
Deming (2009), “Early Childhood Intervention and Life-Cycle Skill Development: Evidence from Head Start,” <i>AEJ: Applied</i>	Family fixed effects	CNLSY data, 1984–1990	Long-term impact of 0.23 SD on a summary index of outcomes in adolescence and early adulthood despite “fadeout” of test score effects
Garces, Thomas, & Currie (2002), “Longer-Term Effects of Head Start,” <i>AER</i>	Family fixed effects	PSID data, 1969–1981	Increased educational attainment and suggestive evidence of higher earnings; reductions in criminal engagement among Black participants; positive spillovers from older to younger siblings
Johnson & Jackson (2019), “Reducing Inequality through Dynamic Complementarity,” <i>AEJ: Policy</i>	Difference-in-differences & IV	PSID data, 1965–1980	Greater educational attainment, higher earnings, and reductions in poverty and incarceration; Head Start benefits were larger when followed by better-funded K-12 schooling
Kose (2023), “Public Investments in Early Childhood Education and Academic Performance: Evidence from Head Start in Texas,” <i>JHR</i>	Difference-in-differences	Federal funding expansions, TX administrative data, 1988–1994	Improved academic achievement, particularly for low-income Hispanic students, and greater language proficiency and lower special education identification among Hispanic students
Ludwig & Miller (2007), “Does Head Start Improve Children’s Life Chances? Evidence from a Regression Discontinuity Design,” <i>QJE</i>	Regression discontinuity	Grant-writing assistance at program introduction, 1965–1980	Reductions in child mortality and suggestive evidence of increased educational attainment
Miller, Shenhav, & Grosz (2023), “Selection into Identification in Fixed Effects Models,” <i>JHR</i>	Family fixed effects	PSID and CNLSY data, 1965–1990	Selection into the identifying variation in family fixed effects designs generates estimates of Head Start impact that are larger than “reweighted-on-observables” estimates intended to recover average treatment effects

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Study	Research Design	Context & Time Frame	Findings
Pages et al. (2020), “Elusive Longer-Run Impacts of Head Start: Replications Within and Across Cohorts,” <i>EEPA</i>	Family fixed effects	CNLSY data, 1984–2000	Extending timeframe of Deming (2009) yields mixed evidence on long-term impact with null effects overall and mostly negative effects in more recent birth cohorts
Pihl (2022), “Head Start and Mothers’ Work: Free Child Care or Something More?,” <i>Labour Econ</i>	Regression discontinuity	Census data, 1970	Increased employment in the short run for non-white mothers and decreased employment for single mothers, with persistent declines (10 yrs. later) in employment for non-white and single mothers.
Thompson (2018), “Head Start’s Long-Run Impact,” <i>JHR</i>	Difference-in-differences	NLSY79, 1966–1970	Increased earnings, additional years of schooling, and lower likelihood of a health limitation in adulthood.
Wikle & Wilson (2023), “Access to Head Start and Maternal Labor Supply: Experimental and Quasi-Experimental Evidence,” <i>JOLE</i>	Difference-in-differences	CPS, 1990s funding expansions	Led to increased short-run employment and earnings among single mothers.
<b><i>Panel B. Head Start Impact Study (HSIS)</i></b>			
Bitler, Hoynes, & Domina (2014), “Experimental Evidence on Distributional Effects of Head Start,” <i>NBER working paper</i>	RCT re-analysis	HSIS, 2000s	Gains concentrated at the bottom of the skills distribution, and cognitive gains persist for Spanish speakers while fading out for the full population.

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Study	Research Design	Context & Time Frame	Findings
Bloom & Weiland (2015), “Quantifying Variation in Head Start Effects on Young Children’s Cognitive and Socio-Emotional Skills Using Data from the National Head Start Impact Study,” <i>MDRC working paper</i>	RCT re-analysis	HSIS, 2000s	Considerable cross-site variation in program effectiveness, relative to local alternatives, and pronounced positive effects for certain subgroups, including dual language learners and Spanish-speaking children with low pretest scores.
Feller et al. (2016), “Compared to What? Variation in the Impacts of Early Childhood Education by Alternative Care Type,” <i>Annals Appl Stat</i>	RCT re-analysis	HSIS, 2000s	Positive effects on vocabulary for those who would otherwise be in home-based care and no discernable effects on vocabulary for those who would be in other center-based care.
Gelber & Isen (2013), “Children’s Schooling and Parents’ Behavior: Evidence from the Head Start Impact Study,” <i>JPubE</i>	Multi-site RCT	HSIS, 2000s	Sizable increases in parents’ involvement, including time spent reading, math activities, and days children spent with non-resident fathers, persisting after the Head Start period.
Kline & Walters (2016), “Evaluating Public Programs with Close Substitutes: The Case of Head Start,” <i>QJE</i>	RCT re-analysis	HSIS, 2000s	Program produces larger skill benefits for children who would otherwise not participate in preschool and for those who are less likely to enroll in Head Start.
Morris et al. (2018), “New Findings on Impact Variation from the HSIS: Informing the Scale-Up of Early Childhood Programs,” <i>AERA Open</i>	RCT re-analysis	HSIS, 2000s	Average effects conceal important variation in effectiveness across sites and by children’s characteristics and counterfactual experiences.
Puma et al. (2010), “Head Start Impact Study Final Report,” <i>US Dept of HHS report</i>	Multi-site RCT	HSIS, 2000s	Positive cognitive, social-emotional, and health effects during the program year largely evaporated by kindergarten and end of 1st grade.

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Study	Research Design	Context & Time Frame	Findings
Puma et al. (2012), “Third Grade Follow-up to the Head Start Impact Study,” <i>US Dept of HHS report</i>	Multi-site RCT	HSIS, 2000s	Little to no difference on a variety of elementary school outcomes measured in third grade between children with program access and those in the control group .
Sabol & Chase-Lansdale (2015), “The Influence of Low-Income Children’s Participation in Head Start on Their Parents’ Education and Employment,” <i>JPAM</i>	Multi-site RCT	HSIS, 2000s	Increases in parental education, particularly for African American parents and those with at least some college at program outset.
Schiman (2021), “Experimental Evidence of the Effect of Head Start on Mothers’ Labor Supply and Human Capital Investments,” <i>REHO</i>	Multi-site RCT	HSIS, 2000s	Increases in use of non-parental care, but no overall effect on mothers’ likelihood of employment; mothers of younger children at program entry increase labor supply and enrollment at school.
Walters (2015), “Inputs in the Production of Early Childhood Human Capital: Evidence from Head Start,” <i>AEJ: Applied</i>	RCT re-analysis	HSIS, 2000s	More cross-center variation than typical estimates of teacher and school effectiveness, with those offering full-day programming and home visitation more effective and those drawing children from other center-based care less effective.
Wikle & Wilson (2023), “Access to Head Start and Maternal Labor Supply: Experimental and Quasi-Experimental Evidence,” <i>JOLE</i>	Multi-site RCT	HSIS, 2000s	Greater maternal labor force participation, with largest effects among never-married mothers, mothers with no younger children, and for those exposed to centers with full-day programs.