



Society for Research in Child Development

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Placing the First-Year Findings of the National Head Start Impact Study in Context¹

This document provides a summary of the first-year findings of the Head Start Impact Study. It also aims to help policy makers, practitioners, and the interested public interpret the Head Start Impact Study's first-year findings by placing the results to date in the context of other research on children's development.² The overview presented here applies to data collected after only 9 months of Head Start. Further information on the points below must await future reports.

Statistically significant effects of Head Start were consistently positive.

Evaluators tested 30 outcomes for each of the two groups targeted (3-year-olds and 4-year-olds who had entered Head Start that year). For each of the groups, the number of statistically significant effects found exceeded what one would expect by chance.³ When statistically significant effects occurred, they were without exception positive (increases in "good" outcomes, decreases in "bad" outcomes). These effects included: better skills in aspects of pre-reading and pre-writing, more access to dental care, better overall physical health, less hyperactivity, fewer behavior problems, and better parenting (more frequent reading to children and lower rates of corporal punishment). No impact of Head Start was found for either of the two age groups on oral comprehension, phonological awareness, early math, aggressive or withdrawn behaviors, social skills, or parental safety practices.

The positive effects of 9 months of Head Start were seen in multiple aspects of child development (cognitive, social, emotional and health) as well as in parenting practices.

The positive effects found did not cluster within a single aspect of children's development, but occurred across several areas. Research in child development suggests that when positive effects of early childhood programs accumulate across important health and developmental areas, success in the longer term is also more likely.⁴

Head Start narrowed the gap in specific aspects of pre-reading ability between children in poverty and U.S. children as a whole by 45%.

Head Start reduced, by almost half, the achievement gap in pre-reading skills between Head Start children and the national average for all 3- and 4-year olds.⁵ The specific skill showing this effect was children's ability to recognize letters. Few 9-month educational interventions have narrowed the gap between low-income children and U.S. children as a whole to this degree.⁶

The positive effects of Head Start on children are comparable to or larger than those of other large-scale social programs.

The effects of 9 months of Head Start on children's pre-reading and pre-writing skills are comparable to or larger than the effects of child care quality, welfare reform, wage-supplement programs, or reductions in classroom size on similar outcomes.⁷ In addition, unlike these other social programs, Head Start improved children's health.⁸ It is particularly impressive that Head Start produced these effects when many of the children in the study who were randomly assigned to the no-Head-Start group nevertheless were enrolled in child care centers.⁹

It is too early to draw conclusions about differences in effects of Head Start on three- vs. four-year-olds.

The evaluation showed a larger number of statistically significant positive effects on 3-year-olds than 4-year-olds. This may be for a variety of reasons. For example, demographic differences between these two groups in this study's sample may be responsible for the differences in effects.¹⁰ From the data in the report, it is not possible to determine why this difference occurred; future reports may shed light on this issue. Future reports will also look at children who started Head Start as 3-year-olds and remained in the program for two years.

Head Start's Performance Standards across multiple areas may explain the range of positive effects.

The Head Start Performance Standards require comprehensive services, across education, child health and nutrition, mental health and social services, and parent involvement.¹¹ For example, Head Start staff must assist parents in accessing: regular health care, as well as immunizations; well child care; screenings for health, vision, hearing, and behavioral problems; and regular preventive dental care. Parents become involved not only in classroom observation, but also in governance of the program. As the current report shows, classroom quality in Head Start is substantially better than that in other preschool and child care settings for low-income children.¹² Head Start teachers in the study were also more likely than non-Head Start center teachers to report using a curriculum.¹³ Future work will look more specifically at the bases of these findings.

¹ Prepared for the Society for Research in Child Development by Hirokazu Yoshikawa, in consultation with J. Lawrence Aber, Joshua Aronson, Thomas Cook, Greg J. Duncan, Walter Gilliam, Robert Granger, Marilou Hyson, John Love, Mary Ann McCabe, Kathleen McCartney, Pamela A. Morris, Deborah A. Phillips, C. Cybele Raver, Sean Reardon, and Martha Zaslow.

² U.S. Department of Health and Human Services, Administration for Children and Families (2005). *Head Start Impact Study: First year findings*. Washington, DC: Author.

³ The evaluators used the widely accepted .05 level of statistical significance in their analyses. Using this standard, one would expect 1.5 effects to be significant by chance in each of the two age groups. The evaluators report 14 significant effects among the 3-year-olds, and 6 significant effects among the 4-year-olds, above chance levels

⁴ Shonkoff, J., & Phillips, D.A. (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.

⁵ The magnitude of reduction was 47% for the 3-year-olds and 45% for the 4-year-olds. Smaller reductions in gaps were found in pre-writing skills (28%) and vocabulary skills (8%).

⁶ Johnson, D. W., Johnson, R. T., & Stanne, M. B. (2000). Cooperative learning methods: A meta-analysis. Retrieved July, 2000 from the World Wide Web: <http://www.clcrc.com/pages/cl-methods.html>. Slavin, R. E., & Madden, N.A. (2001). *Success for all: Research and reform in elementary education*. Mahwah, NJ: Erlbaum.

⁷ The National Head Start Impact Study results show that Head Start has small to moderate positive impacts on pre-reading, pre-writing for both 3- and 4-year-olds, at the end of the Head Start year. Positive effect sizes found to be statistically significant ranged from .10 to .24 for standardized assessments. In addition, Head Start had small positive impacts on vocabulary skills for 3-year-olds (effect sizes in the .10 to .12 range). *Child care quality*: In the most comprehensive national study of child care quality conducted to date, the NICHD Study of Early Child Care and Youth Development, researchers estimated that a 1-standard deviation increase in child care quality, sustained across 24 to 54 months of age, was associated with a small increase in the Bayley Mental Development Index (effect size .04 to .08). NICHD Early Child Care Research Network and Duncan, G.J. (2003).

Modeling the impacts of child care quality on children's preschool cognitive development. *Child Development*, 74, 1454-1475. *Welfare reform*. In a non-experimental analysis conducted in three U.S. cities following passage of the federal welfare reform legislation in 1996, Chase-Lansdale and colleagues found no evidence of effects of welfare reform on the cognitive or socio-emotional development of preschoolers. Chase-Lansdale, P.L., Moffitt, R.A., Lohman, B.J., Cherlin, A.J., Coley, R.L., Roff, J., Votruba-Drzal, E. (2003). Mothers' transitions from welfare to work and the well-being of preschoolers and adolescents. *Science*, 299, 1548-1552. *Wage-supplement programs*: A recent set of experiments examined whether programs that provided incentives for low-income parents to work by providing wage supplements improved their children's school achievement. These programs reduced family poverty levels and increased income by between \$1,500 and \$2,000 a year, at follow-ups conducted 3 to 4 years after random assignment. They also increased the school achievement of young children in the first years of elementary school, with effect sizes ranging between .07 and .11. Morris, P.A., Duncan, G.J., & Clark-Kauffman, E. (in press). Child well-being in an era of welfare reform: The sensitivity of developmental transitions to policy change. *Developmental Psychology*. *Reductions in classroom size*. The Tennessee Study of Class Size randomly assigned kindergarteners to reductions in classroom size of about 35%, or a control condition of regular class size. After one year, the group assigned to smaller classes scored higher on two standardized reading tests (effect sizes of .21 and .23; Mosteller, F. (1995). The Tennessee study of class size in the early grades. *The Future of Children*, 5(2), 113-127.

⁸ Head Start's positive effect on overall health, for example, was six times larger than the average effect of schooling on health found across hundreds of studies in a recent meta-analytic review. Grott, W., & van den Brink, H.M. (2005). The health effects of education: A survey and meta-analysis. Working paper, University of Amsterdam: <http://www1.fee.uva.nl/scholar/wp/wp50-04.pdf>.

⁹ Some (over 15%) even received Head Start. In addition, more than 10% of the group assigned to the Head Start group did not go on to utilize Head Start during the period of the current study. The report, using an appropriately conservative statistical approach (the "intent to treat" approach to experimental impact analysis), kept families in both of these groups in the analysis sample, analyzed within the groups to which they were randomly assigned. Because of these "crossovers," the reported positive effects may be underestimates.

¹⁰ One might expect that 4-year-olds in the non-Head Start group would be more likely to be in preschool programs than 3-year-olds in the non-Head Start group. However, this was not the case (see page 3-1 of the report), most likely because the entire sample had applied to Head Start before random assignment.

¹¹ U.S. Code of Federal Regulations 45, Ch. XIII (10-01-02 Edition), §1304.21 (Program Performance Standards for Operation of Head Start – Education and early childhood development).

¹² The average score on the most widely used measure of preschool classroom quality – the ECERS – was 5.22 for Head Start classrooms, vs. 4.52 for other center-based programs (p. 3-13). This represents over a .55 standard deviation difference.

¹³ P. 3-17 of the report.