

# What Works Clearinghouse



Revised December 2010

## WWC Quick Review of the Report “Head Start Impact Study: Final Report”<sup>1,2,3</sup>

### What is this study about?

This study examined the effects of offering Head Start to 3- and 4-year-olds. Head Start is a federal program aimed at boosting the school readiness of low-income children by providing preschool education and health and nutrition services.

The study analyzed data on about 4,700 preschool-aged children who applied for enrollment for the 2002–03 program year at one of about 380 Head Start centers randomly selected for the study. The study followed the students through first grade.

The study compared the outcomes of children who were offered enrollment in Head Start to the outcomes of children who were not offered enrollment.

School-readiness outcomes, which are the focus of this quick review, were measured using standardized cognitive assessments of language and literacy, pre-writing, and math skills administered at the end of each year through first grade.<sup>4</sup>

### What Groups of Children Were Contrasted?

Students were selected from a nationally representative sample of Head Start centers in 2002–03.

The number of applicants exceeded the number of available slots, so enrollment offers were granted randomly to a cohort of 3-year-olds and a cohort of 4-year-olds. Those in the treatment group could access Head Start services in 2002–03.

Families of children not offered enrollment could seek services from other center-based care providers or neighboring Head Start centers not involved with the study (about 43% of 3-year-olds and 49% of 4-year-olds did this).

Among 3-year-olds, all study children were eligible to apply for Head Start as 4-year-olds in 2003–04.

Although some students offered enrollment did not attend Head Start (about 15% of 3-year-olds and 20% of 4-year-olds), and some students in the control group received either Head Start or other similar services, all were included in the analysis as members of the group to which they were randomly assigned.

(continued)

<sup>1</sup> Puma, M., et al. (2010). *Head Start impact study: Final report*. Washington, DC: Administration for Children and Families, U.S. Department of Health and Human Services.

<sup>2</sup> This quick review is a revision of a quick review released in July 2010. Although attrition and baseline equivalence could not be determined from the information provided in the published report, study authors subsequently provided the necessary information to the WWC review team. This information resulted in a new rating for the analyses based on data from the first follow-up.

<sup>3</sup> Absence of conflict of interest: This study was conducted in part by staff from Chesapeake Research Associates, Abt Associates, and American Institutes for Research, which are subcontractors to Mathematica on the WWC. For this reason, no staff from these organizations participated in the review of the study or development of this quick review.

<sup>4</sup> The study also examined children’s childcare experiences, socio-emotional development, health status and access to health services, and parenting practices. These outcomes fall outside the scope of the quick review protocol, and program effectiveness on these outcomes is not evaluated in this quick review.

Quick reviews examine evidence published in a study (supplemented, if necessary, by information from author queries) to assess whether that study’s design meets WWC evidence standards. Quick reviews rely on the effect sizes and significance levels reported by study authors.

The WWC rating applies only to the summarized results, and not necessarily to all results presented in the study.

## What did the study find about effectiveness at the first follow-up?

The study found that children offered the chance to enroll in Head Start as 3-year-olds had higher scores on four of eight measures of language and literacy, the single measure of pre-writing, and one of two measures of math skills at the first follow-up, than children not offered enrollment as 3-year-olds.

Children offered the chance to enroll in Head Start as 4-year-olds had higher scores on six of eight measures of language and literacy at the first follow-up than children not offered enrollment as 4-year-olds. There were no significant differences between the groups in pre-writing or math skills.

However, the WWC has reservations about these findings because the groups of students compared in the analysis may have differed from each other in ways not accounted for in the analysis.

## What did the study find about effectiveness at the later follow-ups?

The study found no significant differences between the children offered and not offered the chance to enroll in Head Start as 3-year-olds on language and literacy, pre-writing, and math skills measured at the second, third, and fourth follow-ups. These follow-ups corresponded to the ends of preschool, kindergarten, and first grade, respectively.

In addition, there were no significant differences between the children offered and not offered the chance to enroll in Head Start as 4-year-olds on language and literacy and math skills measured at the second and third follow-ups (there was no fourth follow-up for this cohort, and pre-writing was not examined). These follow-ups corresponded to the ends of kindergarten and first grade, respectively.

### WWC Rating of First Follow-up Analysis

***The first follow-up analysis described in this report meets WWC evidence standards with reservations***

**Strengths:** The analysis was based on a randomized controlled trial.

**Cautions:** The first follow-up (called the Head Start year in the study and corresponding to the year during which treatment students could attend Head Start) for both cohorts of students had higher attrition in the control group than the Head Start group. The authors showed that the groups of students contrasted at the first follow-up were equivalent on baseline measures of achievement, but it is possible that there were other differences between the two groups that could have influenced achievement at the first follow-up and were not accounted for in the analysis.

### WWC Rating of Second, Third, and Fourth Follow-up Analyses

***The second, third, and fourth follow-up analyses described in this report meet WWC evidence standards***

**Strengths:** The analyses at the second, third, and fourth follow-ups were based on a randomized controlled trial with low attrition.