

Estimating Head Start Enrollment and Eligibility with Census Bureau Surveys  
Jessica Davis and Lynda Laughlin  
U.S. Census Bureau  
Housing and Household Economic Statistics Division

## ABSTRACT

Head Start is one of the largest federally funded early education programs. Today, Head Start serves more than 900,000 children and has been shown to provide positive outcomes for children. However, estimating the number of children who are served by Head Start programs has not been successful. This study examines the quality and comparability of Head Start and early education data obtained from the Survey of Income and Program Participation (SIPP), the American Community Survey (ACS), and the Current Population Survey (CPS). Preliminary analysis shows that SIPP under estimates the number of children in Head Start. We investigate if it is possible to indirectly estimate the number of children eligible for Head Start using the ACS or the CPS and if our estimates can be used to improve the SIPP data. Recommendations for how to collect higher quality data on Head Start and other child care issues will also be discussed.

## INTRODUCTION

Research has shown that children who attend high-quality early learning childcare programs are better prepared for school. Effective preschool programs can help children foster their physical, emotional, social, and cognitive development (Shonkoff and Phillips 2000). However, children in low-income families have less access to early childhood education programs due to costs and availability.

To address the unequal access to early childhood education programs, the federal government established Head Start in 1965 to serve preschool children from low-income families. At its start, the program served 561,000 children at the cost of \$96 million. As of 2007, the Head Start program disbursed \$6.9 billion in funds to roughly 1,600 private and public nonprofit organizations who served 908,412 low-income children (USDHHS, Administration for Children and Families 2007).

In addition to preparing children for school, Head Start programs also help mothers balance child care needs and employment. The influx of women into the labor market has increased the need for child care. Today, the majority of parents with children under 5 have come to depend on substitute care givers (Smith 2002). Additionally, welfare legislation promotes employment as a way to decrease dependency on welfare. Head Start can help reduce the cost of child care, which has been viewed as an important component in achieving employment, particularly since low-income families spend a greater proportion of their monthly income on child care (U.S. Census 2008).

Given the considerable federal investment in Head Start and the importance of child care for child development and maternal employment, high quality data on Head Start enrollment is vital. The Head Start Bureau maintains administrative program data on enrollment along with information on the child's age and race/ethnicity. A number of national surveys also collect information on child care, but most yield different estimates on the number of children in Head Start. For instance, in 2004 the Survey of Income and Program Participation (SIPP) recorded 204 thousand children under the age of five in Head Start, compared to 907 thousand (Head Start administrative data). The undercount of Head Start enrollment by surveys like SIPP is due to a number of factors. Parents may not know that they are using a child care program that is funded with Head Start money and the child care program may not be called Head Start. Also, a number of surveys do not list Head Start as a separate child care arrangement, instead it is grouped with other organized care options such as nursery school and preschool.

In short, there are substantial differences in the number of children enrolled in Head Start programs when one compares child care and school enrollment data from

surveys, with administrative records or other sources of Head Start information. In this paper we examine the quality of the Head Start data in Census surveys such as the Survey of Income and Program Participation (SIPP) as well as consider if it is possible to indirectly estimate the number of children who are eligible for Head Start using other Census survey sources such as the Current Population Survey (CPS) and the American Community Survey (ACS) and if those estimations mirror official Head Start data. Understanding the quality of data on Head Start will help researchers and policy makers better understand the child care options for low-income families.

## DATA

For the current study, we will examine three Census surveys: the Survey of Income and Program Participation (SIPP), American Community Survey (ACS), and the Current Population Survey (CPS). We selected these datasets because they are widely used for child care and school enrollment data and contain demographic and economic data needed to make indirect Head Start enrollments.

SIPP is a longitudinal survey with detailed social and economic data on households. The SIPP consists of core data on incomes sources, educational activities, health insurance, and other government program participation. Child care information can be found in the child care topical module. The universe of respondents in the SIPP child care module consists of adults who are the parents of children under 15 years old. A *designated parent* is selected in households where both parents are present to report child care arrangements for each child. In married-couple families, the mother is the designated parent. If the mother is not available for an interview, proxy responses are accepted from

the father or husband. In single-parent families, the resident parent is the designated parent. If neither parent is in the household, the guardian is the designated parent. Designated parents include biological, step- and adoptive parents, or other relatives/non-relatives acting as a guardian in the absence of parents.

Child care providers can be broadly classified as being relatives or nonrelatives of children. *Relatives* include mothers, fathers, siblings, grandparents, and *other relatives* such as aunts, uncles, and cousins. *Non-relatives* include in-home babysitters, neighbors, friends, and other non-relatives providing care either in the child's or the provider's home. It also includes *family day care providers* who are non-relatives who care for one or more unrelated children in the provider's home. *Organized care* includes day care, nursery or preschool, and federal Head Start programs for those five years and younger. Kindergarten/grade school is also included in the organized care total for children under five years.

The design and implementation of the SIPP child care module may lead to a certain amount of age shifting. Age shifting occurs when a child's birthday falls between the enrollment period for a child care program (i.e. school, Head Start, etc.) and the period that the SIPP survey takes place. For example, a five-year child enrolled in Head Start who turns six by the time of the survey would be out of universe for the Head Start question at interview date, resulting in an undercount of children in Head Start.

While the SIPP directly asks about Head Start participation, the two other Census Bureau surveys that we will investigate, the American Community Survey and the Current Population Survey, do not ask for specific Head Start participation. These surveys obtain school enrollment data for children of Head Start age and contain

information that may indirectly allow us to estimate the number of children who may qualify for Head Start.

The American Community Survey looks at a wide range of social, economic, and housing characteristics for the population by a multitude of demographic variables. The ACS is used to provide annual data on more than 7,000 areas, including all congressional districts as well as counties, cities, metro areas, and American Indian and Alaska Native areas with a population of 65,000 or more. The ACS surveys information from about 3 million addresses, or 2.5 percent of the nation's population each year. The ACS is administered to the entire domestic population, including those living in institutions and other group quarters. The ACS asks respondents throughout the entire calendar year whether they were enrolled in regular school at any time in the three months before the interview. The survey also asks whether each person attended public school or private school, and in what grade or level the person was enrolled. The ACS does not ask specifically about Head Start as either a form of school enrollment or a child-care arrangement.

The Current Population Survey surveys approximately 72,000 housing units each month. The survey is used primarily to produce the official monthly estimates of employment and unemployment for the nation and the states. Unlike the ACS, the sample is scientifically selected to represent the civilian non-institutionalized population, so that people living in institutions are not included. While the sample size is not sufficient to describe small geographic areas, the CPS is designed to meet reliability requirements for the 50 states and the District of Columbia.

Respondents are interviewed to obtain information about the employment status of each member of the household 15 years of age and older. Estimates of school enrollment from the CPS are based on a special supplement administered each October since 1956, allowing the construction of a time series of trends for school enrollment. There are separate questions for adults 15 years and older and for children 3 to 14 years old. Twenty questions are asked, gathering information on single year of enrollment, enrollment status and level for the previous year, whether the respondent goes to school full time or part time, whether they attend a two-year or four-year institution, whether they are obtaining any vocational training, and what year they received their most recent degree.

In the CPS a nursery school is defined as a group or class that is organized to provide educational experiences for children during the year or years preceding Kindergarten. It includes instruction as an important and integral phase of its program of child-care. Private homes in which essentially custodial care is provided are not considered nursery schools. Children attending nursery school are classified as attending during either part of the day or the full day. Part-day attendance refers to those who attend either in the morning or in the afternoon, but not both. Full-day attendance refers to those who attend in both the morning and the afternoon. Children enrolled in Head Start programs or similar programs sponsored by the local agencies to provide preschool education to young children are counted under nursery school.

Using these three data sources we hope to evaluate the usefulness of the existing Census Bureau surveys to either directly or indirectly estimate the Head Start population and to reconcile any differences with administrative records.

## PLAN OF ANALYSIS

To determine who is enrolled in and who is eligible for Head Start programs, our analysis will first focus on examining the social and economic characteristics of children enrolled in Head Start using data from the SIPP. We will compare this information to administrative data and discuss the quality of the SIPP data and how the data can be improved.

Second, we will estimate the number of eligible children for Head Start at both the national and state level using ACS and CPS. To estimate the number children in Head Start, we will need to take into consideration several Head Start eligibility requirements. According to Head Start eligibility guidelines, children from birth to age five from families with incomes below the federal poverty line are eligible for Head Start. Children from families receiving public assistance (i.e. TANF or SSI) are also eligible for Head Start programs, regardless of family income. Foster children are also eligible for Head Start programs, also regardless of the foster family's income.

Both ACS and CPS provide information on age, income, public assistance, and foster child status. Therefore, we can indirectly estimate the number of children eligible for Head Start and compare this information with national and state level administrative records.

Our analysis of these three data sources will enhance our understanding of the Head Start population as well as shed light on inaccuracies in SIPP data. Our findings will also indicate if estimates derived from ACS and CPS are similar to administrative Head Start data at both the state and national levels. If ACS and CPS estimates are

similar to administrative data, then it may be possible to use these data sources as supplemental substitutes regarding Head Start enrollment.

#### COMPARISON OF CENSUS DATA WITH HEAD START RECORDS

Preliminary analysis comparing ACS, CPS, SIPP and administrative Head Start data is displayed in Table 1. According to SIPP data, in the Spring of 2005 approximately 204,000 children were enrolled in Head Start. The estimates provided by SIPP are more than four times smaller than the administrative data (905,851). SIPP data also differs in terms of race and Hispanic origin. Compared to administrative records, SIPP reports a larger percentage of Blacks in Head Start (38 percent vs. 31 percent), and a smaller percentage of Hispanic children (24 percent vs. 31 percent). SIPP also reports a larger percentage of Whites in Head Start (58 percent vs. 27 percent), however the difference is not as large if non-Hispanic Whites are used as the comparison group (34 percent vs. 27 percent).



Table 1. Comparison of ACS, CPS, SIPP and Head Start Administrative Data (Numbers in thousands)				
Characteristic	ACS	CPS	SIPP	Head Start Administrative Data <sup>1</sup>
<b>Head Start</b>	-	-	204	905
<b>Nursery school enrollment</b>	4,785	4,603		
<b>Percent enrolled by race and Hispanic origin</b>				
Hispanic	17.0	17.3	24.0	31.2
Black	16.4	15.6	37.7	31.1
White	70.3	61.0	58.3	26.9
Non-Hispanic White	60.8	61.0	34.3	-
Other	4.8	4.0	.5	10.8

1. Includes children enrolled in Indian tribes, migrant programs, other Pacific regions, Puerto Rico, and the Virgin Islands.

(-) Not available.

Source: ACS 2005, CPS 2005, SIPP 2005, and Head Start 2005.

## FUTURE ANALYSIS

Future analysis will further compare SIPP Head Start enrollment data with administrative records and discuss reasons why SIPP data does not accurately capture the number of children in Head Start. Future work will also determine the number of eligible children using ACS and CPS data. Indirect estimates using ACS will be reported at both the national and state level (plus the District of Columbia), while estimates for CPS will be reported at the national level. If our indirect estimates are close to the administrative data, we can then determine where SIPP is deficient and what steps that can be taken to improve the survey. We will then discuss the merits of using ACS and CPS estimates as substitutes for Head Start enrollment data and address why better estimates of Head Start enrollment are needed.

References:

Shonkoff, Jack. P., and Deborah Philips, eds. 2000. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, DC. National Academy Press.

Smith, Kristin . 2002. *Who's Minding the Kids? Child Care Arrangements: Winter 1997*. Current Population Reports. Washington, D.C., U.S. Census Bureau.

U.S. Census Bureau. 2008. *Who's Minding The Kids, Detailed Tables: Spring 2005*. Washington, DC.