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National Household Education Surveys Program of 2016

Data File User's Manual

Parent and Family Involvement in Education Survey

Early Childhood Program Participation Survey

Adult Training and Education Survey

FEBRUARY 2018

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Chapter 1. Introduction

The National Household Education Surveys Program of 2016 (NHES:2016) Data File User's Manual provides documentation and guidance for users of the NHES:2016 data files. The manual provides information about the purpose of the study, cognitive research conducted for questionnaire design, the sample design, the data collection procedures, the data processing procedures, response rates, imputation, weighting and standard error calculation and use, the data files and codebooks, data considerations and anomalies, and derived variable details. In addition, the manual contains a nonresponse bias analysis, comparisons of estimates from NHES:2016 to prior NHES administrations and other data sources, tables of nonresponse adjustment cells and response rates, the data collection instruments, and the data file layouts for the public and restricted-use data files.

The NHES:2016 data are contained in three public-use and three restricted-use data files, one for each topical survey that was fielded: the Early Childhood Program Participation (ECPP) Survey and the Parent and Family Involvement in Education (PFI) Survey, which were last fielded in 2012; and the Adult Training and Education Survey (ATES), which is a new survey for 2016. The ECPP survey has a target population of children age 6 or younger who are not yet enrolled in kindergarten. The PFI survey has a target population of children and youth age 20 or younger who are enrolled in kindergarten through 12th grade in a public or private school or who are being homeschooled for the equivalent grades. ATES has a target population of noninstitutionalized adults ages 16–65, not enrolled in grade 12 or below.

The NHES:2016 was a two-phase survey conducted primarily by mail, although a small portion of the sample completed a web-based version of the survey (see chapters 2 and 3 for details). The first phase of the survey was the administration of a short household screener questionnaire used to identify households with children or youths under age 20 and adults ages 16–65. A total of 206,000 households were selected based on this screener, and the screener response rate was 66.4 percent. The second phase of the survey was the collection of topical survey data from households with eligible children or adults. The topical response rate was 73.4 percent for the ECPP survey, 74.3 percent for the PFI survey, and 73.1 percent for ATES. The overall response rates (the product of the screener response rate and the topical response rate) were 48.7 percent for the ECPP survey, 49.3 percent for the PFI survey, and 48.5 percent for ATES. All response rates discussed above are weighted by the inverse of the probability of selection.

The data files contain the following:

- The ECPP survey file contains data from surveys completed with the parents or guardians of 5,844 children age 6 or younger not yet enrolled in kindergarten.
- The PFI survey file contains data from surveys completed with the parents or guardians of 14,075 children age 20 or younger in kindergarten through 12th grade, including 13,523 students whose parents completed the PFI–Enrolled questionnaire for students enrolled in public or private school and 552 students whose parents completed the PFI questionnaire for homeschooled students.
- The ATES file contains data from surveys completed with 47,744 noninstitutionalized adults ages 16–65, not enrolled in grade 12 or below.

The data are subject to federal law on data confidentiality (20 U.S.C. sec. 9573). Data may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law.

1.1 Background of Study

The National Household Education Surveys (NHES) Program was developed by the National Center for Education Statistics (NCES), an agency within the U.S. Department of Education’s Institute of Education Sciences, to complement its institutional surveys. The surveys that comprise the NHES are integral data collection tools for addressing topics that cannot be studied through institutional data collections. By collecting data directly from households, the NHES has allowed NCES to gather data on a wide range of issues, such as early childhood care and education, children’s readiness for school, before-school and afterschool activities of school-age children, adult basic and work-related education, parents’ involvement in education, school choice, and homeschooling. These topics have been addressed through a series of topical survey modules. Many of the topical survey modules were repeated on a rotating basis, whereas others were one-time-only collections. Table 1-1 shows the topical survey modules included in the NHES by year of administration, beginning in 1991.

Table 1-1. Topical surveys conducted under the NHES Program, by years administered: 1991–2016

Topical survey	NHES survey administration										
	1991	1993	1995	1996	1999 ¹	2001	2003	2005	2007	2012	2016
Young children											
Early childhood education/ program participation	X		X		X	X		X		X	X
School readiness		X			X				X		
School-aged children											
School safety and discipline		X									
Parent and family involvement in education			X	X		X			X	X	X
Homeschooling				X		X				X	X
After-school programs and activities		X ²		X	X ³			X			
Adults											
Adult education	X		X		X	X	X	X			
Credentials for work										X	
Civic involvement		X		X							
Household library use			X								

¹ The NHES:1999 was a special end-of-decade administration that measured key indicators from the surveys fielded during the 1990s.

² The After-School Programs and Activities Survey of the NHES:1995 only collected data about children in the first through third grades.

³ The After-School Programs and Activities Survey of the NHES:2001 also included items on before-school programs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 1991–2016.

Data from the NHES are used to provide national estimates on populations of interest to education researchers and policymakers. The NHES targets populations of interest using specific screening and sampling procedures. The survey design includes oversamples of Black and Hispanic individuals who might otherwise be underrepresented in the NHES sample. The NHES is conducted in English and Spanish.

Until 2012, the NHES was conducted by telephone interviewers using list-assisted random-digit-dial (RDD) and computer-assisted telephone interview (CATI) methodologies. Data were collected between January and June in approximately every other year from 1991 through 2007. After the 2007 collection, the NHES was redesigned to improve response rates and population coverage. In the redesigned survey, samples were developed using household address information, and data were collected using self-administered questionnaires delivered and returned through the mail. The redesign process included a feasibility pilot test, cognitive interviews about the redesigned survey questionnaires and materials, and a full-scale field test of the new methodology.

and instruments. The time invested in the redesign resulted in a gap in NHES data collections between 2007 and 2012. Beginning in 2016, surveys were administered through a web-based questionnaire as well as through the mail. The NHES surveys from 1991 through 2007 and the NHES redesign pilot and field tests, were administered by Westat, Inc. on behalf of NCES. The NHES surveys in 2012 and 2016 were administered by the U.S. Census Bureau on behalf of NCES.

At about the same time as the NHES redesign, the ATES instrument was in development. ATES provides nationally representative data on non-degree credentials, such as certifications, licenses, and educational certificates, and on the completion of work experience programs such as apprenticeships and internships.¹ Prior to the introduction of ATES into the NHES, three field tests were conducted to evaluate the new questionnaire items, the self-administered mail mode of data collection, and the sample design, respectively.

NHES survey data have been used for a large number of descriptive and analytic reports and articles, including NCES publications, publications of other federal agencies, policy analyses, theses and dissertations, conference papers, and journal articles. Because many of the topical surveys fielded as part of the NHES are repeated over time, in addition to providing cross-sectional estimates, some NHES data can be used to develop trend estimates.² However, the ATES survey is not comparable to prior NHES surveys on adult education topics.

A list of NHES publications issued by NCES can be found on the NHES website: <http://nces.ed.gov/nhes>. Non-NCES publications that use NHES data also can be found using the NCES Bibliography Search Tool at <http://nces.ed.gov/bibliography/>.

1.2 Overview of the NHES:2016 Design

The NHES:2016 surveys were designed to provide nationally representative data about topics central to education policy and research. Multiple topical surveys are conducted simultaneously because of the high costs associated with screening large numbers of households in order to meet the sample size requirements for precise nationally representative estimates about young children, students, and adults. By fielding more than one topical survey simultaneously, the cost of screening

¹ The ATES development work was led by the Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA), a collaboration among federal statistical agencies, the National Science Foundation, the Office of Management and Budget's Office of Statistical and Science Policy, the Council of Economic Advisors, and the Under Secretary of Education.

² Data users should take into consideration that the mode change—from a computer-assisted telephone interview to a self-administered paper-and-pencil survey—required changes in item wording that may affect the comparability of estimates from NHES:2012 and NHES:2016 with those from NHES administrations conducted from 1991 through 2007.

households to find eligible household members is distributed over the surveys. This strategy is key to the NHES design.

In 2016, households were mailed a short screener asking them to list the first name, age, sex, type of school enrollment (preschool, public or private school, homeschooled, or not enrolled), and grade or level of enrollment of every person living in the household. After the screener was returned, one adult or child per household was selected, and the sampled adult or sampled child's parent was mailed a topical follow-up survey. Households without eligible members were not asked to complete any topical surveys. Though most households were mailed paper surveys, a sample of 35,000 households was sent a letter containing a URL and log-in credentials for a web-based survey.

Table 1-2 displays the number of completed surveys and the unweighted and weighted single-stage and overall (two-stage) unit response rates for the NHES:2016 screener and topical surveys. Details on the computation of these rates, as well as a discussion of the uses of weighted and unweighted response rates, are provided in chapter 5.

Table 1-2. Number of completed NHES:2016 surveys and unweighted and weighted single-stage and overall (two-stage) unit response rates, by survey type

Survey type	Number of completed surveys	Unweighted single-stage unit response rate ¹	Unweighted overall (two-stage) unit response rate ²	Weighted single-stage unit response rate ¹	Weighted overall (two-stage) unit response rate ²
Screener	115,342	65.2		66.4	
ECPP survey	5,844	73.7	48.0	73.4	48.7
PFI survey	14,075	75.2	49.0	74.3	49.3
ATES	47,744	74.8	48.7	73.1	48.5

¹ The unit response rate is the percentage of completed surveys for a specific stage of the study (i.e., the screener or topical stage) and is derived by dividing the number of completed surveys by the number of eligible units (e.g., addresses and children or adults) sampled.

² The overall unit response rate indicates the percentage of surveys that have been completed, taking all sampling stages into account. It is the product of the screener unit response rate and the topical unit response rate.

SOURCE: U.S. Department of Education, National Center for Education Statistics. Early Childhood Program Participation (ECPP) Survey, Parent and Family Involvement in Education (PFI) Survey, and Adult Training and Education Survey (ATES) of the 2016 National Household Education Surveys Program (NHES:2016).

1.3 NHES:2016 Topical Questionnaires

The NHES:2016 was administered using four topical questionnaires: one for the ECPP survey, two for the PFI survey (enrolled and homeschooled questionnaires), and one for ATES. The content, target population, and respondents for these questionnaires are described below.

1.3.1 Early Childhood Program Participation Survey

The Early Childhood Program Participation (ECPP) Survey focused on children age 6 or younger who were not yet enrolled in kindergarten. The survey questionnaire covered children's participation in early education and care arrangements provided by relatives or nonrelatives in private homes, center-based day care, or preschool programs (including Head Start). Additional topics included family learning activities, early literacy and numeracy skills, out-of-pocket expenses for nonparental care and education, factors related to parents' selection of providers, and parents' perceptions of care and education quality. Parents also were asked about child characteristics, including the child's health and disability status; characteristics of the child's parents or guardians who live in the household; and household characteristics. The survey instructions requested that the respondent be a parent or guardian in the household who knew about the sampled child's care and education.

1.3.2 Parent and Family Involvement in Education Survey

The Parent and Family Involvement in Education (PFI) Survey focused on children and youth age 20 or younger who were enrolled in kindergarten through 12th grade in a public or private school and children who were homeschooled for the equivalent grades.

Parents of enrolled children received the PFI-Enrolled questionnaire, which included questions about school choice, parent and family involvement at school, the child's behavior at school, grade retention, parents' satisfaction with the child's school, family's involvement in school work and activities outside of school, and factors affecting family involvement. Parents of homeschooled children received the PFI-Homeschooled questionnaire, which included questions about who is primarily responsible for homeschooling the sampled child, the amount of time that the child is homeschooled, parents' reasons for homeschooling, subjects covered in homeschooling, and the resources used for homeschooling, including internet resources. Both questionnaires included questions about child characteristics, including the child's health and disability status; parent/guardian characteristics; and household characteristics. The instructions for both questionnaires requested that the respondent be a parent or guardian who knew about the sampled child's education.

1.3.3 Adult Training and Education Survey

The Adult Training and Education Survey (ATES) focused on noninstitutionalized adults ages 16–65 not enrolled in grade 12 or below. ATES collected information on educational attainment; the prevalence and characteristics of certifications and licenses; the prevalence and characteristics of

educational certificates; and completion and key characteristics of work experience programs, such as apprenticeships and internships. It also collected detailed employment information and respondent background characteristics. The survey instructions requested that the respondent be the household member selected for the survey.

1.4 Contents of This Manual

The chapters that follow provide information about the NHES:2016 sampling methodology (chapter 2), data collection (chapter 3), data processing (chapter 4), response rates (chapter 5), imputation (chapter 6), weighting and standard error calculation (chapter 7), data considerations and anomalies (chapter 8), data file and codebook guides (chapter 9), and nonresponse bias analysis (chapter 10). Additional information is contained in the appendices. Appendix A provides a copy of the survey questionnaires, appendix B shows the data file layouts in position order, appendix C compares NHES:2016 estimates with those of other surveys, appendix D contains nonresponse adjustment cells and response rates for the screener survey, appendixes E–G contain nonresponse adjustment cells and response rates for the topical surveys, appendix H includes a summary of weighting and variance estimation variables, appendix I includes SAS code for derived variables, and appendix J contains the ATES Certification and License Field Coding Manual.

Chapter 2. Sampling Methodology

The National Household Education Surveys Program of 2016 (NHES:2016), like the NHES:2012, used an address-based sample covering the 50 states and the District of Columbia. As described in detail below, households were randomly sampled, and a screening questionnaire was sent to each sampled household. All U.S. civilian, noninstitutional, occupied residential addresses were eligible to be sampled for the screener.³ Demographic information about household members provided on the screener was used to determine whether anyone in the household was eligible for one of the second-phase topical surveys: the Early Childhood Program Participation (ECPP) survey, Parent and Family Involvement in Education—Enrolled (PFI—Enrolled) survey, Parent and Family Involvement in Education—Homeschooled (PFI—Homeschooled) survey, or Adult Training and Education Survey (ATES). Regardless of the number of eligible household members, no more than one person per household was sampled for the topical surveys and no more than one topical survey was administered in a household.

The target population for the ECPP survey consisted of children age 6 or younger who were not yet in kindergarten. The target population for the PFI—Enrolled survey included students ages 20 or younger who were enrolled in kindergarten through 12th grade. The target population for the PFI—Homeschooled survey included students ages 20 or younger who were homeschooled for the equivalent of grades kindergarten through 12th grade. Finally, the target population for the ATES survey consisted of noninstitutionalized adults ages 16 to 65 who were not enrolled in grades 12 or below or being homeschooled for equivalent grades. For all NHES:2016 topical surveys, eligibility was determined by the individual’s age as of December 31, 2015.

2.1 Sampling Households

An initial sample of 226,600 addresses was selected, of which 206,000 were designated for the NHES:2016. The initial sample of addresses was drawn from a file of residential addresses maintained by Marketing Systems Group (MSG), based on the United States Postal Service (USPS) Computerized Delivery Sequence File (CDSF).

The NHES:2016 sample was a two-phase, stratified sample. The first sampling phase selected residential addresses from the MSG file, and the second sampling phase selected an eligible individual from information provided on the household mail screener. Households and individuals

³ P.O. boxes were excluded from the sampling frame with the exception of P.O. boxes identified as being a household’s “only way to get mail” (OWGM). This exclusion is intended to reduce overcoverage due to households who receive mail at both a residential address and a P.O. box. More information about the address types included in the sample is provided in section 2.1.1.

were selected with differential probabilities of selection based on the Black and Hispanic composition of the Census tract where an address is located and on a person's survey eligibility within the household. These differential probabilities of selection are accounted for in the NHES weighting methodology. When weights are applied to the NHES topical surveys, the ECPP survey is nationally representative of all children from birth through age 6 who are not enrolled in kindergarten; the PFI-Enrolled and PFI-Homeschooled surveys are nationally representative of students enrolled in grades K–12, including children who are enrolled in public school, private school, and those who are homeschooled for the equivalent grades; and the ATES is nationally representative of noninstitutionalized adults ages 16–65, not enrolled in grades 12 or below.

2.1.1 Black and Hispanic Oversample, Sort Order, and Address Type

As in past NHES surveys, the NHES:2016 survey oversampled Black and Hispanic households using U.S. Census and sampling frame data. Oversampling provides improvement in the precision of estimates by race/ethnicity and protects against unknown factors that might affect the estimates for key subgroups, especially differential response rates.

To facilitate the oversampling of Black and Hispanic households, addresses were stratified by race/ethnicity into three strata:

- Census tracts with 25 percent or more Black persons (Black stratum)
- Census tracts with 40 percent or more persons of Hispanic origin (Hispanic stratum)
- All other tracts (All Other stratum)

As shown in table 2-1, the sample allocation was 20 percent to the Black stratum, 15 percent to the Hispanic stratum, and 65 percent to the All Other stratum. Assignment to strata was sequential: Tracts with 25 percent or more Black persons were assigned to the Black stratum; of the remaining tracts, tracts with 40 percent or more persons of Hispanic origin were assigned to the Hispanic stratum; and all remaining tracts were assigned to the All Other stratum.

The NHES:2016 Black and Hispanic oversampling strategy was the same approach used in the NHES:2012 administration. This approach was selected because it allows for the specification of sufficient Black *and* Hispanic sample sizes, and it helps to target Spanish-language mailings to households in the Hispanic stratum. Table 2-1 shows the percentage and number of sampled addresses from each stratum.

Table 2-1. Percentage of sample and number of addresses by address selection characteristic: NHES:2016

Address selection characteristic	Percentage of sample	Sample size
Total	100	206,000
Addresses in Census tracts with 25% or more Black persons	20	41,200
Addresses in Census tracts with 40% or more Hispanic persons (and not 25% or more Black persons)	15	30,900
Addresses in all other Census tracts	65	133,900

SOURCE: NCES sample specifications provided to Marketing Systems Group (MSG) for sample purchase.

In addition to stratifying by the race and ethnicity groups mentioned above, addresses within each of these three strata were sorted by a Census tract-level poverty indicator. The sample for each stratum was selected systematically from the sorted list in order to maintain the population poverty-level proportions, which otherwise could be skewed if the addresses were selected randomly from within the race/ethnicity strata. The tract-level poverty indicator classifies addresses into one of two poverty categories based on the proportions of households below the poverty line in the Census tract in which the address is based. Specifically, tracts were classified as follows:

- Tracts with 20 percent or more of households below the poverty line
- Tracts with less than 20 percent of households below the poverty line

This methodology is different from what was used in the NHES:2012. The sort by poverty status was added to increase the number of low-income respondents with certifications, licenses, and certificates for the ATES and the number of low-income respondents to key measures in the ECPP and PFI.

Additionally, P.O. box addresses not flagged as the “Only Way to Get Mail” were dropped from the sample frame prior to sampling. These P.O. boxes generally are not unique mailing addresses for households (Iannacchione, Staab, and Redden 2003), which means that including them in the sampling frame is likely to result in duplication of households. To the extent P.O. boxes could be mapped to households, they could provide additional contact information. However, a methodology has not been developed for reliably determining which addresses also receive mail from a P.O. box. Therefore, to avoid duplication of households, this type of P.O. box address was dropped at the frame development stage. This methodology is different from what was used in the NHES:2012. In 2012, these P.O. box addresses were included in the sample, but were sampled at a lower rate than other addresses. In 2012, about 10 percent of addresses in the initial sample were P.O. boxes not flagged as the “Only Way to Get Mail.”

2.1.2 Within-Household Sampling of Eligible Individuals

Among households that returned a completed screener and reported household members who were eligible for one or more topical surveys, a four-step procedure was used to select a single household member to receive a topical questionnaire. To minimize household burden, only one eligible member from each household was sampled; therefore, each household received only one of the four topical surveys. In the topical sampling procedure, three predesignations were randomly assigned to each household and applied sequentially. The three predesignations were

- 1) predesignation to the PFI–Homeschooled survey,
- 2) predesignation to a child survey or an adult survey, and
- 3) predesignation to a PFI–Enrolled survey or to an ECPP survey.

The designations were assigned at specified rates, determined to be optimal to balance the sample requirements for each of the surveys being fielded. Depending on the composition of the household, some or all of these predesignations were used to assign the household to one of the four topical surveys. If the household had more than one member eligible for the survey for which it was selected, then the final step of within-household sampling randomly selected one of these members for that survey.

In the first step of within-household sampling, each address was randomly predesignated as either a “PFI–Homeschooled household” or an “other household.” When a household had at least one member eligible for the PFI–Homeschooled and at least one member eligible for one of the other topical surveys, the household was predesignated as a “PFI–Homeschooled household” with an 80 percent probability and as an “other household” with a 20 percent probability. If a household only had a member or members eligible for the PFI–Homeschooled, then that household received the PFI–Homeschooled survey regardless of predesignation. Likewise, if a household only had members eligible for one of the other surveys, that household received a non-homeschooling survey regardless of predesignation. The purpose of sampling for the PFI–Homeschooled in the first step of topical sampling was to increase the number of homeschooled children for whom data could be collected.

The second step of within-household sampling was at the age group level (child or adult). In addition to the homeschool predesignation, each household was randomly predesignated as either a “child household” or an “adult household.”⁴ Because eligible children comprised a smaller

⁴ Since the composition of the household was unknown prior to fielding the screener, every sampled household was assigned all three designation. They were applied sequentially however, in conjunction with the eligibility of the household members.

portion of the population than eligible adults, this differential sampling was applied to ensure a sufficient sample size for the ECPP and PFI-Enrolled surveys. The predesignation was only used when a household contained both an eligible child and an eligible adult and was not selected for the PFI-Homeschooled survey in the first phase of sampling. In this scenario, a household was predesignated as a “child household” with an 80 percent probability and an “adult household” with a 20 percent probability. If a household only had an eligible child and no eligible adults, then that household received a child topical survey, regardless of predesignation. Likewise, if a household only had an eligible adult and no eligible children, then that household received an adult topical survey, regardless of predesignation.

The third step of within-household sampling was at the topical survey level, for households selected to receive a child survey other than PFI-Homeschooled. Because households were sampled for the PFI-Homeschooled in the first step of topical sampling, there were two child-level topical surveys that a household could be eligible for in the third step: the ECPP or the PFI-Enrolled survey. Because children eligible for the ECPP survey comprise a smaller proportion of the population than children eligible for the PFI-Enrolled survey, differential sampling was used to ensure a sufficient sample size for the ECPP group. This predesignation was used only when a household was not selected for the PFI-Homeschooled survey in the first step, was selected for a child survey in the second step, and had children eligible for both the ECPP and PFI-Enrolled topical surveys. In this scenario, each household was pre-designated as an “ECPP household” with a 70 percent probability or a “PFI-Enrolled household” with a 30 percent probability. At this step, if a household was selected to receive a child survey and only had a child eligible for the ECPP topical survey, then that household received an ECPP topical survey, regardless of pre-designation. Likewise, if a household was selected to receive a child survey and only had a child eligible for the PFI-Enrolled topical survey, then that household received a PFI-Enrolled topical survey, regardless of pre-designation.

The fourth step of sampling was at the person level. If any household had only one person that was eligible for the survey for which the household was selected by the first three steps of sampling, then that person was selected. If any household had two or more people eligible for the survey for which the household was selected by the first three steps, then one of those persons was randomly selected (with equal probability) to receive that topical survey. At the end of the four steps of within-household sampling, one eligible child or one eligible adult within a household was sampled for the ECPP, PFI-Enrolled, PFI-Homeschooled, or ATES topical survey provided that the household contained at least one person under the age of 66.

Table 2-2 presents the percentages of households with individuals eligible for each possible combination of topical surveys, in the NHES:2014 Feasibility Study, 2013 American Community Survey (ACS), and NHES:2016. Data from the NHES:2014 Feasibility Study was used to determine the sampling rate applied to the ECPP, PFI-Enrolled, PFI-Homeschooled, and ATES surveys. Historically, NHES has consistently yielded fewer households with children compared to the Current Population Survey (CPS) or ACS, and the CPS and ACS do not provide estimates of homeschooled children. For these reasons, the NHES:2014 Feasibility Study estimates were used when making sampling rate decisions.

Table 2-2. Percentage of households with eligible adults and/or children for one or more topical surveys: NHES:2014 Feasibility Study, ACS:2013, and NHES:2016

Household eligibility status	NHES:2014 Feasibility Study	ACS: 2013	NHES:2016
Total households with eligible adults	80.1	83.5	79.4
Total households with eligible children	31.1	32.6	29.5
Households with ECPP-eligible children	11.8	13.0	10.8
Households with PFI-eligible children	25.7	26.1	24.1
Households with PFI-Enrolled-eligible children	24.8	†	23.3
Households with PFI-Homeschooled-eligible children	0.9	†	1.1

†Not available; the ACS data file does not identify homeschoolers.

NOTE: ATES = Adult Training and Education Survey. ECPP = Early Childhood Program Participation. NHES = National Household Education Surveys Program. PFI = Parent and Family Involvement in Education. Percentages do not sum to 100 because some households have members eligible for more than one survey. NHES: 2014 Feasibility Study and NHES:2016 estimates are calculated among respondents to the household screener using household-level nonresponse-adjusted weights.

SOURCE: U.S. Department of Commerce, U.S. Census Bureau, American Community Survey (ACS), 2013; U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2014 and 2016.

2.2 Sampling for Experiments

The NHES:2016 contained three methodological experiments designed to test the impact of various design features on response rates. Table 2-3 shows the experiments, their sample allocation rates and expected and actual sample sizes. The experiments were pre-assigned to all sampled addresses. The first experiment was a screener incentive experiment designed to examine the effectiveness of leveraging auxiliary frame data to target (1) lower prepaid screener incentives to households with a higher predicted propensity to respond to the screener and (2) higher prepaid screener incentives to households with a lower predicted propensity to respond to the screener. The potential advantage of this design is to reduce incentive costs for households that require less or no money to respond. The hypothesis was that paying higher screener incentives to households with a lower predicted propensity to respond to the screener was that it would lead to higher response rates among respondents whose demographics are typically underrepresented, thus

reducing bias. Households' response propensities were predicted using a logistic regression model.⁵ The household whose predicted response propensity was below the 15th percentile received \$10, those between the 15th and 75th percentiles received \$5, those between the 75th and 95th percentiles received \$2, and those above the 95th percentile received \$0. A total of 45,000 households were allocated to this experiment: 35,000 received an incentive based on their response propensity and 10,000 received \$2 regardless of response propensity. The \$2-only sample was selected as a control group to enable analysis of the sensitivity of different types of households to the incentive amount and thereby enable further refinement of the incentive structure in future administrations. All households not selected for the web experiment were eligible for the targeted incentive experiment. All sample members not included in the incentive experiment received a prepaid \$5 screener incentive. For cases assigned to receive an incentive based on their response propensity, the actual sample counts diverged slightly from the expected sample counts for each incentive level because incentives were allocated based on response propensity percentiles, and a small number of cases had a response propensity exactly equal to a percentile cut point. However, this did not affect the total size of the treatment group, which remained fixed at 35,000.

The second experiment was designed to determine whether asking respondents to complete the survey on the Internet results in an acceptable response rate and high data quality. A third, embedded, experiment was included in the web experiment sample in which a random sample of the households allocated to the web treatment were asked to provide the topical respondent's e-mail address (in cases where the screener led to a topical survey). The e-mail experiment included both households where the screener respondent was the topical respondent and where a different household member would complete the topical. A total of 35,000 of the 206,000 screened households were selected for the web experiment. Of those, 17,500 were assigned to receive the e-mail request.

⁵ Two types of variables were used as independent variables in the logistic regression model. The first consisted of address-level variables providing information on the characteristics of the address (e.g. route type, single- or multi-unit dwelling, etc.) and the demographic characteristics of the household (e.g. age or educational attainment of the head of the household). These variables were appended to the sample file by the frame vendor from consumer databases and the U.S. Postal Service's Computerized Delivery Sequence (CDS) file. The second consisted of American Community Survey (ACS) percentage estimates for the Census tract or block group in which the household was located, and were appended from the 2014 Census Planning Database (CPD) using tract and block group identifiers available in the sample file.

Table 2-3. Number of households sampled for methodological experiments and expected and actual sample sizes: NHES:2016

Experiment	Number of households sampled	
	Expected	Actual
Web	35,000	35,000
E-mail requested ¹	17,500	17,500
E-mail not requested ¹	17,500	17,500
Incentive	45,000	45,000
\$2 incentive, random selection	10,000	10,000
\$0 incentive based on response propensity at or above 95th percentile	1,750	1,750
\$2 incentive based on response propensity from 75th to 95th percentile	7,000	6,996
\$5 incentive based on response propensity from 15th to 75th percentile	21,000	21,007
\$10 incentive based on response propensity below 15th percentile	5,250	5,247

¹Sample sizes for the e-mail treatment include all originally sampled web experiment cases who were flagged to be asked for an e-mail address (or not asked for an e-mail address) after completion of the screener portion of the survey, contingent on someone in the household being eligible for the survey. These numbers do not account for screener nonresponse or households without eligible individuals. In the 2016 administration, 14,146 screener respondents were eligible to receive the e-mail question. Of those 7,123 were asked to provide an e-mail address.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

2.3 Expected and Actual Yield

In planning the NHES:2016 sample design, consideration was given to the number of completed interviews that the design was expected to yield. This section discusses the assumptions used in the calculations of expected interview counts and then compares the expected to the actual interview counts.

In calculating expected yields, it was necessary to make assumptions about expected address eligibility rates and screener and topical response rates. These rates were estimated on the basis of prior NHES studies; adjustments were made for the expected effects of the NHES:2016 stratification and experimental treatments. Within the main study group (\$5-only incentive and paper questionnaires), the expected address eligibility rate was 90.6 percent and was close to the actual observed screener eligibility rate of 90.8 percent⁶. This rate was based on the address eligibility rates observed in the NHES:2014 Feasibility Study: approximately 85.8 percent in the Black stratum, 90.6 percent in the Hispanic stratum, and 92.2 percent in the Other stratum, compared to the observed rates of 87.0, 89.1, and 92.4 percent in the Black, Hispanic, and Other strata respectively. The expected screener response rate in the main study group was 66.9 percent, based on the final screener response rates in the NHES:2014 Feasibility Study, which was higher than the observed response rate of 63.0 percent: approximately 58.4 percent in the Black stratum,

⁶ Eligibility and response rates presented in this section are unweighted and assume all cases of unknown eligibility are eligible for the study. For more details about response rate computations, see Chapter 5.

55.4 percent in the Hispanic stratum, and 72.0 percent in the Other stratum, compared to observed rates of 53.2, 52.0, and 68.2 percent in the Black, Hispanic, and Other strata respectively.

Response rates within the various treatment groups were then projected, based on assumptions about the effect of the experimental treatments on response rates relative to the main study group. Table 2-4 summarizes the expected eligibility and response rates within each of the treatment groups and for the overall sample. The actual response rates are shown for comparison.

Table 2-4. Expected and actual screener eligibility rates, screener response rates, and topical response rates, by experimental treatment group: NHES:2016

Experimental treatment group	NHES:2016 expected rates							NHES:2016 actual rates						
	Number of households (actual)	Screener eligibility rate	Screener response rate	ATES response rate	Enrolled response rate	ECPP response rate	PFI—Home-schooled response rate	NHES:2016 actual rates			PFI—Home-schooled response rate			
								ATES response rate	Enrolled response rate	ECPP response rate				
Incentive experiment¹														
Main study (paper, \$5 incentive)	126,000	90.6	66.9	75.0	80.0	80.0	80.0	90.8	63.0	73.6	74.1	71.1	56.6	
Paper, \$2 incentive to random subsample	10,000	90.6	61.9	75.0	80.0	80.0	80.0	90.8	60.0	73.5	76.8	78.5	67.6	
Paper, \$0 incentive based on response propensity	1,750	98.0	59.9	75.0	80.0	80.0	80.0	96.9	82.2	81.5	68.5	‡	‡	
Paper, \$2 incentive based on response propensity	6,996	97.0	61.9	75.0	80.0	80.0	80.0	97.0	76.3	79.3	82.5	82.9	‡	
Paper, \$5 incentive based on response propensity	21,007	91.0	65.5	75.0	80.0	80.0	80.0	90.8	60.3	72.5	74.8	73.7	61.9	
Paper, \$10 incentive based on response propensity	5,247	78.0	44.0	75.0	80.0	80.0	80.0	78.9	41.8	64.9	63.0	61.7	‡	
E-mail question experiment														
Web treatment group, e-mail, \$5 incentive	17,500	90.6	56.9	65.0	70.0	70.0	70.0	90.7	57.3	81.5	84.9	82.2	62.5	
Web treatment group, no e-mail, \$5 incentive	17,500	90.6	56.9	65.0	70.0	70.0	70.0	90.3	56.5	81.1	84.5	84.5	77.0	
Total	206,000	90.6	64.1	74.2	79.2	79.2	79.2	90.7	61.7	74.8	76.0	73.7	59.7	

[‡]Reporting standards not met. Data may be suppressed because the response rate is under 50 percent, there are too few cases for a reliable estimate, or the coefficient of variation (CV) is 50 percent or greater.

¹Experimental treatment groups based on response propensity were strata of respondents predicted to have very high, high, medium, or low response propensity based on a logistics regression model built using NHES:2014 data.

NOTE: ATES = Adult Training and Education Survey. ECPP = Early Childhood Program Participation. NHES = National Household Education Surveys Program. PFI = Parent and Family Involvement in Education. Expected eligibility and response rates are based on the calculations from the NHES:2011 Field Test, NHES:2012, and the NHES:2014 Feasibility Study. The total response rates represent the response rates over the entire NHES:2016 sample after accounting for the differential effects of experimental treatments. All response rates are unweighted.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2011, 2012, and 2014.

The following assumptions were made in deriving the response rates shown in table 2-4:

- Based on the results of the NHES:2011 Field Test, it was assumed that screener response rates in the \$2-only group would be 5 percentage points lower than the \$5 main study group. In NHES:2016, the \$2-only group response rate was approximately 3 percentage points lower than the main study group.
- Among households assigned to receive differential screener incentives based on their response propensity, screener response rates were projected as follows.
 - Among households whose response propensity was above the 95th percentile (which received \$0 in the experiment), a 7-percentage-point decrease from the \$5 main study was assumed, based on the NHES:2014 screener experiment results. In NHES:2016, the screener response rate in this group was approximately 19 percentage points higher than in the main study group.
 - Similarly, among households whose response propensity was between the 75th and 95th percentiles (which received \$2 in the experiment) group, the screener response rate was assumed to be 5 percentage points lower than the response rate in the \$5 main study group. In NHES:2016, the screener response rate in this group was approximately 13 percentage points higher than the main study group.
 - Among households whose response propensity was between the 15th and 75th percentile (which received \$5 in the experiment), it was assumed that the screener response rate would be 65.5 percent, which was based on the NHES:2014 response rate among households in the \$5 incentive group whose predicted response propensity was between the 15th and 75th percentiles.⁷ The actual NHES:2016 screener response rate in this group was 60.3 percent.
 - Among households whose response propensity was below the 15th percentile (which received \$10 in the experiment), it was assumed that the screener response rate would be approximately 44 percent. This rate was based on the NHES:2014 response rate among households receiving a \$5 incentive whose predicted response propensity was below the 15th percentile. The actual NHES:2016 screener response rate in this group was 41.8 percent.

⁷ For the \$10 and \$5 response propensity groups, 1 percentage point was subtracted from the NHES:2014 \$5 response rate within the associated response propensity cluster, to account for the fact that sample stratification by race/ethnicity will likely reduce response rates relative to the NHES:2014, which utilized no Black/Hispanic oversample.

- On the basis of the NHES:2014 and the NHES:2011 results, it was assumed that the screener incentive treatment would have no impact on topical response rates. Therefore, within the control group and all incentive treatment groups, the expected ATES response rate was 75 percent (based on the ATES response rate in NHES:2014), and the expected child topical response rate was 80 percent (based on the PFI and ECPP response rates in NHES:2012, the most recent administration of these surveys). The actual NHES:2016 topical response rates within the control group and all incentive treatment groups (not shown in tables) were 73.6 percent (ATES), 74.4 percent (PFI-Enrolled), 71.9 percent (ECPP), and 57.9 percent (PFI-Homeschooled).
- On the basis of prior literature (cf. Manfreda et al. 2008; Messer and Dillman 2011; Shih and Fan 2008; Smyth et al. 2010), it was assumed that the screener and topical response rates would be approximately 10 percentage points lower in the web treatment group than in the mail control group. The rate takes into account the fact that the web experiment was designed such that web treatment cases received up to three total nonresponse follow-up mailings, of which two included paper questionnaires. In NHES:2016, the screener response rate was approximately 6 percentage points lower in the web treatment group than in the mail control group. The ATES response rate was approximately 8 percentage points higher, the PFI-Enrolled response rate was approximately 11 percentage points higher, the ECPP response rate was approximately 12 percentage points higher, and the PFI-Homeschooled response rate was approximately 14 percentage points higher. It was assumed that approximately 50 percent of households that responded from the web treatment group would return a paper screener after the third or fourth mailing using paper rather than respond by web. In NHES:2016, approximately 39 percent of households that responded to the screener from the web treatment group returned a paper screener (or provided screener information over the phone) rather than a web screener.
- It also was assumed that topical response rates in the web group would be the same regardless of whether the respondent was asked for an e-mail address. For the most part, this assumption was borne out in actual rates⁸. In NHES:2016, the PFI-Homeschooled response rate in the web treatment group was approximately 15 percentage points higher when the respondent was not asked for an e-mail address; for the other topical surveys,

⁸ Response rates to the PFI-Homeschooled web survey were somewhat lower for those cases who were asked to provide an e-mail address compared to those who were not. These differences were not observed for the other three topical surveys. This difference may be due, at least in part, to the relatively small number of cases sampled on the web to the PFI-Homeschooled survey.

the response rate in the web treatment group was approximately the same regardless of whether the respondent was asked for an e-mail address.

- The experimental treatments were not expected to affect the address eligibility rate; however, it was expected that households with a higher predicted response propensity (and therefore receiving a lower incentive if assigned to the incentive experiment) would show higher address eligibility rates. Therefore, differential eligibility rates were assumed for the individual response propensity groups in the incentive experiment, which averaged to approximately 90.6 percent for the treatment group as a whole. This was approximately the same as the actual address eligibility rate observed in NHES:2016.

In calculating expected yields, it also was necessary to make assumptions about the number of screener respondent households that would report members eligible for one or more topical surveys. The NHES:2014 Feasibility Study results suggested that approximately 31 percent of screener respondent households would have eligible children and 80 percent would have eligible adults.⁹ Actual data collection experiences for NHES:2016 differed from this expectation to some degree. Table 2-5 shows both the assumptions for within-household sampling based on NHES:2014 Feasibility Study results, and actual data collection results.

Table 2-5. Expected and actual percentage and number of households with eligible individuals for one or more topical surveys: NHES:2016

Household eligibility status	Expected percentage of households	Actual percentage of households	Expected number of screened households	Actual number of screened households
Total households with eligible adults	80.1	78.1	95,736	90,029
Total households with eligible children	31.1	28.7	37,224	33,144
Households with ECPP-eligible children	11.8	10.3	14,057	11,882
Households with PFI-eligible children	25.7	23.7	30,683	27,292
Households with PFI-Enrolled-eligible children	24.8	22.9	29,628	26,405
Households with PFI-Homeschooled- eligible children	0.9	1.1	1,055	1,216

NOTE: ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Percentages do not sum to 100 because some households have members eligible for more than one survey. Expected estimates are based on calculations from National Household Education Surveys Program of 2014 Feasibility Study. All percentages are unweighted.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

On the basis of topical eligibility assumptions, table 2-6 summarizes the expected and actual numbers of completed screener and topical interviews for the NHES:2016. The expected numbers

⁹ The expected percentage of households with eligible individuals was estimated using nonresponse-adjusted screener weights and was adjusted to account for differences between the race/ethnicity strata in the proportion of households with each composition.

take into account the sampling stratification, allocation to the experimental treatments, and within-household sampling. Table 2-7 disaggregates the number of actual completed cases by the sampling stratum and response mode (web or paper) regardless of assigned incentive experiment treatment group. For more information about the effect of the experiments on the NHES:2016 response rates, see chapter 5.

Table 2-6. Expected and actual number of cases sampled and number of completed screeners and topical surveys in the NHES:2016

Survey	Expected number sampled	Actual number sampled	Expected number of completed interviews	Actual number of completed interviews
Household screeners ¹	206,000	206,000	119,568	115,342
ECPP	9,411	7,937	7,457	5,844
PFI-Enrolled	19,744	17,798	15,646	13,523
PFI-Homeschooled	846	925	670	552
ATES	66,463	63,846	49,345	47,744

¹It is assumed that approximately 9.4% of screener cases will be ineligible; therefore, an eligible sample size of 186,636 is used as the basis for the expected screener interviews.

NOTE: ATES = Adult Training and Education Survey. ECPP = Early Childhood Program Participation. NHES = National Household Education Surveys. PFI = Parent and Family Involvement in Education. Expected estimates are based on calculations from NHES:2014 Feasibility Study.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 2-7. Number of completed interviews by sampling stratum and mode: NHES:2016

Sampling stratum and mode	Number of completed interviews				
	Screener	ATES	PFI-Enrolled	ECPP	PFI-Homeschooled
Black stratum					
Paper	17,061	6,671	1,702	753	84
Web	1,532	793	239	92	9
Hispanic stratum					
Paper	12,840	4,870	1,658	732	78
Web	1,066	488	215	89	10
Other stratum					
Paper	74,417	30,861	8,428	3,621	322
Web	8,426	4,061	1,281	557	49

NOTE: ATES = Adult Training and Education Survey. ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Mode refers to the mode by which the survey was completed. Therefore, respondents who were sampled for the web experiment but returned a paper questionnaire are included in the paper interview counts. Respondents who were sampled for the web experiment or the paper survey who completed the screener through the toll-free questionnaire assistance (phone) are included in the paper interview counts.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

2.4 Precision Requirements

In designing the NHES:2016 sample, a number of measures were examined to ensure that the expected number of interviews would be large enough to report estimates with a desired level of statistical precision. Measures of precision included expected design effects, margins of error on percentage estimates, and detectable differences from prior NHES administrations.

2.4.1 Design effects and effective interview counts

Because the precision of any survey estimate is directly related to the size of the analytic sample, the design of the NHES:2016 took into consideration the estimated variances that would result under the expected interview counts. Because the NHES:2016 used a complex two-phase sampling design with unequal selection probabilities, the variances of estimates are larger than would be observed if a sample of the same size were selected using simple random sampling. The factor by which the variance of an estimate increases due to a complex sampling design is referred to as the *design effect*. The actual interview count divided by the design effect is referred to as the *effective interview count*, and represents the interview count that, under simple random sampling, would give the same variance as that observed under the complex design. Table 2-8 shows the expected average design effect and effective interview count for each of the NHES:2016 topical surveys.¹⁰ The average design effect and effective interview count for the NHES:2012 also are shown for comparison.

¹⁰ The expected design effect for the NHES:2016 was calculated as follows. The design effect attributable to the stratification of the initial screener sample was approximated using Kish's (1965) $I+L$ statistic. This result was multiplied by the design effect attributable to the differential sampling of households for each topical survey, which was approximated in the same way. Finally, this product was multiplied by 1.3 to approximate the effect of nonresponse adjustment at the screener stage, and then again by 1.3 to approximate the effect of nonresponse adjustment and raking at the topical stage.

Table 2-8. Actual interview counts, design effects, and effective interview counts for topical surveys, 2016 expected and 2012 actual

Survey	2016 expected			2012 actual		
	Actual interview count	Design effect	Effective interview count	Actual interview count	Design effect	Effective interview count
ATES	49,345	3.1223	15,804	†	†	†
PFI-Enrolled	15,646	2.3007	6,801	17,166	2.7225	6,305
ECPP	7,448	1.8727	3,977	7,893	1.6900	4,670
PFI-Homeschooled	670	1.7135	391	397	7.6176	52

†Not applicable; survey was not administered in 2012.

NOTE: Expected 2016 design effects were approximated based on the planned sampling design, with adjustments for the likely effect of nonresponse adjustments. 2012 design effects represent the average design effect across key estimates, as reported in the NHES:2012 Data File User's Manual. The effective sample size represents the number of expected (2016) or actual (2012) completed interviews, divided by the design effect.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012.

2.4.2 Topical Estimate Margins of Error

Taking into account the expected sample sizes described above, the expected reliability of estimated proportions also was considered as part of the design of the NHES:2016 sample. The reliability of proportion estimates under the expected sample sizes was measured using the margins of error for a 95 percent confidence level. Table 2-9 shows the reliability of estimates for proportions between 10 percent and 90 percent under the expected effective topical interview counts. For example, in the ATES topical survey, if an estimated proportion was 70 percent, the margin of error was expected to be below 1 percentage point for the overall population, about 1 percentage point within subgroups that constitute 50 percent of the population, and about 2.3 percentage points within subgroups that constitute 10 percent of the population. As can be seen from table 2-9, based on the expected topical interview count, estimates for proportions between 10 percent and 90 percent were expected to have a margin of error ranging from less than one percentage point to over 15 percentage points, depending on the topical survey and the size of the subgroup for which the proportion was estimated.

Table 2-9. Expected margins of error for NHES:2016 topical surveys, by proportion estimate and subgroup

Topical survey	Proportion estimate	Margin of error on proportion estimate		
		Overall	Within 50% subgroup	Within 20% subgroup
ATES	10% or 90%	0.47%	0.66%	1.05%
	20% or 80%	0.62%	0.88%	1.39%
	30% or 70%	0.71%	1.01%	1.60%
	40% or 60%	0.76%	1.08%	1.71%
	50%	0.78%	1.10%	1.74%
PFI-Enrolled	10% or 90%	0.71%	1.01%	1.59%
	20% or 80%	0.95%	1.34%	2.13%
	30% or 70%	1.09%	1.54%	2.44%
	40% or 60%	1.16%	1.65%	2.60%
	50%	1.19%	1.68%	2.66%
ECPP	10% or 90%	0.93%	1.32%	2.08%
	20% or 80%	1.24%	1.76%	2.78%
	30% or 70%	1.42%	2.01%	3.18%
	40% or 60%	1.52%	2.15%	3.40%
	50%	1.55%	2.20%	3.47%
PFI-Homeschooled	10% or 90%	2.97%	4.21%	6.65%
	20% or 80%	3.96%	5.61%	8.87%
	30% or 70%	4.54%	6.42%	10.16%
	40% or 60%	4.86%	6.87%	10.86%
	50%	4.96%	7.01%	11.08%

NOTE: The following estimated design effects were used in the calculations for this table: 3.122 for ATES, 2.301 for the PFI-Enrolled, 1.873 for the ECPP, and 1.714 for the PFI-Homeschooled. These represent the estimated design effects due to unequal weighting at the screener and topical levels. The margins of error were calculated assuming a confidence level of 95 percent, using the following formula: $1.96 * \sqrt{[p * (1 - p) / ne]}$, where p is the proportion estimate and ne is the effective sample size for the topical survey. Refer to table 2-8 for a comparison of the expected 2016 design effect with the actual 2012 design effect for each survey.

2.4.3 Detectable Differences from Prior NHES Administrations

The NHES:2016 was designed to meet precision requirements that allow for comparison with prior NHES administrations. The precision requirements specified that one be able to detect a 10 to 15 percent relative change in percentage estimates between 30 and 60.

NHES:2016 will represent the first full-scale administration of ATES; therefore, there are no prior published estimates with which to compare 2016 ATES estimates. However, an analysis was conducted to ensure that the expected PFI and ECPP effective interview count would be sufficient to enable statistical comparisons to key estimates from NHES:2012. Table 2-10a shows the minimum detectable change in key ECPP proportion estimates, both overall and within key subgroups, between the 2012 and 2016 administrations ($\alpha = .05$), given the expected 2016 effective interview count of 3,982. The percent relative change in an estimate is equal to the change in an estimate from 2012 to 2016, divided by the 2012 estimate—for example, if an estimate was

30 percent in 2012, then a 10 percent relative increase would be equivalent to an increase of 3 percentage points. The expected effective ECPP interview count of 3,982 was sufficient to detect a 10 percent relative change in all but one overall estimate, and all but two estimates within the White subgroup. In general, as was the case from 2007 to 2012, it was not expected to be possible to detect 10 percent relative increases in most of the estimates within the Black and Hispanic subgroups. However, for most of the estimates within these subgroups, a 15 percent relative change was expected to be detectable. The rightmost column of the table also shows the minimum effective interview count in 2016 necessary to detect a 15 percent relative increase¹¹ in the estimate. For most estimates, a 15 percent relative increase would be detectable even with an effective sample size that is substantially lower than expected.

Table 2-10b shows the minimum detectable change in key PFI proportion estimates (from both the PFI-Enrolled and PFI-Homeschooled as one analytic sample), given the expected 2016 interview counts of 6,801 for the PFI-Enrolled and 391 for the PFI-Homeschooled. It was expected that 10 percent relative changes would be detectable for all overall estimates and for the majority of the estimates within race/ethnicity subgroups. Furthermore, only a handful of estimates within race/ethnicity subgroups would not show a 15 percent detectable change under the expected effective sample sizes. However, for most of the estimates among homeschoolers, a 15 percent relative change was not expected to be detectable given the small size of the 2012 and 2016 PFI-Homeschooled samples. As with the ECPP, for most estimates a 15 percent relative increase would be detectable even with an effective sample size that is substantially lower than expected.

¹¹ The minimum effective sample size to detect a 15 percent relative decrease would be similar but not identical to the minimum effective sample size to detect a 15 percent relative increase.

Table 2-10a. Expected detectable changes from 2012 for key Early Childhood Program Participation characteristics: NHES:2016

Characteristic	ECPP:2012		Detectable upward change ¹		Detectable downward change ¹		Minimum effective sample size to detect 15 percent relative increase	
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change		
Overall estimates								
Participation in care arrangements								
Any care	63.0	0.8	2.2	3.4	-2.2	-3.5	88	
Relative care	28.5	0.7	2.0	7.0	-1.9	-6.8	516	
Nonrelative care	15.2	0.6	1.7	10.9	-1.6	-10.4	1,452	
Center-based	34.3	0.7	2.0	5.9	-2.0	-5.8	373	
Recognizes all colors	66.7	0.9	2.3	3.4	-2.3	-3.5	71	
Can count higher than 10	50.5	1.0	2.5	4.9	-2.5	-5.0	175	
Knows all letters	27.2	0.8	2.1	7.8	-2.1	-7.6	582	
Can write own name	37.3	0.8	2.2	5.9	-2.2	-5.8	326	
Estimates by race/ethnicity								
White, non-Hispanic, percentage of population		50.3						
Participation in care arrangements								
Any care	64.1	1.0	2.8	4.4	-2.9	-4.5	167	
Relative care	26.0	0.8	2.5	9.7	-2.4	-9.4	1,255	
Nonrelative care	17.7	0.8	2.4	13.3	-2.2	-12.6	2,697	
Center-based	35.5	0.9	2.8	7.8	-2.7	-7.6	731	
Recognizes all colors	74.9	1.1	2.8	3.8	-2.9	-3.9	75	
Can count higher than 10	52.7	1.3	3.3	6.4	-3.4	-6.4	326	
Knows all letters	28.1	1.0	2.8	10.0	-2.7	-9.7	1,200	
Can write own name	39.2	1.1	3.1	7.8	-3.0	-7.7	632	

See notes at end of table.

Table 2-10a. Expected detectable changes from 2012 for key Early Childhood Program Participation characteristics: NHES:2016—Continued

Characteristic	ECPP:2012		Detectable upward change ¹		Detectable downward change ¹		Minimum effective sample size to detect 15 percent relative increase
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Black, non-Hispanic, percentage of population	13.3						
Participation in care arrangements							
Any care	70.6	2.5	5.2	7.4	-5.3	-7.5	500
Relative care	34.4	2.3	6.1	-	-5.9	-	10,956
Nonrelative care	12.5	1.7	4.6	-	-4.1	-	--
Center-based	42.2	2.3	6.2	14.7	-6.1	-14.4	3,654
Recognizes all colors	58.2	3.0	7.1	12.3	-7.3	-12.5	1,535
Can count higher than 10	58.7	2.8	6.8	11.6	-6.9	-11.8	1,336
Knows all letters	33.1	2.9	7.1	-	-6.8	-	--
Can write own name	38.8	2.9	7.1	-	-6.9	-	45,620
Hispanic, percentage of population	25.2						
Participation in care arrangements							
Any care	58.1	1.5	3.6	6.2	-3.7	-6.3	502
Relative care	31.4	1.7	4.5	14.2	-4.3	-13.8	3,174
Nonrelative care	12.5	1.2	3.3	-	-3.0	-	--
Center-based	27.7	1.2	3.7	13.4	-3.5	-12.8	2,821
Recognizes all colors	52.3	2.0	5.0	9.5	-5.0	-9.5	791
Can count higher than 10	40.0	1.9	4.8	12.1	-4.8	-11.9	1,711
Knows all letters	18.2	1.2	3.5	-	-3.2	-	13,133
Can write own name	32.7	1.8	4.6	14.1	-4.5	-13.7	3,080

¹The detectable upward change is the minimum increase from the 2012 estimate that would be statistically significant (at the .05 level) given the expected ECPP effective sample size of 3,982. The detectable downward change is the minimum decrease from the 2012 estimate that would be statistically significant.

NOTE: The symbol “-” in the detectable change columns indicates that a percent relative change of 15 percent or below is not detectable given the expected ECPP effective sample size of 3,982. The symbol “-” in the minimum sample size column indicates that a percent relative increase of 15 percent would not be detectable with any 2016 sample size due to the precision of the 2012 estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation Survey of the National Household Education Surveys Program (NHES) of 2012.

Table 2-10b. Expected detectable changes from 2012 for key Parent and Family Involvement in Education characteristics: NHES:2016

Characteristic	PFI:2012		Detectable upward change ²		Detectable downward change ²		Minimum effective sample size to detect 15 percent relative increase ³
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Overall estimates (PFI-Enrolled and PFI-Homeschooled)							
Child's parents participate in three or more activities at child's school ¹	63.2	0.4	1.4	2.2	-1.4	-2.2	85
Child's parents report school practices have been done very well							
School tells family how child is doing in school	56.0	0.5	1.5	2.7	-1.5	-2.7	127
School provides information about how to help child with homework	41.4	0.5	1.5	3.6	-1.5	-3.6	255
School provides information about why child is in groups/classes	39.1	0.5	1.5	3.8	-1.5	-3.8	284
School provides information on how to help prepare child for college	21.2	0.5	1.4	6.5	-1.3	-6.4	774
School provides information about parents' expected role	44.2	0.5	1.5	3.4	-1.5	-3.4	223
Child's parents told child a story in the last week (K-5)	69.3	0.9	2.1	3.0	-2.1	-3.0	59
Child's parents did arts and crafts with child in the last week (K-5)	67.6	0.8	1.9	2.8	-1.9	-2.8	66
Child's parents talked with child about family history/ethnicity in the last week	52.7	0.6	1.6	3.1	-1.7	-3.1	150
Child's parents and child visited a library in the last month	39.9	0.5	1.5	3.8	-1.5	-3.7	274
Child's parents and child went to a concert/live show in the last month	31.0	0.5	1.5	4.7	-1.4	-4.7	427
Child's parents and child visited a museum/gallery/historical site in the last month	21.7	0.4	1.3	5.8	-1.2	-5.6	721
Child's parents and child visited a zoo/aquarium in the last month	18.8	0.5	1.4	7.2	-1.3	-7.0	931
Child's parents and child went to a sporting event in the last month	41.4	0.6	1.6	4.0	-1.6	-3.9	258

See notes at end of table.

Table 2-10b. Expected detectable changes from 2012 for key Parent and Family Involvement in Education characteristics: NHES:2016—Continued

Characteristic	PFI:2012		Detectable upward change ²		Detectable downward change ²		Minimum effective sample size to detect 15 percent relative increase ³
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Estimates by race/ethnicity (PFI-Enrolled and PFI-Homeschooled)							
White, non-Hispanic, percentage of population	52.2						
Child's parents participate in three or more activities at child's school	70.3	0.6	1.9	2.6	-1.9	-2.7	104
Child's parents report school practices have been done very well							
School tells family how child is doing in school	57.0	0.8	2.2	3.9	-2.2	-3.9	235
School provides information about how to help child with homework	41.3	0.7	2.1	5.1	-2.1	-5.0	503
School provides information about why child is in groups/classes	39.7	0.8	2.2	5.6	-2.2	-5.6	553
School provides information on how to help prepare child for college	19.7	0.6	1.8	9.0	-1.7	-8.7	1,755
School provides information about parents' expected role	45.7	0.8	2.2	4.9	-2.2	-4.9	412
Child's parents told child a story in the last week (K-5)	72.3	1.0	2.4	3.3	-2.5	-3.4	91
Child's parents did arts and crafts with child in the last week (K-5)	68.3	1.0	2.4	3.6	-2.5	-3.6	123
Child's parents talked with child about family history/ethnicity in the last week	41.6	0.8	2.2	5.4	-2.2	-5.3	503
Child's parents and child visited a library in the last month	37.0	0.7	2.1	5.6	-2.1	-5.6	622
Child's parents and child went to a concert/live show in the last month	32.9	0.6	1.9	5.9	-1.9	-5.8	754
Child's parents and child visited a museum/gallery/historical site in the last month	22.4	0.6	1.8	8.1	-1.8	-7.8	1,421
Child's parents and child visited a zoo/aquarium in the last month	15.4	0.5	1.6	10.1	-1.5	-9.6	2,451
Child's parents and child went to a sporting event in the last month	43.6	0.7	2.1	4.8	-2.1	-4.8	450

See notes at end of table.

Table 2-10b. Expected detectable changes from 2012 for key Parent and Family Involvement in Education characteristics: NHES:2016—Continued

Characteristic	PFI:2012		Detectable upward change ²		Detectable downward change ²		Minimum effective sample size to detect 15 percent relative increase ³
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Black, non-Hispanic, percentage of population	14.1						
Child's parents participate in three or more activities at child's school	56.9	1.4	4.1	7.2	-4.1	-7.3	943
Child's parents report school practices have been done very well							
School tells family how child is doing in school	58.3	1.6	4.3	7.4	-4.4	-7.5	903
School provides information about how to help child with homework	45.1	1.8	4.7	10.4	-4.7	-10.3	2,041
School provides information about why child is in groups/classes	41.4	1.6	4.4	10.6	-4.3	-10.5	2,365
School provides information on how to help prepare child for college	25.3	1.7	4.4	-	-4.2	-	17,033
School provides information about parents' expected role	47.8	1.8	4.7	9.8	-4.7	-9.8	1,731
Child's parents told child a story in the last week (K-5)	64.9	2.3	5.3	8.2	-5.4	-8.4	693
Child's parents did arts and crafts with child in the last week (K-5)	64.4	2.7	6.0	9.3	-6.1	-9.5	801
Child's parents talked with child about family history/ethnicity in the last week	68.7	1.5	4.0	5.9	-4.2	-6.1	463
Child's parents and child visited a library in the last month	47.9	1.7	4.5	9.5	-4.5	-9.4	1,664
Child's parents and child went to a concert/live show in the last month	32.2	1.6	4.3	13.4	-4.2	-13.0	4,708
Child's parents and child visited a museum/gallery/historical site in the last month	21.6	1.3	3.7	-	-3.5	-	12,700
Child's parents and child visited a zoo/aquarium in the last month	20.8	1.5	4.0	-	-3.7	-	45,455
Child's parents and child went to a sporting event in the last month	42.7	1.7	4.5	10.6	-4.5	-10.5	2,276

See notes at end of table.

Table 2-10b. Expected detectable changes from 2012 for key Parent and Family Involvement in Education characteristics: NHES:2016—Continued

Characteristic	PFI:2012		Detectable upward change ²		Detectable downward change ²		Minimum effective sample size to detect 15 percent relative increase ³
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Hispanic, percentage of population	22.8						
Child's parents participate in three or more activities at child's school	52.8	1.2	3.4	6.4	-3.4	-6.4	703
Child's parents report school practices have been done very well							
School tells family how child is doing in school	51.4	1.1	3.2	6.3	-3.2	-6.3	743
School provides information about how to help child with homework	38.7	1.2	3.4	8.7	-3.3	-8.5	1,477
School provides information about why child is in groups/classes	35.4	1.0	3.1	8.7	-3.0	-8.5	1,670
School provides information on how to help prepare child for college	22.7	1.2	3.2	14.0	-3.0	-13.4	5,362
School provides information about parents' expected role	38.0	1.0	3.1	8.1	-3.0	-8.0	1,447
Child's parents told child a story in the last week (K-5)	65.9	2.1	4.7	7.1	-4.7	-7.2	383
Child's parents did arts and crafts with child in the last week (K-5)	68.3	1.6	3.8	5.6	-3.9	-5.7	298
Child's parents talked with child about family history/ethnicity in the last week	63.9	1.2	3.3	5.1	-3.3	-5.2	380
Child's parents and child visited a library in the last month	38.5	1.4	3.6	9.5	-3.6	-9.3	1,610
Child's parents and child went to a concert/live show in the last month	26.3	1.3	3.4	12.9	-3.3	-12.4	3,919
Child's parents and child visited a museum/gallery/historical site in the last month	19.6	1.1	3.0	-	-2.8	-14.4	7,363
Child's parents and child visited a zoo/aquarium in the last month	24.3	1.2	3.2	13.2	-3.1	-12.7	4,375
Child's parents and child went to a sporting event in the last month	38.8	1.3	3.5	9.0	-3.4	-8.9	1,521

See notes at end of table.

Table 2-10b. Expected detectable changes from 2012 for key Parent and Family Involvement in Education characteristics: NHES:2016—Continued

Characteristic	PFI:2012	Detectable upward change ²		Detectable downward change ²		Minimum effective sample size to detect 15 percent relative increase ³		
		Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change			
Homeschooling estimates (PFI–Homeschooled)								
Reasons for homeschooling								
Concerns about the environment of other schools	90.1	2.0	4.5	5.0	-5.3	-5.9		
Dissatisfaction with academic instructions at other schools	75.2	3.0	7.0	9.3	-7.5	-10.0		
To provide religious or moral instruction	81.2	2.5	5.9	7.3	-6.5	-8.0		
Child has a physical or mental health problem	19.3	2.5	6.5	-	-5.9	-		
Child has other special needs	17.5	2.6	6.6	-	-6.0	-		
Nontraditional approach to child's education	43.8	3.1	7.8	-	-7.7	-		
Other reasons	38.5	3.6	8.6	-	-8.4	-		
Most important reason for homeschooling								
Concerns about the environment of other schools	24.1	2.8	7.2	-	-6.7	-		
Dissatisfaction with academic instructions at other schools	18.7	3.1	7.5	-	-6.9	-		
To provide religious or moral instruction	21.3	2.8	7.1	-	-6.5	-		
Child has a physical or mental health problem	6.7	1.7	4.6	-	-3.7	-		
Child has other special needs	1.7	0.9	2.7	-	-1.8	-		
Nontraditional approach to child's education	5.3	1.6	4.3	-	-3.4	-		
Other reasons	22.3	3.2	7.7	-	-7.2	-		

[†]Not applicable; a 15 percent relative increase would place the estimate above 100 percent.

¹ Any three or more of FSMTNG, FSATCNF, FSSPORT, or FSVOL.

²The detectable upward change is the minimum increase from the 2012 estimate that would be statistically significant (at the .05 level) given the expected PFI effective sample size of 6,801 for the PFI-Enrolled and 391 for the PFI-Homeschooled. The detectable downward change is the minimum decrease from the 2012 estimate that would be statistically significant.

³For nonhomeschooling estimates, this column shows the minimum PFI effective sample size (PFI-Enrolled and PFI-Homeschooled combined) at which a 15 percent relative increase from the 2012 estimate would be statistically significant (at the .05 level). For homeschooling estimates, this column shows the minimum PFI-Homeschooled effective sample size.

NOTE: The symbol “-” in the detectable change columns indicates that a percent relative change of 15 percent or below is not detectable given the expected PFI effective sample size (6,801 for the PFI-Enrolled and 391 for the PFI-Homeschooled). The symbol “-” in the minimum sample size column indicates that a percent relative increase of 15 percent would not be detectable with any 2016 sample size due to the precision of the 2012 estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the National Household Education Surveys Program (NHES) of 2012.

2.5 References

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Chapter 3. Data Collection

3.1 Overview of Data Collection

Data collection for the National Household Education Surveys Program of 2016 (NHES:2016) primarily utilized a mail-based, self-administered methodology. Data collection was conducted in two stages: a screener stage and a topical survey stage. Data collection began with the mailing of brief screener questionnaires to sampled household addresses. When the completed screener questionnaires were returned, information from the questionnaires was used to sample individuals in the household for a more in-depth topical follow-up survey.

Parents of sampled children were mailed one of three topical questionnaires in the second stage of data collection: the Early Childhood Program Participation (ECPP) questionnaire for children ages 6 or younger and not yet enrolled in school, the Parent and Family Involvement in Education—Enrolled (PFI—Enrolled) questionnaire for children ages 3–20 enrolled in public or private school, or the Parent and Family Involvement in Education—Homeschooled (PFI—Homeschooled) questionnaire for homeschooled children ages 3–20. Sampled adults ages 16–65 and not enrolled in grades 12 or below were mailed the Adult Training and Education Survey (ATES). No more than one child or one adult per household was sampled for the topical surveys.

A separate study on a seeded sample of 1,000 adults who hold certain types of occupational credentials also was conducted during data collection in order to permit measurement of the extent to which respondents may underreport these credentials. Because the names and addresses of those in the seeded sample were solicited from credentialing organizations, they were excluded from the screener operation and instead received a personally addressed copy of the ATES topical questionnaire. In addition, as discussed in the previous chapter on Sampling Methodology, several different methodological experiments were conducted, including a self-administered internet survey.

3.1.1 Data Collection Activities

The data collection activities for the NHES:2016 were conducted between January and September 2016. Table 3-1 highlights the timing of these activities.

Table 3-1. Data collection activity timeline: NHES:2016

Activity	Date
Advance letters mailed	January 4, 2016
Initial screener questionnaires mailed	January 9, 2016
Screener reminder postcards mailed	January 26, 2016
Second screener questionnaires mailed	February 10–17, 2016
Third screener questionnaires mailed, via FedEx and U.S. Postal Service ¹	March 2–4, 2016
Fourth screener questionnaires mailed	March 23–24, 2016
Returned screener questionnaires processed, and eligible households assigned to receive the PFI-Enrolled, PFI-Homeschooled, ECPP, or ATES questionnaire	January–May 2016 on a rolling basis
First topical questionnaires mailed	February–June 2016
Reminder postcards mailed to topical sampled households one week after the first topical questionnaire packages mailed	February–June 2016
Thank-you e-mail ²	February–August 2016
Topical questionnaire follow-ups mailed	March–August 2016
Automated telephone calls	May–August 2016
Last completed questionnaires accepted	August 23, 2016
Last undeliverable as addressed (UAA) questionnaires accepted	September 6, 2016

¹ All addresses were sent FedEx except addresses with a P.O. box, which utilized U.S. Postal Service priority mail during the third screener.

² Throughout the data collection, a thank-you e-mail was sent to respondents who submitted a valid e-mail address via the self-administered web instrument.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 3-2 shows a full list of the mailing materials used throughout the NHES:2016 data collection process. All mailing materials were in English and Spanish, except for the materials for the seeded sample, which were only in English. The English-language questionnaires are provided in the appendixes to this manual. The Spanish-language questionnaires are available upon request by contacting nhes@ed.gov.

Table 3-2. Data collection mailing materials: NHES:2016

Material name	Language
Questionnaires	
Screener	English, Spanish
ATES	English, Spanish
ECPP	English, Spanish
PFI-Enrolled	English, Spanish
PFI-Homeschooled	English, Spanish
Advance letter materials	
Advance letter envelope	English, Bilingual ¹
Screener advance letter—mail	English, Bilingual
Screener advance letter—mail, no incentive	English, Bilingual
Screener advance letter—web	English, Bilingual
Seeded sample advance letter	English
1st screener mailing materials	
Screener envelope—mail	English, Bilingual
Screener envelope—web	English, Bilingual
Initial screener mailing letter—mail	English, Bilingual
Initial screener mailing letter—mail, no incentive	English, Bilingual
Initial screener mailing letter—web	English, Bilingual
Screener reminder postcard	
Screener reminder postcard—mail	English, Bilingual
Screener reminder postcard—web	English, Bilingual
Screener nonresponse follow-up mailings	
Second screener mailing letter—mail	English, Bilingual
Second screener mailing letter—web	English, Bilingual
Third screener mailing letter—mail/web	English, Bilingual
Fourth screener mailing letter—mail/web	English, Bilingual
Topical mailings	
Topical envelope—mail	English, Bilingual
Topical envelope—web	English, Bilingual
Initial ECPP mailing letter—mail	English, Spanish
Initial ECPP mailing letter—web, same respondent as during screener	English, Spanish
Initial ECPP mailing letter—web, different respondent from screener	English, Spanish
Second ECPP mailing letter—mail	English, Spanish
Second ECPP mailing letter—web, same respondent as during screener	English, Spanish
Second ECPP mailing letter—web, different respondent from screener	English, Spanish
Third ECPP mailing letter—mail/web	English, Spanish
Fourth ECPP/PFI-Enrolled/PFI-Homeschooled mailing letter—mail/web	English, Spanish
Initial PFI-Enrolled mailing letter—mail	English, Spanish
Initial PFI-Enrolled mailing letter—web, same respondent as during screener	English, Spanish
Initial PFI-Enrolled mailing letter—web, different respondent from screener	English, Spanish
Second PFI-Enrolled mailing letter—mail	English, Spanish
Second PFI-Enrolled mailing letter—web, same respondent as during screener	English, Spanish

See notes at end of table.

Table 3-2. Data collection mailing materials: National Household Education Surveys Program of 2016—Continued

Material name	Language
Second PFI—Enrolled mailing letter—web, different respondent from screener	English, Spanish
Third PFI—Enrolled mailing letter—mail/web	English, Spanish
Initial PFI—Homeschooled mailing letter—mail	English, Spanish
Initial PFI—Homeschooled mailing letter—web, same respondent as during screener	English, Spanish
Initial PFI—Homeschooled mailing letter—web, different respondent from screener	English, Spanish
Second PFI—Homeschooled mailing letter—mail	English, Spanish
Second PFI—Homeschooled mailing letter—web, same respondent as during screener	English, Spanish
Second PFI—Homeschooled mailing letter—web, different respondent from screener	English, Spanish
Third PFI—Homeschooled mailing letter—mail/web	English, Spanish
Initial ATES mailing letter—mail	English, Spanish
Initial ATES mailing letter—web, same respondent as during screener	English, Spanish
Initial ATES mailing letter—web, different respondent from screener	English, Spanish
Second ATES mailing letter—mail	English, Spanish
Second ATES mailing letter—web, same respondent as during screener	English, Spanish
Second ATES mailing letter—web, different respondent from screener	English, Spanish
Third ATES mailing letter—mail/web	English, Spanish
Fourth ATES mailing letter—mail/web	English, Spanish
Initial ATES mailing letter—Seeded Sample	English
Second ATES mailing letter—Seeded Sample	English
Third ATES mailing letter—Seeded Sample	English
Fourth ATES mailing letter—Seeded Sample	English
Topical reminder postcard—ECPP/PFI—Enrolled/PFI—Homeschooled/ATES, mail	English, Spanish
Topical reminder postcard—ECPP/PFI—Enrolled/PFI—Homeschooled/ATES, web	English, Spanish
Topical reminder postcard—seeded sample	English
Return mailing envelope, postage paid	English

¹Bilingual letters are double-sided letters, with one side in English and one side in Spanish.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

3.1.2 Methodology

During data collection, three methodological experiments were fielded to determine whether a particular method would increase response rates or survey representativeness or maintain current response rates at a reduced cost. The methodological experiments will inform future administrations of the NHES.

In one experiment at the screener stage, households were randomly assigned to an incentive experiment designed to examine the effectiveness of leveraging auxiliary frame data to assign screener incentives to households based on their modeled propensity to respond. Roughly 22

percent, or 45,000, of the initial 206,000 sampled cases were included in this incentive experiment. Of these 45,000 households, approximately 35,000 were assigned to a noncontingent incentive amount (\$0, \$2, \$5, or \$10) based on their modeled response propensity, and 10,000 were randomly assigned to receive a noncontingent \$2 cash incentive. Letters were tailored to the different treatment groups. All of the households that were not included in the incentive experiment received a \$5 noncontingent cash incentive.

Also at the screener stage, a self-administered web experiment was conducted to determine whether asking respondents to complete the survey on the Internet results in an acceptable response rate and high data quality. All of the initial 206,000 sampled addresses were eligible for the web experiment, and a total of 35,000 were selected. All web experiment cases received a \$5 incentive and were not part of the incentive experiment. An embedded experiment was included within the web experiment in which a random sample of 17,500 households was assigned to a treatment in which the screener respondent was asked to provide an e-mail address for the topical respondent. About three-fourths of the time, the topical respondent was the screener respondent, but in about one quarter of cases, the screener respondent was asked to provide the e-mail address for another household adult sampled for ATES or if the screener respondent indicated they were not knowledgeable about the sampled child, they were asked to provide the e-mail address of the person who was knowledgeable. The e-mail addresses provided by the screener respondents were not used for invitations to complete the survey online; instead, they were used to send thank-you messages to respondents during and at the end of the data collection period. The thank-you messages were a mechanism to determine how many e-mail addresses were valid (i.e., did not bounce back). Results indicated the majority of e-mail addresses were valid and about 1.6 percent of e-mails bounced back (n = 37).

Self-administered web experiment collection details

As mentioned above, a random sample of 35,000 addresses was assigned to the self-administered web experiment treatment group. These addresses were sent information about how to complete the survey online in the first two mailings; in the final two mailings, the addresses also were provided with a paper questionnaire. Unlike the respondents in the paper-only group, who only had the option to complete their survey using the paper questionnaire or via the Telephone Questionnaire Assistance (TQA) help line, respondents in the web experiment treatment group had the option to complete their survey by web or by a paper questionnaire if they had not responded to the survey by the time the third mailing was sent. Similar to the paper-only group, they also had the option of completing their screener over the phone with TQA staff if they called the help line. If web-treatment respondents requested a paper questionnaire, they were informed they would

receive a package with a paper questionnaire in approximately 2 to 3 weeks. At this point, they were switched to the paper-only group, and any future mailings included only a paper questionnaire.

After a web-treatment respondent completed the household roster online, the self-administered web screener instrument automatically determined whether anyone in the household was eligible for a topical survey. If someone was eligible and the person who completed the screener was either the eligible adult or was knowledgeable about the sampled child, then that person was immediately routed to the appropriate topical survey. If someone was eligible but the person who completed the screener was not the adult selected for sampling or was not knowledgeable about the sampled child selected for the ECPP or PFI, then the self-administered web screener ended and the sampled case followed the topical web mailing procedures listed in the topical data collection in section 3.2.2 below.

For a visual overview of both the mail and web operations, please refer to figures 3-1 through 3-5.

Figure 3-1. Screener mail operations

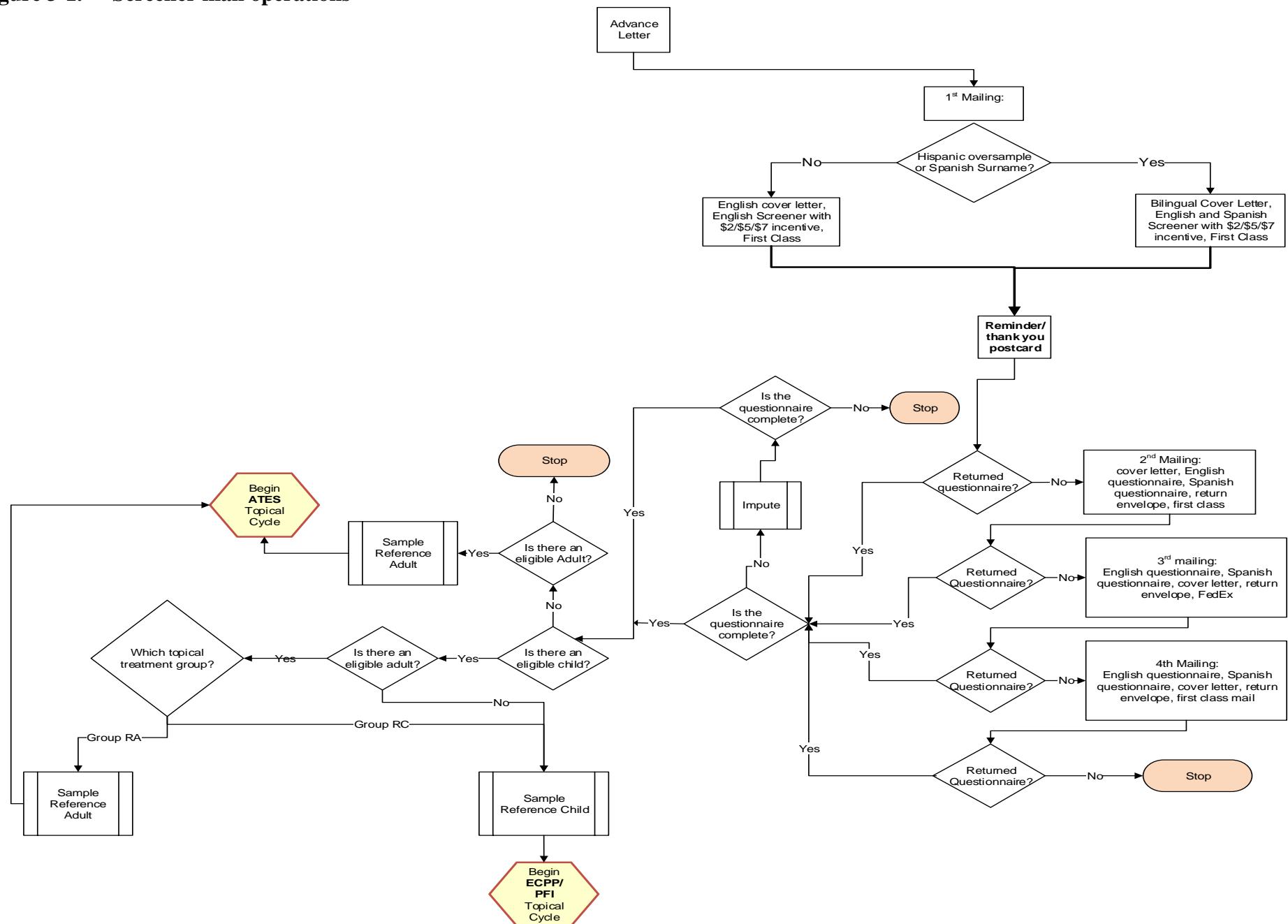


Figure 3-2. Early Childhood Program Participation Survey (ECPP) and Parent and Family Involvement in Education Survey (PFI) mail operations

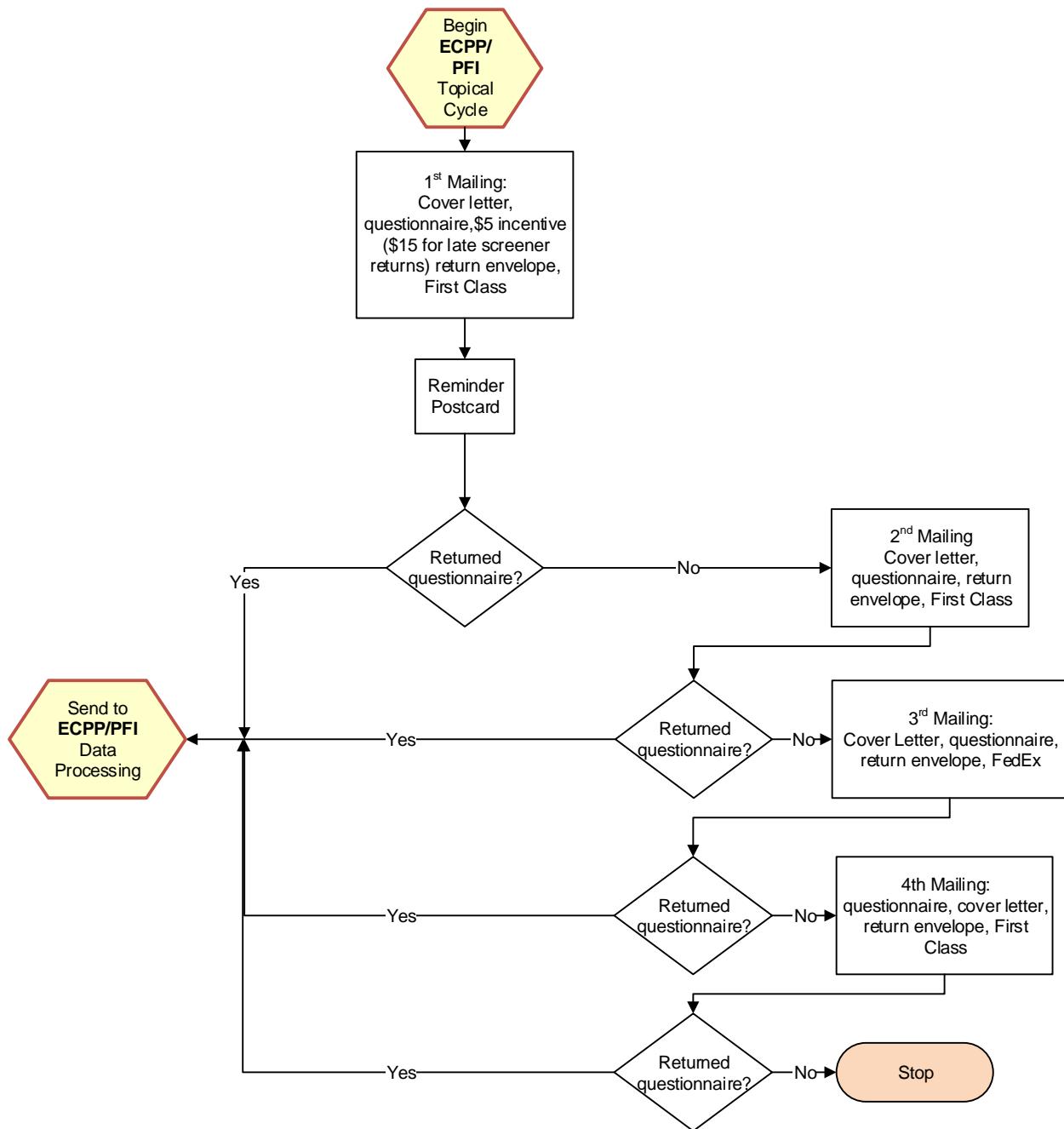


Figure 3-3. Adult Training and Education Survey (ATES) mail operations

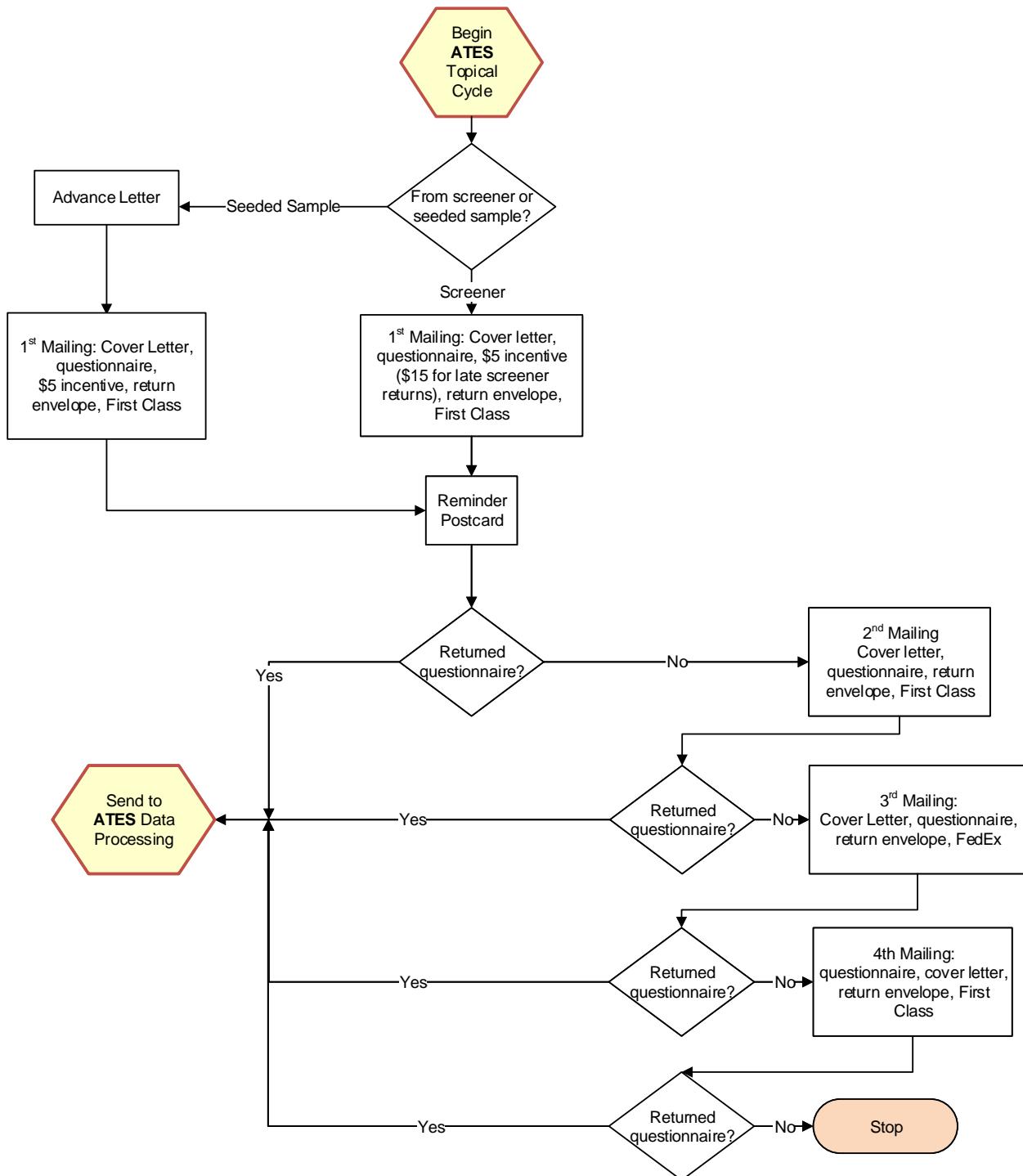
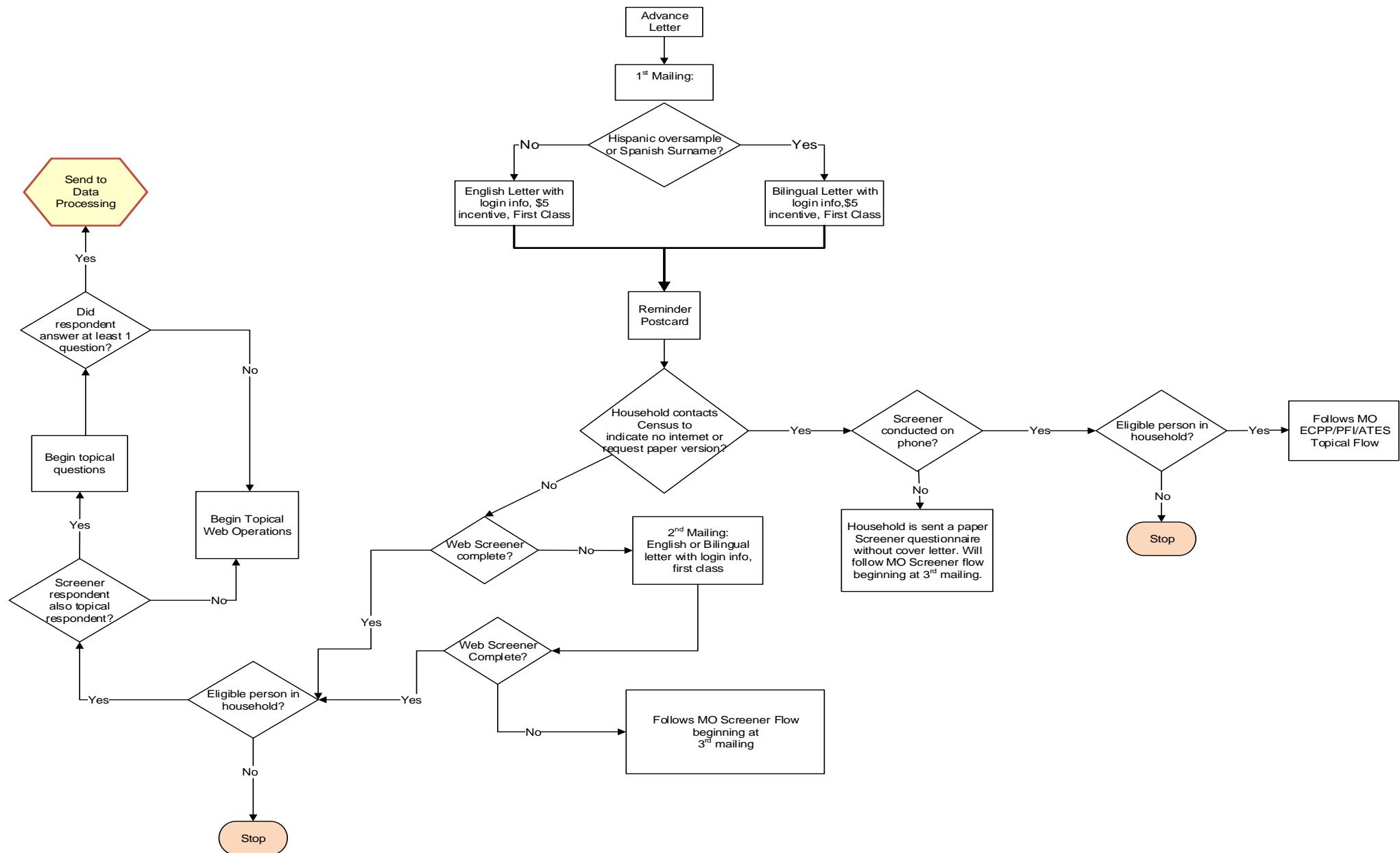
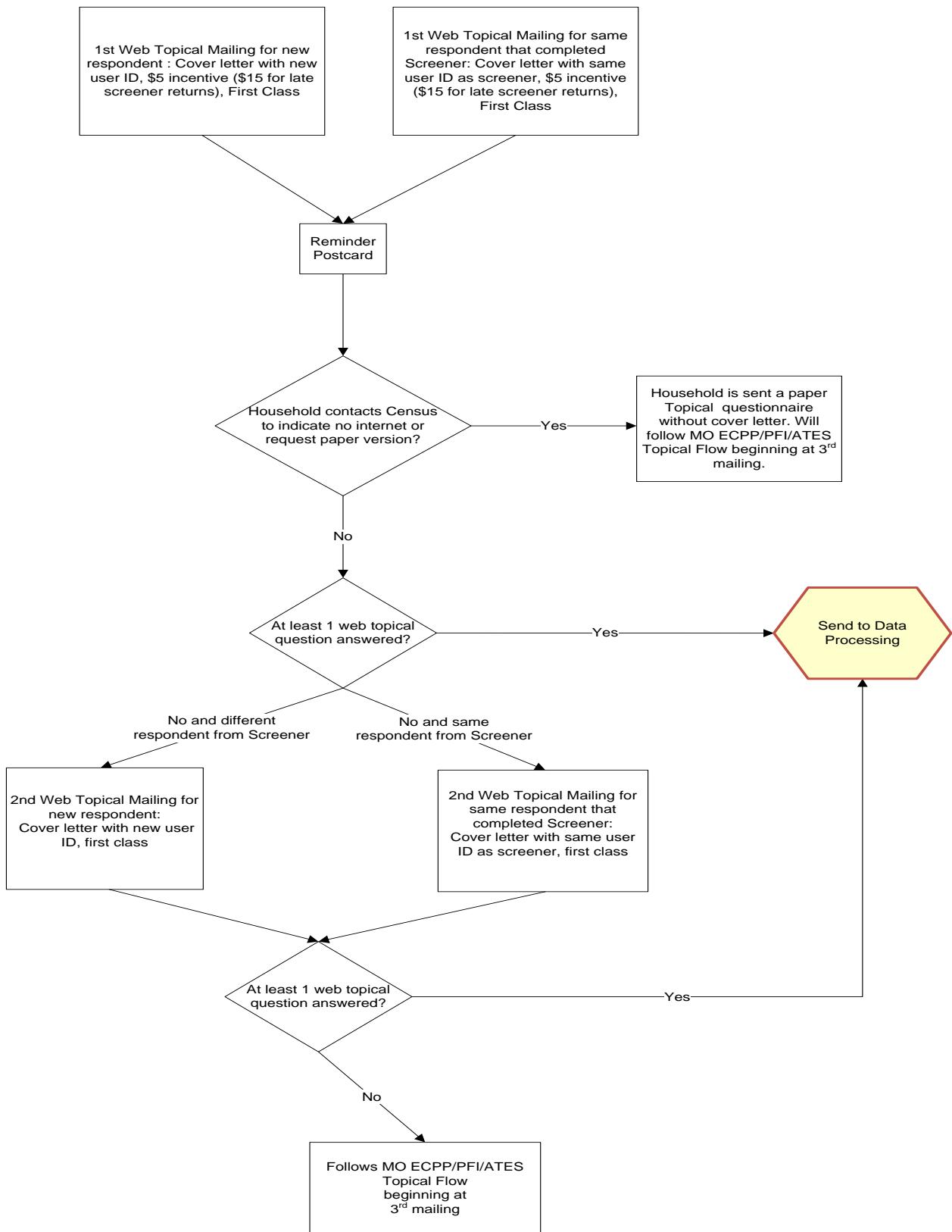


Figure 3-4. Screener web operations



NOTE: MO = Mail Operation

Figure 3-5. Topical web operations



NOTE: MO = Mail Operation

3.2 Details of the Data Collection

3.2.1 Screener Data Collection

Data collection began with the mailing of advance notification letters to sampled addresses on January 4, 2016. The letter introduced the survey, informed the household that it had been selected to participate, and provided notice of the forthcoming questionnaire. The letter included a toll-free number for the recipient to call with any questions or to report that the address was not an eligible household (e.g., if the address was a school or business).

In all mailings of screener packages, the package was addressed to “CITY RESIDENT” in the mailing address and “CITY HOUSEHOLD” in the salutation. In both, “CITY” corresponded to the city or town name on file.

The initial screener questionnaire packages were mailed to all sample addresses on January 9, 2016 using U.S. Postal Service (USPS) First-Class mail. Nonresponding households were sent screener packages in three subsequent mailings. All envelopes were preprinted with the Census Bureau logo on the left-hand side.

There were two versions of the initial screener questionnaire package: a mail survey package and a web survey package. The mail survey package included the screener questionnaire, a letter introducing the survey, a cash incentive (amounts varied), and a preaddressed, postage-paid return envelope. The web survey package included only a letter with log-in information inviting the respondent to complete the survey via the self-administered web instrument and a \$5 incentive. (The letter also included Census Bureau contact information should the respondent be unable or unwilling to complete the survey online.) Both versions of the package materials were either in English, or in English and Spanish (bilingual). The English versions of the packages contained letters written only in English and included only one screener questionnaire. The bilingual versions of the packages had English on one side of the cover letter and Spanish on the opposite side, and included screener questionnaires in both English and Spanish.

One week after the initial screener mailing, a reminder/thank-you postcard was sent to each household.

Approximately 2 weeks after the reminder/thank-you postcard, nonresponding households were sent the first follow-up package. The contents of this package were identical to the materials in the

initial mailout, with the exclusion of the incentive and a slightly different letter. These packages also were mailed with either all-English or bilingual materials.

Nonresponding households were sent two additional follow-up mailings, each mailed 3 weeks after the previous follow-up package to allow time for the receipt of completed screener questionnaires. Regardless of whether or not the household was originally sampled for the self-administered web experiment, the packages sent to nonresponding households after the first follow-up package included a cover letter, a screener questionnaire, and a postage-paid return envelope. The second follow-up package for nonresponding households was mailed using FedEx services, where possible.¹²

The schedule for all screener-related mailings is shown in table 3-3.

Table 3-3. Mailing schedule for screener questionnaires: NHES:2016

Item	Mailing date	Number mailed
Advance letter	January 4, 2016	206,000
Initial screener questionnaire mailing—all packages	January 9, 2016	206,000
Reminder postcard mailing—all postcards	January 26, 2016	206,000
Second screener questionnaire mailing—all packages mailed on a flow basis	February 10–17, 2016	166,232
Third screener questionnaire mailing, via FedEx and U.S. Postal Service—all packages mailed on a flow basis	March 2–4, 2016	131,740
Fourth screener questionnaire mailing—all packages mailed on a flow basis	March 23–24, 2016	86,094

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 3-4 presents the number of screener questionnaires completed by respondents during each week of data collection. Data from the paper screener questionnaires were keyed and transmitted weekly to Census Bureau analysts on Wednesdays. Data from the web screener questionnaires were processed immediately upon completion. By February 26, 2016, about eight weeks after the start of data collection, about 30 percent of the total number of mailed screener questionnaires had been processed and used to identify the cases for the topical mailings (61,851 screener questionnaires). By May 24, 2016 (the cut-off date for the receipt of screeners used to identify cases for the topical mailings), about 50 percent of the total number of mailed screener questionnaires had been received (102,236 screener questionnaires).

¹² Packages with a P.O. box address were mailed using USPS Priority Mail because FedEx does not deliver to P.O. boxes.

Table 3-4. Number and percentage of completed paper screeners received throughout data collection, by week: NHES:2016

Week	Week ending	Completed screeners		Cumulative percentage
		Number completed in this week	Cumulative total	
	Total	102,696	102,696	100.00
1	January 15, 2016	634	634	0.62
2	January 22, 2016	330	964	0.94
3	January 29, 2016	1,062	2,026	1.97
4	February 5, 2016	32,270	34,296	33.40
5	February 12, 2016	14,034	48,600	47.32
6	February 19, 2016	7,707	56,307	54.83
7	February 26, 2016	5,544	61,851	60.23
8	March 4, 2016	6,877	68,728	66.92
9	March 11, 2016	12,990	81,718	79.57
10	March 18, 2016	9,815	91,533	89.13
11	March 25, 2016	3,947	95,480	92.97
12	April 1, 2016	1,118	96,598	94.06
13	April 8, 2016	1,955	98,553	95.97
14	April 15, 2016	1,936	100,489	97.85
15	April 22, 2016	360	100,849	98.20
16	April 29, 2016	691	101,540	98.87
17	May 6, 2016	270	101,810	99.14
18	May 13, 2016	282	102,092	99.41
19	May 20, 2016	144	102,236	99.55
20	May 27, 2016	69	102,305	99.62
21	June 3, 2016	0	102,305	99.62
22	June 10, 2016	146	102,451	99.76
23	June 17, 2016	51	102,502	99.81
24	June 24, 2016	18	102,520	99.83
25	July 1, 2016	27	102,547	99.85
26	July 8, 2016	17	102,564	99.87
27	July 15, 2016	30	102,594	99.90
28	July 22, 2016	23	102,617	99.92
29	July 29, 2016	19	102,636	99.94
30	August 5, 2016	16	102,652	99.96
31	August 12, 2016	10	102,662	99.97
32	August 19, 2016	5	102,667	99.97
33	August 26, 2016	13	102,680	99.98
34	September 2, 2016	13	102,693	100.00
	After close of data collection	3	102,696	100.00

NOTE: Differences in the number of completed cases between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 3-5 presents the number of completed paper screener questionnaires returned by mailing wave.

**Table 3-5. Number of completed paper screeners returned, by mailing wave:
NHES:2016**

Mailing wave	Mail date	Total number completed ¹
Total		102,696
1	January 9, 2016	70,837
2	February 10–17, 2016	11,744
3	March 2–4, 2016	16,513
4	March 23–24, 2016	3,602

¹ The “total number completed” represents the total number of cases that returned a completed paper questionnaire during that mailing wave; it does not include cases closed out as undeliverable as addressed (UAA) because they were determined to be ineligible for the study.

NOTE: Differences in the number of completed cases between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

3.2.2 Topical Data Collection

The NHES:2016 topical data collection was conducted from February through September 2016. Households with eligible individuals were assigned to a topical mailing group upon receipt of a sufficiently complete screener questionnaire. A screener questionnaire was considered sufficiently complete if it included answers for at least one household member’s month and year of birth, school enrollment status, or grade. Once the screener data were processed, within-household sampling occurred. One adult or one child was selected from each eligible household that returned a completed screener. Refer to chapter 2 for full details on the sampling methodology.¹³

Topical mailings were batched into groups based on when the household’s completed screener questionnaire was received. Data collection for each group occurred on a flow basis, with multiple topical groups in data collection concurrently. In all, there were 10 topical mailing groups. Each topical mailing group followed its own mailing track for initial and nonresponse follow-up mail packages. The initial topical packages were mailed in groups as households were assigned, up to June 6, 2016, when the final mailing file was compiled for the mailout on June 20, 2016. Topical group assignments took place 2 weeks prior to mailing out the topical package; any screeners received between the group assignment and the group mailing were assigned to the next group.

The initial screener packages were received by the Census Bureau in mid-January, with the first topical group assignment beginning on January 20, 2016. Topical mail packages were sent between

¹³ For additional details on the self-administered web instrument collection process, please refer to the “Self-administered web experiment collection details” section earlier in this chapter.

2 and 3 weeks after a screener package was received.¹⁴ Packages were shipped via USPS First-Class mail. All envelopes were preprinted with the Census Bureau logo on the left-hand side.

There were two versions of the initial topical package: a mail package and a web package. Those respondents who were not part of the self-administered web experiment or who were part of the self-administered web experiment but returned a completed paper screener questionnaire were sent the topical mail package. Otherwise, the respondent was sent a topical web package. Details on each package are provided below.

The initial topical mail package contained the following:

- A letter to the household requesting that the sampled adult or an adult member of the household complete the topical questionnaire
- A monetary incentive—either \$5, \$10, or \$15¹⁵
- A pre-addressed, postage-paid return envelope
- The appropriate topical questionnaire:
 - Households with children age 20 or younger enrolled in kindergarten through 12th grade received the PFI—Enrolled questionnaire.
 - Households with children age 20 or younger homeschooled in the equivalent of grades kindergarten through 12th grade received the PFI—Homeschooled questionnaire.
 - Households with children age 6 or younger not yet enrolled in kindergarten received the ECPP questionnaire.
 - Households with adults ages 16–65 not enrolled in high school received the ATES questionnaire.

The initial topical web package contained the following:

- A letter with log-in information to the household requesting that the sampled adult or an adult member of the household complete the topical survey
- A monetary incentive, either \$5 or \$15¹⁶

¹⁴ Due to a backlog in processing of completed screener questionnaires returned to the Census Bureau, some topical packages may have been mailed later than 3 weeks after the screener package was received.

¹⁵ Households whose screener questionnaire was received at the Census Bureau after February 29, 2016, and were eligible to complete a topical questionnaire, received a \$15 cash incentive instead of \$5 or \$10 in their topical package.

¹⁶ Among the self-administered web experiment cases, those who submitted a screener questionnaire after February 29, 2016 and for whom an adult other than the screener respondent had been selected to complete the topical survey, received a \$15 cash incentive instead of \$5.

The language of the topical mailing package (English or Spanish) was determined by the language in which the household completed the screener. If a Spanish screener form was returned, then the topical mailing package materials were sent in Spanish. If an English screener form was returned, then the topical mailing package materials were sent in English. For the households that completed their screener using the self-administered web instrument, the language of the topical mailing was based on the language of the last completed screener question.

The topical packages were addressed to “CITY Resident.” For the topical packages for ECPP or PFI, the salutation in the letter introducing the survey was “Dear Parent of <Insert name of Sampled Child>” when the child’s first name, nickname, or initials were provided in the screener. When the name was not provided, no reference to the child appeared in the salutation, and instead it said “Dear Parent.” The sampled child was referenced in the letter and questionnaire by his or her age or grade or sex, if available. For the topical package for ATES, the salutation in the letter introducing the survey was “Dear <Insert name of Sampled Adult>” when the adult’s first name, nickname, or initials were provided in the screener. When the name was not provided, the salutation was “Dear Sir” if the sex was provided in the screener as male or “Dear Madam” if the sex was provided in the screener as female. When the sex was not provided, the salutation was “Dear Sir or Madam,” and the sampled adult was referenced in the letter and questionnaire by his or her age or grade, if available.

A postcard was mailed to all topical households approximately 1 week after the initial mailing to remind them to complete and return the questionnaire and to thank them if they had already completed it. Approximately 2 weeks after the reminder postcard, nonresponding households were sent the first follow-up package. The contents of this package were identical to that in the initial mailout, with the exclusion of the incentive.

Nonresponding households were sent two additional follow-up mailings, each mailed 3 weeks after the previous follow-up package to allow time for the receipt of completed topical questionnaires. Regardless of whether the household was originally included in the self-administered web experiment, the packages sent to nonresponding households after the first follow-up package included a cover letter, the appropriate topical questionnaire, and a postage-paid return envelope.

The third screener package for nonresponding households was mailed using FedEx, where possible,¹⁷ for all mailing groups. A total of four mailings were completed for groups 1 through 8,

¹⁷ Packages with a P.O. box address were mailed using USPS Priority Mail because FedEx does not deliver to P.O. boxes.

and a total of three mailings were completed for groups 9 and 10. The cut-off date for receipt of completed topical questionnaires to be included in the data file was August 23, 2016.

Table 3-6 summarizes the specific data collection activities for the topical questionnaires and the date when each occurred. The table shows that the first mailing of topical questionnaires occurred on February 19, 2016, and that 2,895¹⁸ cases in group 1 were sent an initial topical questionnaire. A total of 84,681 cases across groups 1 through 10 were sent an initial topical questionnaire.

¹⁸ This number includes the 1,000 seeded sample cases, all of which were included in Group 1.

Table 3-6. Data collection schedule for topical questionnaires, by mailing group: NHES:2016

Mailing group		Initial mailing		Follow-up mailings to nonresponding households		
		Initial package	Reminder postcard	First follow-up	Second follow-up	Third follow-up
Group 1	Date	February 19, 2016	February 26, 2016	March 14, 2016	April 4, 2016	April 25, 2016
	Number	2,895	2,895	2,146	1,360	1,137
Group 2	Date	February 29, 2016	March 7, 2016	March 22, 2016	April 12, 2016	May 3, 2016
	Number	662	662	463	291	220
Group 3	Date	March 7, 2016	March 14, 2016	March 30, 2016	April 20, 2016	May 11, 2016
	Number	587	587	399	272	212
Group 4	Date	March 21, 2016	March 28, 2016	April 13, 2016	May 4, 2016	May 25, 2016
	Number	14,660	14,660	8,527	4,558	2,420
Group 5	Date	April 4, 2016	April 11, 2016	April 27, 2016	May 18, 2016	June 8, 2016
	Number	18,522	18,522	11,530	5,550	3,526
Group 6	Date	April 18, 2016	April 25, 2016	May 11, 2016	June 1, 2016	June 22, 2016
	Number	18,872	18,872	13,648	8,095	5,460
Group 7	Date	May 2, 2016	May 9, 2016	May 25, 2016	June 15, 2016	July 6, 2016
	Number	16,183	16,183	11,278	8,119	5,799
Group 8	Date	May 23, 2016	May 31, 2016	June 15, 2016	July 6, 2016	July 27, 2016
	Number	11,517	11,517	9,018	6,954	4,951
Group 9	Date	June 6, 2016	June 13, 2016	June 29, 2016	July 20, 2016	N/A
	Number	385	385	296	243	N/A
Group 10	Date	June 20, 2016	June 27, 2016	July 13, 2016	August 3, 2016	N/A
	Number	398	398	336	258	N/A

NOTE: Topical mailings were batched into mailing groups based on when the household's completed screener questionnaire was received. Data collection for each group occurred on a flow basis, with multiple topical groups in data collection concurrently. In all, there were 10 topical mailing groups. Each topical mailing group followed its own mailing track for initial and nonresponse follow-up mail packages.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 3-7 presents the number of paper topical questionnaires marked as complete during each week of data collection; however, this count does not correspond to the total number of topical questionnaires marked as complete in the final data file. Some of the questionnaires marked as complete during data collection were reclassified as noninterviews during the data review because they did not meet completeness requirements for data processing or were out of scope for the

topical questionnaire.¹⁹ (See chapter 4, Data Processing, for additional information.) This table does not include completed web topical questionnaires.

Table 3-7. Number of completed paper topical questionnaires received throughout data collection, by week: NHES:2016

Week	Week ending	Number of completed paper topical questionnaires ¹						
		Total received by week	Total cumulative received	ECPP received by week	ECPP cumulative received	PFI received by week	PFI cumulative received	ATES received by week
1	February 26, 2016	0	0	0	0	0	0	0
2	March 4, 2016	0	0	0	0	0	0	0
3	March 11, 2016	263	263	9	9	25	25	229
4	March 18, 2016	128	391	5	14	13	38	110
5	March 25, 2016	126	517	8	22	16	54	102
6	April 1, 2016	784	1,301	54	76	118	172	612
7	April 8, 2016	5,340	6,641	354	430	910	1,082	4,076
8	April 15, 2016	5,994	12,635	366	796	1,015	2,097	4,613
9	April 22, 2016	4,737	17,372	311	1,107	780	2,877	3,646
10	April 29, 2016	3,056	20,428	310	1,417	527	3,404	2,219
11	May 6, 2016	8,443	28,871	655	2,072	1,755	5,159	6,033
12	May 13, 2016	7,600	36,471	646	2,718	1,452	6,611	5,502
13	May 20, 2016	4,465	40,936	478	3,196	1,055	7,666	2,932
14	May 27, 2016	3,806	44,742	314	3,510	896	8,562	2,596
15	June 3, 2016	2,225	46,967	207	3,717	508	9,070	1,510
16	June 10, 2016	4,361	51,328	390	4,107	984	10,054	2,987
17	June 17, 2016	2,383	53,711	247	4,354	515	10,569	1,621
18	June 24, 2016	2,048	55,759	199	4,553	444	11,013	1,405
19	July 1, 2016	1,565	57,324	141	4,694	372	11,385	1,052
20	July 8, 2016	882	58,206	88	4,782	219	11,604	575
21	July 15, 2016	1,231	59,437	138	4,920	280	11,884	813
22	July 22, 2016	917	60,354	98	5,018	229	12,113	590
23	July 29, 2016	457	60,811	58	5,076	121	12,234	278
24	August 5, 2016	281	61,092	23	5,099	71	12,305	187
25	August 12, 2016	341	61,433	39	5,138	73	12,378	229
26	August 19, 2016	174	61,607	20	5,158	49	12,427	105
27	August 23, 2016	130	61,737	15	5,173	29	12,456	86
	After close of data collection	0	61,737	6	5,179	42	12,498	0
								44,108

¹This number does not include cases closed out as undeliverable as addressed (UAA).

NOTE: Differences in the numbers presented in the table compared to other numbers in this chapter is due to only paper cases being included in this table. Differences in number of completed cases between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 3-8 shows the number of questionnaires returned as undeliverable as addressed (UAA) at least once during the screener or topical mailings. The table also shows the number of UAA cases converted to non-UAA status and the number of non-UAA cases converted to interviews.

¹⁹ The final date for accepting topical questionnaires was August 23, 2016 and the final date for the data collection is September 6, 2016.

Table 3-8 shows the number of questionnaires returned as undeliverable as addressed (UAA) at least once during the screener or topical mailings. The table also shows the number of UAA cases converted to non-UAA status and the number of non-UAA cases converted to interviews.

Table 3-8. Number of questionnaires returned as undeliverable as addressed (UAA): NHES:2016

Form type	Returned as UAA ¹	Converted to non-UAA status ²	Converted to interview
Screener	22,392	2,335	2,138
Topical	2,463	365	324

¹At least one of the mailings resulted in the form being returned as UAA.

²Includes interview, non-interview, and out-of-scope status.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

If a screener was returned as UAA in the first mailing, then the Census Bureau mailed two more packages to determine if delivery were possible. As described in chapter 5, UAAs at the topical level were considered eligible cases since the sampled child or adult remained eligible even though the family was no longer at the same address. These cases were considered nonrespondents in the topical response rate calculations.

3.2.3 Bilingual Mailings

NHES:2016 used several variables in the sample file to determine which addresses would receive a bilingual screener package. As described in chapter 2, Sampling Methodology, the NHES used U.S. Census information to oversample areas with high Black and Hispanic populations. The high Hispanic stratum was made up of Census tracts with a Hispanic population of 40 percent or higher. The NHES used an augmented mailing frame that contained information about the household, including the surname of the head of household for some cases. The frame vendor (MSG) matched the surname to a Census Bureau file of surnames that are commonly shared by people of Hispanic origin. If the surname was in the Census file, an indicator of Hispanic surname was placed in the frame file.

A variable was then created to identify sampled households in Census tracts with high concentrations of Spanish-speaking, limited-English-speaking households. These are tracts in which a selected percentage of the households spoke Spanish as their primary language and no one over the age of 14 spoke only English or spoke English “well or very well.” The percentage of Spanish-speaking, limited-English-speaking households used as part of the bilingual mailing material criteria decreased over the course of the four mailings, from 10 percent in the initial mailing to 3 percent in the second mailing to 2 percent in the third and fourth mailings. Bilingual

materials were initially sent to areas with higher concentrations of Spanish-speaking households that were most likely to need Spanish survey materials. The percentage cutoff was lowered during the course of the mailings to balance the cost of including additional forms in the mailings while providing Spanish language forms to households in areas with lower concentrations of Spanish speakers that may have needed Spanish language materials. The following criteria were used to determine which addresses received a bilingual screener package:

- *First mailing criteria:* If an address was in the Hispanic stratum or there was a Hispanic surname associated with the address, or the address was in a Census tract where 10 percent or more of the population lived in households meeting the criteria of being Spanish-speaking and limited English-speaking, then the address received a bilingual package for all four mailings.
- *Second mailing criteria:* If an address was in the Hispanic stratum or there was a Hispanic surname associated with the address, or the address was in a Census tract where 3 percent or more of the population lived in households meeting the criteria of being Spanish-speaking and limited English-speaking, then the address received a bilingual package for mailings 2 through 4.
- *Third and fourth mailing criteria:* If an address was in the Hispanic stratum or there was a Hispanic surname associated with the address, or the address was in a Census tract where 2 percent or more of the population lived in households meeting the criteria of being Spanish-speaking and limited English-speaking, or the address was in a Census tract where 2 percent or more of the population speaks Spanish at home, then the address received a bilingual package for mailings 3 and 4.

During the course of data collection, one respondent called to request a screener mailing in Spanish and four respondents called or e-mailed to request a Spanish-language topical questionnaire. The one person who requested a Spanish screener completed the screener over the phone (in Spanish); therefore, no reassignment was necessary. Table 3-9 displays the total number of bilingual screener packages, which included a Spanish screener questionnaire, mailed during each wave and the returns for each mailing.

**Table 3-9. Spanish paper screener assignments and returns, by mailing wave:
NHES:2016**

Mailing wave	Bilingual screener packages mailed	Bilingual screener packages mailed as a percentage of total screener mailings	Spanish screeners completed	Spanish screeners completed as a percentage of total Spanish screeners mailed	Total number of completed screeners from bilingual screener package mailings	Total screeners completed as a percentage of total bilingual screener package mailings
Bilingual screener initial mailing	46,669	22.65	1,817	3.89	70,837	34.22
Bilingual screener second mailing	58,071	34.94	499	.86	11,744	6.18
Bilingual screener third mailing	99,440	75.48	944	.95	16,513	11.12
Bilingual screener fourth mailing	66,623	77.39	203	.3	3,602	3.77

NOTE: Differences in the number of completed cases between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

If a completed Spanish screener was returned and the household was eligible for a topical questionnaire, then a Spanish topical form was sent.

Table 3-10 displays the total number of Spanish topical packages mailed during each wave and the returns for each mailing.

Table 3-10. Spanish paper topical questionnaire assignments and returns, by week: NHES:2016

Week	Week ending	Spanish topical questionnaires mailed	percentage of total English and Spanish mailed)	Spanish topical questionnaires returned	percentage of total English and Spanish completed)
1	February 26, 2016	85	0.95	0	0.00
2	March 4, 2016	1	0.04	0	0.00
3	March 11, 2016	314	2.06	0	0.00
4	March 18, 2016	6	0.22	3	1.78
5	March 25, 2016	451	2.38	3	2.29
6	April 1, 2016	314	2.09	17	21.79
7	April 8, 2016	684	3.40	70	1.27
8	April 15, 2016	451	1.70	116	10.65
9	April 22, 2016	843	5.13	44	0.57
10	April 29, 2016	684	2.29	33	0.97
11	May 6, 2016	0	0.00	211	3.70
12	May 13, 2016	1610	3.61	220	4.23
13	May 20, 2016	0	0.00	241	2.52
14	May 27, 2016	22	0.14	174	3.17
15	June 3, 2016	767	6.66	107	7.34
16	June 10, 2016	21	0.28	212	4.36
17	June 17, 2016	22	0.25	129	4.55
18	June 24, 2016	0	0.00	117	5.77
19	July 1, 2016	21	3.06	88	5.05
20	July 8, 2016	0	0.00	76	6.66
21	July 15, 2016	0	0.00	69	10.44
22	July 22, 2016	0	0	43	3.07
23	July 29, 2016	0	0	20	3.98
24	August 5, 2016	0	0	17	6.05
25	August 12, 2016	0	0	21	6.29
26	August 19, 2016	0	0	9	3.91
	After close of data collection	0	0	7	12.50

NOTE: Differences in the number of completed cases between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

3.3 Data Collection Support Activities

3.3.1 Telephone Operation

The Census Bureau established a Telephone Questionnaire Assistance (TQA) operation to serve two purposes. First, interviewers were trained to assist respondents who called with questions about the screener or topical questionnaires, or questions about the web instrument, including

issues logging into the instrument or forgotten personal identification numbers (PINs); concerns about confidentiality, purpose, sponsorship, and other similar issues; and the importance of survey participation to respondents who were reluctant to participate. Second, interviewers collected screener data over the phone via a web instrument when a respondent called about the screener survey.

Thirty telephone interviewers and four supervisors were selected for the NHES:2016 by the Census Bureau's Logistics and Command Center (LCC) in November 2015. All of the interviewers worked out of the Census Bureau's Jeffersonville, Indiana Communication Center (JCC) and had experience with at least two other surveys operating out of the JCC. Two of the 30 interviewers were bilingual. NCES and Census Bureau staff conducted one training session at the beginning of January to prepare interviewers for calls. The training session was conducted at the JCC and lasted approximately 5 hours.

The interviewers filled out a paper log that documented the type of calls received from respondents. NHES supervisors at the JCC keyed the call log entries into a spreadsheet. This spreadsheet documented any call, whether it was a resolved or unresolved case. Whenever an entry was submitted in the spreadsheet, a Census Bureau analyst reviewed the entry and determined whether further action was necessary. Table 3-11 provides a full list of the reasons why respondents called the Census Bureau.

Table 3-11. Telephone call-in reasons on the Telephone Questionnaire Assistance (TQA) telephone line: NHES:2016

Call-in reason	Number of calls
Total number of calls	5,604
Completing a screener interview	2,712
General question	529
Complaint about receiving duplicate forms	128
Hard refusal ¹	448
Correcting demographic information about child on topical form ²	28
Question about eligibility	154
Issue with packet (no incentive in the packet, replacement requests, etc.)	68
Received telephone call from the telephone tree operation, but never received mailing packet ³	2
Request questionnaire in English/Spanish	14
Other language issue	11
Verifying that the Census Bureau received completed form	660
Vacant household or household moved	187
Incorrect address	35
Question or concern about incentive or legitimacy of survey	37
Will mail ⁴	184
Business or college residence	77
Question on how to fill out form	33
Sampled child deceased	49
Question about User ID	7
Question about PIN	18
Unable or unwilling to complete online	96
Other reason	127

¹This number represents the total number of refusals received by telephone. Often, respondents called to refuse without providing a reason, and analysts were unable to code these refusals in the system. For example, callers would frequently state that they had received the survey but refused to do it, and then hang up. Other reasons for refusing to participate included that the caller believed the NHES:2016 asked too many personal questions, the caller did not have time to participate, and general complaints about intrusive government operations.

²Correcting the demographic information about a child on a topical form did not always result in a reassignment of forms. For example, a respondent might call to inform the Census Bureau that the form listed a male 13-year-old, but that the child living in the house was actually a female 13-year-old, which would not result in a reassignment of the topical form. Sometimes, however, a respondent would call to report an incorrect age on the form, typically when a grade was not reported. Because Census generally assigned 5-year-olds to the Parent and Family Involvement in Education-Enrolled if a grade was not indicated, this type of call often occurred when that 5-year-old was actually in preschool and should have been assigned an Early Childhood Program Participation questionnaire.

³See section 3.3.2, Telephone Tree Operation, for a detailed description of this operation.

⁴This number represents the number of respondents who called the TQA help line with a general question and then informed the TQA staff that they would mail back the completed survey.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

3.3.2 Telephone Tree Operation

In addition to follow-up mailouts, a telephone tree operation was used to remind sampled households to complete and return their questionnaire. For screener respondents, a prerecorded telephone message was delivered to households on May 9, 2016. For topical respondents, a prerecorded telephone message was delivered on the mailing date of the final package of the topical mailings for groups 3–10. Phone numbers were obtained for these households by address-

to-telephone matching, which resulted in a phone number match for 65.01 percent of households. The phone recording encouraged respondents to complete their screener or topical survey and reminded them of the importance of their prompt response.²⁰ The prerecorded phone operation ended when the topical packages for group 10 were mailed out on August 3, 2016. Table 3-12 shows the dates of contact, and the number of households contacted, in the telephone tree operation.

Table 3-12. Telephone tree operation by mailing group: NHES:2016

Mailing group	Date of operation	Number of households contacted
Screener	May 9, 2016	50,689
Topical group 3	May 11, 2016	198
Topical group 4	May 25, 2016	1,879
Topical group 5	June 8, 2016	2,824
Topical group 6	June 22, 2016	3,934
Topical group 7	July 6, 2016	4,060
Topical group 8	July 27, 2016	3,998
Topical group 9	July 20, 2016	150
Topical group 10	August 3, 2016	178

NOTE: Topical mailings were batched into mailing groups based on when the household's completed screener questionnaire was received. Data collection for each group occurred on a flow basis, with multiple topical groups in data collection concurrently. In all, there were 10 topical mailing groups. Each topical mailing group followed its own mailing track for initial and nonresponse follow-up mail packages.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

²⁰ The script for the screener automated reminder call said, "This is the United States Census Bureau calling. We mailed you a survey called the National Household Education Survey. Your response is vital to the success of the study, and we urge you to respond today. If you have misplaced your survey or have any questions, please call us at 1-888-840-8353. That number again is 1-888-840-8353. Thank you." Similarly, the topical reminder phone call recording said, "This is the United States Census Bureau calling. You have been selected to participate in a study about an adult in your household or about your child related to education. Recently, we sent a questionnaire to your address, but we have not received your response. Your response is vital to the success of the study. Please respond today. If you have any questions, please call us at 1-888-840-8353. That number again is 1-888-840-8353. Thank you."

3.3.3 Responses to the Topical Questionnaires

Several times, respondents called in to report problems with the demographic information (drawn from the screener) included in the topical questionnaire they received. Some respondents also called in to report receiving the wrong topical questionnaire or to report that their child was no longer in school. Census Bureau analysts handled these on a case-by-case basis. In general, if a household called to report a problem, an analyst would cross-check the data given over the phone with the data in the screener to determine what changes needed to be made.

Census Bureau analysts updated demographic information in a total of 76 cases. Fifty-five of these cases resulted in a different topical questionnaire assignment, either to another questionnaire altogether or to another version of the same questionnaire (for example, to the Spanish version instead of the English version). After these cases were reassigned to the appropriate topical questionnaire, they were included in the next mailing wave for that questionnaire. For the other 21 cases, changes were made to the demographic information of the sampled individual that did not affect the topical questionnaire assignment (for example, the name or the gender of the individual was changed).

Overall, 287 cases were coded as topical refusals through telephone and e-mail operations and on correspondence received at Census. Other outcome codes that were assigned included “out of scope,” “moved household,” and “vacant household.”

3.3.4 E-mail Operation

The NHES screener and topical questionnaires contained a Census Bureau e-mail address, which respondents could use to contact the Census Bureau with questions or comments. In total, 166 e-mails were received, including 51 that were received after the Census Bureau had responded to an initial e-mail. Table 3-13 provides a full listing of these e-mails.

Table 3-13. E-mails received from respondents, by reason: NHES:2016

Reason	Number of e-mails
Response to a previous thank-you e-mail	51
Question if completed survey was received	24
Forgot PIN—needed PIN reset	18
Could not find their user ID in letter; were non-web cases but found the log-in screen on the National Center for Education Statistics web page	16
Question about eligibility for the survey	9
Unable to log in with user ID	8
Re-mail request	6
Hard refusal	6
General comment or question about incentive	6
General inquiry	4
Wrong questionnaire received	4
Sampled person deceased	2
Vacant address	2
Question on when data will be released	2
Question on validity of survey	1
Question about privacy policy	1
Question about who should complete survey	1
Survey incompatible with browser	1
Inquired about job openings	1
Issue with survey URL	1
Asked to complete survey online	1
Asked to be added to sample	1

SOURCE: SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

3.3.5 Standard Reports

Census Bureau analysts monitored the status of the data collection by creating and reviewing weekly reports. Statistics about overall screener and topical response rates, refusal rates, and UAA rates were included in the reports. Statistics provided in the reports were also broken down in further detail to include the number of cases sent by topical questionnaire type and distributions by questionnaire response rate, refusal rates, and UAA rates. These reports also broke down statistics further to include geographic and demographic information and experimental treatment groups.

3.4 Data Check-in

Respondents were encouraged to complete and mail back all questionnaires in the preaddressed, postage-paid return envelope addressed to the Census Bureau’s main processing facility in

Jeffersonville, Indiana. Upon receipt of the questionnaires in Jeffersonville, clerical staff immediately assigned a check-in code that indicated the form's completion status and entered it into the Census Bureau's Automatic Tracking and Control (ATAC) system. At this stage, both screener and topical questionnaires received an outcome code of "complete" if any item in the questionnaire was answered. However, after data collection during data review, some of the questionnaires originally marked as complete were reclassified as noninterviews because they did not meet the completeness requirements for data processing. (See chapter 4, Data Processing, for additional information.) Additional outcome codes included refusals, blanks, duplicates, UAA, and various out-of-scope codes. The questionnaires were then grouped into batches by type of questionnaire form (i.e., ECPP, PFI-Enrolled, PFI-Homeschool, and ATES) and interview status (i.e., interviews, noninterviews, and out of scope) for data capture.

Screener questionnaires that were completed over the Internet by the TQA staff and that were completed via the self-administered web instrument were not sent to the check-in staff; the data were processed directly by Census Bureau headquarters analysts without going through the clerical review procedures. More information regarding data capture and imaging can be found in chapter 4, Data Processing.

Chapter 4. Data Processing

Data from the National Household Education Surveys Program of 2016 (NHES:2016) went through a series of processing procedures after respondents returned questionnaires and before the resulting data were made available to the public. To ensure that the data are complete and accurate, a series of data processing procedures was conducted on all topical questionnaires after receipt. These procedures are data capture and imaging; deduplication of cases; merging paper data and web data; the reformatting of keyed data; a preliminary interview status classification; the implementation of disclosure prevention procedures; a series of computer edits (to check that the data are in range, are consistent throughout a questionnaire record, and follow the correct skip pattern); school coding (where applicable); a final interview status classification; and a set of imputation procedures used to generate values for all appropriate questionnaire items with missing information. After imputation was completed, the editing procedures were repeated to ensure that no errors were introduced during imputation.

4.1 Data Capture and Imaging

4.1.1 Paper Questionnaire Data Capture

The NHES:2016 data were captured (converted from paper to electronic format) using a combination of imaging technology and manual data keying, both of which were facilitated by the Census Bureau’s Integrated Computer Assisted Data Entry (iCADE) system. After the questionnaires were received at the Census Bureau’s National Processing Center (NPC), the questionnaires were checked in by Census Bureau clerical processing staff using the cover-page bar code that identifies the case. Questionnaires were entered into the ATAC system for tracking purposes and grouped into batches by questionnaire type (screener, ECPP, PFI, and ATES) for imaging and data capture. Before the imaging process, each questionnaire was disassembled using a machine that cuts off the stapled edge, and both sides of each page were scanned simultaneously using duplex scanning equipment. During the imaging process, the questionnaire forms were scanned and images of each form page were saved. These images were used by analysts to view the questionnaires online during their review of the data. At the conclusion of the imaging process, the iCADE system matched the number of imaged pages with the number of pages expected for each questionnaire type. If the actual and expected number of imaged pages matched for all forms in the batch, then the batch was accepted and could proceed to the next stages in processing. If the actual and expected number of imaged pages did not match for all cases in a batch, then the batch was sent to a manual registration process (described later in this section).

The batches that were accepted proceeded to the next stages of data capture: auto registration including optical mark recognition (OMR), and manual registration. Prior to the data capture process, a data capture template was created, which was used to program the iCADE system on where to look for answer marks on the forms and how to code these marks. OMR was used to capture responses to items where the respondent answered by writing an “x” in the box next to a categorical response option. During auto registration, all of the scanned images were matched to the data capture template using the page identifier barcode. The page identifier barcode told the iCADE system what page of the questionnaire was being scanned. Once a page was identified, the iCADE system could read answer marks in the answer boxes next to pre-coded, categorical items. Software in the iCADE system then converted the data from the paper form into electronic format for that questionnaire.

During auto-registration, a number of things could potentially go wrong. For example, if the iCADE system were unable to read a bar code, then it could not identify the questionnaire ID. If the system were unable to recognize a page corner point, then it sometimes could not register the page correctly. Occasionally, there also were checkbox ambiguities resulting from marks outside a checkbox, scratch-outs, or random marks on a page. If any of these problems occurred, then the problem page(s) went through the manual registration. Manual registration involved presenting scanned pages to clerical staff, who then resolved the issue. If there were no problems during auto-registration and OMR, then manual registration was skipped.

After the OMR data were captured for the NHES:2016, all write-in fields (e.g., open-ended, numeric, and character fields) were captured by a process called “keyed from image” (KFI). Prior to data capture, keying programs were developed for each NHES topical questionnaire. These keying programs provided the location of answer marks for items that OMR could not be used for. In the KFI process, clerks were presented with fields to key when the iCADE system detected the “presence” of data in an answer field. The clerk either keyed the data present in the field or indicated that the field was blank.

Responses from the KFI process were then verified. The KFI data file was sent to a verification clerk to verify the validity of the KFI output. The verification clerk independently entered responses from the survey image and was not provided with the data entered by the original keyer. The KFI clerk’s entry and the verification clerk’s entry were compared; fields with differences were flagged. When differences were found between the KFI entry and the verification entry, they were forwarded to an adjudicator, who resolved the discrepancy. The adjudicator could (1) agree with the keyer, (2) agree with the verifier, or (3) provide his or her own interpretation of the respondent’s answer. The adjudicator then classified the discrepancy into one of a number of

categories based on the keying issue and adjusted the data as necessary. The system also computed coding discrepancy rates for the nonblank fields. Each batch was then marked as finished and was ready to be transmitted to Census Bureau experts for further processing.

4.1.2 Web Questionnaire Data Capture

Web survey data and system paradata (such as the date and time of entry and the user device information) were stored in real time in a Microsoft SQL database. A database process then exported the data captured by the web survey into a set of database tables. The information was organized by survey type and section number and later flagged as complete once the survey was finished. Three types of database tables were used during collection of the survey data:

- Live tables: held data for started but unfinished surveys
- Archive tables: held data for completed surveys
- Snapshot tables: held the most current data for a given section of the survey. These could be changed as long as the survey was started but incomplete.

This data scheme enabled the compilation of large data sets while maintaining fast periodic and final exports. Data were exported weekly by Census Bureau staff in order to identify the cases in need of further mailings. At the close of data collection, a final data export was performed.

The export process located all of the started surveys (by the unique identifier, “CNTRLNUM11”) in live tables. The process then copied the data from the database table that held participants’ answers and placed it in the snapshot table. Next, it flagged any survey that was complete and moved those data into the finished (archived) table. This helped minimize processing time because completed surveys were considered final and, therefore, not updated with new data from the archive tables.

As the final step, all of the data from the snapshot tables were joined via a database query to be translated into a CSV file.

4.2 Reformatting and Deduplication

All NHES paper questionnaire data were captured in ASCII files. The ASCII files were sent to Census headquarters, where they were reformatted into SAS datasets in order to facilitate the remaining data processing tasks. The reformatted files were delivered to AIR for editing and imputation. Web data were exported directly from the web-capture system described above by AIR and converted to SAS data files. Web and paper data were then combined as described in

section 4.4.1. The edit processes are discussed in section 4.4 of this chapter, while imputation is discussed in chapter 6. There were four separate keyed files, one for each questionnaire: Early Childhood Program Participation (ECPP), Parent and Family Involvement in Education (PFI)—Enrolled, PFI—Homeschooled, and Adult Training and Education Survey (ATES). After the editing and imputation, the two PFI files were combined into a single PFI file.²¹

4.2.1 Deduplication of cases

As outlined in Chapter 3, multiple attempts were made to solicit a response from sampled households. If sample members did not respond to the initial request to complete the survey (either by web or by paper), they were contacted up to four additional times in order to ensure that the responding sample was as representative as possible of the target population. This contact protocol was followed at both the screener and topical phases. While every attempt was made to not send follow-up mailings to cases that had already responded, occasionally multiple responses were received from a single sampled address or case. Additionally, since cases sampled for the web-survey, were sent follow-up mailings that included a paper questionnaire, there were a small number of cases that completed the questionnaire by both web and paper. Deduplication was handled differently depending on whether the duplication occurred on the screener or the topical questionnaire. The following rules were followed in order to select a single completed questionnaire for each cases.

- The first screener received with enough information to conduct within-household sampling was retained. This screener could have been completed by web or by paper. If two completed paper screeners were received by Census in the same week, the one with more data was retained.
- For the topical questionnaires, if two paper topical forms were received by Census for the same case, the form with more completed data was retained. If both forms had the same number of variables answered, the first form returned was retained.
- For the topical questionnaires, if web data and paper topical data were received for the same case and both topical forms were based off of the same web screener²², the questionnaire with more complete data was retained. If both questionnaires had the same number of variables answered, the first one returned or submitted was retained.

²¹ The PFI-Enrolled and PFI-Homeschooled questionnaires were separate forms and were processed separately because they had separate interview criteria and a considerable number of unique variables.

²² Cases could only complete the topical questionnaire by web if they had completed the screener online. However, a case could complete a screener online and then, if they did not respond to the topical by web, they would be mailed a paper topical questionnaire in the 2nd and 3rd follow-up mailings.

- If both paper and web topical questionnaires were completed by the same sampled household, but each was linked to a different screener questionnaire (e.g., a web screener and topical form was completed and also a paper screener and separate paper topical form was completed) then the topical version was retained that corresponded to the first screener that was submitted. This was done to ensure that the topical form always corresponded to the correct sampled individual based on the screener.

4.3 Preliminary Interview Status Recode (ISR) Classification

The preliminary Interview Status Recode (ISR) was an initial determination of whether each topical case was an interview, a noninterview, or out-of-scope. Cases with any data were classified as interviews (ISR = 1); cases with no data were classified as noninterviews (ISR = 2). Because topical questionnaires were only sent to cases that responded to the screener, few cases could be classified as out-of-scope or ineligible for the topical.²³ However, a small number of cases were determined to be ineligible during topical data collection because they had completed the screener questionnaire but subsequently contacted the Census Bureau to say they were, in fact, a business and not a residential address. These cases were classified as out-of-scope (ISR = 3). The subsequent data editing procedures were run only on cases that were classified as interviews (ISR = 1) at this stage. After these data editing procedures were complete, each case was given a final ISR classification. This is discussed in section 4.5.

4.4 Computer Edits

After the preliminary ISR classification, cases classified as interviews in all data files were submitted to a series of computer edits: range checks, consistency edits, and skip pattern edits. In addition, a school coding operation was performed for PFI cases for which the PFI-Enrolled respondent did not select a school from the provided list, but provided information about the school the sampled child attended including the school name and address.

4.4.1 Combining Web and Paper Questionnaire Data

NHES:2016 was the first year that included an option for respondents to complete the survey via an online survey instrument. To ensure consistent processing, these data were merged into a single data file prior to undergoing data processing. The NHES:2016 web instrument collected certain questionnaire items differently than the paper questionnaire. In these instances, the web instrument used a different variable name to distinguish it from the paper questionnaire item. These variables

²³ Cases that were discovered to be out of scope during the screener operation were not included in the topical sample.

were consolidated during this phase of data processing. In some instances, data editing was required to merge the web and paper variables. For example, the web instrument asked respondents to confirm the child's screener-provided grade and date of birth while the paper questionnaire asked respondents to write in the child's grade and date of birth. In these instances, web cases were edited, using screener data, to include child's grade and date of birth in the same manner as paper cases. The full list of items that were edited in order to merge the web and paper data is presented in Table 4-1.

Table 4-1. Variables edited during the merging of mail and web cases by survey and description of edit: NHES:2016

Variable name	Survey(s)	Variable label	Description of edit
SEADPLCX	PFI– Enrolled	Advanced placement enrollment	The web instrument skipped this item if the child's grade was not 9 th , 10 th , 11 th , or 12 th .
HDPRISCH	PFI– Enrolled	Private school provides services	The web instrument skipped this item if the child was indicated to be in public school in SCPUBPRI.
P1DIFFI	PFI– Enrolled	First parent/guardian difficulty participating in child's school due to language	The web instrument skipped this item if P1SPEAK was "English," "English and Spanish equally," or "English and another language equally."
P2DIFFI	PFI– Enrolled	Second parent/guardian difficulty participating in child's school due to language	The web instrument skipped this item if P2SPEAK was "English," "English and Spanish equally," or "English and another language equally."
P1SCINT	PFI– Enrolled	Interpreters at school for first parent/guardian	The web instrument skipped this item if P1SPEAK was "English," "English and Spanish equally," or "English and another language equally."
P2SCINT	PFI– Enrolled	Interpreters at school for second parent/guardian	The web instrument skipped this item if P2SPEAK was "English," "English and Spanish equally," or "English and another language equally."
P1WRMLT	PFI– Enrolled	Written materials at school in first parent/guardian native language	The web instrument skipped this item if P1SPEAK was "English," "English and Spanish equally," or "English and another language equally."
P2WRMLT	PFI– Enrolled	Written materials at school in second parent/guardian native language	The web instrument skipped this item if P2SPEAK was "English," "English and Spanish equally," or "English and another language equally."
LCCURRJOB	ATES	Post-secondary certificate related to current job	The web instrument skipped this item if CNCURRJOB was "Not applicable, not currently working."
WECURJO	ATES	Current job related to work experience program	The web instrument skipped this item if CNCURRJOB was "Not applicable, not currently working."
WESKILL	ATES	Use skills from work experience program in current job	The web instrument skipped this item if CNCURRJOB was "Not applicable, not currently working."
EEPTJOB	ATES	Part-time job last week	The web instrument skipped this item if EEMAIN was not equal to "No", and EEJOB was "1" or EEFTJOB was "1"
CNCURRJOB2	ATES	Second certification or license is for current job	The web instrument skipped this item if CNCURRJOB was "Not applicable, not currently working."

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

4.4.2 Range Checks

The first of the computer edits were the range checks. Range checks were used to delete entries that were outside the range of acceptable values determined prior to the administration of NHES. For example, on the ECPP and PFI questionnaires, parents are asked the number of hours they work in a given week (P1HRSWK/P2HRSWK). If the number of reported exceeded 80, the data were set to missing. Entries that were classified as out of range were imputed, along with other missing variables, after the edit stages of processing.²⁴

4.4.3 Consistency Edits

The consistency edits identified inconsistent entries within each case and, whenever possible, corrected them. If the inconsistencies could not be corrected, then the entries were deleted. These inconsistencies could occur within an item or between items on the same form. For example, a within-item inconsistency would occur if the write-in field within the “Other relationship” part of ECPP questionnaire item 98—the relationship between the respondent and the sampled child—contained text, but no checkbox within the item was marked. In this case, the “Other relationship” variable would be changed to “Yes.” An example of an inconsistency between items on the same form would be if ECPP item 49b indicated that Temporary Assistance for Needy Families (TANF) helped pay for child care, but item 137a did not indicate that the family received benefits from TANF in the last 12 months. In this case, a “No” answer in item 137a would be changed to “Yes.”

Table 4-2 summarizes the number of changes made to the entries for the variables in the data files for the ECPP, PFI, and ATES questionnaires, based on the range and consistency edits described above. As can be seen, for all three surveys, the largest number of variables were edited for only 1-15 percent of cases. For example, for the PFI survey, 108 variables were edited for only 1-15 percent of the respondents, while 27 variables were edited for more than 30 percent of the survey respondents.

²⁴ Range checks were performed automatically on the NHES:2016 web instrument. If a response violated a range check, a warning message was displayed describing the inconsistency. However, while the respondent was encouraged to correct the inconsistency, a respondent was allowed to proceed with the questionnaire without editing an out of range response.

Table 4-2. Number of changes made to entries for the variables in NHES:2016, by percentage of cases with changes and questionnaire type

Questionnaire type	Total number of interviews (ISR = 1)	Total number of variables in questionnaire	Number of variables changed, by percentage of cases			
			None	1–15 percent	16–30 percent	More than 30 percent
ECPP	5,844	246	154	63	3	26
PFI	14,075	335	190	108	10	27
ATES	47,744	127	109	18	0	0

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

4.4.4 Skip Pattern Edits

The skip pattern edits deleted extraneous entries (errors of commission) and replaced them with the “not applicable” code (i.e., in situations where skip patterns were not followed correctly and a respondent answered a question he or she should have skipped) and assigned the “not answered” code to items that should have been answered but were not (errors of omission).

4.4.5 Coding Schools

For every PFI case for an enrolled student, a coding operation was performed to assign a National Center for Education Statistics (NCES) School identification (SID) number. Assigning NCES School IDs allowed school-related data from the NCES Common Core of Data (CCD) and NCES Private School Universe Survey (PSS) to be included in the PFI data files (in addition to the data provided by respondents in the School Characteristics section of the PFI questionnaire).

The manner in which PFI–Enrolled respondents identified the child’s school was different on the paper questionnaire and the web instrument. Based on the address zip code in the sampling frame, respondents to the paper questionnaire were provided a list of 15 schools from which to select the child’s school. The list was drawn from the 2014–15 CCD and the 2013–14 PSS, using the child’s grade (as provided in the screener) and included both public and private schools. If the grade was not provided in the screener, it was derived from the child’s age. Respondents to the web instrument were provided a list of 25 schools generated from within a geographic radius around the longitude and latitude associated with the child’s address. The web lookup also used additional criteria, including whether the parent indicated the child’s school was public or private. In both cases, respondents were asked to select the child’s school from the list, with write-in boxes available if the school was not included in the generated list.

In 30 percent of the enrolled PFI cases (approximately 4,000 cases), respondents did not select a school from the list provided on the questionnaire but did write in the name of a school. Using the

school's name, address, and zip code, data processing staff coded these schools using an online school lookup application that accessed the CCD and the PSS. Analysts were able to match schools to 93 percent of the cases, leaving 387 cases where an appropriate match could not be found. School codes for these cases were imputed (imputation is discussed in chapter 6). Table 4-3 provides the results of the coding operation.

Table 4-3. Results of the NHES:2016 Parent and Family Involvement in Education school coding operation, by school type

School type	Selected from list provided in questionnaire	Matched based on name or address	Imputed	Total
Public	8,904	2,964	120	11,988
Private	581	687	267	1,535
Total	9,485	3,651	387	13,523

NOTE: School information was only collected from respondents to the PFI-Enrolled questionnaire.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

4.5 Final Interview Status Recode (ISR) Classification

After the range checks, consistency edits, and blanking edits were completed, each case was put through an edit to make a final determination of whether it was eligible for the survey and, if so, whether sufficient data had been collected for it to be classified as a completed survey. This is referred to as the ISR. A final ISR value was assigned to each case as a result of this edit. Ultimately, 2,150 cases were classified as noninterviews based on the final ISR coding and were not included in the data files. Table 4-4 summarizes the critical items and criteria used to determine a final ISR classification (many of these critical items are those during imputation, which is discussed in Chapter 6).

Table 4-4. NHES:2016 critical items and criteria for final Interview Status Recode classification of completed interview, by questionnaire type

Questionnaire	Critical items
ATES	At least three of: Annual earnings (EEEARN) Educational attainment (EDUATTN) Age (XXAGE) Sex (XXSEX)
PFI-Enrolled	At least two of: Child's sex (CSEX) Parent 1 relation to child (P1REL) Second parent in household (P2GUARD) Parent 1 or parent 2 highest grade completed (P1EDUC or P2EDUC) AND at least one of: Child's grade (GRADEAT or GRADEBT) Total household income (TTLHHINC) Home ownership status (OWNRNTHB)
PFI-Homeschooled	At least two of: Child's sex (CSEX) Parent 1 relation to child (P1REL) Second parent in household (P2GUARD) Parent 1 or parent 2 highest grade completed (P1EDUC or P2EDUC) AND at least one of: Child's grade equivalent (GRADEEQA or GRADEEQB) Total household income (TTLHHINC) Home ownership status (OWNRNTHB)
ECPP	At least two of: Child's sex (CSEX) Parent 1 relation to child (P1REL) Second parent in household (P2GUARD) Parent 1 or parent 2 highest grade completed (P1EDUC or P2EDUC) AND at least one of: Child's age (CAGE) Total household income (TTLHHINC) Home ownership status (OWNRNTHB)

NOTE: In addition to the above criteria, 10 percent of the remaining items must have a valid entry in order for a case to be classified as complete.
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

The final ISR counts for the data files for the ECPP, PFI, and ATES surveys are shown in table 4-5.

Table 4-5. NHES:2016 Final Interview Status Recode counts, by survey type

Survey type	Number of records	Final Interview Status Recode	
		Number of interviews	Number of noninterviews
ECPP	5,948	5,844	104
PFI	14,308	14,075	233
ATES	49,557	47,744	1,813
Total	69,813	67,663	2,150

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

4.6 Data Review

After the automated edits were run, a manual data review process was initiated. The overall goal of the data review process was to make sure that the final datasets contained clean, accurate data and that there were no “not answered” items that should have an answer in any record in the final data files. Another component of the manual data review process was reviewing “other, specify” text responses to determine whether they should be coded into one of the existing code categories.

During the data review process, analysts looked at the frequencies of the data items in order to observe the changes that occurred in the data throughout the different stages of processing. By reviewing the frequency counts of data items at each stage of processing, analysts were able to make sure that the edit and imputation programs worked correctly. The data review process also helped to ensure that the imputed values were consistent with the other data in the questionnaire record. The data review process also compared variable distributions between NHES:2016 and NHES:2012. This process included a comparison of edited and unedited data to confirm that data editing procedures were not introducing unexpected deviations in the NHES:2016 variable distributions.

Another reason reviewers examined the frequencies of data items at each stage of processing was to identify any suspect values (e.g., whether a response was outside the range of possible answer choices or whether an answer seemed unlikely given the respondent’s other responses in the survey). Occasionally, analysts looked at the image of the questionnaire page to verify that the data were keyed correctly. Appropriate changes were made to the data files when necessary.

4.6.1 Review of “Other, Specify” Text Items

The “other, specify” responses were reviewed by survey staff and, where appropriate, coded into one of the existing response categories. Additionally, new values were created in some cases. In situations where write-in comments indicated that an additional category would be appropriate, analysts created a new category. On the PFI file, the following changes were made:

- For the variable HSWHOX,²⁵ two new values were added: “6—Teacher or tutor” and “7—Virtual school or curriculum.”
- The variable HSCOTHOS,²⁶ a new variable was created: HSCVTLCR, “Virtual school or curriculum.”
- For the variable RELATION,²⁷ one new value was added: “9—Sibling.”

On the ECPP file, the following changes were made:

- For the variable CPPLACEX,²⁸ two new values were added: “9—Center, type of location not specified” and “10—A home.”
- For the variable WHYDIFCLT,²⁹ six new values were added: “7—Not applicable, did not look for care,” “8—Wanted a particular type of program,” “9—Looking for specific hours/schedule,” “10—Challenges receiving financial assistance,” “11—Age requirements,” and “12—Multiple reasons.”
- For the variable RELATION,³⁰ one new value was added: “9—Sibling.”

On the ATES file, the following change was made:

- For the variable WEFOLP³¹, one new value was added: “26—TV, Radio, and Broadcasting.”

4.7 Data Products

After all stages of imputation were completed and the blanking and consistency edits were run once again, final data files were created for ECPP, PFI, and ATES. Each of these data files included

²⁵ Item 1, PFI—Homeschooled questionnaire: “Who is the person that mainly provides this child’s home instruction?”

²⁶ Item 11, PFI—Homeschooled questionnaire: “Thinking about sources of curriculum or books you use to homeschool this child, please tell us about all the sources that apply to you.”

²⁷ Item 50, PFI—Homeschooled questionnaire and Item 67, PFI—Enrolled questionnaire: “How are you related to this child?”

²⁸ Item 39, ECPP questionnaire: “Where is this program located?”

²⁹ Item 58, ECPP questionnaire: “What was the primary reason for the difficulty finding care?”

³⁰ Item 98, ECPP questionnaire: “How are you related to this child?”

³¹ Item 40, ATES questionnaire: “If yes, what type of work was your last work experience program for?”

all variables: operational variables, survey variables, created variables, appended variables, weighting variables, and imputation flags. These files were used as the source files for the restricted-use and public-use files:

- *Early Childhood Program Participation.* The ECPP file includes all items from the Early Childhood Program Participation questionnaires. It also includes several items from the corresponding screener questionnaire for each record and additional derived variables. The derived variables were created using data from both outside data sources (for example, the American Community Survey (ACS)) and the survey.
- *Parent and Family Involvement in Education.* The PFI file includes all items from the Parent and Family Involvement in Education questionnaires. It also includes items from the corresponding screener questionnaire for each record and additional derived variables. The derived variables were created using data from both outside data sources (the ACS, CCD, and PSS) and the survey.
- *Adult Training and Education.* The ATES file includes all items from the Adult Training and Education questionnaires. It also includes items from the corresponding screener questionnaire for each record and additional derived variables. The derived variables were created using data from both outside data sources (ACS) and the survey.

4.8 Disclosure Risk Analysis

Central to the mission of NCES is a commitment to protecting the identity of respondents to its various data collections. Surveys that make up the NHES are designed to protect respondent identity. All direct respondent identifiers, as well as any characteristics that might lead to identification, are omitted or modified in the public-use dataset to protect the identities of individuals. An extensive respondent disclosure risk analysis was performed on the NHES dataset prior to its release. As in past NHES collections, the results from this analysis led to modifications to some data included on the data files. The modifications included coarsening of response categories (such as top and bottom coding variables as well as grouping rare categories together) and swapping of certain data items between respondents. These confidentiality edits modify respondent data in order to prevent positive identification of individual respondents. Tests on the modified data were conducted to assure that the data remain accurate and useful.

Under law, data collected and distributed by NCES may be used only for statistical purposes. Any effort to determine the identity of any reported case by data users is prohibited by law. Violations are subject to Class E felony penalties including a fine of up to \$250,000, a prison term of up to

5 years, or both. Any intentional identification or disclosure of a person violates the assurances of confidentiality given to the providers of the information.

Users must adhere to the following rules:

- Use the data in this dataset for statistical purposes only.
- Make no use of the identity of any person discovered inadvertently and advise NCES of any such discovery.
- Do not link this dataset with individually identifiable data from other NCES or non-NCES datasets.

Chapter 5. Response Rates

This chapter describes the method used for calculating unit and item response rates for the National Household Education Surveys Program of 2016 (NHES:2016) screener and three topical surveys—the Early Childhood Program Participation (ECPP) Survey, the Parent and Family Involvement in Education (PFI) Survey, and the Adult Training and Education Survey (ATES).

The NHES:2016 screener was conducted using an address-based, stratified sample of 206,000 addresses. All U.S. civilian, noninstitutional, occupied addresses were eligible to be sampled for the screener. Every sampled address was sent a short screener questionnaire to determine whether the household was eligible to participate in the ECPP survey, the PFI survey, or the ATES survey. Households were eligible to participate in the ECPP survey if they had a child age 6 or younger who was not yet enrolled in kindergarten. Households were eligible to participate in the PFI survey if they had a child or youth age 20 or younger who was enrolled in kindergarten through 12th grade or homeschooled for the equivalent grades.³² Households with adults ages 16 through 65 and not enrolled in twelfth grade or below were eligible to participate in the ATES survey. Households with eligible children or adults as described previously that responded to the screener were sent a topical survey. More details on the NHES:2016 sampling methodology and data collection process can be found in chapters 2 and 3, respectively.

5.1 Unit Response Rates

A unit response rate is the ratio of the number of units with completed questionnaires to the number of sampled units eligible for the questionnaire. In some cases, response rates are easily defined and computed, whereas in other cases, the denominator of the ratio must be estimated due to the unknown eligibility status of nonrespondents. For the NHES:2016 screener, a unit was an address or a household. For the NHES ECPP and PFI surveys, a unit was a child within a household that had completed the screener. For the NHES ATES survey, a unit was an adult within a household that had completed the screener.

This chapter reports (1) a unit response rate that measures the percentage of questionnaires that were completed for a specific stage of the survey and (2) the overall unit response rate that measures the percentage of questionnaires that were completed, taking all survey stages into account. Specifically, NHES:2016 used a two-phase sampling process. In phase 1, screener questionnaires were mailed to identify whether the household included members eligible for one

³² Households with homeschooled children were sampled at higher rates for the PFI-Homeschooled to ensure a sufficient number of responses about homeschooled children. Additional details on the topical sampling procedure for NHES:2016 can be found in chapter 2.

of the topical questionnaires and were used to sample one child or adult in each household. In phase 2, a topical survey was sent to each household that had been identified in phase 1 as including an eligible member. If the screener was not completed, then a person could not be sampled for a topical questionnaire.

Based on this design, the unit response rate for the first phase is the estimated percentage of eligible households that completed the screener. The unit response rate for the second phase (ECPP, PFI, or ATES questionnaires) is the percentage of sampled individuals for whom topical questionnaires were completed. The overall unit response rate—calculated independently for the ECPP, the PFI, and the ATES—is the product of the first- and second-phase unit response rates (i.e., the screener unit response rate multiplied by the topical survey unit response rate).

Unit response rates can be either unweighted or weighted. The unweighted rate, computed using the raw number of cases, describes the success of the operational aspects of the survey. The weighted rate, computed by summing the weights (usually the reciprocals of the probability of selecting the units) for both the numerator and the denominator, describes the success of the survey with respect to the population sampled because the weights allow inference of the sample data (including response status) to the population level. Both rates are usually similar unless the probabilities of selection and the unit response rates vary considerably. All the unit response rates discussed below are weighted by the inverse of the probability of selection unless noted specifically in the text.

The next section discusses the unit response rate for the screener and provides a profile of the characteristics of the respondents.³³ The subsequent sections discuss the topical unit response rates and the overall unit response rates for the ECPP, PFI, and ATES surveys.

5.1.1 NHES Screener Unit Response Rates

To calculate the screener unit response rate, each sampled address in the screener operation was classified in one of four ways: a response (*R*), a nonresponse (*NR*), an ineligible case (*I*), or a case of unknown eligibility (*U*). Eligible cases (*E*) in the NHES screener consisted of responses (*R*) and nonresponses (*NR*). A response (*R*) was defined as a completed web or paper screener questionnaire from a household, regardless of whether the household reported persons eligible for a topical survey. For the paper screener, a nonresponse (*NR*) was defined as either a blank screener questionnaire or another clear refusal reply. For the web screener, a nonresponse was defined as a

³³ The unit response rate and overall response rate for the screener are the same because there is only one phase of selection (household address) at the screener level.

screener questionnaire for which the household logged in but did not complete any items, or completed some items but did not reach the end of the screener and thus did not undergo topical sampling. Nonrespondents also included cases that completed a web or paper screener after May 24, which was the cutoff for the screener data collection. Ineligible cases were those returned by the postmaster with one of the following statuses: unit is vacant, undeliverable as addressed (UAA), insufficient address, unclaimed, no such street, no such street number, illegible address, and no mail receptacle. In addition, the following types of cases were ineligible based on the postmaster’s information (postal workers used the U.S. Postal Service (USPS) procedures to assign these types): box closed—no forwarding order; forwarding order has expired; deceased; moved, left no address; and moved out of U.S.—no forwarding address. Although these last three ineligibility types are usually thought of as pertaining to individuals and the NHES:2016 screener questionnaires were not addressed to specific persons, it was decided early in the NHES planning to carry over these dispositions into the NHES processing. A small number of addresses were otherwise found to be out of scope and were classified as ineligible—for example, an address would be classified as out of scope if information written on the screener form indicated that it corresponded to a business rather than a residence. Therefore, the term *eligible* at the screener phase refers to the capability of a household to respond to the screener questionnaire, such as the address belonging to an occupied, residential household.³⁴

Sample addresses for which a questionnaire was never received were identified as unknown eligibility (*U*)—neither a response nor a nonresponse—because information was insufficient to determine whether they were valid, occupied households.

One reason some cases were not returned was that screener questionnaire packages were mailed to a simplified addressee, “City/County Resident,” using first-class mail.³⁵ According to the USPS Domestic Mail Manual (DMM), return service is not required for mailings using this format. However, the USPS informed the Census Bureau’s National Processing Center (NPC) that even though the DMM states that undeliverable mail pieces with a simplified addressee are treated as waste, 90 percent of the USPS personnel will not discard first-class mail and will return an undeliverable mail piece to the sender. Experience with the NHES:2011 Field Test and the NHES:2012 collection, which used the same mailing format, indicated that undeliverable mail addressed to a simplified addressee was often returned to the sender; however, it is not possible to determine how many unreturned cases were discarded as undeliverable. As a result, it is possible

³⁴ Cases were classified as ineligible only if one or more of the mailings was returned with one of the undeliverable or out-of-scope status codes noted here, and none of the other mailings was returned as a respondent or nonrespondent.

³⁵ The initial screener mailing and the first and third screener nonresponse follow-up mailings were sent via first-class mail. The second screener nonresponse mailing was sent via FedEx when possible.

that some of the unreturned cases of unknown eligible status were undeliverable and thus ineligible.

Table 5-1 shows the disposition of the 206,000 cases resulting from the NHES:2016 screener operation.

Table 5-1. Count and percentage distribution of households sampled for NHES:2016 screener, by response status

Response status	Count of households	Percent of households
Total	206,000	100.0
Eligible	116,948	56.8
Respondents	115,342	56.0
Nonrespondents	1,606	0.8
Ineligible	19,136	9.3
Unknown eligibility	69,916	33.9

NOTE: All proportions are unweighted. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

For the NHES:2016, the unit response rate was calculated per NCES standard 1-3-2, which corresponds to the American Association for Public Opinion Research (AAPOR) Response Rate 3 (RR3) formula and weighted data:

$$RR3 = \left[\frac{R}{E + ee * U} \right] * 100$$

where

$$ee = \frac{E}{T - U}$$

and

R = sum of base weights of respondents,

E = sum of base weights for eligible sample units: $E = R + NR$, (NR = sum of base weights of nonrespondents)

U = sum of base weights for unknown-eligibility cases,

T = sum of base weights over all cases in sample, and

ee = proportion of known eligibility cases that are eligible.

Although the formula is standard, the calculation of unit response rates is complicated by the cases with unknown eligibility, which comprise 33.9 percent of the addresses in the sample (table 5-1). The specific assumptions about the eligibility status of the addresses from which no response was

received will have an impact on the response rate calculation. Assuming that they are all ineligible would provide a response rate at one end of the spectrum, and assuming that they are all nonresponses would define a conservative response rate at the other end of the spectrum.

To reflect differences in eligibility by address information provided on the vendor's sample frame, the eligibility rate, ee , was estimated separately for each subgroup formed according to the combinations of address types available on the frame as presented in table 5-2. Specifically, ee was calculated by dividing the number of eligible cases by the difference between the total number of cases in a subgroup (i.e., address type) and the number of unreturned questionnaires in that subgroup. Because this approach uses direct information about likely household occupancy status associated with the particular address, this approach yields more accurate estimates of eligibility rates than other potential methods.

Table 5-2 presents the proportion of known eligibility cases for five subgroups of addresses. The eligibility rate varied from a low of 0.06, for addresses on the frame flagged as vacant and for which the type of dwelling was unknown, to a high of 0.89 for addresses on the frame identified as not a P.O. box, not vacant, and not a drop point.

Table 5-2. Proportion of known eligibility screener cases that are eligible (*ee*), by cell

Cell number	Cell definition	All sampled addresses	Unweighted eligibility rate (<i>ee</i>)	Weighted eligibility rate (<i>ee</i>)
Total		All sampled addresses	0.86	0.87
1	Address indicated on the NHES:2016 frame as vacant, and type of dwelling (single or multiple unit) is unknown	0.06	0.06	
2	Address indicated on the NHES:2016 frame as vacant, and type of dwelling (single or multiple unit) is known	0.23	0.24	
3	Address indicated on the NHES:2016 frame as drop point or augmented drop point, ¹ and not vacant	0.74	0.73	
4	Address indicated on the NHES:2016 frame as only way to get mail P.O. box, not vacant, and not drop point or augmented drop point	0.84	0.85	
5	Address indicated on the NHES:2016 frame as non-P.O. box, not vacant, and not drop point or augmented drop point	0.89	0.89	

¹A drop point is an address that is a single postal delivery point for multiple housing units. An augmented drop point is a drop point that includes a unit designation (i.e., an apartment number) added by the frame vendor. Vacant addresses and drop point/augmented drop point addresses are mutually exclusive on the NHES sample frame.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

To calculate the response rate, a base-weighted response rate was first calculated for each of the mutually exclusive subgroups or cells described in table 5-2. The *ee* was multiplied by the weighted number of unknown cases in each cell to obtain a count of unknown eligibility cases that were likely eligible per cell. The response rate was then calculated as the weighted sum of responding cases divided by the weighted sum of responding and nonresponding cases, plus the weighted sum of the unknown cases deemed eligible. Each cell's response rate was proportionally represented in the overall response rate by multiplying the rate by the base-weighted number of records corresponding to the cell. These products were summed and divided by the base-weighted number of records for the screener survey.

With this method, the NHES:2016 screener unit response rate was 66.1 percent and is shown in table 5-3. The table also presents two other response rates based on different eligibility assumptions. The response rate labeled “conservative” assumes that 100 percent of the unknown eligible cases would have been eligible and yielded a weighted response rate of 63.2 percent. The single-eligibility unit response rate was calculated using the proportion of known-eligibility screener cases that were eligible. That proportion, *ee*, was applied overall to the unknown-eligibility cases in the entire screener sample. This response rate method assumed that the unknown-eligibility screener cases were all eligible at the same rate as the known-eligibility screener cases. Because the calculations for the weighted frame-assisted unit response rate and the weighted single-eligibility unit response rate were very similar, the single-eligibility unit response

rate was used for the response rate calculations in the rest of the screener unit response rate section because it is a simpler calculation and more easily replicated than the frame-assisted method.

Table 5-3. Unweighted and weighted screener unit response rates

Screener response rate	Unweighted	Weighted
Frame-assisted rate (ee varies by cell)	64.8	66.1
Single-eligibility rate ($ee = 0.87$)	65.2	66.4
Conservative rate ($ee = 1.0$)	61.7	63.2

NOTE: Weighted unit response rates weight the numerator and denominator by the inverse of the probability of selection associated with each case considered eligible. Unweighted unit response rates include the same cases in the numerator and denominator as the weighted estimates but without weights applied. For the frame-assisted rate, the eligibility rate (ee) varies by the cells listed in table 5-2. A separate ee and response rate is calculated for each subgroup listed in table 5-2, and then the six response rates are combined to form the frame-assisted unit response rate. For the single-eligibility rate, a single ee is used for the entire sample, consistent with the American Association for Public Opinion Research Response Rate 3 formula. For the conservative rate, ee is set equal to 1.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 5-4 presents the screener unit response rate by selected characteristics of addresses. These characteristics were chosen because they were available for most or all addresses and were associated with response propensity in the NHES:2011 Field Test, NHES:2012, and the NHES:2014 Feasibility Study. Screener unit response rates were measurably lower for the following:

- Addresses in Census tracts where at least 25 percent of the population was Black or where at least 40 percent of the population was Hispanic, compared to tracts with lower percentages of Black or Hispanic residents;
- Addresses in Census tracts where at least 20 percent of families had incomes below the poverty line compared to those with a poverty rate of 20 percent or less;
- Addresses in the South and West compared to the Northeast and Midwest;
- Addresses in high rise buildings compared to street, P.O. box, or rural route addresses;
- Addresses classified as drop point addresses compared to non-drop point addresses;
- Multiple-unit addresses compared to single-unit addresses;
- Addresses with only one resident adult or for which the number of adults was unknown compared to those addresses with more than one resident adult;
- Addresses without a matched phone number compared to those with a matched phone number;
- Addresses at which the home is rented or for which the home tenure is unknown compared to addresses at which the home is owned;

- Addresses with a household income under \$50,000 compared to addresses with higher incomes;
- Addresses that received Web mailings compared to those that received only paper questionnaire mailings; and
- Addresses that received a \$2-only incentive compared to those that received a \$5-only incentive or an incentive tailored based on response propensity.

Table 5-4. Count of sampled households by response status, and weighted screener response rate, by selected household characteristics

Household characteristic	Count of sampled households					Weighted screener response rate
	Total	Responded	Refused	Ineligible	Unknown eligibility	
Total	206,000	115,342	1,606	19,136	69,916	66.4
Frame variables						
Sampling stratum						
Tracts with 25% or more Black persons	41,200	18,593	330	5,472	16,805	58.2
Tracts with 40% or more Hispanic persons	30,900	13,906	206	3,404	13,384	55.9
All other tracts	133,900	82,843	1,070	10,260	39,727	69.4
Tract poverty rate						
20% or higher	64,760	29,030	468	9,025	26,237	59.5
Below 20%	141,240	86,312	1,138	10,111	43,679	68.9
Census region ¹						
Northeast	35,398	20,341	281	3,019	11,757	67.2
South	82,478	43,580	662	8,500	29,736	64.0
Midwest	42,817	25,859	336	4,056	12,566	70.6
West	45,307	25,562	327	3,561	15,857	65.6
Route type						
City style/street	155,113	93,178	1,252	11,302	49,381	68.4
P.O. box	2,181	785	19	845	532	74.5
High rise	48,507	21,276	333	6,958	19,940	58.9
Rural route	199	103	2	31	63	67.8
Delivery point is a drop point						
Yes	3,784	1,558	50	573	1,603	57.5
No	202,216	113,784	1,556	18,563	68,313	66.5
Dwelling type						
Single family	150,545	91,419	1,219	10,650	47,257	68.9
Multiple unit	53,274	23,138	368	7,641	22,127	58.5
Dwelling type unknown	2,181	785	19	845	532	74.5
Number of adults in household						
1	78,318	39,090	589	8,008	30,631	61.1
2	50,592	32,743	395	2,388	15,066	70.6
3 or 4	38,440	26,435	288	1,225	10,492	73.1
5–8	9,200	6,321	63	260	2,556	72.7
Number of adults unknown	29,450	10,753	271	7,255	11,171	61.6
Children in household						
Yes	47,236	28,146	297	2,415	16,378	65.8
No/unknown	158,764	87,196	1,309	16,721	53,538	66.5

See notes at end of table.

Table 5-4. Count of sampled households by response status, and weighted screener response rate, by selected household characteristics—Continued

Household characteristic	Count of sampled households					Weighted screener response rate
	Total	Responded	Refused	Ineligible	Unknown eligibility	
Phone number matched						
Yes	134,574	84,010	1,099	7,687	41,778	69.4
No	71,426	31,332	507	11,449	28,138	60.6
Home tenure						
Rent	52,220	23,091	330	6,037	22,762	56.6
Own	120,115	79,806	988	5,165	34,156	71.6
Home tenure unknown	33,665	12,445	288	7,934	12,998	61.0
Income						
\$50,000 or less	83,949	43,740	673	8,065	31,471	62.8
\$50,001–\$100,000	55,967	36,271	401	2,446	16,849	70.2
\$100,001–\$150,000	21,839	14,376	147	822	6,494	70.5
\$150,001 or more	14,772	10,189	114	544	3,925	73.3
Income unknown	29,473	10,766	271	7,259	11,177	61.6
Treatment variables						
Assigned mode at first screener mailing						
Paper	171,000	97,315	1,256	15,819	56,610	67.2
\$5 incentive	126,000	72,064	914	11,593	41,429	67.5
Other incentive (\$2 or modeled)	45,000	25,251	342	4,226	15,181	66.5
Web ²	35,000	18,027	350	3,317	13,306	62.1
Screeener incentive						
\$5	161,000	90,091	1,264	14,910	54,735	66.3
\$2	10,000	5,449	71	922	3,558	64.9
Modeled incentives ³	35,000	19,802	271	3,304	11,623	67.0
\$0	1,750	1,393	18	55	284	82.8
\$2	6,996	5,176	63	210	1,547	77.2
\$5	21,007	11,502	150	1,932	7,423	64.2
\$10	5,247	1,731	40	1,107	2,369	54.0

¹ Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

²All households assigned to the web mode received a \$5 screener incentive.

³Incentives in the modeled group were assigned according to predicted response propensity, with households with a higher predicted response propensity receiving a lower incentive.

NOTE: Weighted screener response rate is calculated using the single-eligibility formula (AAPOR RR3).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

5.1.2 NHES Topical Surveys Unit Response Rates

For the topical surveys, ECPP, PFI, and ATES, the unit response rate was calculated as a ratio of responses to eligible cases. Topical sample cases were all cases in the screener sample for which a completed questionnaire was received and the household had one or more persons eligible for a topical survey. If correspondence or information provided on the topical questionnaire indicated that a person was ineligible for the topical survey that they received but eligible for a different topical survey, then the case was classified as a nonrespondent to the survey for which it was actually eligible. A small number of cases were classified as ineligible at the topical phase; these cases included those that were assigned an out-of-scope outcome code by the Census Bureau³⁶ or that indicated on the questionnaire that they were not eligible for the survey to which they were assigned, but did not provide enough information to determine which survey they should have received. For the child surveys, completed topical cases were those that had valid answers to at least two of the following questionnaire items: gender of child, relationship of “parent 1” to child, presence of a second parent or guardian in the household, or highest level of education of either “parent 1” or “parent 2”.³⁷ Additionally, to be considered complete as an ECPP case, at least one of the following additional questions had to have a valid answer: age of child, total household income, or home ownership status. In addition to items needed to be considered a completed topical case, completed PFI–Homeschooled cases had to have a valid response for at least one of the following items: child’s grade equivalent, total household income, or home ownership status. In addition to items needed to be considered a completed topical case, completed PFI–Enrolled cases had to have a valid response for at least one of the following items: child’s grade, total household income, or home ownership status. For the ATES, completed topical cases were those that had valid answers to at least three of the following questionnaire items: earnings in the last 12 months, educational attainment, age of adult, or gender of adult. Finally, for all topical surveys, at least 10 percent of the remaining questionnaire items were required to have valid answers to be classified as a complete.³⁸ Cases that completed a topical survey after August 24, the cutoff for the topical data collection, were classified as nonrespondents.

³⁶ The out-of-scope outcome code was assigned at the topical phase if a case completed a screener and was sent a topical questionnaire but was then determined (e.g., on the basis of a call to the questionnaire assistance hotline) to be a nonresidential address (e.g., a business or a fraternity house).

³⁷ Parent 1 refers to the child’s parent or guardian living in the household and is usually the person who answered the topical questionnaire. If the person who answered the questionnaire is not the child’s parent or guardian, then parent 1 can refer to either of the child’s parents or guardians who live in the household. Parent 2 refers to the child’s other parent or guardian who lives in the household.

³⁸ During data file review, it was determined that approximately 110 households had been sent the wrong topical survey. Of these, approximately 50 completed the topical survey that they were sent. Approximately 20 additional cases were not sent any topical survey despite having reported eligible household members. All 130 of these discrepancies occurred among households that completed the paper screener. These discrepancies were investigated and determined to be the result of a programming error that had caused the screener data for some eligible persons to be truncated during the topical sampling procedure. For these cases, the selection of an eligible person to complete the topical survey deviated from the pre-specified topical sampling rules that were designed to ensure the randomness of the selection. Consequently, these cases were treated as nonrespondents and are not included in the data files.

Calculation of the topical unit response rate differs from the screener unit response rates because it does not include unknown eligible cases in the denominator or take into account the number of known eligibility cases that are actually eligible. The topical surveys had no unresolved cases because all households in the topical samples had already responded to the screener and were known to be eligible for the topical survey that they were sent (with the exception of the small number of cases whose eligibility changed or that were classified as ineligible, as described above). For overall response rates, the topical unit response rate was multiplied by the screener unit response rate.

The number of persons sampled and those with completed questionnaires for each NHES:2016 survey are presented in table 5-5. Of the adults enumerated in the screener and eligible for the ATES, a sample of 63,846 adults was selected. Of the children enumerated in the screener and eligible for the ECPP survey, a sample of 7,937 children was selected. Of the children enumerated in the screener and eligible for the PFI survey, a sample of 18,723 children was selected. Less than 0.1 percent of the ECPP sampled children ($n = 7$) were classified as ineligible because they were enumerated in error (i.e., children who were not household members at the time of screening) or were assigned an out-of-scope outcome code by the Census Bureau. Less than 0.1 percent of PFI sampled children ($n = 9$) and ATES adults ($n = 15$) were classified similarly. Completed ATES questionnaires were obtained for 47,744 of the sampled adults for an estimated 73.1 percent single-stage response rate and an overall response rate of 48.5 percent. Completed ECPP questionnaires were obtained for 5,844 of the sampled children for an estimated 73.4 percent single-stage response rate and an overall response rate of 48.7 percent. Completed PFI questionnaires were obtained for 14,075 of the sampled children for an estimated 74.3 percent single-stage response rate and an overall response rate of 49.3 percent.

Table 5-5. Count of addresses, weighted topical response rate, and weighted overall response rate, by topical questionnaire

Topical questionnaire	Count of addresses	Unweighted topical response rate	Weighted topical response rate	Weighted overall response rate
ATES ¹	-	74.8	73.1	48.5
Sampled	63,846	-	-	-
Ineligible (ISR = 3)	15	-	-	-
Did not respond (ISR = 2)	16,087	-	-	-
Total respondents (ISR = 1)	47,744	-	-	-
Sampled as PFI, responded as ATES	3	-	-	-
Sampled as ATES, responded as ATES	47,741	-	-	-
PFI (Enrolled and Homeschooled) ¹	-	75.2	74.3	49.3
Sampled	18,723	-	-	-
Ineligible (ISR = 3)	9	-	-	-
Did not respond (ISR = 2)	4,639	-	-	-
Total respondents (ISR = 1)	14,075	-	-	-
Sampled as ECPP, responded as PFI	1	-	-	-
Sampled as PFI, responded as PFI	14,074	-	-	-
ECPP ¹	-	73.7	73.4	48.7
Sampled	7,937	-	-	-
Ineligible (ISR = 3)	7	-	-	-
Did not respond (ISR = 2)	2,086	-	-	-
Total respondents (ISR = 1)	5,844	-	-	-
Sampled as PFI, responded as ECPP	1	-	-	-
Sampled as ECPP, responded as ECPP	5,843	-	-	-

¹The number sampled for the ATES survey includes the number sampled as ATES, completed as ATES (47,741); the number sampled as PFI, completed as ATES (3); the number ineligible (15); and the number that did not respond (16,087). The number sampled for the ECPP survey includes the number sampled as ECPP, completed as ECPP (5,843); the number sampled as PFI, completed as ECPP (1); the number ineligible (7); and the number that did not respond (2,086). The number sampled for the PFI survey includes the number sampled as PFI, completed as PFI (14,074); the number sampled as ECPP, completed as PFI (1); the number ineligible (9); and the number that did not respond (4,639).

NOTE: The weighted topical response rate is calculated using AAPOR RR1 because there were no unknown eligible cases at the topical stage. The weighted overall response rate is equal to the weighted topical response rate multiplied by the weighted single-eligibility screener response rate. Cases that completed a different survey than the one for which they were originally sampled are those that called the Census Bureau and provided information indicating that they were eligible for a different survey.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

The unit response rates for the ECPP, PFI, and ATES surveys could be examined only by variables available for both respondents and nonrespondents. These include variables available on the sampling frame, randomly assigned treatment flags, and variables available on the screener. The frame and treatment variables shown in tables 5-6, 5-7, and 5-8 for the ECPP, PFI, and ATES surveys (respectively) are stratum, tract-level poverty rate, Census region, route type, drop point status, dwelling type, number of adults in the household, presence of children in the household, phone match status, home tenure, and income from the sampling frame; plus the mode of screener response and the assigned screener incentive. Screener variables for the number of persons eligible for the assigned topical survey, the presence of persons eligible for other topical surveys, and the age, gender, enrollment status, and grade (as applicable) of the sampled person also are shown. For all three surveys, the following sampling frame and treatment variables showed statistically significant differences in topical response rates between at least one pair of categories: stratum,

tract-level poverty rate, Census region, route type, dwelling type, number of adults in the household, presence of children in the household, home tenure (own or rent), income, mode of screener completion, and screener incentive amount. For the PFI and ATES, a statistically significant response rate difference was observed between households that did and did not have a matched phone number available on the frame. For the ATES, statistically significant response rate differences were observed between drop point and non-drop point addresses.

For all three surveys, screener variables for the number of persons in the household eligible for the assigned survey, and the age, enrollment status, and gender of the sampled person also showed statistically significant response rate differences between at least one pair of categories. For the ECPP and PFI, a statistically significant response rate difference was observed between households that did and did not have an ATES-eligible adult. For the ECPP and ATES, a statistically significant response rate difference was observed between households that did and did not have a PFI-eligible child. For the PFI, statistically significant response rate differences were observed by questionnaire type (PFI-Enrolled or PFI-Homeschooled) and the grade level of the sampled child. For the ATES, a statistically significant response rate difference was observed between households that did and did not have an ECPP-eligible child.

Table 5-6. Count of Early Childhood Program Participation households by response status, and weighted Early Childhood Program Participation response rate, by selected household characteristics

Household characteristic	Count of ECPP households				Weighted ECPP response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Total	7,937	5,844	2,086	7	73.4
Frame variables					
Sampling stratum					
Tracts with 25% or more Black persons	1,284	845	438	1	64.6
Tracts with 40% or more Hispanic persons	1,211	821	389	1	66.8
All other tracts	5,442	4,178	1,259	5	75.9
Tract poverty rate					
20% or higher	2,014	1,345	668	1	66.3
Below 20%	5,923	4,499	1,418	6	75.6
Census region					
Northeast	1,296	975	319	2	75.1
South	2,952	2,111	840	1	71.3
Midwest	1,711	1,300	408	3	76.1
West	1,978	1,458	519	1	72.8
Route type					
City style/street	6,579	4,941	1,633	5	75.0
P.O. box	31	19	12	0	69.3
High rise	1,314	873	439	2	65.2
Rural route	13	11	2	0	74.2
Delivery point is drop point					
Yes	102	70	32	0	64.6
No	7,835	5,774	2,054	7	73.5
Dwelling type					
Single family	6,455	4,863	1,588	4	75.1
Multiple unit	1,451	962	486	3	65.4
Dwelling type unknown	31	19	12	0	69.3

See notes at end of table.

Table 5-6. Count of Early Childhood Program Participation households by response status, and weighted Early Childhood Program Participation response rate, by selected household characteristics—Continued

Household characteristic	Count of ECPP households				Weighted ECPP response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Number of adults in household					
1	2,797	1,947	847	3	68.9
2	2,698	2,143	552	3	79.7
3 or 4	1,403	1,060	343	0	74.8
5–8	292	215	77	0	72.7
Number of adults unknown	747	479	267	1	64.5
Children in household					
Yes	2,654	2,027	627	0	75.6
No/Unknown	5,283	3,817	1,459	7	72.1
Phone number matched					
Yes	4,983	3,700	1,277	6	74.1
No	2,954	2,144	809	1	72.2
Home tenure					
Rent	2,067	1,396	668	3	66.6
Own	5,002	3,887	1,112	3	77.8
Home tenure unknown	868	561	306	1	65.5
Income					
\$50,000 or less	2,858	1,956	897	5	68.0
\$50,001–\$100,000	2,339	1,764	574	1	75.6
\$100,001–\$150,000	1,255	1,029	226	0	82.1
\$150,001 or more	738	616	122	0	81.5
Income unknown	747	479	267	1	64.5
Treatment variables					
Assigned screener mailing protocol					
Paper	6,709	4,821	1,881	7	71.5
\$5 incentive	4,995	3,546	1,442	7	70.3
Other incentive (\$2 or modeled)	1,714	1,275	439	0	74.7
Web ²	1,228	1,023	205	0	83.6
Responded to screener by web	812	746	66	0	91.9
Responded to screener by paper	416	277	139	0	67.8

See notes at end of table.

Table 5-6. Count of Early Childhood Program Participation households by response status, and weighted Early Childhood Program Participation response rate, by selected household characteristics—Continued

Household characteristic	Count of ECPP households				Weighted ECPP response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Screeener incentive³					
\$5	6,223	4,569	1,647	7	73.0
\$2	349	274	75	0	76.7
Modeled incentives	1,365	1,001	364	0	74.2
\$0	14	13	1	0	95.7
\$2	158	131	27	0	81.9
\$5	1,010	744	266	0	74.4
\$10	183	113	70	0	65.1
Data reported on household screener					
Number of ECPP-eligible children in household					
1	5,688	4,156	1,527	5	72.7
2	1,992	1,508	482	2	75.0
3	231	169	62	0	72.7
4 or more	20	10	10	0	51.7
Household has ATES-eligible adults					
Yes	7,858	5,816	2,040	2	73.6
No	79	28	46	5	38.5
Household has PFI-eligible children (Enrolled or Homeschooled)					
Yes	3,244	2,327	917	0	71.5
No	4,693	3,517	1,169	7	75.1
Age of sampled child ⁴					
0	1,486	1,099	385	2	73.9
1	1,457	1,097	360	0	74.9
2	1,453	1,079	374	0	73.8
3	1,466	1,094	372	0	74.3
4	1,436	1,088	347	1	75.3
5–6	539	378	160	1	70.8
Not reported	100	9	88	3	9.1

See notes at end of table.

Table 5-6. Count of Early Childhood Program Participation households by response status, and weighted Early Childhood Program Participation response rate, by selected household characteristics—Continued

Household characteristic	Count of ECPP households				Weighted ECPP response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Reported enrollment status of sampled child					
Homeschooled ⁵	121	84	35	2	71.9
Public or private school, or preschool	2,503	1,900	603	0	75.5
College, university or vocational school, or not reported	642	396	245	1	60.6
Not in school	4,671	3,464	1,203	4	74.0
Gender of sampled child					
Male	3,963	2,956	1,004	3	74.1
Female	3,733	2,780	950	3	74.5
Not reported	241	108	132	1	45.3

¹Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

²Households in the web group that responded to the screener via the web received the web protocol at the topical stage. Households in the web group that responded to the screener via the paper form received the paper protocol at the topical stage. Households in the web group received a \$5 screener incentive. Households in the web group that proceeded directly from the web screener instrument to the web topical instrument, without receiving any topical mailings, did not receive an additional topical incentive. Households in the web group that received a topical mailing received a \$5 topical incentive with the first topical mailing, unless they had responded to the screener after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

³Screener incentives in the modeled group were assigned according to predicted response propensity, with households with a higher predicted response propensity receiving a lower incentive.

Households that received a \$0, \$2, or \$5 screener incentive received a \$5 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive. Households that received a \$10 screener incentive received a \$10 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

⁴The derived screener age variable is equal to the sampled person's age as of December 31, 2015, the cutoff date for NHES topical sampling.

⁵A respondent could have marked homeschool as the child's enrollment no matter the child's age, but if the child was 5 years old or younger, that child would have been sampled for the ECPP in these scenarios: if the child's grade was reported to be prekindergarten, none of the grades, or missing for age 5; if grade is prekindergarten, 3-12, college, none of the grades, or missing for age 4; if grade is prekindergarten, 1-12, college, none of the grades, or missing for age 3; and for ages 0-2 with any grade reported.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 5-7. Count of Parent and Family Involvement in Education households by response status, and weighted Parent and Family Involvement in Education response rate, by selected household characteristics

Household characteristic	Count of PFI households				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Total	18,723	14,075	4,639	9	74.3
Questionnaire type					
PFI-Enrolled	17,798	13,523	4,267	8	74.8
PFI-Homeschooled	925	552	372	1	61.3
Frame variables					
Sampling stratum					
Tracts with 25% or more Black persons	2,945	2,034	907	4	67.1
Tracts with 40% or more Hispanic persons	2,875	1,961	914	0	67.2
All other tracts	12,903	10,080	2,818	5	76.7
Tract poverty rate					
20% or higher	4,741	3,253	1,483	5	68.5
Below 20%	13,982	10,822	3,156	4	76.2
Census region ¹					
Northeast	3,164	2,427	736	1	74.9
South	7,053	5,154	1,896	3	72.2
Midwest	4,063	3,136	923	4	75.8
West	4,443	3,358	1,084	1	75.5
Route type					
City style/street	16,407	12,536	3,863	8	75.5
P.O. box	104	76	28	0	78.2
High rise	2,204	1,458	745	1	64.3
Rural route	8	5	3	0	53.2
Delivery point is a drop point					
Yes	261	179	81	1	68.6
No	18,462	13,896	4,558	8	74.3

See notes at end of table.

Table 5-7. Count of Parent and Family Involvement in Education households by response status, and weighted Parent and Family Involvement in Education response rate, by selected household characteristics—Continued

Household characteristic	Count of PFI households				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Dwelling type					
Single family	16,107	12,337	3,762	8	75.8
Multiple unit	2,512	1,662	849	1	64.1
Dwelling type unknown	104	76	28	0	78.2
Number of adults in household					
1	5,358	3,729	1,625	4	67.5
2	6,109	4,827	1,280	2	79.0
3 or 4	4,876	3,828	1,045	3	78.0
5–8	974	734	240	0	74.4
Number of adults unknown	1,406	957	449	0	68.0
Children in household					
Yes	9,810	7,743	2,064	3	77.9
No/Unknown	8,913	6,332	2,575	6	70.1
Phone number matched					
Yes	13,933	10,668	3,256	9	75.8
No	4,790	3,407	1,383	0	70.1
Home tenure					
Rent	3,790	2,537	1,251	2	65.7
Own	13,279	10,413	2,859	7	77.9
Home tenure unknown	1,654	1,125	529	0	67.9
Income					
\$50,000 or less	5,582	3,877	1,699	6	68.0
\$50,001–\$100,000	6,113	4,662	1,448	3	76.1
\$100,001–\$150,000	3,304	2,671	633	0	79.3
\$150,001 or more	2,317	1,907	410	0	81.8
Income unknown	1,407	958	449	0	68.0

See notes at end of table.

Table 5-7. Count of Parent and Family Involvement in Education households by response status, and weighted Parent and Family Involvement in Education response rate, by selected household characteristics—Continued

Household characteristic	Count of PFI households				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Treatment variables					
Assigned screener mailing protocol					
Paper	15,790	11,611	4,171	8	72.6
\$5 incentive	11,664	8,533	3,126	5	72.1
Other incentive (\$2 or modeled)	4,126	3,078	1,045	3	73.9
Web ²	2,933	2,464	468	1	83.3
Responded to screener by web	1,932	1,810	122	0	93.3
Responded to screener by paper	1,001	654	346	1	64.1
Screeener incentive ³					
\$5	14,597	10,997	3,594	6	74.4
\$2	857	655	202	0	75.2
Modeled incentives	3,269	2,423	843	3	73.6
\$0	58	41	17	0	74.1
\$2	646	524	121	1	81.1
\$5	2,201	1,631	569	1	73.6
\$10	364	227	136	1	61.3
Data reported on household screener					
Number of PFI-eligible children (Enrolled or Homeschooled)					
1	9,337	7,088	2,242	7	75.6
2	6,541	4,951	1,588	2	75.2
3	2,190	1,582	608	0	72.0
4 or more	654	454	200	0	70.6
Household has ATES-eligible adults					
Yes	18,328	13,841	4,483	4	74.5
No	395	234	156	5	57.0
Household has ECPP-eligible children					
Yes	1,547	1,127	419	1	73.0
No	17,176	12,948	4,220	8	74.6

See notes at end of table.

Table 5-7. Count of Parent and Family Involvement in Education households by response status, and weighted Parent and Family Involvement in Education response rate, by selected household characteristics—Continued

Household characteristic	Count of PFI households				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Age of sampled child ⁴					
0–4	30	15	15	0	54.2
5–6	1,762	1,322	440	0	74.2
7–8	2,392	1,779	611	2	73.6
9–10	2,473	1,903	570	0	76.7
11–12	2,719	2,058	661	0	74.8
13–14	3,023	2,278	745	0	74.6
15–16	3,472	2,700	772	0	74.6
17–20	2,595	1,935	659	1	74.0
Not reported	257	85	166	6	35.2
Reported enrollment status of sampled child					
Homeschooled	928	552	375	1	60.9
Public or private school, or preschool	16,875	12,980	3,893	2	75.5
College, university or vocational school, or not in school	78	14	59	5	20.7
Not reported	842	529	312	1	63.2
Reported grade of sampled child					
Kindergarten/pre-K	1,185	864	321	0	73.4
1 st grade	1,017	769	247	1	74.5
2 nd grade	1,135	832	302	1	73.1
3 rd grade	1,118	881	237	0	77.7
4 th grade	1,075	831	244	0	77.0
5 th grade	1,179	904	275	0	75.6
6 th grade	1,187	897	290	0	74.1
7 th grade	1,281	994	287	0	77.6
8 th grade	1,337	1,002	334	1	73.2
9 th grade	1,449	1,116	333	0	75.3
10 th grade	1,549	1,199	350	0	74.8
11 th grade	1,614	1,286	327	1	78.0
12 th grade	1,745	1,271	470	4	72.5
College, university or vocational school; none of these; or not reported	1,852	1,229	622	1	65.2

See notes at end of table.

Table 5-7. Count of Parent and Family Involvement in Education households by response status, and weighted Parent and Family Involvement in Education response rate, by selected household characteristics—Continued

Household characteristic	Count of PFI households				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Gender of sampled child					
Male	9,450	7,119	2,329	2	74.5
Female	8,917	6,749	2,162	6	74.6
Not reported	356	207	148	1	56.7

¹Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

²Households in the web group that responded to the screener via the web received the web protocol at the topical stage. Households in the web group that responded to the screener via the paper form received the paper protocol at the topical stage. Households in the web group received a \$5 screener incentive. Households in the web group that proceeded directly from the web screener instrument to the web topical instrument, without receiving any topical mailings, did not receive an additional topical incentive. Households in the web group that received a topical mailing received a \$5 topical incentive with the first topical mailing, unless they had responded to the screener after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

³Screener incentives in the modeled group were assigned according to predicted response propensity, with households with a higher predicted response propensity receiving a lower incentive. Households that received a \$0, \$2, or \$5 screener incentive received a \$5 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive. Households that received a \$10 screener incentive received a \$10 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

⁴The derived screener age variable is equal to the sampled person's age as of December 31, 2015, the cutoff date for NHES topical sampling.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 5-8. Count of Adult Training and Education Survey households by response status, and weighted Adult Training and Education Survey response rate, by selected household characteristics

Household characteristic	Count of ATES households				Weighted ATES response rate
	Sampled	Responded	Refused or did not respond	Ineligible	
Total	63,846	47,744	16,087	15	73.1
Frame variables					
Sampling stratum					
Tracts with 25% or more Black persons	10,806	7,464	3,338	4	65.8
Tracts with 40% or more Hispanic persons	7,611	5,358	2,249	4	66.1
All other tracts	45,429	34,922	10,500	7	75.4
Tract poverty rate					
20% or higher	16,503	11,563	4,938	2	67.2
Below 20%	47,343	36,181	11,149	13	75.0
Census region ¹					
Northeast	11,435	8,608	2,824	3	73.5
South	23,909	17,420	6,484	5	71.2
Midwest	14,463	11,182	3,278	3	75.7
West	14,039	10,534	3,501	4	73.3
Route type					
City style/street	50,471	38,301	12,162	8	74.2
P.O. box	442	333	109	0	74.0
High rise	12,883	9,072	3,804	7	67.8
Rural route	50	38	12	0	59.9
Delivery point is a drop point					
Yes	875	586	287	2	66.6
No	62,971	47,158	15,800	13	73.2
Dwelling type					
Single family	49,385	37,570	11,807	8	74.4
Multiple unit	14,019	9,841	4,171	7	67.3
Dwelling type unknown	442	333	109	0	74.0

See notes at end of table.

Table 5-8. Count of Adult Training and Education Survey households by response status, and weighted Adult Training and Education Survey response rate, by selected household characteristics—Continued

Household characteristic	Count of ATES households				Weighted ATES response rate
	Sampled	Responded	Refused or did not respond	Ineligible	
Number of adults in household					
1	22,395	16,227	6,163	5	69.9
2	15,821	12,086	3,730	5	75.1
3 or 4	15,042	11,761	3,279	2	76.9
5–8	4,202	3,287	914	1	76.6
Number of adults unknown	6,386	4,383	2,001	2	65.2
Children in household					
Yes	13,360	9,938	3,419	3	74.5
No/Unknown	50,486	37,806	12,668	12	72.5
Phone number matched					
Yes	44,570	33,907	10,649	14	74.0
No	19,276	13,837	5,438	1	71.0
Home tenure					
Rent	13,716	9,537	4,173	6	67.3
Own	42,678	33,100	9,571	7	76.4
Home tenure unknown	7,452	5,107	2,343	2	64.9
Income					
\$50,000 or less	22,544	16,074	6,464	6	68.6
\$50,001–\$100,000	21,136	16,396	4,735	5	76.0
\$100,001–\$150,000	7,959	6,224	1,734	1	76.5
\$150,001 or more	5,813	4,661	1,151	1	80.1
Income unknown	6,394	4,389	2,003	2	65.2
Treatment variables					
Assigned survey mode at first topical mailing					
Paper	53,861	39,632	14,217	12	71.9
\$5 incentive	39,816	29,281	10,525	10	71.8
Other incentive (\$2 or modeled)	14,045	10,351	3,692	2	72.2
Web ²	9,985	8,112	1,870	3	79.7
Responded to screener by web	6,395	5,696	698	1	86.4
Responded to screener by paper	3,590	2,416	1,172	2	66.3

See notes at end of table.

Table 5-8. Count of Adult Training and Education Survey households by response status, and weighted Adult Training and Education Survey response rate, by selected household characteristics—Continued

Household characteristic	Count of ATES households				Weighted ATES response rate
	Sampled	Responded	Refused or did not respond	Ineligible	
Screeener incentive ³					
\$5	49,801	37,393	12,395	13	73.4
\$2	3,065	2,251	813	1	72.4
Modeled incentives	10,980	8,100	2,879	1	72.2
\$0	433	353	80	0	79.7
\$2	2,683	2,128	555	0	80.0
\$5	6,798	4,927	1,870	1	71.0
\$10	1,066	692	374	0	61.5
Data reported on household screener					
Number of ATES-eligible adults in household					
1	25,256	18,975	6,276	5	74.1
2	27,718	20,962	6,752	4	74.5
3	7,108	5,166	1,938	4	71.8
4 or more	3,761	2,640	1,120	1	68.5
Household has PFI-eligible children (Enrolled or Homeschooled)					
Yes	5,326	3,775	1,550	1	71.0
No	58,520	43,969	14,537	14	74.2
Household has ECPP-eligible children					
Yes	2,404	1,676	728	0	69.0
No	61,442	46,068	15,359	15	73.9
Reported age of sampled adult ⁴					
16–24	5,840	3,908	1,931	1	66.6
25–34	9,992	7,043	2,946	3	68.4
35–44	8,016	5,738	2,277	1	71.7
45–54	13,839	10,262	3,575	2	75.7
55–65	25,932	20,716	5,211	5	79.0
Not reported	227	77	147	3	36.4

See notes at end of table.

Table 5-8. Count of Adult Training and Education Survey households by response status, and weighted Adult Training and Education Survey response rate, by selected household characteristics—Continued

Household characteristic	Count of ATES households				Weighted ATES response rate
	Sampled	Responded	Refused or did not respond	Ineligible	
Reported enrollment status of sampled adult					
Public or private school, preschool, or homeschooled	887	523	363	1	60.2
College, university or vocational school	6,148	4,405	1,743	0	70.7
Not in school	55,140	41,815	13,313	12	74.2
Not reported	1,671	1,001	668	2	59.3
Gender of sampled adult					
Male	29,713	21,697	8,008	8	71.8
Female	33,416	25,617	7,795	4	74.7
Not reported	717	430	284	3	57.2

¹Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

²Households in the web group that responded to the screener via the web received the web protocol at the topical stage. Households in the web group that responded to the screener via the paper form received the paper protocol at the topical stage. Households in the web group received a \$5 screener incentive. Households in the web group that proceeded directly from the web screener instrument to the web topical instrument, without receiving any topical mailings, did not receive an additional topical incentive. Households in the web group that received a topical mailing received a \$5 topical incentive with the first topical mailing, unless they had responded to the screener after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

³Screener incentives in the modeled group were assigned according to predicted response propensity, with households with a higher predicted response propensity receiving a lower incentive.

Households that received a \$0, \$2, or \$5 screener incentive received a \$5 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive. Households that received a \$10 screener incentive received a \$10 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

⁴The derived screener age variable is equal to the sampled person's age as of December 31, 2015, the cutoff date for NHES topical sampling.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

5.2 Item Response Rates

For most of the items collected in the NHES:2016 surveys, the item response rates were very high. The tables in this section show the item response rates for a representative group of items from each topical survey. These items were selected to represent key items considered in the sample design and to represent the range of item response rates. The number of cases for which each item was attempted and the percentage of cases for which a valid response was obtained are shown.

Item response rates for the NHES topical surveys are calculated using the imputation flag for each variable.³⁹ Cases with an imputation flag of 0 are item respondents, whereas those with an imputation flag of greater than 0 are item nonrespondents.⁴⁰ As described in chapter 6, certain items were imputed using logic-based imputation, in which the likely response to a missing item was inferred based on the same respondent's responses to other items. In NHES:2012, logic-based imputation was treated as an editing step rather than an imputation step, and values that were filled in using these procedures were therefore not flagged as having been imputed. Because of this change, the reported response rate for some items that used logic-based imputation appear to be lower for NHES:2016 than for NHES:2012. Data users who wish to calculate item response rates that are comparable with NHES:2012 may do so by treating cases with an imputation flag of 1 (which denotes logic-based imputation) as item respondents. Additional detail on the imputation procedures and flags is provided in chapter 6.

Tables 5-9, 5-10, and 5-11 show the item response rates and total response rates (the product of the item response rate and the overall unit response rate for the survey) for a representative group of items from the ECPP, PFI, and ATES surveys, respectively. These item response rates were calculated using the sample base weights (i.e., the inverse of the probability of selection). For the ECPP, PFI, and ATES surveys, the median item response rates across all items were 98.0 percent, 96.8 percent, and 96.1 percent, respectively; and the median total response rates were 47.7 percent, 47.7 percent, and 46.7 percent, respectively.

³⁹ A small number of variables were not imputed; for these variables, item response rates are calculated using the reserve code for invalid missing data (-9).

⁴⁰ Cases for which an item was validly skipped due to survey routing rules have an imputation flag of -1 for that item and are excluded from the denominator of the item response rate.

Table 5-9. Unweighted and weighted item response rates and total response rate, by selected Early Childhood Program Participation items

Early Childhood Program Participation item	Number eligible to respond to item ¹	Unweighted item response rate	Weighted item response rate	Total item response rate
Demographic characteristics of child				
Child's birth month	5,844	99.2	99.1	48.3
Child's birth year	5,844	99.1	99.1	48.2
Language child speaks most at home	5,844	99.0	99.1	48.3
State, country, or territory of birth	5,844	98.9	99.0	48.2
Whether child is of Hispanic origin	5,844	99.3	99.2	48.3
Race of child	5,844	99.2	99.3	48.3
Childhood care and programs				
Child receiving regular care from relative other than parent/guardian	5,844	99.2	99.2	48.3
Child receiving regular care from nonrelative	5,844	99.0	99.1	48.2
Child attending daycare center, preschool, or pre-K	5,844	99.1	99.1	48.3
Finding and choosing care for child				
Good choices for child care	5,844	98.0	97.9	47.7
Developmental characteristics				
Child can identify red, yellow, blue, and green	3,997	98.8	98.8	48.1
Family activities				
Number of books child owns	5,844	98.2	98.2	47.8
Times read to child in past week	5,844	98.6	98.6	48.0
Number of days family ate dinner together in past week	5,844	98.6	98.5	48.0
Visited a library in the past month	5,844	98.9	98.8	48.1
Things child may be learning				
Child reads words or pretends to read	3,997	98.7	98.6	48.0

See notes at end of table.

Table 5-9. Unweighted and weighted item response rates and total response rate, by selected Early Childhood Program Participation items—Continued

Early Childhood Program Participation item	Number eligible to respond to item ¹	Unweighted item response rate	Weighted item response rate	Total item response rate
Characteristics of parent/guardian ¹				
Marital status	5,844	98.8	98.9	48.2
Country where born	5,844	98.6	98.7	48.1
Highest educational attainment	5,844	99.0	99.1	48.3
Relationship to child	5,844	99.3	99.4	48.4
Health and disability				
Rating of child's health	5,844	99.5	99.5	48.4
Child has specific learning disability	5,844	99.5	99.5	48.4
Child has pervasive developmental disorder	5,844	99.5	99.5	48.4
Household characteristics				
Household size	5,844	99.7	99.8	48.6
Receives Women, Infants, and Children benefits	5,844	96.3	96.4	47.0
Received Food Stamps in past month	5,844	96.3	96.6	47.0
Received Section 8 housing assistance	5,844	92.4	92.6	45.1
Home tenure	5,844	98.6	98.5	48.0
Total household income	5,844	97.3	97.6	47.5

¹Refers to the number of unit respondents who, based on their questionnaire type or responses to previous items, were eligible to answer the specified item.

NOTE: The total item response rate is equal to the weighted item response rate multiplied by the Early Childhood Program Participation response rate.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 5-10. Unweighted and weighted item response rates and total response rate, by selected Parent and Family Involvement in Education items

Parent and Family Involvement in Education item	Number eligible to respond to item ¹	Unweighted item response rate	Weighted item response rate	Total item response rate
Demographic characteristics of child				
Child's birth month	14,075	99.2	99.2	48.9
Child's birth year	14,075	99.2	99.3	48.9
Language child speaks most at home	14,075	99.4	99.4	49.0
State, country, or territory of birth	14,075	98.5	98.6	48.6
Whether child is of Hispanic origin	14,075	99.0	99.0	48.8
Race of child	14,075	99.1	99.1	48.9
Child's schooling				
Child's grade in school	13,523	79.8	81.6	40.2
Child attends public/private school	13,523	99.0	99.2	48.9
Allowed to choose school in any district	13,523	99.0	99.0	48.8
Other schools considered for child	13,523	98.5	98.5	48.5
Child's grades across all subjects	13,523	99.3	99.3	48.9
Child enrolled in advanced classes	5,221	99.0	99.1	48.8
Family/school involvement and school practices				
Attend general school meeting	13,523	98.8	98.8	48.7
Participate in fundraising for school	13,523	97.5	97.5	48.0
Family involvement in schoolwork				
How often homework done outside school	13,523	99.5	99.6	49.1
Family involvement outside of school				
Visited a library in the past month	14,075	97.0	97.3	47.9
Number of days family ate dinner together in past week	14,075	97.6	97.7	48.2
Visited zoo/aquarium in past month	14,075	96.4	96.8	47.7

See notes at end of table.

Table 5-10. Unweighted and weighted item response rates and total response rate, by selected Parent and Family Involvement in Education items—Continued

Parent and Family Involvement in Education item	Number eligible to respond to item ¹	Unweighted item response rate	Weighted item response rate	Total item response rate
Health and disability				
Rating of child's health	14,075	99.6	99.7	49.1
Household worked with school to develop individualized education program	1,437	92.5	92.5	45.6
Characteristics of parent/guardian ¹				
Marital status	14,075	98.5	98.6	48.6
Country where born	14,075	98.5	98.7	48.6
Highest educational attainment	14,075	98.9	99.0	48.8
Relationship to child	14,075	99.3	99.3	48.9
Homeschooling				
Person providing home instruction	552	97.5	97.8	48.2
Child attends school/college/university for instruction	552	98.0	98.0	48.3
Household characteristics				
Household size	14,075	99.6	99.7	49.1
Receives Women, Infants, and Children benefits	14,075	95.1	95.6	47.1
Received Food Stamps in past month	14,075	97.5	97.6	48.1
Received Section 8 housing assistance	14,075	94.3	94.2	46.5
Home tenure	14,075	98.3	98.3	48.5
Total household income	14,075	96.5	96.6	47.6

¹Refers to the number of unit respondents who, based on their questionnaire type or responses to previous items, were eligible to answer the specified item.

NOTE: Total item response rate is equal to the weighted item response rate multiplied by the Parent and Family Involvement in Education response rate.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) Program of 2016.

Table 5-11. Unweighted and weighted item response rates and total response rate, by selected Adult Training and Education Survey items

Adult Training and Education Survey item	Number eligible to respond to item ¹	Unweighted item response rate	Weighted item response rate	Total item response rate
Demographic characteristics				
Educational attainment	47,744	99.6	99.6	48.3
Employment status	47,744	98.9	99.1	48.1
Annual earnings	36,567	97.3	97.7	47.4
Age of adult	47,744	98.6	98.7	47.9
Whether adult is of Hispanic origin	47,744	99.2	99.3	48.2
Race of adult	47,744	99.1	99.1	48.1
Home language	47,744	98.8	98.8	48.0
Certifications/licenses				
Whether adult has a certification/license	47,744	99.0	99.1	48.1
Number of certifications/licenses	11,744	96.2	96.6	46.9
Kind of work for most important certification/license	11,744	96.7	96.7	46.9
Most important certification/license required by government	11,744	98.7	98.7	47.9
Kind of work for second most important certification/license	4,431	75.1	74.9	36.4
Second most important certification/license required by government	4,431	76.7	76.3	37.0
Kind of work for third most important certification/license	1,659	60.8	63.9	31.0
Third most important certification/license required by government	1,659	62.0	64.9	31.5
Certificates				
Whether adult has a postsecondary certificate	47,744	96.1	96.7	46.9
Field of study of last postsecondary certificate	6,676	93.1	94.4	45.8
Provider of last postsecondary certificate	6,676	92.6	93.7	45.5
Work experience programs				
Whether adult has completed a work experience program	47,744	98.4	98.7	47.9
Type of work for last work experience program	10,931	96.8	96.9	47.0
Length of last work experience program	10,931	96.5	96.8	47.0

¹Refers to the number of unit respondents who, based on their responses to previous items, were eligible to answer the specified item.

NOTE: Total item response rate is equal to the weighted item response rate multiplied by the Adult Training and Education Survey response rate.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Most items on the public use data file have item response rates over 90 percent. Most item response rates of less than 90 percent are for items that apply to only a small number of cases.⁴¹ Tables 5-12, 5-13, and 5-14 show items with response rates below 90 percent on the ECPP, PFI, and ATES surveys, respectively. As shown in these tables, several of the variables with response rates below 90 percent are “other specify” items. Nonresponse occurs on these items when respondents mark “other” as their response and then do not write a more specific answer in the “other specify” box.

⁴¹ For items that were asked only of a small subgroup of respondents, a small number of missing values could result in a low item response rate.

Table 5-12. Early Childhood Program Participation items with weighted response rates below 90 percent

Variable name	Variable description	Number eligible ¹	Unweighted item response rate	Weighted item response rate
RCSTRTY	Child's age when care began from relative (years)	1,468	67.5	67.8
RCSTRTM	Child's age when care began from relative (months)	1,468	86.6	86.5
RCREL	Outside relative pays for care by relative	316	89.2	89.5
RCTANF	Temporary Assistance for Needy Families pays for care by relative	316	86.4	87.0
RCSSAC	Other social service pays for care by relative	316	88.9	89.2
RCEMPL	Employer pays for care by relative	316	86.1	86.7
RCOTHER	Someone else pays for care by relative	316	88.0	87.7
RCCOST	Amount household pays for care by relative	316	87.7	87.6
NCSTRTY	Child's age when care began from nonrelative (years)	838	72.8	74.4
NCSTRTM	Child's age when care began from nonrelative (months)	838	89.1	89.1
NCUNITOS	Unit of time for cost of nonrelative care (other)	5	80.0	88.2
NCTLHR	Total hours per week in care with nonrelative	37	81.1	82.7
CPSTRTM	Age of child when starting program (months)	2,531	88.2	88.5
CPUNITOS	Unit of time for cost of program care (other)	22	90.9	86.3
HDSCHLX	Local school district provides services	451	80.0	80.0
HDGOVTX	Local health or service agency provides services	451	77.6	77.4
HDOCTORX	Doctor, clinic, or other provider provides services	451	81.6	81.8
HDPRISCH	Private school provides services	451	72.5	73.4
HDSPCLED	Enrollment in special education classes	634	87.9	87.9
HDLEARN	Condition interferes with learning	634	87.1	86.9
HDPLAY	Condition interferes in participation in play	634	85.8	85.4
HDOUT	Condition interferes with going on outings	634	85.2	84.8
HDFRNDS	Condition interferes with making friends	634	85.6	85.2
CMOVEAGE	Age of child when first moved to the United States	151	70.9	66.3
RELATIONOS	Respondent relation to child (other)	25	80.0	76.6

¹Refers to the number of unit respondents who, based on their responses to previous items, were eligible to answer the specified item.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 5-13. Parent and Family Involvement in Education items with weighted response rates below 90 percent

Variable name	Variable description	Number eligible ¹	Unweighted item response rate	Weighted item response rate
GRADE	Grade attending	13,523	79.8	81.6
SEGBEHAV	Times contacted about very good behavior	13,523	88.9	89.5
SEGWORK	Times contacted about very good work	13,523	88.8	89.2
HMSCHARR	How much homeschooling	111	80.2	76.7
HSSCHR	Hours spent in public or private school	256	86.7	84.5
HSSAFETYX	Why homeschool—peer pressure	634	86.9	89.1
HSDISSATX	Why homeschool—dissatisfied with instruction	634	83.8	85.3
HSRELGON	Why homeschool—religious instruction	634	84.1	87.4
HSMORAL	Why homeschool—moral instruction	634	83.9	86.0
HSDISABLX	Why homeschool—health problem	634	82.3	83.6
HSILLX	Why homeschool—temporary illness	634	82.5	83.8
HSSPCLNDX	Why homeschool—special needs	634	82.2	83.9
HSALTX	Why homeschool—nontraditional education	634	82.2	84.5
HSOTHERXOS	Why homeschool—write-in	135	77.8	81.1
HSMOSTX	Why homeschool—most important reason	634	77.4	79.4
HDGOVTX	Local health or service agency provides services	2,646	87.7	87.7
HDDOCTORX	Doctor, clinic, or other provider provides services	2,646	90.2	89.9
HDPRISCH	Private school provides services	338	85.8	87.1
CMOVEAGE	Age of child when first moved to the United States	820	84.9	86.0
GRADEEQ	Homeschool grade—equivalent K–12	552	82.6	83.6
HSDAYS	Days a week homeschooled	552	87.0	89.2
HSHOURS	Hours a week homeschooled	552	85.1	88.0
HSCHSPUBX	Homeschool curriculum source—homeschool catalog	552	84.6	87.6
HSCEDPUBX	Homeschool curriculum source—educational publisher	552	80.1	82.8
HSCORGX	Homeschool curriculum source—homeschooling organization	552	80.8	82.5
HSCCHURX	Homeschool curriculum source—church	552	79.2	81.5
HSCPUBLX	Homeschool curriculum source—public school	552	81.9	82.5
HSCPRIVX	Homeschool curriculum source—private school	552	77.4	78.9
HSCRELX	Homeschool curriculum source—bookstore	552	83.3	86.8
HSCNETX	Homeschool curriculum source—websites	552	85.0	87.6
HSCOTHOS	Homeschool curriculum source—other source specify	40	82.5	89.8
HSINTOTHOS	Homeschool instruction provided by (other, specify)	66	87.9	88.3

See notes at end of table.

Table 5-13. Parent and Family Involvement in Education items with weighted response rates below 90 percent—Continued

Variable name	Variable description	Number eligible ¹	Unweighted item response rate	Weighted item response rate
HSNART— HSNHEALTH ²	Subject areas taught now	552	87.0	89.2

¹Refers to the number of unit respondents who, based on their questionnaire type or responses to previous items, were eligible to answer the specified item.

²This was a check all that apply item that includes HSNART HSNMUSIC, HSNARTH, HSNALG1, HSNALG2, HSNGEOM, HSNCALC, HSNPROB, HSNSCIEN, HSNGEOL, HSNBIOL, HSNCHEM, HSNGEOG, HSNREAD, HSNSPELL, HSNENGL, HSNCOMSCI, HSNHIST, HSNFOLANG, HSNPHYED, and HSNHEALTH.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 5-14. Adult Training and Education Survey items with weighted response rates below 90 percent

Variable name	Variable description	Number eligible to respond to item ¹	Unweighted item response rate	Weighted item response rate
CNPRP_TRAIN1	Took noncollege classes for most important certification/license	11,744	77.6	78.9
CNPRP_ONOWN1	Studied on own for most important certification/license	11,744	76.3	77.8
CNPRP_COLLG2	Took college classes for second most important certification/license	4,431	67.7	68.3
CNPRP_TRAIN2	Took noncollege classes for second most important certification/license	4,431	64.8	64.8
CNPRP_ONOWN2	Studied on own for second most important certification/license	4,431	63.5	63.7
LCRED	Completed minimum number of credits	6,676	77.4	80.4
LCINHRS	Completed minimum number of instructional hours	6,676	85.8	88.0
WEPRP_TRAIN	Took company, association, union, or private classes for work experience program	10,931	86.6	87.2
WECRED	Got college credit for work experience program	10,931	88.2	89.1
WEJOURN	Received journeyman status	10,931	84.5	85.6
WEAPPRE	Received state or federal apprenticeship number	10,931	83.6	84.7
EEL5YRS	Intend to look for work in next 5 years	13,691	82.9	84.5
EECOMP	Name of company	46,166	83.6	84.7

¹Refers to the number of unit respondents who, based on their responses to previous items, were eligible to answer the specified item.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Chapter 6. Imputation

In the National Household Education Surveys Program of 2016 (NHES:2016), as in most surveys, responses were not obtained for some question items in the survey. There are numerous reasons for item nonresponse. Some respondents may not have known the answer to a question or simply did not wish to respond. Some respondents may have run out of time and left items at the end of the survey blank. Item nonresponse also may have occurred because a respondent's responses were not internally consistent; data processing to resolve internal inconsistencies sometimes resulted in items being set to "missing" during the editing stage. The NHES:2016 items that were set to missing during editing or that were missing due to nonresponse were imputed.

Item imputation was typically needed for only a small proportion of cases for any given survey item. The median weighted item response rates for the NHES:2016 Early Childhood Program Participation (ECPP), Parent and Family Involvement in Education (PFI), and Adult Training and Education Surveys (ATES) were 98 percent, 96.8 percent, and 96.3 percent, respectively. The ECPP had a maximum of 244 questions and only two of these items had a response rate below 70 percent.⁴² The PFI survey was fielded as two different questionnaires: One focused on students enrolled in public or private school for kindergarten through 12th grade and one focused on children homeschooled for kindergarten through 12th grade or the equivalent. The PFI survey questionnaire for enrolled students had a maximum of 239 questions, and none of these items had response rates below 70 percent. The PFI survey questionnaire for homeschooled students had a maximum of 243 questions, and none of these items had response rates below 70 percent. The ATES survey questionnaire had a maximum of 115 questions, and none of these items had response rates below 70 percent.

Numeric and categorical data items with missing data were imputed; character string variables (such as country of origin, name of certification/license, or "other/specify" responses) were not imputed. In the ATES, the certification/license field codes (which were based on character string variables for name and subject of a certification/license), were not imputed. Similarly, the industry and occupation codes (based on industry and occupation character strings) were not imputed.

Imputation was done for two reasons. First, complete responses were needed for the variables used in developing the sampling weights. Second, users will be computing estimates employing a variety of methods, and complete responses should aid their analyses. For each data item for which any values were imputed, an imputation flag variable was created on the data file. Users can use

⁴² The two ECPP questions with response rates below 70 percent were RCSTRY (years in relative care) and CMOVEAGE (age child moved to United States).

the imputation flag to delete the imputed values, use alternative imputation procedures, or to account for the imputation in computations of the reliability of the estimates produced from the dataset. More information on these flags is provided in section 6.3.

6.1 Imputation Methodology

Four approaches to imputation were used in the NHES:2016: logic-based imputation, which was used whenever possible; unweighted sequential hot deck imputation, which was used for the majority of the missing data (i.e., for all variables that were not boundary and sort variables—described below); weighted random imputation, which was used for a small number of variables including boundary and sort variables; and manual imputation, which was used in a very small number of cases for a small number of variables.

Each of these approaches is described in the following sections.

6.1.1 Logic-Based Imputation

In logic-based imputation, items for which a respondent is missing data are imputed using other data available for the same respondent. Specifically, for NHES:2016, the imputed value was derived using data reported by the respondent in other topical items and data reported on the respondent’s household screener.

Logic-based imputation was used for the following:

- To impute a value to missing gate questions based on the presence of “Yes” or valid data in follow-up items. Gate questions are defined as survey questions whose answers determine the subsequent routing of the respondent through the survey instrument. For example, respondents who answered “No” to item 81 on the ECPP (HDIEP) were instructed to skip items 82 and 83 and proceed to item 84. Items 82 and 83 were coded as “valid skip” for those who answered “No” to item 81. If, however, item 81 was left blank but the respondent answered “Yes” to item 82 or anything other than “Does not apply” to item 83, then item 81 was logically imputed as “Yes.”
- To impute “No” answers to grid items when only “Yes” answers have been marked. This common practice was used during the NHES:2016 due to the presence of a number of cases where respondents marked “Yes” for some grid items and left the others blank. Logic-based imputation is the first stage of imputation for these types of items.

- To impute a value to missing items for which data are available on the screener. For example, missing information about a sampled child’s birth date, sex, and grade level was imputed using information collected on the screener (when available).
- To impute a value to missing items for which other information is provided on the topical questionnaire. For example, the ATES asks respondents for the number of currently active certifications/licenses they have (CNNUM). Paper questionnaire respondents are later asked whether they have a second currently active certification/license (CNMAIN2). If the respondent did not answer CNMAIN2 but indicated that they had two or more certifications or licenses, CNMAIN2 was imputed using that information.

6.1.2 Hot-Deck Imputation

Unweighted sequential hot-deck imputation was used for most variables in the NHES. In this procedure, a nonmissing value for an item from one respondent was donated to a respondent with similar characteristics for whom the value for the item was missing. Two sets of variables were used in hot-deck imputation: “boundary” variables and “sort” variables. Boundary variables were used to identify respondents considered similar enough to group donors for imputation. Sort variables were used to identify the best match within groups for donation and imputation. All respondents were placed into homogeneous cells based on the values of the boundary variables. Within each cell, the respondents were matched to donors by the sort variables.

During sequential hot-deck imputation, the last encountered respondent’s data from within the same cell (i.e., the case’s nearest neighbor) is substituted for the recipient’s missing value when a missing response is encountered for a particular data item. Sort order is crucial in sequential procedures as it governs who is the “nearest neighbor” suitable for imputation. It also is important to use a parsimonious number of boundary and sort variables to generate enough homogenous donor cases for reliable imputation.

To maintain consistency with past procedures, the boundary and sort variables used in previous NHES cycles were considered in order to arrive at a final set of standard imputation variables for the NHES:2016. The boundary and sort variables were chosen because they are characteristics of households, respondents, or children that are likely to be associated with differences in item response propensities, such as parent(s) educational attainment, or are key variables in questionnaire paths and skip patterns, such as the child’s grade and enrollment status.

The boundary and sort variables used in NHES:2016 PFI and ECPP surveys were similar to those used in NHES:2012. These variables are the following:

- CSEX (boundary)—sex of the sampled child
- GRADE/GRADEEQ (sort)—a derived variable that indicates the grade/grade equivalent of the sampled child
- PARGRADEX (sort)—a derived variable that indicates the highest education level attained by either parent in the household
- HHPARN16X (sort)—a derived variable that indicates whether there are two parents in the household

Because the ATES was not included in NHES:2012, the boundary variables were selected to be as comparable as possible with those used for the PFI and ECPP surveys, given the variables included on the ATES questionnaire.

- EDUATTN (boundary)—the highest education level attained by the sampled adult
- XXAGE (sort)—age of sampled adult
- XXSEX (sort)—sex of sampled adult
- EEEARN (sort)—sampled adult's earnings from all jobs over the past 12 months

The boundary variable QTYPE, a variation of which was also used in NHES:2012 was used across all NHES:2016 surveys:

- QTYPE (boundary)—a variable that indicates which questionnaire type (ECPP, PFI—Homeschooled, PFI-Enrolled, ATES) was administered

The other boundary and sort variables listed above were either variables used as part of the final Interview Status Recode (ISR) classification (CSEX) or derived from variables used as part of the final ISR classification (GRADE/GRADEEQ, PARGRADEX, HHPARN16X). To ensure that the hot-deck imputation programs functioned properly, at least one of the variables used to derive these boundary and sort variables were required to have valid responses for a case to be classified as complete. The variable PARGRADEX is derived from P1EDUC (the first parent's highest level of education) or P2EDUC (the second parent's highest level of education if there were two parents living in the household with the child). The variable HHPARN16X is derived from five variables: P1REL (the first parent's relationship to the child), P1SEX (the first parent's sex), P2GUARD (whether there is a second parent in the household), P2REL (the relationship of the second parent to the child, if there is a second parent living in the household), and P2SEX (the second parent's sex, if there is a second parent living in the household). Two of these variables (P1REL and

P2GUARD) were used as part of the ISR classification. For ATES, all boundary and sort variables were questionnaire items that were used as part of the ISR classification.

The variables PARGRADEX and HHPARN16X were collapsed for imputation purposes. For PARGRADEX, “Less than high school diploma” and “high school diploma” were combined into a single category. HHPARN16X was collapsed into two categories, which were “Two parent household” and “Other household.”

In cases where an item succeeded a gate question, the gate question was used as a boundary variable to ensure that all possible donors had valid (non-“valid skip”) values. For certain variables, additional sort variables were used to ensure consistency within a case. These variables were related to the child and parent’s age at the time of certain events. In these cases, we used the age of the child or parent at the time of interview as a sort variable. These additional sort variables are listed below, followed by the variables for which they were used to sort donors:

- Child’s age—Age child moved to the United States; Age child began relative care; Age child began nonrelative care; Age child began center-based care
- Parent’s age—Age parent moved to the United States; Age at which person became a parent

After values had been imputed for all observations with missing values, the distribution of the item prior to imputation (i.e., the respondents’ distribution) was compared to the post-imputation distributions of the imputed values alone and of the imputed values together with the observed values. For most items, the comparison revealed similar item distributions both before and after imputation.⁴³ This comparison is an important step in assessing the potential impact of item nonresponse bias and ensuring that the imputation procedure reduces this bias, particularly for items with relatively low response rates (less than 85 percent⁴⁴). Additionally, to prevent a single case from having an undue impact on the data, a case could be used as a donor a maximum of five times. Imputed values themselves could not be used as donors.

⁴³ Generally, any impact outside of 1 or 2 percentage points was investigated further, based on the discretion of the analyst.

⁴⁴ For the PFI, these variables were GRADE, HMSCHARR, HSSCHR, HSDISABLX, HSILLX, HSSPCLNDX, HSALTX, HSOTHERXOS, HSMOSTX, GRADEEQ, HSCEDPUBX, HSCORGX, HSCCHURX, HSCPUBLX, and HSCPRIX. For the ECPP, these variables were: RCSTRTY, NCSTRTY, NCTLHR, HDSCHLX, HDGOVTX, HDOCTORX, HDPRISCH, HDOUT, CMOVEAGE, and RELATIONOS. For the ATES, these variables were CNPRP_TRAIN1, CNPRP_4ONOWN, CNPRP_TRAIN2, CNPRP_ONOWN2, LCRED, WEAPPRE, EEL5YRS, and EECOMP.

6.1.3 Weighted Random Imputation

For records that had missing values for the boundary variables discussed previously, a different procedure was used for imputation because hot-deck imputation with a limited set of boundary variables tends to produce unreliable results. For these variables, a random imputation based on the preimputation statistical distribution of the variable was used to obtain a value. This distribution was based on questionnaire type. For example, the variable P1REL (which is used to derive HHPARN16X) had a 95.6 percent chance of being imputed as “1” (biological parent) for ECPP respondents. In contrast, there was an 89.7 percent chance of imputing a “1” for P1REL for PFI-Enrolled respondents. This procedure was performed using the UNIFORM function in SAS to generate a random number, which was fitted to the probabilities described above. This procedure was not used for respondents for whom other items on the questionnaire could be used to determine values for missing boundary variables using logic-based imputation. Weighted random imputation was used for less than 1 percent of the total completed cases. Of 19,919 completed cases across both the PFI and ECPP surveys, 141 cases were missing a value for P1REL, 127 cases were missing a value for P2REL (used to derive HHPARN16X), and 129 cases were missing values for both P1EDUC and P2EDUC (used to derive PARGRADEX). Of the 47,744 completed cases for the ATES survey, 9 cases were missing a value for XXSEX, 208 cases were missing a value for EDUATTN, and 12 cases were missing a value for XXAGE.

6.1.4 Manual Imputation

For some items, missing values were imputed manually rather than by using either the hot-deck or weighted-random imputation procedure. In the NHES:2016, manual imputation was performed in three instances: (1) if the child’s grade was missing on both the topical and screener, (2) if the child’s sex was missing, and (3) to correct for inconsistent values following post-imputation data editing. Imputation in the first case, where the child’s grade was missing, was performed by researching the age of the child. These cases were assigned a grade based on the most commonly reported grade for children of the same age. For cases where the child’s sex was missing, a random 50/50 imputation was performed to assign a sex to the child.

Manual imputation also was used to correct for inconsistent values following post-imputation data editing. After imputation, edit programs were run to ensure that the imputed responses did not violate edit rules. When violations or inconsistencies were detected, manual imputation was used to re-impute. For example, if an age greater than the parent’s age were imputed for P1AGEMV (age of parent 1 when he or she moved to the United States) or P1AGEPAR (age of parent 1 when

he or she first became a parent),⁴⁵ then the inconsistent imputed value was re-imputed using the distribution of the unimputed data. Typically, a modal value was imputed. In some cases, the overall mode was imputed, and in other cases, a modal value for a subgroup was imputed.

6.1.5 Imputation of School Identification Number (School ID)

The procedures used to assign the school identification variable (the NCES school identification number, from the 2014–15 Common Core of Data (CCD) or 2013–14 Private School Universe Survey (PSS))⁴⁶ to respondents based on write-in information (school name, address, etc.) are discussed in chapter 4, Data Processing. For any cases where a school ID could not be determined, either because the write-in information was not sufficient or because there was no write-in information at all, an imputation procedure similar to random weighted imputation was used to assign a school ID from one of the 15 schools printed on the respondent's questionnaire. For cases that completed the survey using the web instrument, the list of the 15 schools that would have been printed on a paper questionnaire was used.⁴⁷ The schools printed on each questionnaire were determined by the zip code of the sampled address and the age of the sampled child, and were ordered starting with the school that was the closest to the sampled address. The probability of each school being selected for imputation was determined by the frequency distribution of valid cases across the list of schools. For example, if 47 percent of respondents selected the first school on the list, and 15 percent selected the second school, the probability of selection for those schools was set proportionally. The survey variable, SCPUBPRI, which indicates whether the sampled child attends private or public school, was used to remove schools from the list that did not match the survey data. For example, if SCPUBPRI indicated the sampled child were in public schools, any private schools in the list of 15 were removed as possible values during imputation.

6.2 Post-imputation Processing

After the imputation was completed, the edit programs described in chapter 4 were run on the data to ensure that the imputed responses did not violate skip patterns or edit rules. If any violations occurred, the imputation program was adjusted and the imputation was rerun, or if only a few cases were affected, they were manually imputed. During the imputation of some items, specific edit

⁴⁵ As discussed previously in this chapter, additional sort variables were added to prevent this type of inconsistency. Although this reduced the frequency of these errors considerably, a small number of cases required manual imputation.

⁴⁶ For a small number of cases, the respondent wrote in a school name that could not be matched to the 2014–15 CCD or 2013–14 PSS but could be matched to the 2013–14 CCD and 2011–12 PSS, respectively. In these instances, the 2013–14 CCD and 2011–12 PSS data were used to derive school-level variables.

⁴⁷ The web questionnaire employed a slightly different algorithm for generating the list of possible schools based on geography in combination with the respondent's previously provided information about the child's grade level and the school sector (i.e., public or private). However, the list generated through the web tool was not part of the output data and therefore could not be easily used for imputation. Additionally, using the 15 schools that would have been used had the respondent received a paper questionnaire ensured imputation consistency across modes.

programs were run immediately after imputation. For example, if a filter question were imputed with a value that made follow-up questions inapplicable, these edits set the subsequent items to “-1”(not applicable) to ensure that they were not imputed. For example, RCNOW in ECPP indicated whether a child was in a relative care arrangement. If it were imputed as “no,” then the follow-up questions about characteristics of the relative care arrangement were not applicable and the responses to these items were set to “-1”.

6.3 Imputation Flags

For each data item for which any values were imputed, an imputation flag variable was created. These flags are named $F_{<\text{variable}>}$. If the response for the item was not imputed, then the imputation flag was set equal to 0. If the response was imputed, then the flag was set to 1, 2, 3, or 4. The value of the imputation flag indicates the specific procedure used to impute the missing value. The imputation flag was set to 1 if the missing value was imputed using logic-based imputation. If an item was imputed using weighted random imputation, then the flag was set to 2. The imputation flag was set to 3 for cases that were imputed using the standard hot-deck approach. The imputation flag was set to 4 for cases that were imputed manually. Variables that were set to “valid skip” based on responses (reported or imputed) to gate items have an imputation flag value of -1.

The imputation flags were created to enable users to identify imputed values. Users can employ the imputation flag to delete the imputed values, use alternative imputation procedures, or to account for the imputation in computations of the reliability of the estimates produced from the dataset. For example, some users might wish to analyze the data with the missing values rather than the imputed values. If the imputation flag corresponding to the variable is equal to 1, 2, 3, or 4, then the user can replace the imputed response with a missing value to accomplish this goal. This method also can be used to replace the imputed value with a value imputed by a user-defined imputation approach.

Imputation can affect the precision of survey estimates, especially when large numbers of cases are imputed for a given measure (this is generally not the case in the NHES surveys; see chapter 10, which includes an item nonresponse bias analysis). If the user wishes to account for the fact that some of the data were imputed when computing sampling errors for the estimates, then the missing values can be imputed using multiple imputation methods or flagged so that variance procedures that reflect imputation variance can be used.

Chapter 7. Weighting and Standard Error Calculation

7.1 Weighting Methodology

The objective of the National Household Education Surveys Program of 2016 (NHES:2016) is to make inferences about the entire civilian, noninstitutionalized population for the three target populations described in the following paragraph. Weighting is necessary to account for differential probabilities of selection and to reduce potential bias owing to nonresponse and differential coverage of subpopulations. Although these weighting adjustments reduce bias, they increase the variances of survey estimates when applied. These aspects of weighting are addressed in Kish (1965). The weighting methodology developed for the NHES:2016 carefully balanced the bias reductions against the potential increases in variance.

The target populations for the NHES:2016 surveys are

- the U.S. noninstitutional population age 6 or younger and not yet enrolled in kindergarten (Early Childhood Program Participation Survey [ECPP]);
- the U.S. noninstitutional population age 20 or younger and enrolled in kindergarten through 12th grade, or homeschooled for the equivalent grades (Parent and Family Involvement in Education Survey [PFI])⁴⁸; and
- the U.S. noninstitutional population ages 16 through 65 and not enrolled in kindergarten through 12th grade or homeschooled for the equivalent grades (Adult Training and Education Survey [ATES]).

The weights were constrained such that the distribution of the NHES ECPP, PFI, and ATES estimates matched select population estimates from the 2015 American Community Survey (ACS). In administrations prior to 2012, NHES used the Current Population Survey (CPS) estimates for control totals. The ACS was chosen for NHES:2012 and NHES:2016 because it had a larger sample size than CPS. This allowed for more accurate control totals and greater precision in the NHES person-level estimates.

The following sections describe the weighting and variance estimation methodologies used for NHES:2016. The computation of household-level weights used in computing person-level weights

⁴⁸ Children enrolled in kindergarten through 12th grade received the PFI-Enrolled survey, whereas children homeschooled for equivalent grades received the PFI-Homeschooled survey. Data from the PFI-Enrolled and PFI-Homeschooled surveys were released as a single combined dataset and were combined for the purposes of weighting because external population estimates for the homeschooled population are not available.

is described in the following section. Later sections describe the computation of the person-level weights for use in analyzing the survey data and the procedures for computing sampling errors.

7.2 Household-Level Weights

The NHES:2016 had two sequential phases: a first phase in which households were asked a few questions to determine the presence of eligible children or adults (called the “screener”) and a second phase in which households with eligible children or adults were asked to complete more in-depth topical questionnaires. (These phases are described in chapter 2.) Information from the first phase was used to create the household-level weights. Because the NHES:2016 is primarily concerned with information about eligible children and adults, the household-level weights were calculated specifically as a basis for computing the person-level weights.

The household base weight (HBW_j) was calculated first to account for the differential sampling of addresses based on the race/ethnicity stratum of the frame. The household-level base weight was then adjusted for screener nonresponse using the screener noninterview adjustment factor ($SNIAF_j$). The procedures for computing the household-level weights are discussed next.

The first step was to compute a base weight for each sample address. For NHES:2016, the addresses were first stratified into three race/ethnicity strata to facilitate the oversampling of Black and Hispanic households. A sample of 226,600 addresses was drawn first, which was then subsampled to achieve the final sample of 206,000 addresses (the remaining addresses were held in reserve to protect respondent confidentiality). Each address’s overall probability of selection was therefore the product of two probabilities—the probability of being selected for the initial sample and the probability of being subsampled conditional on selection for the initial sample. Refer to chapter 2 for full details on the sampling methodology, including stratification and sorting variables. The base weight, as shown in table 7-1, is the reciprocal of the address’s overall probability of selection (the sampling fraction).

Table 7-1. Sampling fractions for screener sample, and household-level base weights, by stratum: NHES:2016

Stratum	Sampling fraction for initial sample	Subsampling fraction for final screener sample	Household-level base weight
1: 25% or more Black	45,320 / 19,882,074	41,200 / 45,317	482.54
2: 40% or more Hispanic	33,990 / 12,345,700	30,900 / 33,984	399.47
3: Other	147,290 / 95,613,267	133,900 / 147,265	713.94

NOTE: the household-level base weight is the product of the inverse sampling fraction for the initial sample and the inverse subsampling fraction for the final screener sample. The numerator of the initial sampling fraction differs from the denominator of the subsampling fraction because 34 addresses were flagged as invalid and removed from the initial sample prior to subsampling.

The second step was to calculate the screener phase household nonresponse adjustment. Each sampled address was classified as a respondent (*R*), a nonrespondent (*NR*), an ineligible case (*I*), or a case of unknown eligibility (*U*). Ineligible cases (*I*) were those returned by the postmaster with one of the following statuses: unit is vacant, undeliverable as addressed (UAA), insufficient address, unclaimed, no such street, no such street number, illegible address, attempted and not known, and no mail receptacle. The following types of cases were classified as ineligible on the basis of the postmaster's information: box closed—no order; forwarding order has expired; deceased; moved, left no address; and moved out of U.S.—no forwarding address. Although these latter ineligibility types are usually thought of as pertaining to individuals and the NHES:2016 questionnaires were not addressed to specific individuals, these types were assigned by postal workers using the United States Postal Service procedures. Even though these dispositions did not exactly apply to households, it was decided early in the NHES planning to carry over these dispositions into the NHES processing. A small number of addresses were found to be out of scope and were classified as ineligible—for example, an address would be classified as out of scope if information written on the screener form indicated that it corresponded to a business rather than a residence. Therefore, the term *eligible* at the screener phase refers to the capability of a household to respond to the screener questionnaire, such as the address belonging to an occupied, residential household.⁴⁹

The unknown eligibility cases (*U*) are different from the nonrespondent cases (*NR*) in that no information about the validity of the address was obtained for unknown eligibility cases—no form was returned, and it is not known whether the address was eligible. For cases classified as nonrespondents at the screener level, some type of response was received, such as a blank form or a note that the household would not participate. Screener nonrespondents also included cases that opened the web screener instrument but did not complete any items; cases that began the web

⁴⁹ Cases were classified as ineligible only if one or more of the mailings was returned with one of the undeliverable or out-of-scope status codes noted here, and none of the other mailings was returned as a respondent or nonrespondent.

screener but broke off prior to undergoing topical sampling; and cases that completed a web or paper screener after May 24, which was the cutoff for the screener data collection.

To adjust the weights for screener nonresponse, the base weights of the nonrespondent cases and a portion of the unknown eligible cases were distributed to the base weights of the respondent cases within a nonresponse adjustment cell. Chi-square automatic interaction detection (CHAID) analysis was used to identify characteristics most associated with screener nonresponse, which were then used to define the adjustment cells.⁵⁰ Cases of unknown eligibility within each cell were assumed to be eligible at the same rate as the known eligibility cases within the same cell. The proportion of eligible cases ($R + NR$) to total cases identified as eligible or ineligible ($T-U$) (where T is the weighted size of the nonresponse adjustment cell) is referred to as ee in the alternative response rate formula from the American Association for Public Opinion Research (AAPOR) Response Rate 3.

The characteristics used to form the adjustment cells had to be available for both respondents and nonrespondents. These variables and their definitions are listed in table 7-2. They include variables available on the vendor's frame, experimental treatment flags, and block group-level estimates linked to the sample from the Census Planning Database (CPD).⁵¹

⁵⁰ CHAID is a categorical search algorithm that identifies characteristics associated with response propensity.

⁵¹ The Planning Database (PDB) assembles a range of housing, demographic, socioeconomic, and census operational data that can be used for survey planning. Data are provided at both the census block group and the tract levels of geography. The PDB uses selected Census and selected American Community Survey (ACS) estimates. Information about the PDB can be found at https://www.census.gov/research/data/planning_database/

Table 7-2. Independent variables for NHES:2016 household-level CHAID analysis

Variable	Definition	Response categories	Selected ¹
Address vacancy status	Whether the address is vacant	1 = not vacant; 2 = vacant	No
Mailing address type	Whether the address is a street address, P.O. box address, high-rise building address, or rural-route address	1 = high rise; 2 = P.O. box; 3 = rural-route; 4 = street	Yes
Drop point	Whether the address is a single postal delivery point for multiple housing units	1 = not a drop point; 2 = augmented drop point; 3 = drop point	No
Seasonal address	Whether the address is seasonal	1 = educational seasonal; 2 = not seasonal; 3 = seasonal	No
Dwelling type	Whether the address is a single-family or multiple-unit structure	1 = dwelling type missing on sampling frame; 2 = multiple unit; 3 = single family	Yes
Home tenure	Whether the address was owned or rented by the household	1 = tenure missing on sampling frame; 2 = owned; 3 = rented	Yes
Educational attainment	Highest educational attainment of the head of household	0 = educational information missing on sampling frame; 1 = high school credential; 2 = some college; 3 = bachelor degree; 4 = graduate degree; 5 = less than high school credential	Yes
Race/ethnicity	Race or ethnicity of the head of household	0 = race information missing on sampling frame; 1 = White; 2 = Black; 3 = Hispanic; 4 = Asian or Pacific Islander; 5 = Other	Yes
Marital status	Marital status of the head of household	1 = marital status information missing on sampling frame; 2 = married; 3 = single	Yes
Age	Age of the head of household	0 = age information missing on sampling frame: 1 = 0–17; 2 = 18–24; 3 = 25–34; 4 = 35–44; 5 = 45–54; 6 = 55–64 6 = 65+	Yes
Gender	Gender of the head of household	1 = gender information missing on sampling frame; 2 = female; 3 = male	Yes

See notes at end of table.

Table 7-2. Independent variables for NHES:2016 household-level CHAID analysis—Continued

Variable	Definition	Response categories	Selected ¹
Phone number	Existence of a telephone number on the sampling frame for the household	1 = phone number exists; 2 = no phone number exists on sampling frame	Yes
Income	Household income	1 = income information missing from sampling frame; 2 = under \$15,000; 3 = \$15,000–\$24,999; 4 = \$25,000–\$34,999; 5 = \$35,000–\$49,999; 6 = \$50,000–\$74,999; 7 = \$75,000–\$99,999; 8 = \$100,000–\$124,999; 9 = \$125,000–\$149,999; 10 = \$150,000–\$174,999; 11 = \$175,000–\$199,999; 12 = \$200,000–\$249,999; 13 = \$250,000 or higher	Yes
Number of adults	Number of adults in the household	0 = information missing on sampling frame; 1 = 1 adult in the household; 2 = 2 adults in the household; ...	Yes
Number of children	Number of children in the household	0 = no children or information missing on the sampling frame; 1 = 1 child in the household; 2 = 2 children in the household; ...	No
Web treatment flag	Whether the household was assigned to the standard screener mailing protocol or the web screener protocol	0 = standard mailing protocol; 1 = web protocol	Yes
Incentive treatment flag	The household's assigned incentive protocol	0 = \$5-only protocol; 1 = \$2-only protocol; 2 = modeled \$0; 3 = modeled \$2; 4 = modeled \$5; 5 = modeled \$10	Yes
Low response score ^{2,3}	Census LRS (categorized into quartiles)	0 = LRS missing for block group; 1 = first quartile; 2 = second quartile; 3 = third quartile; 4 = fourth quartile	Yes
Percent without high school diploma ³	ACS 2010–2014 percent of persons in block group without a high school diploma (categorized into quartiles)	0 = missing for block group; 1 = first quartile; 2 = second quartile; 3 = third quartile; 4 = fourth quartile	Yes

See notes at end of table.

Table 7-2. Independent variables for NHES:2016 household-level CHAID analysis—Continued

Variable	Definition	Response categories	Selected ¹
Percent Black ³	ACS 2010–2014 percentage of persons in block group who are Black (categorized into quartiles)	0 = missing for block group; 1 = first quartile; 2 = second quartile; 3 = third quartile; 4 = fourth quartile	No
Percent speaking a non-English language ³	ACS 2010–2014 percentage of persons in block group who speak a non-English language (categorized into quartiles)	0 = missing for block group; 1 = first quartile; 2 = second quartile; 3 = third quartile; 4 = fourth quartile	Yes

¹Indicates whether the specified variable was selected by the NHES:2016 screener CHAID analysis.

²The Census low response score is a derived variable that identifies block groups with characteristics associated with low mail return rates to the 2010 Decennial Census. A higher low response score corresponds to a lower expected mail return rate.

³The Census low response score and ACS percentage variables were treated as nominal variables in the CHAID procedure, due to the presence of missing values for a small number of cases.

NOTE: ACS = American Community Survey. LRS = low response score.

The screener noninterview adjustment factor, $SNIAF_{j(c)}$, applied to each responding household j in adjustment cell c , is

$$SNIAF_j = \frac{\sum_{j \in R_c} HBW_j + \sum_{j \in NR_c} HBW_j + ee_c \sum_{j \in U_c} HBW_j}{\sum_{j \in R_c} HBW_j}$$

$$\text{where } ee_c = \frac{\sum_{j \in R_c} HBW_j + \sum_{j \in NR_c} HBW_j}{\sum_{j \in T_c} HBW_j - \sum_{j \in U_c} HBW_j}$$

The screener nonresponse adjustment cells and response rates within the cells are shown in appendix D.

The final household-level weight for household j , HHW_j , is given by

$$HHW_j = HBW_j * SNIAF_j$$

7.3 Person-Level Weights for ECPP, PFI, and ATES

A sampling algorithm was used to select one child or one adult from each household. The sampling was based on information collected in the screener questionnaire from the household member who responded to the screener. For the ECPP and PFI questionnaires, the eligibility of the sampled child was verified or updated when the parent/guardian who knew about the child responded to the ECPP or PFI questionnaire. For the ATES questionnaire, the eligibility of the sampled adult was verified or updated when the sampled adult responded to the ATES questionnaire. A small number of cases (34) switched forms when the household contacted the Census Bureau to request a different form, indicating that the sampled individual should have been sampled for a different survey (e.g., a PFI-Enrolled form instead of a PFI-Homeschooled form). An additional 17 cases appeared to be eligible for a different topical survey than the one that was completed, based on information provided on the form.⁵² For cases whose eligibility was updated at the topical phase, the original probability of selection from the screener phase was used to calculate person-level weights. If the weights had been modified to reflect the hypothetical probability of sampling for

⁵² The cases that switched forms after contacting the Census Bureau were as follows: 9 cases switched from the PFI-Enrolled to the ATES; 1 switched from the ATES to the PFI-Enrolled; 2 switched from the PFI-Homeschooled to the ATES; 3 switched from the PFI-Enrolled to the ECPP; 3 switched from the ECPP to the PFI-Enrolled; 1 switched from the ECPP to the PFI-Homeschooled; 14 switched from the PFI-Homeschooled to the PFI-Enrolled; and 1 switched from the PFI-Enrolled to the PFI-Homeschooled. An additional 4 cases responded to the PFI-Enrolled but provided information on the form indicating that the child was actually eligible for the ECPP; these cases were reclassified as nonrespondents to the ECPP. One case responded to the PFI-Enrolled but provided information on the form indicating that the child was actually eligible for the ATES (i.e., was over 16 and in college); this case was reclassified as a nonrespondent to the ATES. Finally, 12 cases responded to the PFI-Homeschooled but provided information on the form indicating that the child was actually eligible for the PFI-Enrolled; these cases were reclassified as nonrespondents to the PFI-Enrolled.

the survey for which the case should have been sampled, they would no longer reflect the case's actual sampling probability and would therefore lead to biased estimates.

The household-level weight was used as the base weight for each of the person-level (ECPP, PFI, and ATES) weights. The person-level weight for sampled person k in household j , $FEWT_{jk}$ for the ECPP survey, $FPWT_{jk}$ for the PFI survey, and $FAWT_{jk}$ for the ATES, is the product of the final household weight and five weight adjustment factors:

- Weight associated with sampling the person's domain (ECPP, PFI-Enrolled, PFI-Homeschooled, or ATES) in the given household, A_{jk}
- Weight associated with sampling the person from among all eligible persons in the given domain in the household, B_{jk}
- Weight associated with sampling a child in a joint custody arrangement at both parents' addresses C_{jk}
- Weight associated with the topical questionnaire (ECPP, PFI, or ATES) unit nonresponse, $NIAF_k$ (noninterview adjustment factor)
- Adjustment associated with raking the person-level weights to Census Bureau estimates of the number of persons in the target population, RAF_k (ratio adjustment factor)

The first step in developing the person-level weights was to account for the probability of sampling the person's domain (i.e., ECPP, PFI-Enrolled, PFI-Homeschooled, ATES) in the given household. Households were assigned to domains based on the combination of domains for which the household had eligible persons. If a household only had persons in a single domain, then the household was automatically assigned to that domain. Otherwise, if a household had persons in multiple domains, then randomly predesignated sampling flags were used to assign the household to a single domain. The flags were applied sequentially as follows. First, if the household had homeschooled children, then a preassigned flag determined whether the household would be assigned to the PFI-Homeschooled survey (with 0.8 probability) or a different survey (with 0.2 probability). Second, if the household had no homeschooled children or had homeschooled children but was not assigned to the PFI-Homeschooled survey in the prior step, then the second flag determined whether the household would be assigned to the ATES (with 0.2 probability) or to one of the other two child surveys (with 0.8 probability). Finally, if the household had not been assigned to the PFI-Homeschooled survey or the ATES in the prior steps, then the third flag determined whether the household would be assigned to the PFI-Enrolled survey (with 0.3 probability) or the ECPP survey (with 0.7 probability). The differential sampling probabilities

were chosen to ensure sufficient sample sizes for the PFI–Homeschooled and the ECPP surveys, both of which collected data about relatively small populations.

The weighting factor A_{jk} was used to adjust for the probability with which the household was selected for its assigned domain. A_{jk} is equal to 1 for households with all persons eligible for only one topical questionnaire because such households were always assigned to that domain. If the household had persons eligible for multiple domains, A_{jk} was equal to the inverse of the probability with which the household was selected for its assigned domain. Table 7-3 shows A_{jk} for households assigned to each of the four possible topical surveys⁵³ based on the combination of domains for which the household had eligible members.

⁵³ For cases that switched from one topical survey to another, A_{jk} was determined by the topical survey to which the case was originally assigned in order to preserve the original probability of selection.

Table 7-3. Domain adjustment factor (A_{jk}) for person-level weighting, by household composition and survey

Surveys for which household contains eligible members	Domain adjustment factor (A_{jk}) for households sampled for:			
	PFI-E	PFI-H	ECPP	ATES
ATES	†	†	†	1
ATES and PFI-E	5/4	†	†	5
ATES, PFI-E, and PFI-H	25/4	5/4	†	25
ATES, PFI-E, and ECPP	25/6	†	25/14	5
ATES, PFI-E, PFI-H, and ECPP	125/6	5/4	125/14	25
ATES and PFI-H	†	5/4	†	5
ATES, PFI-H, and ECPP	†	5/4	25/4	25
ATES and ECPP	†	†	5/4	5
PFI-E	1	†	†	†
PFI-E and PFI-H	5	5/4	†	†
PFI-E and ECPP	10/3	†	10/7	†
PFI-E, PFI-H, and ECPP	50/3	5/4	50/7	†
PFI-H	†	1	†	†
PFI-H and ECPP	†	5/4	5	†
ECPP	†	†	1	†
None	†	†	†	†

†Not applicable; households with the specified composition are not sampled for the specified survey.

NOTE: ATES = Adult Training and Education Survey. ECPP = Early Childhood Program Participation. PFI-E = Parent and Family Involvement in Education—Enrolled. PFI-H = Parent and Family Involvement in Education—Homeschooled.

The second adjustment, which accounted for the probability of sampling child or adult k from among all eligible children or adults (as reported by the respondent) in the given domain in household j , is

$$B_{jk} = N_{jk}$$

where N_{jk} is the number of eligible children or adults in household j in the same sampling domain as child or adult k .⁵⁴

The third step was an adjustment that accounted for the possibility that a child in a joint custody arrangement could be sampled at both parents' addresses. For ECPP and PFI respondents who

⁵⁴ For cases that switched from one topical survey to another, N_{jk} was the count of persons in the domain to which the case was originally assigned in order to preserve the original probability of selection.

reported that the sampled child usually lives at another address or spends an equal amount of time at the sampled address and a different address, the weight adjustment was

$$C_{jk} = 1/2$$

C_{jk} was equal to 1 for all other ECPP and PFI respondents and for all ATES respondents. For each sampled child or adult k in household j , the person-level base weight (sometimes referred to as the unadjusted person-level weight), UPW_{jk} , can be written as the product of the final household weight and the adjustments for within-household sampling. That is, for sampled child or adult k in household j , the base weight is

$$UPW_{jk} = HHW_j * A_{jk} * B_{jk} * C_{jk}$$

The fourth step was to adjust for persons who did not respond to the topical questionnaire. Each topical questionnaire case was classified as either a respondent (R) or a nonrespondent (NR), depending on whether or not the topical questionnaire was completed for the sampled person. The definition of nonrespondent cases differed between the screener and topical levels. At the topical level, nonrespondents included both refusal cases and cases that did not return the topical questionnaire. Topical nonrespondents also included cases that did not complete a sufficient number of critical items (refer to the description of Interview Status Recoding in chapter 4 for a list of the critical items for each survey); or that completed the topical survey after August 24, the cutoff for topical data collection. As described previously, cases that, based on information provided on the topical questionnaire, appeared to be eligible for a different topical than the one they completed were treated as nonrespondents to the survey for which they should have been sampled. There were no cases of unknown eligibility at the topical phase because eligibility was determined based on the completed screener questionnaire. A small number of cases were classified as ineligible at the topical phase. These included cases that were assigned an out-of-scope outcome code by the Census Bureau⁵⁵ or cases that indicated on the questionnaire that they were not eligible for the survey to which they were assigned, but did not provide enough information to determine which survey they should have received.

The unadjusted person-level weights (UPW) of the nonrespondents were distributed to the unadjusted person-level weights of the respondents within a nonresponse adjustment cell. The characteristics used to form the adjustment cells were characteristics for which information was available for both respondents and nonrespondents. The adjustment cells were determined by a

⁵⁵ The out-of-scope outcome code was assigned at the topical phase if a case completed a screener and was sent a topical questionnaire, but was then determined (e.g., on the basis of a call to the questionnaire assistance hotline) to be a nonresidential address (e.g., a business or a fraternity house).

separate CHAID analysis for each topical survey. The analysis identified combinations of characteristics (taken from the sample frame and the screener) associated with response propensity. For ECPP, PFI, and ATES, the variables used are listed in table 7-4.

Table 7-4. Independent variables for NHES:2016 person-level CHAID analysis

Variable ¹	Definition	Response categories	Source	Selected ²
Stratum	Race/ethnicity stratum	1 = Black stratum; 2 = Hispanic stratum; 3 = Other stratum	Sampling frame	Yes
Topical mode	Mode of initial topical contact	1 = proceeded directly from web screener to web topical; 2 = completed web screener, received web topical mailing; 3 = sampled for web screener, completed paper screener, and received paper topical; 4 = not sampled for web screener	Experimental condition	Yes
Topical incentive ³	Incentive amount at first topical mailing ³	0 = \$0; 1 = \$5; 2 = \$10; 3 = \$15; 4 = no topical mailings received ⁴	Experimental condition	Yes
ECPP children	Number of ECPP-eligible children in the household	0 = no children; 1 = 1 child; ...; 6 = 6 or more children ⁵	Screener data	Yes
PFI children	Number of PFI-eligible children in the household	0 = no children; 1 = 1 child; ...; 6 = 6 or more children ⁶	Screener data	Yes
ATES adults	Number of ATES-eligible adults in the household	0 = no adults; 1 = 1 adult; ...; 6 = 6 or more adults ⁷	Screener data	Yes
Ineligible or unknown	Number of persons in the household that are ineligible for any topical survey, or for whom eligibility status cannot be determined due to missing or inconsistent information	0 = no persons; 1 = 1 person; 2 = 2 or more persons	Screener data	No
Sex	Sex of sampled person	1 = male; 2 = female; 99 = not reported	Screener data	Yes
Enrollment	Reported enrollment of sampled person	1 = homeschooled; 2 = public/private school or preschool; 3 = college; 4 = not in school; 99 = not reported	Screener data	Yes
Grade	Reported grade of sampled person	1 = Pre-K; 2 = K; 3 = 1-2; 4 = 3 and 4; 5 = 5 and 6; 6 = 7 and 8; 7 = 9 and 10; 8 = 11-12; 9 = college; 99 = none of these or not reported	Screener data	Yes
Age (ECPP)	Age of sampled child (as of December 31, 2015; ECPP categories)	-1 = born in 2016; 0 = age 0; 1 = age 1; ...; 5 = age 5 or 6; 99 = not reported	Screener data	Yes
Age (PFI)	Age of sampled child (as of December 31, 2015; PFI categories)	1 = age 0-4; 2 = age 5-6; 3 = age 7-8; 4 = age 9-10; 5 = age 11-12; 6 = age 13-14; 7 = age 15-16; 8 = age 17-18; 9 = age 19-20; 99 = not reported	Screener data	Yes
Path (PFI)	Questionnaire type (PFI only)	1 = PFI-Enrolled, 2 = PFI-Homeschooled	Screener data	No

See notes at end of table.

Table 7-4. Independent variables for NHES:2016 person-level CHAID analysis—Continued

Variable ¹	Definition	Response categories	Source	Selected ²
Age (ATES)	Age of sampled adult (as of December 31, 2015; ATES categories)	1 = age 16–24; 2 = age 25–34; age 3 = 35–44; 4 = age 45–54; 5 = age 55–65; 99 = not reported	Screen data	Yes

¹ Parentheses indicate the topical survey for which the variable was used in the CHAID analysis. If no survey is listed in parentheses, the variable was used in the CHAID analysis for all 3 topical surveys.

² Indicates whether the specified variable was selected by the NHES:2016 topical CHAID analysis for use in defining the nonresponse adjustment cells for one or more topical surveys.

³ Households from the modeled screener incentive group that received \$10 with the screener also received \$10 with the first topical mailing, unless they responded to the screener after the third or fourth mailing wave, in which case they received \$15 with the first topical mailing. Households that completed a web screener and proceeded directly to the web topical did not receive a topical incentive. All other households received \$5 with the first topical mailing, unless they responded to the screener after the third or fourth mailing wave, in which case they received \$15 with the first topical mailing.

⁴ The “No topical mailings received” category consists of 33 households that, due to an operational error, did not receive any topical mailings despite being sampled for a topical survey, and therefore did not receive a topical incentive.

⁵ The 0 category was omitted from the ECPP CHAID analysis, because all sampled households had at least one PFI-eligible child.

⁶ The 0 category was omitted from the PFI CHAID analysis, because all sampled households had at least one ECPP-eligible child.

⁷ The 0 category was omitted from the ATES CHAID analysis, because all sampled households had at least one ATES-eligible adult.

NOTE: ATES = Adult Training and Education Survey. CHAID = chi-square automatic interaction detection. ECPP = Early Childhood Program Participation. PFI-E = Parent and Family Involvement in Education—Enrolled. PFI-H = Parent and Family Involvement in Education—Homeschooled.

Appendices E, F, and G show the nonresponse adjustment cells and response rates within the cells for the ECPP, PFI, and ATES, respectively. The nonresponse adjustment factor, $NIAF_k$, to be applied to each respondent k in adjustment cell c is as follows:

$$NIAF_k = \frac{\sum_{k \in R_c} UPW_k + \sum_{k \in NR_c} UPW_k}{\sum_{k \in R_c} UPW_k}$$

Thus, for sampled person k in household j , the nonresponse adjusted person-level weight, NPW_{jk} , can be written as

$$NPW_{jk} = UPW_{jk} * NIAF_k$$

The final stage of person-level weighting was to rake the nonresponse adjusted person-level weights, NPW , to national control totals. Raking was proposed by Deming and Stephan (1940) as a way to ensure consistency between complete counts and population data (Deming and Stephan used sample data from the 1940 U.S. Census of Population). The raking procedure typically improves the reliability of survey estimates and corrects for the bias that results from households or persons not covered by the survey. The raking procedure was carried out in a sequence of adjustments: First, the weights were adjusted to one marginal distribution (or dimension) and then to the second marginal distribution, and so on. One sequence of adjustments to the marginal distributions is known as a cycle or iteration. The procedure was repeated until convergence of weighted totals to all sets of marginal distributions was achieved. (See Deming and Stephan, 1940, for further details on raking and the convergence process.)

The raking of the person-level weights was required in order to align the person-level weights with the person-level control totals and adjust for differential coverage rates at the person level. The raking procedure for the ECPP, PFI, and ATES involved raking the nonresponse-adjusted person-level weights to national totals obtained using the number of children and adults from the 2015 annual ACS estimates. CPS was used for raking in NHES administrations prior to 2012, but ACS was used for NHES:2012 and NHES:2016 because its sample size was larger than CPS, allowing for more accurate control totals and greater precision in the NHES estimates. The raking dimensions for the ECPP and PFI were as follows, which are the same as the dimensions used for NHES:2012:

- A cross of the child's race/ethnicity (Hispanic, Non-Hispanic Black only, Other) and household income (\$10,000 or less, \$10,001–\$20,000, \$20,001–\$30,000, \$30,001–\$40,000, \$40,001–\$50,000, \$50,001–\$60,000, \$60,001–\$75,000, \$75,001–\$100,000, \$100,001–\$150,000, and \$150,001 or more) for ECPP and PFI

- A cross of household size (1 or 2, 3 or 4, 5+ persons) and child's age (0–2 or 3–6) for ECPP; a cross of household size and child's age (age 5 and under, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19–20) for PFI
- A cross of home tenure (rent, own, or other) and either parent's highest educational attainment (less than high school credential/high school credential or equivalent/some college up to and including a bachelor's degree/higher than a bachelor's degree) for ECPP and PFI

The raking dimensions for the ATES were as follows:

- A cross of the adult's race/ethnicity (Hispanic, Non-Hispanic Black only, Other) and highest educational attainment (less than high school diploma, high school diploma or equivalent, some college up to and including a bachelor's degree, higher than a bachelor's degree)
- A cross of the adult's work status in the past 12 months (has worked in the past 12 months, has not worked in the past 12 months) and earnings in the past 12 months (\$0 to \$10,000, \$10,001 to \$20,000, \$20,001 to \$30,000, \$30,001 to \$40,000, \$40,001 to \$50,000, \$50,001 to \$60,000, \$60,001 to \$75,000, \$75,001 to \$150,000, over \$150,000)
- The adult's age (25 or under, 26 to 35, 36 to 45, 46 to 55, 56 or over)

These raking dimensions were proposed because they included important analysis variables, and preliminary research showed that NHES distributions for these dimensions had a fair amount of variation compared with the ACS distributions for the same variables. Of the variables examined as part of the raking research (household income, household size, home tenure, highest educational attainment of either parent, Census region, and child's race/ethnicity, sex, and age for the child surveys; race, earnings, household size, age, educational attainment, sex, region, and work status in the past 12 months for the ATES), the chosen variables showed the most variability across their categories when each was examined alone. The variables also were crossed with each other and, again, the pairs that showed the most variability were chosen for the raking dimensions. For the child surveys, several of the variables and variable pairings were included in the preliminary analysis because they were used for raking in past NHES administrations. These included the race/ethnicity of child by household income and home tenure by educational attainment. It was decided not to rake on several variables and dimensions that had limited variation across the categories. Table 7-5 shows the final dimensions chosen for raking.

In NHES:2012, the race and ethnicity categories used for raking were Hispanic (regardless of race), non-Hispanic Black only, and Other. For NHES:2016, the ACS race and Hispanic origin variables were recoded into the same three raking categories used for NHES:2012 (ACS has hundreds of categories for the variables race and Hispanic origin⁵⁶).

One issue that arose in raking the data from the NHES:2016 was the handling of age. Age groups in NHES had to be compared with equivalent age groups in the ACS; however, each survey collected age information differently and used different reference points. It was important that NHES subpopulations be consistent with the ACS subpopulation to which the weights were raked. Otherwise, inconsistencies in the definitions of the subpopulations would result in large weighting adjustments and inaccurate estimates. The ECPP and PFI collected month and year of birth for each sampled child. The ATES collected the age in years of the sampled adult; however, for most ATES cases, a month and year of birth was available from the screener. In the ACS, age was collected in reference to the date of the particular interview—there was no single reference date for the 2015 annual ACS estimates. For the purpose of creating ACS weights, age was treated as if it were the age on July 1, the midpoint of the data-collection year. For the NHES raking, ACS age was used as is without “aging” the sample because using ACS date of birth to “age” the ACS cases to a different month would be inconsistent with the ACS weights. Thus, the NHES ages were aged using the month and year of birth to July 1, 2016, to be comparable with the ACS age distribution of July 1, 2015. Because of the differences in the structure of the age item, the aging procedure used for the ECPP and PFI differed from that used for the ATES.

For the ECPP and PFI, the topical questionnaire asks for the child’s month and year of birth. Therefore, the month and year of birth reported (or imputed) on the topical was used to calculate the child’s age in years as of July 1, 2016 (AGE_R). For the purpose of calculating age, the child was assumed to have been born on the 15th of the reported month of birth. Because the zero-year category of NHES ECPP contained relatively few cases after aging, this category was collapsed with the one- and two-year categories. Also after aging, the ages of some children were greater than the age limit for the surveys: Three ECPP children’s ages were changed to 7, over the age limit of 6; and eight PFI youths’ ages were changed to 21, over the age limit of 20. These records were placed in the age 3 to 6 category for ECPP and the age 19 and 20 category for PFI for the purposes of raking.

⁵⁶ American Community Survey and Puerto Rico Community Survey (https://www2.census.gov/programs-surveys/acs/tech_docs/code_lists/2015_ACS_Code_Lists.pdf).

For ATES, the topical questionnaire asks only for the adult's age as of the time the questionnaire is filled out. However, for most respondents, a month and year of birth (PDOBMM and PDOBYY, respectively) was available from the household screener. To determine whether the screener data were consistent with the age reported (or imputed) on the topical (XXAGE), the screener age was calculated as of the date the topical was returned, with the respondent assumed to have been born on the 15th of the month reported on the screener. If the topical age was within 1 year of the screener age,⁵⁷ then it was assumed that the screener age matched the topical age, and that the screener date of birth could therefore be used to calculate AGE_R. For these respondents, AGE_R was set equal to the respondent's age as of July 1, as calculated from the month and year of birth reported on the screener.

For ATES respondents for whom the month or year of birth was missing on the screener, or for whom the screener age did not match the reported or imputed topical age, a different procedure was used to derive AGE_R. These "nonmatched" ATES respondents were split into 2 groups: group 1 consisted of those from whom the completed topical was received on or before July 1, and group 2 consisted of those from whom the completed topical was received after July 1. For group 1, the median number of days between the topical check-in date and July 1 was calculated. This median number of days was divided by 366⁵⁸ to obtain the corresponding proportion of the year, and that same proportion of nonmatched group 1 respondents was randomly selected to age forward 1 year. For example, suppose that, among nonmatched group 1 respondents, the median number of days between the topical check-in date and July 1 was 61. Because 61 divided by 366 is approximately 16.7 percent, 16.7 percent of the nonmatched group 1 respondents would be randomly selected to age forward 1 year.

For group 2, the median number of days between July 1 and the topical check-in date was calculated. This median number of days was divided by 366 to obtain the proportion of the year, and that same proportion of nonmatched group 2 respondents was randomly selected to age backward 1 year. For example, suppose that, among nonmatched group 2 respondents, the median number of days between July 1 and the topical check-in date is 31. Because 31 divided by 366 is approximately 8.5 percent, 8.5 percent of the nonmatched group 2 respondents would be randomly selected to age backward 1 year. For nonmatched respondents who were selected to age forward

⁵⁷ A 1-year tolerance was used because the screener age could plausibly differ from the topical age due to lags between the completion of the topical and the receipt of the completed form by the Census Bureau; or due to the assumption that the respondent was born on the 15th of the month.

⁵⁸ 366 was used because 2016 was a leap year.

or backward, AGE_R was equal to the topical age plus or minus 1 year, respectively. For all other nonmatched respondents, AGE_R was equal to the topical age.

The aged ages were derived only for the purposes of raking and comparing NHES age distributions with ACS age distributions and are not included on the data files.⁵⁹

Prior to raking, all variables used in the raking procedure were fully imputed (see chapter 6 for information on imputation procedures). Raked weights were formed by iteratively modifying the nonresponse adjusted person-level weights (*NPW*) so that they corresponded to the control totals. A table of estimates was formed using the nonresponse adjusted person-level weights. These weights were multiplied by the constant that forced the sum of the tabled values to equal the control totals along the first dimension. The revised table was then multiplied by the constant required so that the second dimension control totals were obtained, and the same process was repeated for all higher dimensions. When the last dimension was done, one iteration of raking was complete. Further iterations were employed until the estimates converged to within two of the control totals across all the dimensions.

The final ECPP person-level weight for sampled person *k* in household *j* is

$$FEWT_{jk} = NPW_{jk} * RAF_k$$

where *RAF_k* is the raking adjustment factor for person *k*, where person *k* has the attributes corresponding to each of the raking cells to which they are assigned.

The final PFI person-level weight for sampled person *k* in household *j* is

$$FPWT_{jk} = NPW_{jk} * RAF_k$$

The final ATES person-level weight for sampled person *k* in household *j* is

$$FAWT_{jk} = NPW_{jk} * RAF_k$$

After the raking was completed, the distributions of the weights were examined for excessive variability. A high level of weighting variability can inflate the variances of estimates and thus reduce the effective sample size.⁶⁰ This effect can potentially be mitigated by constraining the weights to a specified maximum value, in a process known as “trimming.” However, trimming

⁵⁹ In prior NHES administrations, the approach involved aging all cases in the CPS and NHES sample to bring them to the same month in age. This approach is described in the NHES:2007 Methodology Report (Hagedorn et al. 2009).

⁶⁰ The effective sample size is the actual sample size divided by the design effect. The design effect is the factor by which the variance of an estimate is increased due to departures from simple random sampling.

raises the risk of introducing bias into the estimates or preventing convergence to the specified control totals. Several trimming options were considered for each of the three topical surveys. Each trimming option was evaluated with respect to (1) the resulting reduction in the design effect and (2) any resulting changes in key estimates (which was used as a proxy for the amount of bias that could potentially be introduced by trimming). For the ECPP and PFI, all trimming options examined either led to meaningful changes in the estimates, prevented the weights from converging to the control totals, or failed to meaningfully reduce the design effect; thus, the weights for the ECPP and PFI were not trimmed. For the ATES, it was determined that capping the weights to the 99th percentile of the untrimmed distribution increased the effective sample size by approximately 15 percent while leading to minimal changes in estimates and still permitting convergence to the control totals.⁶¹ Thus, the ATES weights were trimmed by rerunning the raking with this constraint imposed.

⁶¹ Specifically, none of the estimates examined changed by more than 0.2 percentage points over the full sample, or by more than 1 percentage point within race/ethnicity, age, education, and employment subgroups.

Table 7-5. American Community Survey control totals, by raking dimension for the Adult Training and Education Survey

Topical survey and raking dimension	Control total
Age	
Under 26	30,467,196
26 to 35	42,394,243
36 to 45	40,161,346
46 to 55	42,482,063
Over 55	40,837,695
Race/ethnicity by education	
Hispanic	
Less than high school diploma	9,573,850
High school diploma or equivalent	9,792,076
Some college or bachelor's degree	12,831,379
Higher than a bachelor's degree	1,348,361
Black only, non-Hispanic	
Less than high school diploma	2,645,160
High school diploma or equivalent	7,655,499
Some college or bachelor's degree	12,114,998
Higher than a bachelor's degree	1,617,522
Other, non-Hispanic	
Less than high school diploma	9,077,535
High school diploma or equivalent	35,157,215
Some college or bachelor's degree	77,045,806
Higher than a bachelor's degree	17,483,142

See notes at end of table.

Table 7-5. American Community Survey control totals, by raking dimension for the Adult Training and Education Survey—Continued

Topical survey and raking dimension	Control total
Work status in past 12 months by earnings in the past 12 months	
Has worked in the past 12 months	
\$10,000 or less	28,539,677
\$10,001 to \$20,000	21,490,388
\$20,001 to \$30,000	21,335,880
\$30,001 to \$40,000	18,729,958
\$40,001 to \$50,000	14,730,149
\$50,001 to \$60,000	11,375,393
\$60,001 to \$75,000	12,296,605
\$75,001 to \$150,000	19,175,212
\$150,001 or more	5,332,843
Has not worked in the past 12 months	43,336,438

NOTE: Control totals are population totals within the eligible universe for each survey, obtained from the 2015 American Community Survey (ACS) 1-year Public Use Microdata Sample (PUMS) file.

Table 7-6. American Community Survey control totals, by raking dimension for the Early Childhood Program Participation Survey

Topical survey and raking dimension	Control total
Race/ethnicity by household income	
Hispanic	
\$10,000 or less	368,931
\$10,001 to \$20,000	599,003
\$20,001 to \$30,000	778,308
\$30,001 to \$40,000	678,307
\$40,001 to \$50,000	546,348
\$50,001 to \$60,000	457,506
\$60,001 to \$75,000	531,168
\$75,001 to \$100,000	576,123
\$100,001 to \$150,000	556,125
\$150,001 or more	327,961
Black only, non-Hispanic	
\$10,000 or less	469,528
\$10,001 to \$20,000	423,451
\$20,001 to \$30,000	385,900
\$30,001 to \$40,000	301,515
\$40,001 to \$50,000	243,545
\$50,001 to \$60,000	195,583
\$60,001 to \$75,000	228,731
\$75,001 to \$100,000	255,065
\$100,001 to \$150,000	207,952
\$150,001 or more	125,349
Other, non-Hispanic	
\$10,000 or less	548,868
\$10,001 to \$20,000	654,101
\$20,001 to \$30,000	877,200
\$30,001 to \$40,000	948,212
\$40,001 to \$50,000	1,000,612
\$50,001 to \$60,000	984,211
\$60,001 to \$75,000	1,424,285
\$75,001 to \$100,000	2,050,852
\$100,001 to \$150,000	2,488,799
\$150,001 or more	2,204,407

See notes at end of table.

Table 7-6. American Community Survey control totals, by raking dimension for the Early Childhood Program Participation Survey—Continued

Topical survey and raking dimension	Control total
Household size by age	
1 or 2 persons	
Age 0–2	375,557
Age 3–6	394,851
3 or 4 persons	
Age 0–2	6,742,107
Age 3–6	5,190,835
5 persons or more	
Age 0–2	4,550,649
Age 3–6	4,183,947
Home tenure by parents' highest educational attainment	
Rent	
Less than high school diploma	1,561,411
High school diploma or equivalent	2,549,055
Some college or bachelor's degree	4,662,603
Higher than a bachelor's degree	844,580
Own or other	
Less than high school diploma	736,751
High school diploma or equivalent	1,547,388
Some college or bachelor's degree	6,505,250
Higher than a bachelor's degree	3,030,908

NOTE: Control totals are population totals within the eligible universe for each survey, obtained from the 2015 American Community Survey (ACS) 1-year Public Use Microdata Sample (PUMS) file.

Table 7-7. American Community Survey control totals, by raking dimension for the Parent and Family Involvement in Education Survey

Topical survey and raking dimension	Control total
Race/ethnicity by household income	
Hispanic	
\$10,000 or less	728,873
\$10,001 to \$20,000	1,359,813
\$20,001 to \$30,000	1,738,032
\$30,001 to \$40,000	1,606,402
\$40,001 to \$50,000	1,381,875
\$50,001 to \$60,000	1,146,108
\$60,001 to \$75,000	1,310,643
\$75,001 to \$100,000	1,463,521
\$100,001 to \$150,000	1,357,068
\$150,001 or more	851,487
Black only, non-Hispanic	
\$10,000 or less	909,514
\$10,001 to \$20,000	1,010,636
\$20,001 to \$30,000	930,833
\$30,001 to \$40,000	832,449
\$40,001 to \$50,000	613,794
\$50,001 to \$60,000	548,679
\$60,001 to \$75,000	628,433
\$75,001 to \$100,000	738,891
\$100,001 to \$150,000	657,038
\$150,001 or more	430,308
Other, non-Hispanic	
\$10,000 or less	1,088,499
\$10,001 to \$20,000	1,535,723
\$20,001 to \$30,000	1,919,032
\$30,001 to \$40,000	2,107,786
\$40,001 to \$50,000	2,210,055
\$50,001 to \$60,000	2,251,779
\$60,001 to \$75,000	3,385,220
\$75,001 to \$100,000	4,986,746
\$100,001 to \$150,000	6,762,897
\$150,001 or more	6,732,528

See notes at end of table.

Table 7-7. American Community Survey control totals, by raking dimension for the Parent and Family Involvement in Education Survey—Continued

Topical survey and raking dimension	Control total
Household size by age	
1 or 2 persons	
Age 5 or under	89,372
Age 6	151,458
Age 7	156,766
Age 8	146,869
Age 9	152,154
Age 10	159,381
Age 11	167,792
Age 12	175,026
Age 13	177,651
Age 14	216,688
Age 15	243,364
Age 16	274,202
Age 17	299,958
Age 18	175,479
Age 19 or older	46,243
3 or 4 persons	
Age 5 or under	1,199,856
Age 6	1,909,495
Age 7	2,002,576
Age 8	1,984,669
Age 9	1,962,709
Age 10	1,939,945
Age 11	1,965,144
Age 12	1,979,100
Age 13	2,053,691
Age 14	2,126,674
Age 15	2,166,355
Age 16	2,224,840
Age 17	2,160,278
Age 18	1,139,377
Age 19 or older	212,618
5 persons or more	
Age 5 or under	1,114,229
Age 6	1,799,950

See notes at end of table.

Table 7-7. American Community Survey control totals, by raking dimension for the Parent and Family Involvement in Education Survey—Continued

Topical survey and raking dimension	Control total
Age 7	1,929,373
Age 8	2,031,805
Age 9	1,975,231
Age 10	1,970,525
Age 11	1,897,305
Age 12	1,832,962
Age 1	1,801,723
Age 14	1,774,791
Age 15	1,667,393
Age 16	1,533,203
Age 17	1,363,681
Age 18	686,445
Age 19 or older	186,316
Home tenure by parents' highest educational attainment	
Rent	
Less than high school diploma	3,660,319
High school diploma or equivalent	5,247,376
Some college or bachelor's degree	9,409,917
Higher than a bachelor's degree	1,280,331
Own or other	
Less than high school diploma	2,277,706
High school diploma or equivalent	5,074,718
Some college or bachelor's degree	18,580,326
Higher than a bachelor's degree	7,693,969

NOTE: Control totals are population totals within the eligible universe for each survey, obtained from the 2015 American Community Survey (ACS) 1-year Public Use Microdata Sample (PUMS) file.

7.4 Methods for Computing Sampling Errors

Sampling error, the difference between the estimate from a sample and the true population parameter, occurs when data are collected from a sample rather than from a full population. In surveys with complex sample designs, such as NHES:2016, direct estimates of sampling errors, which assume a simple random sample, typically underestimate the variability in the estimates (Wolter 1985). The NHES:2016 sample design and weighting included procedures that deviated from the assumption of simple random sampling, such as oversampling in areas with higher

concentrations of Blacks and Hispanics, sampling persons within households with differential sampling probabilities, adjusting for survey nonresponse, and raking to control totals.

7.4.1 Replication Sampling Errors

One method for computing sampling errors to reflect these aspects of the sample design and weighting is the replication method. Replication involves splitting the entire sample into a set of groups, or replicates, based on the actual sample design of the survey. The survey estimates can then be computed for each replicate by creating replicate weights that mimic the actual sample design and estimation procedures used in the full sample. The variation in the estimates computed from the replicate weights can then be used to estimate the sampling errors of the estimates from the full sample.

As for past NHES surveys, a total of 80 replicates were defined for NHES:2016. Eighty replicates were chosen to provide reliable estimates of sampling errors with reasonable data processing costs. The specific replication procedure used for NHES:2016 was a jackknife replication method (Wolter 1985). It involved dividing the sample into 80 random subsamples (replicates) for the computation of the replicate weights. Before the replicate weighting began, the sample records were sorted by the race/ethnicity strata and the sampling order of the addresses (tract-level poverty rate and ZIP code plus four-digit ZIP suffix) within each stratum. In each replicate, a replicate weight was developed using the same weighting procedures used to develop the full sample weight (described in sections 7.2 and 7.3).

The jackknife variance estimator has the form

$$v(\hat{\theta}) = \frac{G-1}{G} \sum_{k=1}^G (\hat{\theta}_{(k)} - \hat{\theta})^2$$

where θ is the population parameter of interest, $\hat{\theta}$ is the estimate of θ based on the full sample, $\hat{\theta}_{(k)}$ is the estimate of θ based on the observations included in the k^{th} replicate, and G is the total number of replicates ($G = 80$).

Replicate weights were created for all three NHES:2016 surveys: ECPP, PFI, and ATES. The replicate weights were included on the ECPP file as *FEWT1-FEWT80*, on the PFI file as *FPWT1-FPWT80*, and on the ATES file as *FAWT1-FAWT80*. The final replicate base weights were computed in several steps, using the approach described in Kim, Navarro, and Fuller (2000). The procedures for forming the replicate weights for each of these surveys are described next. For more

details about the replication methodology used to reflect the two-phase sampling, refer to Kim, Navarro, and Fuller (2000).

The 206,000 addresses sampled for the screener were divided into the three race/ethnicity strata used for the first phase of sampling. Within each of the three strata, the addresses were sorted in the same order that was used in the selection of the screener sample.

Eighty groups were formed using all sampled addresses. This was done by assigning the 1st, 81st, 161st, and so on, addresses in the list to group 1; the 2nd, 82nd, 162nd, and so on, addresses in the list to group 2; and the 80th, 160th, 240th, and so on, addresses in the list to group 80. Eighty replicates were then formed by leaving out exactly one of these groups. For example, replicate 1 contained all groups except group 1, replicate 2 contained all groups except group 2, and replicate 80 contained all groups except group 80.

The addresses were then assigned 80 replicate base weight variables (*REPBW1* through *REPBW80*) on the basis of the following procedures. The replicate phase 1 base weights were assigned to all sampled addresses by multiplying the full-sample base weight by either zero (for addresses left out of replicate 1) or 80/79 (for addresses retained in replicate 1). This procedure is the standard jackknife method of dropping one unit (in this case, a group of residential households with the same group number) and weighting up the remaining units to account for the dropped unit. For example, to construct *REPBW1*, a replicate base weight of 0 was assigned to residential households from group 1, and the base weights of all residential households in groups 2 through 80 were multiplied by a factor of 80/79.

The sampled households were allocated to the same household-level nonresponse adjustment cells used to generate the final full-sample *SNIAFs*. Within each cell, the replicate *SNIAF* was calculated using the same formula as with the full sample, but the sums of the replicate base weights rather than the full-sample weights were used. The replicate base weight was then multiplied by the replicate *SNIAF*. This step generated replicate household-level nonresponse-adjusted weights (*HHW1* through *HHW80*) for screener respondent households.

For screener respondent households sampled for a topical survey, the replicate household-level nonresponse-adjusted weights were multiplied by the same three adjustment factors used in the full-sample weighting (A_{jk} , B_{jk} , and C_{jk}) to generate replicate person-level base weights (*UPW1* through *UPW80*).

For each of the three topical surveys, sampled persons were allocated to the same person-level nonresponse adjustment cells used to calculate the final full-sample *NIAFs*. Within each cell, the

replicate *NIAF* was calculated using the same formula as with the full sample, but the sums of the replicate person-level base weights rather than the full-sample weights were used. The replicate person-level base weight was then multiplied by the replicate *NIAF*. This step generated replicate person-level nonresponse-adjusted weights (*NPWI* through *NPW80*) for topical respondent households.

The replicate person-level nonresponse-adjusted weights were raked to the same control totals using the same convergence criteria to generate replicate final weights (*FEWT1* through *FEWT80* for the ECPP, *FPWT1* through *FPWT80* for the PFI, and *FAWT1* through *FAWT80* for the ATES).⁶²

Thus, the replication procedure for NHES:2016 involved the calculation of the full sample weight and 80 replicate weights. The variation in the estimates can be calculated by computing the estimate of interest once for each of these 81 weights. This variation can then be used to estimate the sampling errors of the estimates from the full sample.

The computation of the sampling errors, using these replicate weights, can be done easily using several software packages:

The survey data analysis procedures in SAS (http://www.sas.com/en_us/software/all-products.html);

The R Survey Package (<https://cran.r-project.org/web/packages/survey/index.html>);

The Stata “svy” commands (<http://www.stata.com>);

WesVar (Westat 2007) (<https://www.westat.com/our-work/information-systems/wesvar-support/download-wesvar>);

SUDAAN (Research Triangle Institute 2012) (<https://www.rti.org/impact/sudaan-statistical-software-analyzing-correlated-data>); or

AM Statistical Software (<http://am.air.org>).

The replication method should be specified as JK1.

⁶² For the ATES, the replicate weights were constrained in a similar manner as the full-sample weights. For a given replicate, the weights were first raked to the control totals without any constraints, and then the raking was re-run with the constraint that the weight not exceed the 99th percentile of the untrimmed distribution for that replicate. Thus, the weighting procedure for the replicate mimicked the full procedure used for the full sample, including trimming.

For subdomains with very small sample sizes, a particular replicate may not contain any cases in the subdomain, which precludes the calculation of standard errors using the jackknife method (the software will give an error). In this situation, the subdomain of interest could be collapsed or combined with another subdomain in order to have sufficient sample size for computing standard errors.

7.4.2 Taylor Series Approximation

Another approach to the valid estimation of sampling errors for complex sample designs is to use a Taylor series approximation to compute sampling errors. To produce standard errors using a Taylor series program, such as SUDAAN, AM, Stata, SPSS Complex Samples Module (<http://www-03.ibm.com/software/products/en/spss-complex-sample>), the R Survey Package, or SAS, two variables are required in order to identify the stratum and the primary sampling unit (PSU). The stratum-level variable is the indicator of the variance estimation stratum from which the unit (address or sampled person) was selected. The PSU is an arbitrary numeric identification number for the address within the stratum. For NHES:2016, the stratum variable signifies the race/ethnicity stratum that was used in the first phase of sampling; the PSU variable is unique for each address within the race/ethnicity stratum because the addresses were sampled directly in a single stage. Software packages that use Taylor series linearization for variance estimation, such as SUDAAN, do not currently have the capability to compute variance estimates that reflect the effect that two-phase sampling has on the precision of the estimates. Thus, variance estimates computed using these Taylor series linearization packages are likely to be slight underestimates.

The PSU (EPSU for the ECPP, PPSU for the PFI, and APSU for the ATES) and stratum (ESTRATUM for the ECPP, PSTRATUM for the PFI, and ASTRATUM for the ATES) variables appear on each of the topical survey files. Data users should be aware that using different approaches or software packages in the calculation of standard errors may result in slightly different standard errors. Estimates of standard errors computed using the replication method and the Taylor series method are similar but not identical. For a discussion of this issue, see Broene and Rust (2000).

7.4.3 Software Examples for Replication Sampling Errors and Taylor Series Approximation

Table 7-8 summarizes the weight and variance estimation variables and how they are used in selected software packages that allow for Taylor series variance estimation (SUDAAN, Stata, SAS, IBM SPSS Complex Samples, and the R Survey package) and jackknife variance estimation (SUDAAN, Stata, SAS, WesVar, and the R Survey package).

Table 7-8. Use of analysis weights, replicate weights, and variance estimation strata and primary sampling unit (PSU) variables available from NHES:2016, by variance estimation method and selected survey data analysis software: 2016

Variance estimation method and survey data analysis software	Sample syntax elements using Parent and Family Involvement in Education variables
Jackknife variance estimation	
SUDAAN	DESIGN = JACKKNIFE WEIGHT FPWT; JACKWGTS FPWT1-FPWT80 / ADJJACK = 0.9875;
Stata	svyset [pweight=FPWT], vce(jackknife) jkrweight(FPWT1-FPWT80, multiplier(0.9875)) mse
SAS survey data analysis procedures	VARMETHOD = JACKKNIFE REPWEIGHTS FPWT1-FPWT80 / JKCOEFS = 0.9875; WEIGHT FPWT; Method: JK1
WesVar	Full sample weight: FPWT Replicate weights: FPWT1-FPWT80 mydesign<-
R Survey package ¹	svrepdesign(data=pfi,repweights=subset(pfi,select=FPWT1:FPWT80),weights=~FPWT,type="JK1",mse=TRUE,combined.weights =TRUE,scale=79/80)
Taylor series variance estimation	
SUDAAN	DESIGN = WR WEIGHT FPWT; NEST PSTRATUM PPSU;
Stata	svyset PPSU [pweight=FPWT], vce(linearized) strata(PSTRATUM) VARMETHOD = TAYLOR
SAS survey data analysis procedures	WEIGHT FPWT; STRATA PSTRATUM; CLUSTER PPSU; Method: WR
IBM SPSS Complex Samples	Weight: FPWT Strata: PSTRATUM Clusters: PPSU
R survey package ¹	mydesign<-svydesign(data=pfi,id=~PPSU,strata=~PSTRATUM,weights=~FPWT,nest=TRUE)

NOTE: The sample syntax elements use weighting and variance estimation variables for the Parent and Family Involvement in Education (FPWT, FPWT1-FPWT80, PSTRATUM, and PPSU). The weighting and variance estimation variables for the Early Childhood Program Participation are FEWT, FEWT1-FEWT80, ESTRATUM, and EPSU; and the weighting and variance estimation variables for the Adult Training and Education Survey are FAWT, FAWT1-FAWT80, ASTRATUM, and APSU.

¹For the R survey package, “mydesign” can be renamed to any name for an R object to hold the specification of the survey design.

7.4.4 Approximate Sampling Errors

Although calculating the sampling errors using the methods described in this chapter is recommended for many applications, simple approximations of the sampling errors may be valuable for some purposes. Most statistical software packages compute standard errors of the estimates on the basis of simple random sampling assumptions. The standard error from this type of statistical software can be adjusted for the complexity of the sample design to approximate the standard error of the estimate under the actual sample design used in the survey. For example, the variance of an estimated proportion in a simple random sample is typically estimated using the estimated proportion (p) times its complement ($1 - p$) divided by the sample size (n). The standard error is the square root of this quantity. This estimate can be adjusted to more closely approximate the standard error for the estimates from NHES:2016.

A simple approximation of the impact of the sample design on the standard errors of the estimates that has proved useful in previous NHES surveys and in many other surveys is to adjust the simple random sample standard error estimate by the root design effect (DEFT). The DEFT is estimated as the ratio of the standard error of the estimate computed using the replication method discussed previously to the standard error of the estimate under the assumptions of simple random sampling. An average DEFT is computed by estimating the DEFT for a number of estimates and then averaging. A standard error for an estimate can then be approximated by multiplying the simple random sample standard error estimate by the average DEFT. Average DEFTs are computed for estimates from all three of the surveys in NHES:2016. The recommended average DEFTs for NHES:1991–2016 appear in appendix H. The NHES:2016 average DEFTs are computed by race/ethnicity (Hispanic; Black, non-Hispanic; White, non-Hispanic; and All other, multiple races, non-Hispanic), sampled individual's age category (adult, infant,⁶³ preschooler,⁶⁴ elementary schooler, middle schooler, high schooler) and homeschool status.

In complex sample designs, such as NHES:2016, the DEFT is typically greater than 1 due to the differential weights attached to the observations. In NHES:2016, this factor contributed to making the average DEFT greater than 1.

The average DEFT computed for estimates in the ECPP, PFI, and ATES surveys ranged from 1.18 to 1.78. For the ECPP file estimates, the average DEFT was 1.38 overall. For estimates by race/ethnicity, the average DEFT was 1.40 for the category, “All other races and multiple races,

⁶³ On the infant questionnaire path, questions were asked about children ages 0, 1, and 2.

⁶⁴ On the preschooler questionnaire path, questions were asked about children ages 3 to 6 who were not yet enrolled in kindergarten or homeschooled.

non-Hispanic” and 1.48 for the other race/ethnicity categories. For estimates by interview path, the average DEFT was 1.43 for infants (PATH = I) and 1.18 for children enrolled in preschool (PATH = N). Therefore, a DEFT of 1.38 is recommended to approximate the standard error of overall estimates in the ECPP interview file. For estimates by race/ethnicity a DEFT of 1.48 is recommended, with the exception of estimates of “All other races and multiple races, non-Hispanic” (1.40). For estimates by interview path, a DEFT of 1.43 is recommended for infants and a DEFT of 1.18 is recommended for preschoolers.

For the PFI file estimates, the average DEFT was 1.59 overall. For estimates by interview path, the average DEFT was 1.78 for homeschooled children and 1.50 for the other interview path categories. For estimates by race/ethnicity, the average DEFT was 1.57 for the category, “All other races and multiple races, non-Hispanic” and 1.65 for the other race/ethnicity categories. Therefore, a DEFT of 1.59 is recommended to approximate the standard error of overall estimates in the PFI interview file. For estimates by interview path, a DEFT of 1.50 is recommended, with the exception of homeschooled children (1.78); and for estimates by race/ethnicity, a DEFT of 1.65 is recommended, with the exception of “All other races and multiple races, non-Hispanic” (1.57).

For the ATES file estimates, the average DEFT was 1.46 overall. For estimates by race/ethnicity, the average DEFT was 1.54. Therefore, a DEFT of 1.46 is recommended to approximate the standard error of overall estimates in the ATES interview file. For estimates by race/ethnicity, a DEFT of 1.54 is recommended.

As stated previously, the average DEFT can be used to approximate the standard error for an estimate. An example of how to do this for a percentage estimate derived using a statistical package such as SAS⁶⁵ or SPSS is as follows. In the PFI file, the weighted estimate of the percent of children whose parents reported that they had visited a museum in the past month was 26 percent. An approximate standard error can be developed in a few steps. First, obtain the simple random sample standard error for the estimate using the weighted estimate in the numerator and the unweighted sample size minus 1 in the denominator: The standard error for this 26 percent statistic would be 0.37 percent. This value is derived by taking the square root of $(26 \times 74)/14,074$. The weighted estimate (p) is 26 percent, 74 is 100 minus the estimated percent ($1 - p$), and the unweighted sample size minus 1 ($n - 1$) is 14,074. The approximate standard error of the estimate from NHES:2016 is this quantity (the simple random sample standard error) multiplied by the DEFT for the PFI file estimates of 1.59. In this example, the estimated standard error would be 0.59 percent (1.59×0.37 percent).

⁶⁵ Here, the reference to “SAS” applies to SAS version 9.3.

The approximate standard error for a mean can be developed using a related procedure. The three steps required to do so are demonstrated using an example from the PFI file. First, the mean is estimated using the full sample weight and a standard statistical package such as SAS or SPSS. Second, the simple random sample standard error is obtained through a similar, but unweighted, analysis. Third, the standard error from the unweighted analysis is multiplied by the mean DEFT for the PFI file estimates to approximate the standard error of the estimate under the NHES:2016 design. For example, the weighted average number of times in this school year that children enrolled in grades kindergarten through 12 in regular school (excluding homeschooled children) have been absent from school is 4.2 and the simple random sampling standard error (unweighted) is 0.06. Then, the approximate standard error for the estimate would be $1.50 \times 0.06 = 0.09$.

Users who want to adjust the standard errors for estimates of parameters in regression models should follow a procedure similar to that discussed for means. Specifically, the estimates of the parameter in the model can be estimated using a weighted analysis in a standard statistical software package such as SAS or SPSS. A similar, but unweighted, analysis will provide the simple random sample standard errors for these parameter estimates. The standard errors can then be multiplied by the DEFT to arrive at the adjusted standard error for the NHES:2016 design. For example, if a given parameter in a model involving items from the ECPP file has a weighted estimate of 2.33 and an unweighted simple random sample standard error of 0.45, then the adjusted standard error would be $1.38 \times 0.45 = 0.62$.

Alternatively, the final weight can be adjusted to reflect the DEFT before the parameter estimates are calculated in a standard statistical software package such as SAS or SPSS. To do this, first sum the values of the final weights for the sample of interest. For instance, for an analysis of all children enrolled in grades kindergarten through 12 (ALLGRADEX), sum the final weights for all 14,075 responding cases on the PFI file. Second, divide this sum by the number of cases to generate an average final weight. (In the preceding example, the number of cases is 14,075.) Third, multiply the average final weight by the square of the DEFT for the population of interest. (In the preceding example, the average final weight would be multiplied by the square of 1.59, or 2.54.) Fourth, divide the final weight by the adjusted average weight and save the quotient as a new final weight. (In the preceding example, the new final weight is equal to the final weight divided by the product of 2.54 and the average final weight.) Finally, weight the analysis by this new final weight. The standard errors generated in the analysis will approximate the standard errors correctly adjusted for design effects.

It should be noted that direct computation of the standard errors, rather than the approximation techniques outlined previously, is always recommended when the statistical significance of statements of difference would be affected by small differences in the estimated standard errors.

7.5 References

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Chapter 8. Data Considerations and Anomalies

The two main purposes of this chapter are (1) to bring the user's attention to certain data considerations and data anomalies of the Early Childhood Program Participation (ECPP) Survey, the Parent and Family Involvement in Education (PFI) Survey, and the Adult Training and Education Survey (ATES) of the National Household Education Surveys Program of 2016 (NHES:2016) and (2) to describe the nature of those considerations and anomalies. Furthermore, where appropriate, this chapter attempts to identify possible means of handling anomalies when analyzing the data. In most surveys, some real or apparent anomalies are observed, which may result from questionnaire design issues, outlier cases, variations in respondents' interpretations of the questions, or other factors. Those listed here were identified during the editing and review of these data and represent anomalies known at the time this manual was prepared. Other anomalies may exist in the data.

8.1 Data Considerations

Data considerations are unusual features of the data file of which users should be aware. In general, these are unusual features of the questionnaire, survey procedures, or data file conventions. NHES:2016 data considerations are documented here for the purpose of bringing them to the attention of analysts.

8.1.1 Change in Data Collection Mode from Prior Years

From 1991 to 2007, the NHES was conducted by telephone interviewers using list-assisted random-digit-dial and computer-assisted telephone interview (CATI) methodologies. After the 2007 collection, the NHES was redesigned to improve response rates and population coverage. The new NHES data collection methodology uses an address-based sample and self-administered surveys delivered and returned through the mail. In 2016, a small proportion of surveys were completed by web. Information on the current NHES:2016 sample design and data collection is presented in chapters 2 and 3, respectively. The mode change required revisions to item wording and may affect the comparability of estimates from NHES data from 1991 to 2007 with those from 2016. Data users should take the potential impact of the change in data collection mode into consideration when comparing estimates from the NHES:2016 with estimates from the CATI administration years.

8.1.2 Web Experiment

An experiment was conducted as part of NHES:2016 to evaluate response rates for a subsample of respondents who were asked to complete the screener and topical questionnaires via the Internet. Approximately 35,000 households were sampled for internet completion. The web questionnaires were the same as the paper and pencil versions but with a few differences: (1) Skip patterns were programmed and therefore not visible to the respondent; (2) the survey was “personalized” using respondent’s answers—for example, the name of the sampled child from the screener was “filled” in topical items as appropriate (for ECPP and PFI); license/certification names and certificate fields of study as entered by the respondent were “filled” in follow-up questions (for ATES); and (3) range checks were applied in the online survey tool. The web instruments also allowed the respondent to toggle back and forth as desired between English and Spanish; the transition from the household screener to the topical survey required a few transitional items (e.g., “Who is the person in this household who knows about [sampled child]’s care and education?”), and the web screener instrument also included questions asking for “your/sampled person’s” e-mail address “in case we need to contact you further.” Web and self-administered surveys were combined into the same datafile.

A mode effects analysis was conducted to assess the prevalence and the extent of selection effects (whether the respondents in each mode differed on the characteristics measured by key topical survey questions) and measurement effects (whether the response mode affected how individuals responded to those key topical survey questions). Some evidence of both types of effects was in the NHES:2016 data. However, the affected items were scattered throughout the topical questionnaires, the magnitude of most effects was small, and no clear patterns to the effects were found. Researchers interested in examining mode effects can use the derived variable MODECOMP to identify the mode by which each case completed the questionnaire.

8.1.3 Important Information About School-Level Derived Variables

Data about all public elementary and secondary schools are collected annually through the NCES Common Core of Data (CCD), and data about almost all private elementary and secondary schools are collected every 2 years through the NCES Private School Universe Survey (PSS). Data from these files were merged onto child records in NHES to provide information about the children’s schools. At the time that data from the CCD and PSS data files were merged with the NHES:2016 data, CCD data from the 2014–15 school year and PSS data from the 2013–14⁶⁶ school year were

⁶⁶ For a small number of PFI cases, the private school identified by the parent could not be matched to the 2013–14 PSS but could be matched to the 2011–12 PSS. For these cases, the school-level data on the file come from the 2011–12 PSS rather than the 2013–14 PSS. These cases are not identified so as to protect respondent privacy.

the most recent data available. The data from these years are the data included in the PFI data file. Because the NHES data collection took place during the 2015–16 school year, some of the school-level characteristic information extracted from the CCD or PSS data files and merged with NHES data may have changed. Therefore, data users might want to use the NCES School ID (SID), available in the PFI restricted-use data file, to merge the NHES data with data from more recent versions of the CCD and PSS data files, to re-create some of the school-level derived variables included in the data files.

8.1.4 Nonimputation of Common Core of Data and Private School Universe Survey Data

Unlike data from the NHES survey questionnaires, no imputation was performed for data from the CCD or PSS data files that were merged with the NHES data. Therefore, if any inapplicable or missing values in the variables were extracted from the CCD or PSS data files, they remained inapplicable or missing for the school-level derived variables after the data were merged with the NHES data. These are coded “-2 - Inapplicable in CCD file” or “-9 - Data are missing for school.” These could have been schools with no school membership (e.g., shared-time schools) or the result of school misreport or nonresponse. Users interested in identifying the reason for a CCD inapplicable code for a particular case would need to obtain the restricted-use data file, which contains the NCES SID, and match the school to CCD universe files for more information.

8.1.5 Household Composition Variables

Additional editing procedures were performed on household composition data collected in the NHES PFI and ECPP surveys to ensure greater consistency between screener and topical reported data. This includes the variable HHTOTALX, which is the total number of people living in the household. It also includes the individual relationship variables detailing how each household member relates to the sampled child: brothers (HHBROSX), sisters (HHSISSX), mothers (HHMOM), fathers (HHDAD), aunts (HHAUNTSX), uncles (HHUNCLSX), grandmothers (HHGMASX), grandfathers (HHGPASX), cousins (HHCSNSX), parent’s girlfriend/boyfriend/partner (HHPRTNRSX), other relatives (HHORELSX), and other nonrelatives (HHONRELSX), plus the sampled child. In cases where HHTOTALX did not equal the sum of the individual composition variables, two processes were used to address this inconsistency, depending on whether HHTOTALX was greater or less than the sum of the individual composition variables. In cases where HHTOTALX exceeded the sum of the individual composition variables, a new variable—HHUNID (unidentified household members)—was set to the difference so that analysts could see the number of household members that the respondent counted in the total that were not identified by type, such as brother, sister, or grandmother. In

cases where HHTOTALX was less than the sum of the individual composition variables, HHTOTALX was adjusted to equal the sum of these variables. HHTOTALX also was capped at 10 persons.⁶⁷

8.1.6 Missing Race Data for Hispanic Persons

In some cases, questionnaire data for the sampled person or one of the sampled child's parents indicated that the individual was Hispanic, but race was not marked. New variables (AHISPRM, CHISPRM, P1HISPRM, P2HISPRM for adult, child, parent 1, and parent 2, respectively) were created to define these individuals as "Hispanic—race not reported." These individuals have a value of "No" for the five race variables created from the questionnaire race item.

8.1.7 Age Considerations

All parent/guardian age variables have been top-coded at age 90, and the age when a parent/guardian first became a parent to any child has been bottom-coded at age 14 to protect respondent confidentiality. The ATES age was not top-coded because no one older than age 65 was eligible for the ATES. Some adults aged 66 appear in the data because these individuals turned 66 after sample selection and before their receipt of the topical survey.

Also, for some cases, the birth month and year provided for the child on the topical questionnaire made the case out of range for the specific survey or was later than the date at which the NHES questionnaire was received and processed. For these cases, the birth month and year collected on the screener questionnaire was examined, and the topical birth year was replaced with the screener birth year in cases when the topical data were clearly erroneous but the screener data appeared correct. For example, if a child's topical birth month and year on the PFI was 12/1946 and the screener birth month and year was 12/1996, the year of birth was revised to 1996. Another example is an ECPP case where the topical month and year of birth was recorded as 11/2016, which was after the close of data collection, but the screener month and year of birth was 11/2015. For a case such as this, 2016 was changed to 2015, and the month was retained.

8.1.8 Manual Imputation

For a small number of cases, imputation led to data inconsistencies. For these cases, manual imputation was used. This was done using a mean or mode value (i.e., the modal value of a specific

⁶⁷ If HHTOTALX was less than the sum of the individual composition variables, but the sum of the individual composition variables was greater than 10, HHTOTALX was retained, and the individual composition variables were blanked and imputed.

subgroup). Cases that were manually imputed were assigned an imputation flag value (F_<variable>) of “2.”

8.1.9 Duplicate Forms

Sometimes multiple questionnaires are received from the same household if a survey is completed during the time between when cases were identified as not having responded yet to the survey and the nonresponse follow-up with the household. For the screener questionnaire, the first form submitted was retained and used for topical sampling. For the topical questionnaire, duplicate completed forms were addressed by retaining the form that had the largest number of items completed. If all duplicates had the same number of items completed, the form with the earliest receipt date was retained; and if both had the same receipt date, the form to be retained was selected randomly. A small number of cases were selected for the web experiment that had completed both a web screener and a paper screener.⁶⁸ In this situation, the screener received first was retained. If the respondent also completed a topical questionnaire in the same mode as the retained screener, that topical version was retained as well. Also, a small number of cases completed both a web topical and a paper topical questionnaire. For these cases, the form was retained that was linked to the screener from which the topical respondent was sampled.

8.2 Data Anomalies

Data anomalies include responses out of the expected range and real or apparent inconsistencies in the data. The following anomalies are documented here for the purpose of bringing them to the analyst’s attention.

8.2.1 Mothers’ and Fathers’ Specific Relationships to Sampled Children

Several cases occurred where the detailed relationships of mothers and fathers to the subject children were unusual. For example, a child could be reported to have a birth mother and a foster father at home. Data users interested in detailed parent relationships should consider how to treat these cases in their analyses.

8.2.2 Age and Grade Mismatch for Sampled Children

The PFI file has some cases where age and grade do not appear to plausibly match. For example, a 12-year-old in 12th grade or a 17-year-old in 1st grade. In these cases, the inconsistent data

⁶⁸ This typically occurred because the respondent completed the screener by web after the paper questionnaire had already been mailed to the address then completed the mailed screener by paper.

reflected the respondent's answers and were, therefore, left as is. Analysts may wish to exclude age/grade outliers from analytic samples.

8.2.3 Parent Reports of Type of School Child Attends Versus School Classification

For 70 cases in the PFI data file, a parent reported that his or her child attended a public school (SCPUBPRI), whereas data from the CCD or PSS for the school identified by the parent (S16PBPV) indicated that the child attended a private school. Conversely, for 67 cases in the PFI data file, a parent reported that his or her child attended a private school (SCPUBPRI), whereas data from the CCD or PSS (S16PBPV) indicated that the child attended a public school. Reported data for these cases were not changed. These anomalies could have been caused by parent misreporting of the type of school that the child attends, misidentification of the school by the parent, erroneous matching to the CCD or PSS, problems with the school type data from either the CCD or PSS, or other unknown survey collection and post-processing factors.

8.2.4 Truncation of Write-In Text

Verbatim write-in text scanned from the paper forms was sometimes truncated by the scanner. The number of characters scanned varied depending on the data entry field but was not less than 80. Write-in text appears only on the restricted files, in truncated form.

8.2.5 Imputation of Second and Third ATES Certifications/Licenses

In the ATES, as a result of data editing, the imputation rate for variables about the characteristics of a person's second or third certification or license ranges from 22 percent to 37 percent. Analysts using these variables may wish to review the imputation flags prior to analysis. Information about item-missing data and item bias analyses can be found in Chapter 10.

Chapter 9. Guide to the Data File and Codebook

This chapter describes the content of the public-use and restricted-use data files constructed for the Early Childhood Program Participation (ECPP) Survey, the Parent and Family Involvement in Education (PFI) Survey, and the Adult Training and Education Survey (ATES) of the National Household Education Surveys Program of 2016 (NHES:2016). The ECPP file includes data from surveys completed by parents or guardians of 5,843 children between the ages of 0 and 6 who were not yet enrolled in kindergarten. The PFI file includes data from surveys completed by parents or guardians of 14,076 children and youth enrolled in kindergarten through 12th grade or homeschooled for these grades. The ATES file includes data from surveys completed by 47,744 adults ages 16 to 65 who are not in grade 12 or below. The ECPP, PFI, and ATES files contain data from all completed surveys. The ECPP and PFI files have one record for each child, the ATES file has one record for each adult. Only one person was sampled in each household; each record in NHES:2016 files represents one person from a unique household.

The files are organized so that logically related sets of variables are grouped together. The data items for the ECPP and PFI files are listed in the files in the following order: system variables, questionnaire item variables, child health variables, household and family composition variables, derived variables based on questionnaire items, Zip Code Tabulation Area (ZCTA) level variables, variables derived from CCD and PSS (PFI only), other operational and screener variables, weighting and variance estimation variables, and imputation flag variables. The data items for the ATES files are listed in the following order: system variables, questionnaire item variables, household composition variables, derived variables based on questionnaire items, ZCTA level variables, other operational and screener variables, weighting and variance estimation variables, and imputation flag variables. All variables that appear on the public-use data file also appear in the restricted-use data file; the restricted-use file contains additional variables, which are described below.

Lists of all the variables in the public-use and restricted-use ECPP, PFI, and ATES data files are in appendix B. The VARIABLE NAME column displays the unique identifier for each variable in the data file. The VARIABLE LABEL column displays a short description associated with the variable. The FORMAT column indicates if a variable has a numeric (“N”) or a character (“C”) format. The LENGTH column indicates the number of columns of data the variable spans on the ASCII data file. The position of the variable on the ASCII file is indicated in the START and END columns.

The value “-1” for any variable on the file indicates that a case was part of a legitimate skip and therefore not eligible for the variable. For example, if the respondent answered that the child was born in the United States (CPLCBRTH), the respondent would not be asked how old the child was when he or she first moved to the United States (CMOVEAGE), and that variable would contain a value of “-1” for the case. On the restricted use files, missing write-in (e.g., other, specify) variables were not imputed. For these variables, missing values were coded as “-9.”

The NHES public-use data files are provided free of charge and are available on the Internet at <http://nces.ed.gov/nhes>. They also will be made available online through the National Center for Education Statistics (NCES) Education Data Analysis Tool (EDAT) at <http://www.nces.ed.gov/edat>. A license is required to obtain the restricted-use data file. Go to the NCES website at <http://nces.ed.gov/pubsearch/licenses.asp> to learn more about obtaining a restricted-use license.

The subsequent sections of this chapter provide descriptions and values of the derived, appended, and recoded variables on the NHES:2016 data files. These are grouped by type. The questionnaire variables are not described here; the questionnaires, with variable names shown, can be found in appendix A. Additionally, all variables are listed in the data file layouts in appendix B. SAS code for all variables derived from questionnaire data, other than variables that are derived from write-in text, can be found in appendix I.

9.1 System Variables (All Files)

BASMINID is the 11-character ID number for each case.

RCVDATE is the date on which the topical questionnaire was received. This variable appears on the restricted-use data files only.

9.2 Child Health Variables (ECPP and PFI Files)

DISABLTYX indicates whether the sampled child has a disability, based on the items HDLEARNX, HDINTDIS, HDSPEECHX, HDDISTRBX, HDDEAFIMX, HDBLINDX, HDORTHOX, and HDOTHERX. It is not based on the items HDAUTISMX, HDPDDX, HDADDX, HDDELAYX, or HDTRBRAIN (items concerning autism, attention deficit disorder, pervasive developmental disorder, developmental delay, or traumatic brain injury).

The values for DISABLTYX are as follows:

- 1 = Currently has a disability
- 2 = Does not currently have a disability

DISBLTY2X indicates whether the sampled child has a disability based on all the items in the series HDLEARNX-HDOTHERX. It includes the variables from which DISABLTYX was derived, HDLEARNX, HDINTDIS, HDSPEECHX, HDDISTRBX, HDDEAFIMX, HDBLINDX, HDORTHOX, and HDOTHERX plus the additional items HDAUTISMX, HDADDX, HDPDDX, HDDELAYX, and HDTRBRAIN.

The values for DISBLTY2X are as follows:

- 1 = Currently has a disability
- 2 = Does not currently have a disability

9.3 Child, Household, and Family Variables (ECPP and PFI Files)

FOREADTOX (ECPP only) indicates how many times a parent or someone in their family read to the child in the past week. If the respondent marked the check box “Not at all” this variable was coded “0” else it was coded the number of times reported.

PAR1EDUC indicates the educational attainment of the child’s resident parent or guardian identified in the “Parent 1” section of the questionnaire. This variable was derived from P1EDUC. In 2012, cases who reported that their education was Some graduate work, no degree were classified as having a graduate degree for the derived variables. In 2016, this group was classified as having completed a bachelor’s degree and grouped as category 4 = “College graduate.”

The values of PAR1EDUC are as follows:

- 1 = Less than high school credential
- 2 = High school graduate or equivalent
- 3 = Vocational/technical education after high school or some college
- 4 = College graduate
- 5 = Graduate or professional school

PAR1EMPL indicates the employment status of the child's resident parent or guardian identified in the "Parent 1" section of the questionnaire. This variable was derived from P1EMPL, P1HRSWK, and P1LKWRK.

The values of PAR1EMPL are as follows:

- 1 = Working 35 hours or more per week
- 2 = Working less than 35 hours per week
- 3 = Looking for work
- 4 = Not in the labor force

PAR2EDUC indicates the educational attainment of the child's resident parent or guardian identified in the "Parent 2" section of the questionnaire. This variable was derived from P2GUARD and P2EDUC. In 2012, cases who reported that their education was Some graduate work, no degree were classified as having a graduate degree for the derived variables. In 2016, this group was classified as having completed a bachelor's degree and grouped as category 4 = "College graduate."

The values of PAR2EDUC are as follows:

- 1 = Less than high school credential
- 2 = High school graduate or equivalent
- 3 = Vocational/technical education after high school or some college
- 4 = College graduate
- 5 = Graduate or professional school
- 1 = No second parent/guardian identified for the subject child in the household

PAR2EMPL indicates the employment status of the child's resident parent or guardian identified in the "Parent 2" section of the questionnaire. This variable was derived from P2GUARD, P2EMPL, P2HRSWK, and P2LKWRK.

The values of PAR2EMPL are as follows:

- 1 = Working 35 hours or more per week
- 2 = Working less than 35 hours per week
- 3 = Looking for work

4 = Not in the labor force

-1 = No second parent/guardian identified for the subject child in the household

PAR1FTFY indicates if the resident parent identified in the “Parent 1” section of the questionnaire currently works full time and has worked 12 months during the past year. Although this measure has some limitations because it is not known if the parent was employed full time (35 hours per week or more) for the entire year, it is consistent with a measure created from the Current Population Survey (CPS) to classify parents as full-time, full-year labor force participants.⁶⁹ This variable was constructed using PAR1EMPL and P1MTHSWRK.

The values of PAR1FTFY are as follows:

1 = Full time and full year

2 = Less than full time or less than full year

3 = Not employed during past year

PAR2FTFY indicates if the resident parent identified in the “Parent 2” section of the questionnaire currently works full time and has worked 12 months during the past year. Although this measure has some limitations because it is not known if the parent was employed full time (35 hours per week or more) for the entire year, it is consistent with a measure created from the CPS to classify parents as full-time, full-year labor force participants.⁷⁰ This variable was constructed using P2GUARD, PAR2EMPL, and P2MTHSWRK.

The values for PAR2FTFY are as follows:

1 = Full time and full year

2 = Less than full time or less than full year

3 = Not employed during past year

-1 = No second parent/guardian identified for the subject child in the household

⁶⁹ Full-time year-round workers are defined as all people age 16 and older who usually worked 35 hours or more per week for 50 to 52 weeks in the past 12 months.

⁷⁰ Full-time year-round workers are defined as all people age 16 and older who usually worked 35 hours or more per week for 50 to 52 weeks in the past 12 months.

PAR1TYPE indicates whether the resident parent identified in the “Parent 1” section of the questionnaire is a birth, adoptive, step, or foster mother or father or a female or male guardian or partner of the parent of the subject child. This variable is derived from P1REL and P1SEX.

The values for PAR1TYPE are as follows:

- 1 = Birth or adoptive mother
- 2 = Birth or adoptive father
- 3 = Step or foster mother
- 4 = Step or foster father
- 5 = Grandmother or other female guardian
- 6 = Grandfather or other male guardian

PAR2TYPE indicates whether the resident parent identified in the “Parent 2” section of the questionnaire is a birth, adoptive, step, or foster mother or father or a female or male guardian or partner of the parent of the subject child. This variable is derived from P2GUARD, P2REL, and P2SEX.

The values for PAR2TYPE are as follows:

- 1 = Birth or adoptive mother
- 2 = Birth or adoptive father
- 3 = Step or foster mother
- 4 = Step or foster father
- 5 = Grandmother or other female guardian
- 6 = Grandfather or other male guardian
- 1 = No second parent/guardian identified for the subject child in the household

HHPARN16X designates the subject child’s parents or guardians who reside in the household. It denotes a two-parent family, a one-parent family, or a family with nonparent guardians. This measure was derived from PAR1TYPE and PAR2TYPE (both derived earlier). Households comprised of opposite-sex parents or same-sex parents or partners of parents are included in the two-parent household category in this derived variable (see the description for FAMILY16X).

The values for HHPARN16X are as follows:

- 1 = Mother (birth, adoptive, step, foster, or female partner of parent) and father (birth, adoptive, step, foster, or male partner of parent), or two same-sex parents
- 2 = Mother (birth, adoptive, step, or foster) only
- 3 = Father (birth, adoptive, step, or foster) only
- 4 = Nonparent guardian(s)

HHPARN16_BRD is new for 2016. This variable designates whether the subject child lives with two parents or guardians or a single parent/guardian. Two-parent households include those with same-sex partners, partners of parents, and guardians identified as parent figures.

The values for HHPARN16_BRD are as follows:

- 1 = Two parents or guardians
- 2 = Single parent or guardian

NUMSIBSX is a counter variable that indicates the total number of siblings with whom the sampled child lives. The responses to variables HHBROS and HHSISS are counted for this variable.

FAMILY16X consists of a set of family type categories using both parent and sibling information. It was created using HHPARN16X and NUMSIBSX, which are other derived variables. Nonparent guardians are included in the “other” category. Nonparent guardians are persons other than mothers and fathers (birth, adoptive, step, or foster, and same-sex parents or partners of parents), such as grandparents, aunts, or uncles. Households comprised of opposite-sex parents or same-sex parents or partners of parents are included in the two-parent household category in this derived variable (see the description for HHPARN16X).

The values for FAMILY16X are as follows:

- 1 = Two parents and sibling(s)
- 2 = Two parents, no sibling
- 3 = One parent and sibling(s)
- 4 = One parent, no sibling
- 5 = Other

FAMILY16_BRD is new for 2016. This variable consists of a set of family type categories using both parent and sibling information. It was created using P2GUARD and NUMSIBSX. The presence of a second parent or guardian in the household is included regardless of the parent/guardian's relationship to the child. This is created to be consistent with the education and employment derived variables that use education/employment information regardless of the parent/guardian's relationship to the child.

The values for FAMILY16_BRD are as follows:

- 1 = Two parents and sibling(s)
- 2 = Two parents, no sibling
- 3 = One parent and sibling(s)
- 4 = One parent, no sibling

HHUNDR6X is the counter-derived variable that indicates the number of household members younger than age 6. The variable is derived from age variables in the screener (AGE2015, HHMAGE1–HHMAGE9).

HHUNDR10X is the counter-derived variable that indicates the number of household members younger than age 10. The variable is derived from age variables in the screener (AGE2015, HHMAGE1–HHMAGE9).

HHUNDR16X is the counter-derived variable that indicates the number of household members younger than age 16. The variable is derived from age variables in the screener (AGE2015, HHMAGE1–HHMAGE9).

HHUNDR18X is the counter-derived variable that indicates the number of household members younger than age 18. The variable is derived from age variables in the screener (AGE2015, HHMAGE1–HHMAGE9).

LANGUAGEX indicates knowledge or use of English by the parent(s)/guardian(s) in the household. LANGUAGEX was created using the variables P1FRLNG, P1SPEAK, P2GUARD, P2FRLNG, and P2SPEAK. This variable is created the same way it was created in 2012, using the primary language reported for the individual(s) reported as the sampled child's parents/guardians, regardless of their relationship to the child. Prior to 2012, this variable was created using only the primary language of the child's mother(s) and father(s).

The values for LANGUAGEX are as follows:

- 1= Both/only parent(s) learned English first or currently speak(s) English in the home
- 2= One of two parents learned English first or currently speak English in the home
- 3= No parent learned English first, and both/only parent(s) currently speak(s) a non-English language in the home

PARGRADEX indicates the highest level of education for the subject child's parents or nonparent guardians who reside in the household. This measure was derived from PAR1EDUC and PAR2EDUC (derived earlier).

The values for PARGRADEX are as follows:

- 1 = Less than high school credential
- 2 = High school graduate or equivalent
- 3 = Vocational/technical education after high school or some college
- 4 = College graduate
- 5 = Graduate or professional school

PAR1MARST is new for 2016. This variable indicates the current marital status of Parent 1 using marital status (P1MRSTA) and whether the parent lives with a partner (P1BFGF)

The values for PAR1MARST are as follows:

- 1 = Now married
- 2 = Living with a partner
- 3 = Separated
- 4 = Divorced
- 5 = Widowed
- 6 = Never married

PAR2MARST is new for 2016. This variable indicates the current marital status of Parent 2 using marital status (P2MRSTA) and whether the parent lives with a partner (P2BFGF)

The values for PAR2MARST are as follows:

- 1 = Now married
- 2 = Living with a partner
- 3 = Separated
- 4 = Divorced
- 5 = Widowed
- 6 = Never married

AGE2015 is the age of the sampled child as of December 31, 2015.

CSEX is the sex of the sampled child.

The values of CSEX are as follows:

- 1 = Male
- 2 = Female

RACEETHN denotes both the race and ethnicity of the child. If the respondent designated the child's ethnicity as Hispanic, RACEETHN is Hispanic regardless of whether RACE was classified as White, Black, or another race. This measure was derived from CWHITE, CBLACK, CAMIND, CASIAN, CPACI, and CHISPAN.

The values for RACEETHN are as follows:

- 1 = White, non-Hispanic
- 2 = Black, non-Hispanic
- 3 = Hispanic
- 4 = All other races and multiple races, non-Hispanic

RACEETH2 indicates the race and ethnicity of the child with more detail than RACEETHN. Specifically, Asian/Pacific Islander origin is categorized separately in this derived variable. This measure was derived from CWHITE, CBLACK, CAMIND, CASIAN, CPACI, and CHISPAN.

The values for RACEETH2 are as follows:

- 1 = White, non-Hispanic
- 2 = Black, non-Hispanic
- 3 = Hispanic
- 4 = Asian or Pacific Islander, non-Hispanic
- 5 = All other races and multiple races, non-Hispanic

INTACC is new for 2016. This variable indicates whether the person has Internet access. It is derived from HVINTSPHO (cell phone access) and HVINTCOM (at home access).

The values for INTACC are as follows:

- 1 = Yes, at home and on a cell phone
- 2 = Yes, at home only
- 3 = Yes, on a cell phone only
- 4 = No

9.4 Derived ECPP-Specific Variables

ANYCARE indicates whether the child currently participates in any nonparental care or program arrangements. ANYCARE was created using the variables RCNOW, NCNOW, and CPNNOWX.

The values for ANYCARE are as follows:

- 1 = Currently participates in any care or program arrangement
- 2 = Does not currently participate in any care or program arrangement

ANYCARE2X indicates whether the child currently participates in any nonparental care or program arrangements at least once each week. ANYCARE2X was created using the variables RCWEEK, RCOTHC, NCWEEK, NCOTHC, CPWEEKX, and CPOTHC.

The values for ANYCARE2X are as follows:

- 1 = Currently participates in any care or program arrangement that occurs at least once each week
- 2 = Does not currently participate in any care or program arrangement that occurs at least once each week

CAREHOURX is the total number of hours per week spent in nonparental care arrangements or programs at least once per week. Children whose only arrangements take place less often than once per week are coded 0 hours on this variable, as are children in no care or program arrangements. CAREHOURX was derived for ECPP using RCHRS, RCTLHR, NCHRS, NCTLHR, CPHRS, and CPTLHR.

CPARRNEWX is a categorical variable that indicates the number of center-based program arrangements in which a sampled child participates at least once per week. CPARRNEWX is derived using CPWEEKX and CPOTHC.

The values for CPARRNEWX are as follows:

- 0 = Does not currently participate in a center-based care arrangement
- 1 = Currently participates in one center-based care arrangement
- 2 = Currently participates in two or more center-based care arrangements

MOSTHRSX indicates the primary nonparental care or program arrangement in which the child spends the most hours per week. Children whose only arrangements take place less often than once per week are coded 0 on this variable. MOSTHRSX was derived using RCWEEK, RCHRS, RCOTHC, RCTLHR, NCWEEK, NCHRS, NCOTHC, NCTLHR, CPWEEKX, CPHRS, CPOTHC, and CPTLHR. If the arrangement with the most hours was a relative or nonrelative care arrangement, RCPLACE and NCPLACE were used to determine whether the care took place in the child's home or another home.

The values for MOSTHRSX are as follows:

- 1 = Relative care in child's home
- 2 = Relative care in another home
- 3 = Nonrelative care in child's home
- 4 = Nonrelative care in another home
- 5 = Center-based program
- 6 = Equal hours in two or more types of care
- 1 = No nonparental care arrangement/program

NCARRNEWX is a categorical variable that indicates the number of nonrelative care arrangements in which a sampled child participates at least once per week. NCARRNEWX is derived using NCWEEK and NCOTHC.

The values for NCARRNEWX are as follows:

- 0 = Does not currently participate in nonrelative care arrangement
- 1 = Currently participates in one nonrelative care arrangement
- 2 = Currently participates in two or more nonrelative care arrangements

RCARRNEWX is a categorical variable that indicates the number of relative care arrangements in which a sampled child participates at least once per week. RCARRNEWX is derived using RCWEEK and RNCOTHC.

The values for RCARRNEWX are as follows:

- 0 = Does not currently participate in relative care arrangement
- 1 = Currently participates in one relative care arrangement
- 2 = Currently participates in two or more relative care arrangements

9.5 Derived PFI-Specific Variables

ALLGRADEX identifies the grade level of children in graded schools and the grade level equivalent for children in ungraded schools, in special education programs, or who are homeschooled. These values were derived from GRADE and GRADEEQ. For the variables GRADE and GRADEEQ, the PFI questionnaires collected information on the child's grade through a combination of checkboxes that denote type of kindergarten and a write-in for grade. These were collapsed into a single variable (GRADE for PFI-Enrolled and GRADEEQ for PFI-Homeschooled) at the start of data processing.

The values for ALLGRADEX are as follows:

- K = Kindergarten
- 1 = First grade or equivalent
- 2 = Second grade or equivalent
- 3 = Third grade or equivalent

- 4 = Fourth grade or equivalent
- 5 = Fifth grade or equivalent
- 6 = Sixth grade or equivalent
- 7 = Seventh grade or equivalent
- 8 = Eighth grade or equivalent
- 9 = Ninth grade or equivalent/freshman
- 10 = 10th grade or equivalent/sophomore
- 11 = 11th grade or equivalent/junior
- 12 = 12th grade or equivalent/senior

HMSCHLX is new for 2016. This variable combines information from the PFI–Homeschooled questionnaire and the PFI–Enrolled questionnaire to identify the homeschool status of school-aged children. Category 3 includes cases where a child was identified by a parent as a homeschooler, but the child is enrolled in a public or private school more than 25 hours per week or is homeschooled for the reason of temporary illness only. Category 3 also includes cases in which the child was identified as enrolled full-time in a public or private school.

The values for **HMSCHLX** are as follows:

- 1 = Child is homeschooled full time
- 2 = Child is homeschooled part time (in school 1–25 hours per week)
- 3 = Child is not homeschooled

9.5.1 Derived Variables from the Common Core of Data and Private School Universe Survey Data

The record for each child enrolled in school on the PFI file contains variables derived from the 2014–15 Common Core of Data (CCD) or the 2013–14 Private School Universe Survey (PSS).⁷¹ Children whose parent(s) received the homeschooled questionnaire have a value of “-1” for each of these variables.⁷² The code “-1” also is used for public school variables when the child attended a private school and vice versa. A code of “-2” is used when the CCD file indicated that the variable

⁷¹ For a small number of PFI cases, the child’s school could not be matched to the 2013–14 PSS database but could be found on the 2011–12 database. It is likely these schools were misreported as being “out of scope” for the 2013–14 PSS. For these cases, school data were appended from the 2011–12 PSS.

⁷² All students whose parent(s) completed the PFI–Homeschooled questionnaire and no students whose parent(s) completed the PFI–Enrolled questionnaire are considered homeschooled in the value labels for derived variables from the CCD/PSS. However, NCES considers some students whose parent(s) responded to the PFI–Enrolled questionnaire to be homeschoolers for analytic purposes. Use **HMSCHLX** to find such cases.

is not applicable for that student's particular school. NHES did not use any PSS data in derived variables for which inapplicable cases were present.

S16CHART classifies the public school the subject child attends as charter, magnet, or regular public school or other public school. All homeschooled and private school students were assigned a value of “-1” for this variable. The measure was derived from PATH (interview completion code), and CHARTER_TEXT, MAGNET_TEXT, & SCH_TYPE (variables from the CCD not on the NHES data files). Data for this variable are appended from the 2014–15 CCD.

The values for S16CHART are as follows:

- 1 = Charter school
- 2 = Magnet or regular public school
- 3 = Other public school
- 1 = Homeschooled or private school student
- 9 = Data are missing for school

S16NUMST categorizes the total number of students at the subject child's school. The measure was derived from PATH, MEMBER (a variable from the CCD not on the NHES data files), and NUMSTUDS (a variable from the PSS not on the NHES data files). A variable named NBRSTDNS was derived to indicate the number of students in the sampled child's school based on whether the sampled child is in a public school (MEMBER) or a private school (NUMSTUDS). The variable NBRSTDNS was then used to create the breakdowns listed here for the variable S16NUMST, although only the latter variable is on the NHES data files. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16NUMST are as follows:

- 1 = Under 300
- 2 = 300–599
- 3 = 600–999
- 4 = 1,000–2,499
- 5 = 2,500 or more
- 1 = Homeschooled student
- 2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

S16PBPV classifies the subject child's school as public or private. The measure was derived from PATH and a flag variable created to indicate whether data were extracted from the CCD data file or the PSS data file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16PBPV are as follows:

- 1 = Public (school is on CCD)
- 2 = Private (school is on PSS)
- 1 = Homeschooled student

S16TYPE classifies the type of school the subject child attends. Categories 1 through 3 pertain to private school students. All public school students were assigned a value of 4 for this variable. The measure was derived from PATH and RELIG (a variable from the PSS not on the NHES data files). Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16TYPE are as follows:

- 1 = Catholic
- 2 = Other religious
- 3 = Nonsectarian
- 4 = Public
- 1 = Homeschooled student
- 9 = Data are missing for school

SCHLGRAD classifies the type of school the subject child attends based on the highest and lowest grades in the school. Values for SLOW and SHIGH were obtained from the CCD/PSS data files (GSLO, LOGR2014 and GSBI, HIGR2014—variables not on the NHES data files) when matched with the NCES school ID for the student's school. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for SCHLGRAD are as follows:

- 1 = Early childhood programs [low grade nursery school (N), transitional kindergarten (T), kindergarten (K), prefirst grade (P); high grade N, T, K, P]
- 2 = Elementary school (low grade N, K, T, P, 1 to 3; high grade 1 to 8)
- 3 = Middle/junior high school (low grade 4 to 9; high grade 4 to 9)
- 4 = High school (low grade 7 to 12; high grade 10 to 12)
- 5 = Combined grades school
- 1 = Homeschooled student or school is ungraded
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

The following variables appear on the restricted-use file only:

SID is the NCES School ID. It identifies the public or private school at which the child is enrolled and can be linked to the CCD and PSS public data files.

S16SAMSX classifies the private school the subject child attends according to its coeducational status. All homeschooled and public school students were assigned a value of “-1” for this variable. The measure was derived from PATH and P335 (a variable from the PSS not on the NHES data files). Data for this variable are appended from the 2013–14 PSS for students.

The values for S16SAMSX are as follows:

- 1 = All male
- 2 = All female
- 3 = Co-ed
- 1 = Homeschooled or public school student
- 9 = Data are missing for school

S16TITL1 classifies the public school the subject child attends according to whether it operates a schoolwide Title I program. All homeschooled and private school students were assigned a value of “-1” for this variable. The measure was derived from PATH and STITLEI (a variable from the CCD not on the NHES data files). Data for this variable are appended from the 2014–15 CCD.

The values for S16TITL1 are as follows:

- 1 = Yes
- 2 = No
- 1 = Homeschooled or private school student
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16CENRG classifies the school location into census region using Federal Information Processing Standards (FIPS) codes to establish the regions. The measure was derived from FIPST, LSTATE, and REGION (variables indicating the FIPS/state code of the school extracted from the CCD and PSS not on the NHES data file). Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16CENRG are as follows:

- 1 = Northeast
- 2 = South
- 3 = Midwest
- 4 = West
- 1 = Homeschooled student
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16FRRDL categorizes the public school the subject child attends according to the percentage of students eligible for free or reduced-price lunch. All homeschooled and private school students were assigned a value of “-1” for this variable. The measure was derived from PATH, TOTFRL, and MEMBER (variables from the CCD not on the NHES data file). A variable named PCTFRRDL was calculated by dividing TOTFRL by MEMBER. The variable PCTFRRDL was then used to create the percentage breakdowns listed here for the variable S16FRRDL, although only the latter variable is on the NHES data file and appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD.

The values for S16FRRDL are as follows:

- 1 = Fewer than 1 percent
- 2 = 1 percent to fewer than 5 percent
- 3 = 5 percent to fewer than 25 percent

- 4 = 25 percent or more
- 1 = Homeschooled or private school student
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16FTET categorizes the total number of employed teachers at the subject child's school, as measured by full-time equivalents (FTE). The measure was derived from PATH, FTE (a variable from the CCD not on the NHES data file), and NUMTEACH (a variable from the PSS not on the NHES data file). A variable named NBRTCHRS was derived to indicate the number of employed teachers, measured by FTE, in the sampled child's school based on whether the sampled child is in a public school (FTE) or a private school (NUMTEACH). The variable NBRTCHRS was then used to create the breakdowns, by quartiles, listed here for the variable S16FTET, although only the latter variable is on the NHES data file and appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16FTET are as follows:

- 1 = Under 28.5
- 2 = 28.5 to fewer than 43.2
- 3 = 43.2 to fewer than 70
- 4 = 70 or more
- 1 = Homeschooled student
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16HASG4 classifies the school the subject child attends according to whether it has grade 4. The measure was derived from PATH, G4OFFERED (a variable from the CCD not on the NHES data file), and P215 (a variable from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16HASG4 are as follows:

- 1 = Yes
- 2 = No
- 1 = Homeschooled student or school is ungraded

- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16HASG8 classifies the school the subject child attends according to whether it has grade 8. The measure was derived from PATH, G8OFFERED (a variable from the CCD not on the NHES data file), and P255 (a variable from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16HASG8 are as follows:

- 1 = Yes
- 2 = No
- 1 = Homeschooled student or school is ungraded
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16HASG12 classifies the school the subject child attends according to whether it has grade 12. The measure was derived from PATH, G12OFFERED (a variable from the CCD not on the NHES data file), and P295 (variables from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16HASG12 are as follows:

- 1 = Yes
- 2 = No
- 1 = Homeschooled student or school is ungraded
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16HASGK classifies the school the subject child attends according to whether it has kindergarten. The measure was derived from PATH, KGOFFERED (a variable from the CCD not on the NHES data file), and P155 and P165 (variables from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16HASGK are as follows:

1 = Yes

2 = No

-1 = Homeschooled student or school is ungraded

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

S16LOCL classifies the ZIP code of the subject child's school by community type. The measure was derived from PATH, LOCALE (a variable from the CCD not on the NHES data file), and ULOCALE14 (a variable from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16LOCL are as follows:

11 = Large city

12 = Midsize city

13 = Small city

21 = Large suburb

22 = Midsize suburb

23 = Small suburb

31 = Fringe town

32 = Distant town

33 = Remote town

41 = Fringe rural

42 = Distant rural

43 = Remote rural

-1 = Homeschooled student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

S16MAGN classifies the public school the subject child attends as a magnet or nonmagnet school. All homeschooled and private school students were assigned a value of “-1” for this variable. The measure was derived from PATH and MAGNET_TEXT (a variable from the CCD not on the

NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD.

The values for S16MAGN are as follows:

- 1 = Yes
- 2 = No
- 1 = Homeschooled or private school student
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16PBTYP classifies the public school the subject child attends by type. All homeschooled and private school students were assigned a value of “-1” for this variable. The measure was derived from PATH and SCH_TYPE (a variable from the CCD not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD.

The values for S16PBTYP are as follows:

- 1 = Regular school
- 2 = Special education school
- 3 = Vocational school
- 4 = Other/alternative
- 1 = Homeschooled or private school student
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16PCTB categorizes the school the subject child attends according to the percentage of students who are Black/African American, non-Hispanic. The measure was derived from PATH, BL and MEMBER (variables from the CCD not on the NHES data file), and P_BLACK (a variable from the PSS not on the NHES data file). A variable named PCTBLACK was calculated for CCD schools by dividing BLACK by MEMBER. The variables PCTBLACK (for CCD schools) and P_BLACK (for PSS schools) were then used to create the percentage breakdowns listed here for the variable S16PCTB, although only the latter variable is on the NHES data file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16PCTB are as follows:

- 1 = Fewer than 1 percent
- 2 = 1 percent to fewer than 5 percent
- 3 = 5 percent to fewer than 25 percent
- 4 = 25 percent or more
- 1 = Homeschooled student
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16PCTH categorizes the school the subject child attends according to the percentage of students who are Hispanic of any race. The measure was derived from PATH, HI and MEMBER (variables from the CCD not on the NHES data file), and P_HISP (a variable from the PSS not on the NHES data file). A variable named PCTHISP was calculated for CCD schools by dividing HISP by MEMBER. The variables PCTHISP (for CCD schools) and P_HISP (for PSS schools) were then used to create the percentage breakdowns listed here for the variable S16PCTH, although only the latter variable is on the NHES data file. S16PCTH appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16PCTH are as follows:

- 1 = Fewer than 1 percent
- 2 = 1 percent to fewer than 5 percent
- 3 = 5 percent to fewer than 25 percent
- 4 = 25 percent or more
- 1 = Homeschooled student
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

S16PVTYP classifies the private school the subject child attends by type. All homeschooled and public school students were assigned a value of “-1” for this variable. The measure was derived from PATH and P415 (a variable from the PSS not on the NHES data file). S16PVTYP appears only on the restricted file. Data for this variable are appended from the 2013–14 PSS.

The values for S16PVTYP are as follows:

- 1 = Regular elementary or secondary
- 2 = Montessori
- 3 = Special program emphasis
- 4 = Special education
- 6 = Alternative
- 7 = Early childhood program/day care center
- 1 = Homeschooled or public school student
- 9 = Data are missing for school

S16S_TRT categorizes the student–teacher FTE ratio at the subject child’s school. The measure was derived from PATH, MEMBER, FTE (a variable from the CCD not on the NHES data file), and STTCH_RT (a variable from the PSS not on the NHES data file). A variable named ST_RATIO was derived to indicate the student–teacher FTE ratio in the sampled child’s school based on whether the sampled child is in a public school (MEMBER/FTE) or a private school (STTCH_RT). The variable ST_RATIO was then used to create the breakdowns, by quartiles, listed here for the variable S16S_TRT, although only the latter variable is on the NHES data file. S16S_TRT appears only on the restricted file. Data for this variable are appended from the 2014–15 CCD for students in public school and from the 2013–14 PSS for students in private school.

The values for S16S_TRT are as follows:

- 1 = Under 13.8
- 2 = 13.8 to fewer than 15.8
- 3 = 15.8 to fewer than 18.1
- 4 = 18.1 or more
- 1 = Homeschooled student
- 2 = Inapplicable in the CCD universe file
- 9 = Data are missing for school

NEW_SCHL indicates schools that were listed on the CCD frame as being new as of the 2014–15 school year but did not have other data needed for creating other school-level derived variables. It appears only on the restricted file.

The values for NEW_SCHL are as follows:

0 = No

1 = Yes

-1= Homeschooled, private school student

9.6 Derived ATES-Specific Variables

EDUC indicates the sampled person's educational attainment. This variable was derived from EDUATTN, and groups respondents into six categories.

The values for EDUC are as follows:

1 = Less than high school diploma

2 = High school credential

3 = Some college but no degree

4 = Associate's degree (AA or AS)

5 = Bachelor's degree (BA or BS)

6 = Graduate or professional school

EDUC2 indicates the sampled person's educational attainment. This variable was derived from EDUATTN and groups respondents into three categories.

The values for EDUC2 are as follows:

1 = High school credential or less

2 = Some college but no bachelor's degree

3 = Bachelor's degree (BA or BS) or higher

WKSTATUS indicates the sampled person's employment status. This variable is derived from EEFTJOB, EEPTJOB, and EEL4WKS. If a respondent reported that they were currently employed, but did not report having a full-time or part-time job, they were classified as having an unknown employment status.

The values for WKSTATUS are as follows:

1 = Working 35 hours or more per week

2 = Working less than 35 hours per week

- 3 = Looking for work
- 4 = Not in the labor force
- 5 = Unknown

FTFY indicates if the sampled person works full-time, year-round—that is, if the person currently works full time and has worked 12 months during the past year.⁷³ This variable is derived from EEWKS, EEHRS, and EELWRK.

The values for FTFY are as follows:

- 1 = Full time and full year
- 2 = Less than full time or less than full year
- 3 = Not employed during past year

RACEETHN denotes both the race and ethnicity of the sampled person. If the designated ethnicity is Hispanic, RACEETHN is Hispanic regardless of whether RACE was classified as White, Black, or another race. This measure was derived from XXRACE_AMIND, XXRACE_ASIAN, XXRACE_BLACK, XXRACE_PACI, XXRACE_WHITE, and XXRACE_HISP.

The values for RACEETHN are as follows:

- 1 = White, non-Hispanic
- 2 = Black, non-Hispanic
- 3 = Hispanic
- 4 = All other races and multiple races, non-Hispanic

RACEETH2 indicates the race and ethnicity of the sampled person with more detail than RACEETHN. Specifically, Asian/Pacific Islander origin is categorized separately in this derived variable. This measure was derived from XXRACE_AMIND, XXRACE_ASIAN, XXRACE_BLACK, XXRACE_PACI, XXRACE_WHITE, and XXRACE_HISP.

The values for RACEETH2 are as follows:

⁷³ Full-time year-round workers are defined as respondents who usually worked 35 hours or more per week for 50 to 52 weeks in the past 12 months.

- 1 = White, non-Hispanic
- 2 = Black, non-Hispanic
- 3 = Hispanic
- 4 = Asian or Pacific Islander, non-Hispanic
- 5 = All other races and multiple races, non-Hispanic

AGECAT indicates the age category of the respondent. It is derived from XXAGE.

The values for AGECAT are as follows:

- 1 = ages 16 to 24
- 2 = ages 25 to 34
- 3 = ages 35 to 44
- 4 = ages 45 to 54
- 5 = ages 55 to 65

INTACC indicates whether the person has Internet access. It is derived from HVINTSPHO (cell phone access) and HVINTCOM (at home access).

The values for INTACC are as follows:

- 1 = Yes, at home and on a cell phone
- 2 = Yes, at home only
- 3 = Yes, on a cell phone only
- 4 = No

MARRIED indicates the person's current marital status using XXMARIT and XXBFGF.

The values for MARRIED are as follows:

- 1 = Now married
- 2 = Living with a partner
- 3 = Separated
- 4 = Divorced
- 5 = Widowed
- 6 = Never married

CTLEVEL indicates whether the person has a postsecondary program certificate at the subbaccalaureate level or at the baccalaureate or higher level (i.e., a postbaccalaureate certificate). It is derived from CERTPROG and LCENROLL.

The values for CTLEVEL are as follows:

1 = subbaccalaureate certificate

2 = postbaccalaureate certificate

APPRENT indicates whether the person completed a “classic” apprenticeship program (with training wage, on-the-job instruction, and classroom instruction). It is derived from WEFLOP, WEWAGE, WEPRP_INSTR, WEPRP_COLLG, and WEPRP_TRAIN.

The values for APPRENT are as follows:

1 = Yes

2 = No

UNDEREMP indicates whether the person is underemployed, based on nonpreferred part-time or temporary work status. It is derived from EEPTJOB, EEPREFPT, EEPOSIT, and EEPERM.

The values for UNDEREMP are as follows:

1 = Yes

2 = No

9.7 Occupation, Industry, and Manually Coded ATES-Specific Variables

EMPOCC is the sampled person’s occupation field and is derived from EECOMP, EEWHOW, EEMPLO, EEWRKW, and EEDUTIESW. Responses were coded into occupation fields based on the 2015 American Community Survey (ACS) Public Use Microdata Sample (PUMS) occupation code list. The ATES occupation field coding practices were based on the methodology used to code the ACS but were not identical. Specific differences include the following: (1) ATES used a shortened version of the “class of work” question that is used in ACS (ATES item EEMPLO), and ATES did

not include a second close-ended question on industry as is used in ACS⁷⁴; (2) military codes were collapsed to a single code, 9840, and (3) cases that did not provide sufficient information to categorize their occupation or industry were coded as 9990. A full list of ACS occupation codes is provided in the 2015 ACS code list, which is available from the Census.gov website at https://www2.census.gov/programs-surveys/acs/tech_docs/code_lists/2015_ACS_Code_Lists.pdf.

EMPIND is the sampled person's industry and is derived from EECOMP, EEWHOW, EEMPL0, EEWRKW, and EEDUTIESW. Responses were coded into industry fields based on the 2015 ACS PUMS industry code list. The ATES industry coding practices were based on the methodology used to code the ACS but were not identical. Specific differences include the following: (1) The ATES questionnaire included the "industry" write-in question but not the second close-ended "industry type" question that is included in the ACS questionnaire; (2) military codes are collapsed to a single code, 9840, and (3) cases that did not provide sufficient information to categorize their industry were coded as 9990. A full list of ACS industry codes are provided in the 2015 ACS code list, which is available from the Census.gov website at https://www2.census.gov/programs-surveys/acs/tech_docs/code_lists/2015_ACS_Code_Lists.pdf

CNFIELD1, CNFIELD2, and CNFIELD3 indicate the field of the sampled person's first, second, or third reported certification or license. These variables were derived from CNSUBJ1, CNSUBJ2, CNSUBJ3, CNNAME1W, CNNAME2W, and CNNAME3W. See appendix J for more detail.

The values for CNFIELD1, CNFIELD2, and CNFIELD3 are as follows:

- 1 = Architecture
- 2 = Engineering
- 3 = Computer and information technology
- 4 = Other science and mathematics
- 5 = Accounting
- 6 = Other business
- 7 = Finance and insurance
- 8 = Real estate
- 9 = Basic life support
- 10 = Health practitioner or provider other than nursing

⁷⁴ In the Census Bureau occupation coding process, the class-of-work and close-ended industry questions are sometimes (but not often) used to help determine an occupation code.

- 11 = Nursing
- 12 = Other health care
- 13 = Cosmetology
- 14 = Child care
- 15 = Other personal care and services
- 16 = Law and legal support
- 17 = Public safety
- 18 = Social work and counseling
- 19 = Environmental, water, and food safety
- 20 = Other public and social services
- 21 = K–12 teaching
- 22 = Other instruction and training
- 23 = Construction
- 24 = Vehicle maintenance, installation, and repair
- 25 = Transportation and materials moving
- 26 = Other trades
- 28 = Other fields
- 1 = Valid skip
- 8 = Uncodable response
- 9 = Invalid missing

CNFIELDCAT1, CNFIELDCAT2, and CNFIELDCAT3 indicate the collapsed field of the sampled person's first, second, or third reported certification or license. These variables were derived from CNFIELD1, CNFIELD2, and CNFIELD3.

The values for CNFIELDCAT1, CNFIELDCAT2, and CNFIELDCAT3 are as follows:

- 1 = Science, engineering, and mathematics
- 2 = Business
- 3 = Finance, insurance, and real estate
- 4 = Health care
- 5 = Personal care and services
- 6 = Public and social services
- 7 = Teaching and instruction
- 8 = Trades
- 9 = Other fields

- 1 = Valid skip
- 8 = Uncodable response
- 9 = Invalid missing

CNINVALID1, CNINVALID2, and CNINVALID3 indicate if a reported certification or license was potentially invalid, as an aid to analysts who may wish to exclude potentially invalid certifications or licenses. A reported certification or license received an invalid flag if the respondent reported in the credential name or subject write-in fields that he or she did not have a credential or reported a foreign credential, an ID or work card, a personal or business credential, an educational credential, or a company certificate or designation.

The values for **CNINVALID1, CNINVALID2, and CNINVALID3** are as follows:

- 0 = Not flagged as invalid
- 1 = Flagged as invalid
- 1 = Valid skip
- 9 = Invalid missing

LASTPSCER indicates the type of institution that provided the respondent's educational certificate. It was recoded from the questionnaire. The response categories "A community college"; "A vocational, technical, trade, or business school;" and "Another college or university" were combined into a single category, and the response category "Someplace else" was retained.

The recoded values for LASTPSCER are as follows:

- 1 = A community college, vocational school, college, or university
- 2 = Someplace else

9.8 ZCTA-Level Variables

These variables provide information on the characteristics of the zip code tabulation area (ZCTA) in which the respondent's household is located, using data from the 2011–2015 ACS 5-year files. Unless noted otherwise below, these variables were appended to all of the datafiles.

CENREG identifies the census region of the household. This variable was drawn from the household address as provided on the sampling frame.

The values for CENREG are as follows:

- 1 = Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont)
- 2 = South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia)
- 3 = Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin)
- 4 = West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming)

ZIP18PO2 is a variable that categorizes the percentage of families in the sampled person's ZCTA that have children under age 18 and had incomes in the 2011–2015 ACS below the poverty line. This variable is included only on the ECPP and PFI data files. Data for this variable are appended from the 2011–2015 ACS.

The values for ZIP18PO2 are as follows:

- 1 = Less than 5 percent
- 2 = 5 percent to 9 percent
- 3 = 10 percent to 19 percent
- 4 = 20 percent or more

ZIPPO2 is a variable that categories the percentage of families in the sampled person's ZCTA who had incomes in the 2011–2015 ACS below the poverty line. This variable is included only on the ATES data file. Data for this variable are appended from the 2011–2015 ACS.

The values for ZIPPO2 are as follows:

- 1 = Less than 5 percent
- 2 = 5 percent to 9 percent
- 3 = 10 percent to 19 percent
- 4 = 20 percent or more

ZIPBLHI2 is a variable that categorizes the percentage of persons in the sampled person's ZCTA in the 2011–2015 ACS who were Black or Hispanic. Data for this variable are appended from the 2011–2015 ACS.

The values for ZIPBLHI2 are as follows:

- 1 = Less than 6 percent
- 2 = 6 percent to 15 percent
- 3 = 16 percent to 40 percent
- 4 = 41 percent or more

ZIPLOCL is a locale variable that classifies the sampled person's ZCTA into a set of community types. This variable was derived using the respondent's ZCTA and Census data (Geverdt 2015).

The values for ZIPLOCL are as follows:

- 11 = Large city
- 12 = Midsize city
- 13 = Small city
- 21 = Large suburb
- 22 = Midsize suburb
- 23 = Small suburb
- 31 = Fringe town
- 32 = Distant town
- 33 = Remote town
- 41 = Fringe rural
- 42 = Distant rural
- 43 = Remote rural

The following variables appear on the restricted-use file only.

ZCTA identifies the ZCTA in which the sampled person resides. Data for this variable are appended from the 2011–2015 ACS.

BLHISCNT indicates the number of persons in the sampled person's ZCTA who were of Hispanic origin or Black or African American alone in the 2011–2015 ACS. This variable was derived from P007004 and P007010. Data for this variable are appended from the 2011–2015 ACS.

FAM18POV indicates the number of families in the sampled person's ZCTA with related children under age 18 and income in the 2011–2015 ACS below the poverty level. This variable was derived from P090004, P090011, and P090017 and appears only on the restricted ECPP and PFI files only. Data for this variable are appended from the 2011–2015 ACS.

FAMPOV indicates the number of families in the sampled person's ZCTA with income in the 2011–2015 ACS below the poverty level. This variable was derived from P090003, P090010, and P090016 and appears on the restricted ATES file only. Data for this variable are appended from the 2011–2015 ACS.

PCT18POV indicates the percentage of families in the sampled person's ZCTA with related children under age 18 and income in the 2011–2015 ACS below the poverty level. This variable was derived from P090001 and FAM18POV and appears only on the restricted ECPP and PFI files only. Data for this variable are appended from the 2011–2015 ACS.

PCTPOV indicates the percentage of families in the sampled person's ZCTA with income in the 2011–2015 ACS below the poverty level. This variable was derived from P090001 and FAMPOV and appears only on the restricted ATES file. Data for this variable are appended from the 2011–2015 ACS.

PCTBLHIS indicates the percentage of persons in the sampled person's ZCTA who were of Hispanic origin or Black or African American alone. This variable was derived from P007001 and BLHISCNT and appears only on the restricted file. Data for this variable are appended from the 2011–2015 ACS.

REGION indicates the region of the country in which the household is located. It was derived from the sampled person's state and is based on the U.S. Department of Education's classification system for regions. REGION appears only on the restricted file.

The values for REGION are as follows:

- 1 = Northeast (Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont)
- 2 = Southeast (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia)
- 3 = Central (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin)
- 4 = West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington, and Wyoming)

RSTATE is the state in which the sampled person resides. The variable was obtained from the sampling frame and was based on the respondent's ZIP code and appears only on the restricted file.

P005003 indicates the number of persons in the sampled person's ZCTA who live in urbanized areas. The Census Bureau defines an urbanized area as comprising a central place(s) and the adjacent territory that together have a general population density of at least 1,000 people per square mile of land area and a minimum population of 50,000 people. ZCTA-level data were appended from the 2010 Decennial Census Summary File 1 (SF1). This variable appears only on the restricted file.

P005004 indicates the number of persons in the sampled person's ZCTA who live in urban clusters. The Census Bureau defines an urban cluster as densely settled territory that has at least 2,500 people but fewer than 50,000. ZCTA-level data were appended from the 2010 Decennial Census SF1. This variable appears only on the restricted file.

P005005 indicates the number of persons in the sampled person's ZCTA who live in rural areas. ZCTA-level data were appended from the 2010 Decennial Census SF1. This variable appears only on the restricted file.

P007001 indicates the total number of persons in the sampled person's ZCTA in the 2011–2015 ACS. It appears only on the restricted file. Data for this variable are appended from the 2011–2015 ACS.

P007004 indicates the number of persons in the sampled person's ZCTA in the 2011–2015 ACS who were Black or African American and have no Hispanic origins. It appears only on the restricted file. Data for this variable are appended from the 2011–2015 ACS.

P007010 indicates the number of persons in the sampled person's ZCTA in the 2011–2015 ACS who were of Hispanic or Latino origin. It appears only on the restricted file. Data for this variable are appended from the 2011–2015 ACS.

P090001 indicates the total number of families in the sampled person's ZCTA in the 2011–2015 ACS. It appears only on the restricted file. Data for this variable are appended from the 2011–2015 ACS.

P090003 indicates the number of married-couple families in the sampled person's ZCTA living below the poverty line in the 2011–2015 ACS. It appears only on the restricted ATES file. Data for this variable are appended from the 2011–2015 ACS.

P090004 indicates the number of married-couple families in the sampled person's ZCTA living below the poverty line in the 2011–2015 ACS and who had related children under age 18. It appears only on the restricted ECPP and PFI files. Data for this variable are appended from the 2011–2015 ACS.

P090010 indicates the number of families in the sampled person's ZCTA living below the poverty line in the 2011–2015 ACS that were headed by males and had no wife present. It appears only on the restricted ATES file. Data for this variable are appended from the 2011–2015 ACS.

P090011 indicates the number of families in the sampled person's ZCTA living below the poverty line in the 2011–2015 ACS that were headed by males, with no wife present, and had related children under age 18. It appears only on the restricted ECPP and PFI files. Data for this variable are appended from the 2011–2015 ACS.

P090016 indicates the number of families in the sampled person's ZCTA living below the poverty line in the 2011–2015 ACS that were headed by females and had no husband present. It appears only on the restricted ATES file. Data for this variable are appended from the 2011–2015 ACS.

P090017 indicates the number of families in the sampled person's ZIP code living below the poverty line in the 2011–2015 ACS, that were headed by females, with no husband present, and

had related children under age 18. It appears only on the restricted ECPP and PFI files. Data for this variable are appended from the 2011–2015 ACS.

9.9 Other Derived, Operational, and Screener Variables (All Files)

PATH indicates whether the sampled person was an adult not enrolled in grade 12 or below; a child enrolled in high school, middle school, or elementary school; a child homeschooled for any of grades K–12; a preschooler; or an infant. Note: Analysts interested in which PFI questionnaire was completed should use the QTYPE variable.

The values for PATH are as follows:

A = Adult (ages 16 to 65 and not enrolled in grade 12 or below)

S = Senior high (grade = 9, 10, 11, or 12 and enrolled in public/private school)

M = Middle school (grade = 6, 7, or 8 and enrolled in public/private school)

E = Elementary school (grade = K, 1, 2, 3, 4, or 5 and enrolled in public/private school)

H = Homeschooler (grade equivalent K–12)

N = Preschool (AGE2015 = 3 to 6 and not enrolled in school)

I = Infant (AGE2015 = 0, 1, or 2)

QTYPE identifies whether a parent respondent received the PFI–Homeschooled questionnaire or the PFI–Enrolled questionnaire. This variable appears only on the PFI data file.

The values for QTYPE are as follows:

1 = PFI-Homeschooled

2 = PFI-Enrolled in school

ENGLSPANX indicates (1) whether the topical mail questionnaire was completed in English or Spanish, and (2) if the questionnaire was completed on the Web, whether the last item was completed in English or Spanish.

The values for ENGLSPAN are as follows:

1 = Questionnaire was completed in English

2 = Questionnaire was completed in Spanish

MODECOMP is new for 2016. This variable indicates whether the questionnaire was completed on the Web or on paper.

The values for MODECOMP are as follows:

- 1 = Questionnaire was completed on the Web
- 2 = Questionnaire was completed on paper

HHMAGE1 to HHMAGE9 are new for 2016. These variables indicate the age in years of the nonsampled members of the household as of December 31, 2015, based on the household screener-reported data for up to nine household members.

HHMSEX1 to HHMSEX9 are new for 2016. These variables indicate the sex of the nonsampled members of the household based on the household screener-reported data for up to nine household members.

The values of HHMSEX1 to HHMSEX9 are as follows:

- 1 = Male
- 2 = Female
- 1 = Legitimate Skip
- 9 = Missing

HHMENRL1 to HHMENRL9 are new for 2016. These variables indicate the school enrollment status of the nonsampled members of the household based on the household screener-reported data for up to nine household members.

The values of HHMENRL1 to HHMENRL9 are as follows:

- 1 = Homeschooled instead of attending a public or private school for some or all classes
- 2 = Public or private school, or preschool
- 3 = College, university, or vocational school
- 4 = Not in school
- 1 = Legitimate Skip
- 9 = Missing

HHMGRD1 to **HHMGRD9** are new for 2016. These variables indicate the grade of the nonsampled members of the household based on the household screener-reported data for up to nine household members.

The values of HHMGRD1 to HHMGRD9 are as follows:

- 1 = Preschool
- 2 = Kindergarten
- 3 = 1st grade
- 4 = 2nd grade
- 5 = 3rd grade
- 6 = 4th grade
- 7 = 5th grade
- 8 = 6th grade
- 9 = 7th grade
- 10 = 8th grade
- 11 = 9th grade
- 12 = 10th grade
- 13 = 11th grade
- 14 = 12th grade
- 15 = College
- 16 = None of these
- 1 = Legitimate Skip
- 9 = Missing

9.10 Weighting and Variance Estimation Variables

The full weight variables in the NHES:2016 data files are FAWT (ATES), FEWT (ECPP), and FPWT (PFI). These variables should be used to weight estimates computed from the data files. These weights contain all adjustments for the probabilities of selection, nonresponse, and undercoverage as described in chapter 9 of this manual. The restricted-use files also contain a base weight (UPW), which is described further in chapter 9.

The 80 replicate weights, FAWT1 to FAWT80 (ATES), FEWT1 to FEWT80 (ECPP), and FPWT1 to FPWT80 (PFI), are replicate weights that can be used by various statistical software packages, such as SUDAAN, Stata, and AM, to produce estimates of the sampling errors of the estimates. More details on how the replicate weights were created and how they can be used are given in chapter 9.

9.11 Imputation Flag Variables

Item nonresponse occurred when some but not all the responses were missing from a case. To facilitate analyses of the NHES:2016 data, the missing data were imputed, that is, obtained from a donor case using statistical procedures. For each variable with imputed data on the NHES public-use and restricted-use data files, an imputation flag variable was created; this flag can be used to identify the variables with imputed values. Chapter 6 discusses the meaning of values assigned to the imputation flags.

The naming convention for the imputation flag variables is to add “F_” to the beginning of the name of each variable. For example, the imputation flag for CSEX is F_CSEX. The imputation flags appear on the file in the same order as the variables to which they refer.

9.12 Numeric and Character Variables

All the variables in the NHES:2016 public-use data files have numeric formats except for BASMID, PATH, ALLGRADEX, ZIPLOCL, and HSMOSTX.

The NHES:2016 restricted-use data files also include character variables for write-in responses for items including; the field of the sampled person’s certifications and licenses, the name of the sampled person’s certifications or licenses, the language spoken in the home, each family member’s relationship to the sampled child, and the sampled person’s country or territory of birth. All “other, specify” write-in string variables are also character variables. Finally, the variables RCVDATE, RSTATE, SID, S16LOCL, and ZCTA also are character variables, and are included only on the restricted-use data file.

9.13 References

- Geverdt, D. (2015). *Education Demographic and Geographic Estimates Program (EDGE): Locale Boundaries User's Manual*. (NCES 2016-012). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved March 31, 2017, from https://nces.ed.gov/programs/edge/docs/NCES_LOCALE_USERSMANUAL_2016012.pdf.

Chapter 10. Nonresponse Bias Analysis

The theory of sampling that is the basis for the majority of surveys conducted for the federal government assumes that accurate responses are obtained for all the sampled units. However, surveys have always had some level of nonresponse, thus violating this assumption; moreover, the level of nonresponse has been increasing for the past two decades (National Research Council 2013). To the extent that those who respond to surveys and those who do not are different in important ways, a potential exists for nonresponse biases in estimates from survey data, and understanding the relationship between response rates and nonresponse bias has become even more important. One approach to understanding the relationship is to conduct nonresponse bias studies. This chapter documents the nonresponse bias analyses conducted for the National Household Education Surveys Program of 2016 (NHES:2016). The goal of the research is to investigate the potential for nonresponse bias in estimates from the NHES:2016 surveys. This analysis is similar to analyses undertaken to evaluate the potential for nonresponse bias in the NHES:2012, with some new analysis added to provide further insight into the risk of bias.

This chapter discusses the relationship between unit and item response rates and nonresponse bias and includes an analysis of characteristics associated with unit response propensities, a comparison of base-weighted estimates between early and late responders, a comparison of estimates based on nonresponse adjusted weights and base weights, a comparison of the NHES:2016 estimates to those from external data sources, a discussion of using extreme assumptions to assess the potential for item nonresponse bias, and an assessment of means or distributions for items with and without imputed values. A summary of the findings is provided in section 10.4.

10.1 Relationship Between Response Rates and Nonresponse Bias

The estimates from the NHES:2016 surveys are subject to potential bias because of unit nonresponse to the screener and the topical surveys—the Early Childhood Program Participation (ECPP) Survey, the Parent and Family Involvement in Education (PFI) Survey, and the Adult Training and Education Survey (ATES)—as well as nonresponse to specific items. Generally speaking, the primary approach to minimizing nonresponse bias is to plan and implement data collection procedures aimed at achieving high cooperation rates. For the NHES:2016, such procedures included advance mailings to the respondents, recontacting households by mail using alternative strategies, and monetary incentives. However, because some unit nonresponse occurs even with the best strategies, weighting adjustments are necessary to minimize potential unit nonresponse bias.

The term *bias* has a specific technical definition in the survey context. Bias is the expected difference between an estimate of a characteristic from the survey and the actual population value. For example, if all households were included in the survey's sample and all responded, the survey estimate would equal the population value.⁷⁵ However, if all households were included in the sample, but some did not respond (unit nonresponse is nonzero), the difference between the estimate from the survey and the actual population value would be the bias caused by unit nonresponse. Because the NHES is based on a sample, the bias is defined as the expected or average value of this difference over all possible samples.

As outlined in the *NCES Statistical Standards* (U.S. Department of Education 2012), the degree of nonresponse bias is a function of two factors: the nonresponse rate and how much the respondents and nonrespondents differ on survey variables of interest. The mathematical formula to estimate bias for a sample mean of variable y is as follows:

$$B(\bar{y}_R) = \bar{y}_R - \bar{y}_T = \left(\frac{n_M}{n_T} \right) (\bar{y}_R - \bar{y}_M)$$

where

\bar{y}_T is the estimated mean based on all base-weighted eligible sample cases.

\bar{y}_R is the estimated mean based only on base-weighted respondent cases.

\bar{y}_M is the estimated mean based only on base-weighted nonrespondent cases.

n_M is the base-weighted number of nonrespondents.

n_R is the base-weighted number of respondents.

n_T is the base-weighted number of eligible cases (i.e., $n_T = n_R + n_M$).

If the nonresponding units (households or people) are highly similar to the responding units, the unit nonresponse bias might be very small and be deemed insignificant for the purpose of the study. For example, consider a sample of kindergarteners drawn from two kindergarten classrooms. When the survey taker arrives, one class is in its classroom, and the other class is on a field trip. If the children are randomly assigned to one of the two classes, then the group that is absent is highly similar to the group that is present. On the other hand, if the nonresponding units are different in their characteristics from the responding units, the impact on the study can be substantial. For example, if the children were divided into the two classes based on their reading and mathematical

⁷⁵ This chapter does not discuss other types of error, such as measurement error. These errors could cause the estimate to differ from the population value even if all the households were in the sample and all responded.

ability, then the nonrespondents (the children on the field trip) would be substantially different from the children present in the classroom.

If the unit nonresponse rate is low relative to the magnitude of the estimates, then the unit nonresponse bias in the estimates might be small, even if the differences in the characteristics between respondents and nonrespondents are relatively large. In the example above, if rather than a whole class is absent, only a few students are absent, the impact on the estimates produced from the responding sample would be minimal, even if the nonresponding students were notably different from those responding. Specifically, if the unit nonresponse rate is 2 percent, for example, then estimates of characteristics that are for more than 30 percent of the population may not be greatly affected by nonresponse, even if the differences in these characteristics between respondents and nonrespondents are relatively large. If the estimate is for a small domain or subgroup (of about 5 percent or 10 percent of the population), then even a relatively low overall rate of nonresponse can result in important biases if the differences between respondents and nonrespondents are large.

As the absent student example illustrates, nonresponse bias could have a substantial impact on the study if either the difference between respondents and nonrespondents or the nonresponse rate is relatively large. To compare the bias across all variables, the estimates of bias can be transformed into estimates of relative bias, a ratio of the bias to the mean characteristic estimate. Relative bias is independent of the distributions of particular variables. The relative bias for an estimated mean is calculated using the following formula:

$$RelB(\bar{y}_R) = \frac{B(\bar{y}_R)}{\bar{y}_R}$$

Relative bias can be estimated for characteristics available for both respondents and nonrespondents.

10.2 Unit Nonresponse Bias Analysis

NCES Statistical Standard 4-4 requires analysis of unit nonresponse bias for any survey stage with a base-weighted response rate of less than 85 percent. Section 10.2.1 of the unit bias analysis includes comparisons between characteristics of the full sample population and those of the respondent population. Section 10.2.2 presents comparisons of estimates between respondents who returned a questionnaire in earlier mailing waves to those who returned a questionnaire in later mailing waves. Section 10.2.3 presents the comparisons with estimates using the weights before and after the nonresponse weighting adjustments to evaluate the extent to which the

adjustments may have reduced nonresponse bias. Section 10.2.4 includes a comparison of the NHES:2016 estimates with estimates from the Current Population Survey (CPS), the American Community Survey (ACS), and prior NHES collections to evaluate the reasonableness of the NHES:2016 estimates.

10.2.1 Analysis of Characteristics Associated With Unit Response Propensities

In this section, the characteristics of respondents to the screener and topical surveys are compared with the characteristics of the eligible sample for each survey. This analysis allows unit nonresponse bias to be measured directly for any characteristics that are known for both respondents and nonrespondents. To the extent that these characteristics are associated with characteristics measured by the NHES survey instruments (which are known only for respondents), bias in these characteristics may indicate a risk of bias in key NHES estimates.

The available characteristics for this analysis differ between the screener- and topical-level analyses. For the screener, characteristics known for the entire sample consist of NHES sampling frame variables plus variables from sources that can be linked to the frame. The variables used in the screener analysis are listed in table 10-1. The address type information on the sample frame is primarily from the U.S. Postal Service Computerized Delivery Sequence File. Household demographic information was derived from a variety of sources that the sample frame vendor used to match the household's address to the characteristics of the residents of the address. The block group-level Low Response Score and percentages were obtained from the Census Planning Database. Although the screener unit of analysis was addresses, the topical PFI, ECPP, and ATES surveys use eligible persons as the unit of analysis. Only cases that complete the household screener can be sampled for a topical survey; thus, at the topical level, some information from the screener is also available for all sampled cases, in addition to the variables available in or linked to the frame. The variables used for the topical survey unit nonresponse bias analysis are presented in table 10-2.

Table 10-1. Sampling frame and Census variables used in the NHES:2016 screener-level unit nonresponse bias analysis

Sampling frame and Census variables
Household-level variables from U.S. Postal Service files
Type of postal route (street address/P.O. box/high rise building/rural route)*
Dwelling type (multi/single unit)*
Vacancy status
Seasonal address type (seasonal/educational seasonal/not seasonal)
Drop point address type (whether mail receptacle is for multiple units)
Variables obtained from sample vendor
Ability to match address to phone number (whether a phone number was available for the address)*
Census region in which the household is located
Block group-level American Community Survey 2009–2013 estimates from the 2015 Census Planning Database
Census Low Response Score ¹ *
Percentage of persons who are Black
Percentage of persons without a high school diploma*
Percentage of persons speaking a non-English language*
Experimental treatments
Mailing protocol (paper-only or web)*
Incentive protocol (\$5-only, \$2-only, or modeled)*
Household-level variables appended by sample vendor from external data source (e.g., Experian consumer file)
Sex of head of household*
Age of head of household*
Marital status of head of household*
Race/ethnicity of head of household*
Education of head of household*
Household income*
Home tenure (includes both owned or rented)*
Whether household is flagged as having children
Number of adults in household*
Household-level operational variables
Bilingual screener package sent (whether the household received a bilingual screener package in any mailing)
Race/ethnicity stratum
Census tract poverty rate

¹The Low Response Score is a derived variable in the Census Planning Database that identifies block groups with characteristics associated with low mail return rates to the Decennial Census. A higher Low Response Score corresponds to a lower expected mail return rate.

NOTE: Asterisks (*) indicate variables included in screener-level nonresponse weighting adjustments.

Table 10-2. Screener and sampling frame variables used in the NHES:2016 topical-level unit nonresponse bias analysis

Sampling frame and Census variables
Variables reported on household screener
Age of sampled adult or child
Sex of sampled adult or child
Enrollment status of sampled adult or child
Grade of sampled child (for PFI and ECPP)
Number of persons ages 20 or younger in household
Number of persons ages 21 or older in household
Variables obtained from sample vendor
Ability to match address to phone number (whether a phone number existed for the address)
Census region in which the household is located
Household-level variables appended by sample vendor from external data source (e.g., Experian consumer file)
Race/ethnicity of head of household
Education of head of household
Household income
Home tenure
Marital status of head of household
Screener treatment variables
Mailing protocol and response mode (paper-only protocol, web protocol and responded by web, or web protocol and responded by paper)
Incentive protocol (\$5-only, \$2-only, or modeled)
Household-level operational variables:
Language of screener response
Race/ethnicity stratum
Census tract poverty rate
Questionnaire type (Enrolled or Homeschooled) (PFI)
Topical incentive level

The first step in the nonresponse bias analysis was to determine whether the percentages of respondents for the variables listed in table 10-1 differ from the percentages of the eligible sample. Specifically, a significance test was used to estimate whether the difference between the base-weighted respondent percentage and the base-weighted eligible sample percentage was different from zero at the 5 percent level of significance. Base weights are weights that adjust only for the sampled unit's probability of selection. These estimates were not yet adjusted for nonresponse. The standard error of the difference was computed directly using the NHES:2016 replicate base weights and takes into account the correlations between the two estimates. Specifically, the standard error of the difference between the respondent percentage and the eligible sample percentage is calculated as follows:

$$se(p_r - p_s) = \sqrt{\frac{79}{80} \sum_{i=1}^{80} [(p_{ri} - p_{si}) - (p_r - p_s)]^2}$$

where

$\sum_{i=1}^{80}$ is the sum of the 80 replicate weights.

p_{ri} is the proportion among respondents, calculated using the i th replicate weight.

p_{si} is the proportion over the eligible sample, calculated using the i th replicate weight.

p_r is the proportion among respondents, calculated using the full-sample weight.

p_s is the proportion over the eligible sample, calculated using the full-sample weight.

The relative bias was computed for every category of the variables in the nonresponse bias analysis, using the difference between the base-weighted respondent percentage and the base-weighted eligible sample percentage. The absolute and relative bias before nonresponse adjustment is presented on the left-hand side of tables 10-3 through 10-6, which will be presented later.

The second step was to compute the screener nonresponse adjustment. The screener nonresponse adjustment included a subset of the variables used for the bias analysis as noted in table 10-1. The nonresponse adjustments, which are included in the final analytic weights (see chapter 7 on weighting), are designed to significantly reduce unit nonresponse bias for the variables included in the models. To the extent that questionnaire variables are associated with the variables included in the models, the end result should be a reduction in bias in estimates for these questionnaire variables.

Third, after computing the nonresponse adjustment, any remaining bias was estimated for the sampling frame variables, and statistical tests were performed to check the significance of the remaining nonresponse bias. Again, the relative bias was computed for all categories of all variables, this time using the difference between the nonresponse-adjusted respondent percentage and the base-weighted eligible sample percentage as the numerator and the nonresponse-adjusted respondent percentage as the denominator. These figures are displayed on the right-hand side of tables 10-4 through 10-7. The bias was summarized by calculating the mean and median of the relative bias figures across all variables and is displayed in table 10-3.

In this analysis, differences of at least 1 percentage point between the eligible sample and respondent percentages were judged to be of practical significance because effects other than unit nonresponse bias may contribute in part to the differences in the estimates. Additionally, the large sample size and correlated variance between the responding sample and eligible sample leads to small differences testing statistically significant⁷⁶. Sample records found to be ineligible for the NHES were excluded from the analysis. (See chapter 2 for NHES:2016 eligibility criteria.) In addition, the data used for the analysis were not raked. In the weighting process, raking adjustments are performed after the nonresponse adjustments. This analysis was performed using unraked, nonresponse adjusted weights. Examining the estimates using weights just before and just after nonresponse adjustment provides focused analysis on the extent to which the nonresponse adjustment reduced bias. Because the raking adjustment may reduce the residual nonresponse bias, this analysis may underestimate the net bias reduction accomplished in the weighting process. Additional analyses could be performed to examine the full reduction of bias resulting from all weighting steps.

Overall, much of the potential nonresponse bias was reduced through the weighting procedures. The nonresponse weighting adjustments reduced the amount of potential bias in the estimates of the survey respondents (table 10-3). In the preadjustment screener estimates, 59 out of 103 of the estimates analyzed (57 percent) showed statistically significant as well as practical differences between the base-weighted respondents and the base-weighted eligible sample population. In the postadjusted screener estimates, the number of estimates with practical and significant differences was reduced to 35 (34 percent), which, while still notable, represents a reduction of over 40 percent.

Table 10-3 shows similar reductions for the estimates in the topical surveys, as well as in the absolute relative bias means and medians, after the nonresponse adjustments. The number of estimates with statistically significant differences greater than 1 percentage point was reduced from 27 (29 percent) to 7 (7 percent) for the PFI (a reduction of 74 percent); from 33 (40 percent) to 16 (20 percent) for the ECPP (a reduction of 52 percent)⁷⁷; and from 24 (29 percent) to 4 (5 percent) for the ATES (a reduction of approximately 83 percent). The median relative bias after adjustment was 2.4 percent, 2.9 percent, and 2.5 percent, respectively.

⁷⁶ Tables 10-4 through 10-7 flag all statistically significant bias estimates for reference. However, as noted above, only those with practical significance (estimates of bias greater than or equal to one percentage point) are considered important and discussed in the analysis here.

⁷⁷ There is one level of one characteristic for which the bias seemed to increase on the ECPP after nonresponse weighting adjustments are applied. These estimates were for individuals receiving a \$5 incentive with the screener. For these cases, the base-weighted respondent proportion was closer to the eligible sample than the nonresponse adjusted respondent proportion. This is not concerning as the incentive treatment was randomly applied and intended to impact response.

Table 10-3. Summary of bias in NHES:2016 sampling frame characteristics, before and after weighting adjustments for nonresponse

Survey	Before weighting adjustments for nonresponse			After weighting adjustments for nonresponse		
	Mean estimated absolute relative bias	Median estimated absolute relative bias	Percent of estimates with practically and statistically significant bias	Mean estimated absolute relative bias	Median estimated absolute relative bias	Percent of estimates with practically and statistically significant bias
	(percent)	(percent)		(percent)	(percent)	
Screener	12.3	9.3	57.3	5.8	4.3	34.0
PFI	9.3	5.2	28.7	4.8	2.4	7.4
ECPP	18.4	5.7	40.2	15.1	2.9	19.5
ATES	9.0	5.8	29.3	5.3	2.5	4.9

NOTE: ATES = Adult Training and Education Survey. ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Bias is considered statistically significant if $p < .05$ (Student's t test). Bias is considered practically significant if its absolute value exceeds 1 percentage point.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Survey Program (NHES) of 2016.

Tables 10-4 through 10-7 show the relative bias in estimates between the respondent and the eligible sample populations for every category of the variables in the unit nonresponse bias analysis.

Table 10-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 screener

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Total	115,342	186,864	100.0	100.0				100.0				
Race/ethnicity stratum												
25 percent or more Black	18,593	35,728	12.2	14.8	-2.6*	-21.5	0.06	13.5	-1.3*	-9.9	0.06	-49.0
40 percent or more Hispanic	13,906	27,496	7.5	9.4	-1.9*	-25.0	0.04	8.6	-0.8*	-9.8	0.04	-55.3
Other	82,843	123,640	80.3	75.8	4.5*	5.6	0.08	78.0	2.2*	2.8	0.07	-51.7
Tract poverty rate												
20 percent or higher	29,030	55,735	21.7	25.7	-4.0*	-18.6	0.08	24.0	-1.8*	-7.5	0.07	-55.8
Less than 20 percent	86,312	131,129	78.3	74.3	4.0*	5.2	0.08	76.0	1.8*	2.3	0.07	-55.8
Bilingual screener package mailed												
Yes	81,469	136,654	68.8	71.1	-2.3*	-3.4	0.09	70.1	-0.9*	-1.3	0.08	-59.4
No	33,873	50,210	31.2	28.9	2.3*	7.4	0.09	29.9	0.9*	3.2	0.08	-59.4
Census region ¹												
Northeast	20,341	32,379	18.3	18.0	0.3*	1.9	0.07	18.1	0.1	0.6	0.07	-67.3
South	43,580	73,978	36.2	38.1	-1.8*	-5.1	0.09	36.5	-1.6*	-4.3	0.09	-14.8
Midwest	25,859	38,761	23.8	22.2	1.6*	6.7	0.07	23.2	1.0*	4.3	0.07	-38.0
West	25,562	41,746	21.6	21.7	-0.1	-0.5	0.07	22.2	0.5*	2.1	0.08	312.5
Ability to match address to phone number												
Phone number available	84,010	126,887	73.2	68.4	4.8*	6.5	0.09	71.0	2.5*	3.6	0.07	-47.0
No phone number available	31,332	59,977	26.8	31.6	-4.8*	-17.9	0.09	29.0	-2.5*	-8.7	0.07	-47.0

See notes at end of table.

Table 10-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 screener—Continued

Characteristic	Unweighted counts			Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias	
Gender of head of household													
Male	70,012	105,285	61.5	57.3	4.2*	6.8	0.10	59.2	1.8*	3.1	0.10	-56.1	
Female	30,436	51,331	25.8	26.9	-1.1*	-4.2	0.09	26.7	-0.2*	-0.8	0.09	-79.6	
Missing	14,894	30,248	12.7	15.8	-3.1*	-24.4	0.07	14.2	-1.6*	-11.4	0.06	-47.9	
Age of head of household													
18–24	2,115	4,099	1.8	2.1	-0.3*	-19.5	0.03	1.9	-0.2*	-8.4	0.03	-52.6	
25–34	8,679	15,609	7.4	8.3	-0.8*	-11.2	0.05	8.2	-0.1*	-1.4	0.05	-86.6	
35–44	14,412	24,599	12.5	13.2	-0.7*	-5.4	0.06	13.3	0.1	0.7	0.06	-86.7	
45–54	19,678	31,493	17.1	16.9	0.2*	1.0	0.07	17.6	0.7*	3.7	0.05	300.5	
55–65	23,558	33,373	20.5	18.1	2.5*	12.0	0.07	18.8	0.7*	3.9	0.03	-69.9	
Over 65	24,802	32,351	21.9	17.8	4.1*	18.5	0.07	18.9	1.1*	5.6	0.03	-74.0	
Missing	22,098	45,340	18.8	23.6	-4.8*	-25.7	0.08	21.3	-2.3*	-10.6	0.04	-53.0	
Marital status of head of household													
Single	32,255	57,609	26.9	29.7	-2.8*	-10.3	0.08	29.0	-0.7*	-2.5	0.08	-74.4	
Married	68,837	101,017	60.9	55.5	5.4*	8.9	0.09	57.7	2.2*	3.8	0.08	-59.5	
Missing	14,250	28,238	12.2	14.8	-2.6*	-21.5	0.07	13.4	-1.5*	-11.0	0.05	-43.9	
Race/ethnicity of head of household													
White	60,383	86,617	55.6	50.1	5.5*	9.9	0.10	52.7	2.6*	5.0	0.08	-52.6	
Black	10,205	19,142	7.3	8.6	-1.3*	-17.8	0.05	8.0	-0.5*	-6.7	0.04	-58.6	
Hispanic	10,457	20,455	7.4	9.0	-1.6*	-21.7	0.05	8.2	-0.8*	-9.8	0.05	-50.1	
Asian or Pacific Islander	3,865	6,204	3.4	3.4	0.0	0.3	0.03	3.5	0.1*	2.1	0.03	601.5	
Other	163	269	0.1	0.2	0.0	-4.2	0.01	0.2	0.0	-0.2	0.01	-95.6	
Missing	30,269	54,177	26.2	28.8	-2.6*	-10.0	0.09	27.5	-1.4*	-4.9	0.07	-48.4	

See notes at end of table.

Table 10-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 screener—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Education of head of household												
Less than high school diploma	10,239	19,098	8.1	9.3	-1.2*	-14.2	0.05	8.4	-0.8*	-9.7	0.05	-28.9
High school diploma	24,851	38,619	21.4	20.6	0.8*	3.6	0.07	20.9	0.3*	1.5	0.07	-59.4
Some college	24,369	39,061	21.2	21.1	0.1	0.4	0.07	21.4	0.4*	1.7	0.07	298.8
Bachelor's degree	16,732	23,772	15.0	13.3	1.7*	11.5	0.06	14.3	1.0*	6.8	0.06	-44.4
Graduate degree	11,179	15,562	10.2	8.9	1.3*	13.0	0.05	9.5	0.6*	6.5	0.04	-53.2
Missing	27,972	50,752	24.1	26.9	-2.8*	-11.5	0.08	25.4	-1.4*	-5.6	0.07	-48.1
Household income												
Under \$15,000	9,401	18,518	7.7	9.3	-1.6*	-21.3	0.05	8.4	-0.9*	-10.9	0.05	-44.0
\$15,000 to \$24,999	10,743	18,500	9.0	9.5	-0.5*	-6.1	0.06	9.2	-0.3*	-2.8	0.06	-52.8
\$25,000 to \$34,999	9,898	16,568	8.4	8.6	-0.3*	-3.2	0.05	8.5	-0.2*	-1.9	0.05	-40.5
\$35,000 to \$49,999	13,698	22,298	11.7	11.8	-0.1*	-1.0	0.05	11.7	-0.1	-0.8	0.06	-23.0
\$50,000 to \$74,999	21,432	31,855	18.6	17.2	1.4*	7.6	0.06	18.0	0.9*	4.7	0.06	-39.7
\$75,000 to \$99,999	14,839	21,666	13.2	11.9	1.2*	9.3	0.05	12.7	0.7*	5.7	0.05	-41.4
\$100,000 to \$124,999	8,973	13,237	8.0	7.4	0.6*	8.0	0.05	7.8	0.4*	4.7	0.04	-43.1
\$125,000 to \$149,999	5,403	7,780	4.9	4.4	0.5*	10.4	0.04	4.7	0.3*	5.6	0.03	-48.6
\$150,000 to \$174,999	3,067	4,408	2.8	2.5	0.3*	10.5	0.03	2.7	0.2*	7.2	0.03	-33.3
\$175,000 to \$199,999	2,314	3,102	2.2	1.8	0.3*	15.6	0.03	2.0	0.2*	9.0	0.03	-46.4
\$200,000 to \$249,999	2,035	2,797	1.9	1.6	0.3*	13.9	0.02	1.7	0.1*	6.9	0.02	-54.3
\$250,000 or higher	2,773	3,921	2.6	2.3	0.3*	11.5	0.03	2.4	0.1*	4.2	0.02	-66.2
Missing	10,766	22,214	9.2	11.6	-2.4*	-26.4	0.06	10.3	-1.4*	-13.4	0.05	-43.2

See notes at end of table.

Table 10-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 screener—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Home tenure												
Own	79,806	114,950	70.5	63.3	7.2*	10.2	0.09	66.2	2.9*	4.4	0.03	-59.9
Rent	23,091	46,183	18.9	23.3	-4.4*	-23.2	0.09	21.9	-1.4*	-6.2	0.05	-69.2
Missing	12,445	25,731	10.6	13.4	-2.8*	-26.8	0.06	11.9	-1.5*	-13.0	0.05	-45.7
Number of adults in household												
1	39,090	70,310	33.3	36.9	-3.6*	-11.0	0.09	35.6	-1.4*	-3.8	0.07	-62.6
2	32,743	48,204	28.8	26.3	2.5*	8.7	0.08	27.5	1.2*	4.2	0.06	-53.6
3	17,555	24,873	15.5	13.6	1.9*	12.0	0.05	14.4	0.8*	5.5	0.05	-57.6
4 or more	15,201	21,282	13.2	11.5	1.7*	12.9	0.06	12.3	0.8*	6.4	0.05	-53.8
Missing	10,753	22,195	9.2	11.6	-2.4*	-26.4	0.06	10.2	-1.4*	-13.5	0.05	-43.2
Household flagged as having children												
Yes	28,146	44,821	24.4	24.1	0.4*	1.5	0.08	24.3	0.2*	0.9	0.07	-43.1
No	87,196	142,043	75.6	75.9	-0.4*	-0.5	0.08	75.7	-0.2*	-0.3	0.07	-43.1
Route type												
Street	93,178	143,811	81.6	77.9	3.6*	4.4	0.08	79.3	1.3*	1.7	0.07	-63.2
P.O. Box	785	1,336	0.7	0.7	0.0*	-5.8	0.01	0.7	0.0	-4.0	0.02	-28.7
Rural route	103	168	0.1	0.1	0.0	-1.4	0.01	0.1	0.0	3.5	0.01	167.5
High rise	21,276	41,549	17.6	21.2	-3.6*	-20.3	0.08	19.9	-1.3*	-6.6	0.07	-63.4
Dwelling type												
Single unit	91,419	139,895	80.1	76.0	4.1*	5.2	0.08	77.6	1.6*	2.1	0.07	-60.6
Multiunit	23,138	45,633	19.2	23.3	-4.1*	-21.4	0.08	21.7	-1.6*	-7.4	0.07	-60.9
Missing	785	1,336	0.7	0.7	0.0*	-5.8	0.01	0.7	0.0	-4.0	0.02	-28.7

See notes at end of table.

Table 10-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 screener—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Vacancy status												
Flagged as vacant	968	2,108	0.8	1.1	-0.3*	-31.4	0.02	0.9	-0.2*	-18.0	0.02	-36.2
Not flagged as vacant	114,374	184,756	99.2	98.9	0.3*	0.3	0.02	99.1	0.2*	0.2	0.02	-36.2
Seasonal address type												
Seasonal delivery	705	909	0.6	0.5	0.1*	18.8	0.01	0.6	0.1*	15.0	0.01	-23.9
Educational seasonal delivery	77	177	0.1	0.1	0.0*	-45.6	0.01	0.1	0.0*	-19.1	0.01	-48.8
No seasonal delivery	114,560	185,778	99.3	99.4	-0.1*	-0.1	0.01	99.3	-0.1*	-0.1	0.01	-14.7
Drop point address type												
Drop point	1,558	3,211	1.3	1.6	-0.3*	-26.3	0.02	1.3	-0.3*	-19.9	0.02	-20.4
Not a drop point	113,784	183,653	98.7	98.4	0.3*	0.3	0.02	98.7	0.3*	0.3	0.02	-20.4
Mailing protocol												
Paper-only	97,315	155,181	84.3	83.1	1.3*	1.5	0.07	84.2	1.1*	1.3	0.07	-11.6
Web	18,027	31,683	15.7	16.9	-1.3*	-8.1	0.07	15.8	-1.1*	-7.1	0.07	-11.6
Incentive protocol²												
\$5 only	90,091	146,090	78.1	78.2	0.0	-0.1	0.08	78.1	-0.1	-0.1	0.08	110.6
\$2 only	5,449	9,078	4.7	4.9	-0.1*	-2.6	0.04	4.7	-0.1*	-2.6	0.04	0.4
Modeled												
\$10	1,731	4,140	1.1	1.7	-0.6*	-50.4	0.02	1.5	-0.2*	-16.6	0.03	-57.6
\$5	11,502	19,075	9.8	10.2	-0.4*	-4.2	0.06	10.4	0.1*	1.3	0.06	-68.6
\$2	5,176	6,786	4.8	4.0	0.8*	17.4	0.03	4.2	0.2*	5.8	0.03	-70.6
\$0	1,393	1,695	1.3	1.0	0.3*	23.1	0.02	1.1	0.1*	6.7	0.01	-76.0

See notes at end of table.

Table 10-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 screener—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Census Low Response Score (block group, ACS 2009–2013)												
First quartile	34,615	46,712	33.1	28.2	4.9*	14.8	0.08	29.5	1.3*	4.3	0.03	-74.1
Second quartile	31,096	46,709	28.7	27.1	1.5*	5.4	0.08	27.8	0.7*	2.5	0.04	-54.6
Third quartile	27,510	46,710	22.7	24.1	-1.5*	-6.4	0.08	24.0	-0.1*	-0.6	0.04	-90.2
Fourth quartile	22,113	46,710	15.5	20.5	-5.0*	-32.0	0.08	18.7	-1.8*	-9.7	0.03	-63.5
Missing	8	23	0.0	0.0	0.0*	-85.7	0.00	0.0	0.0	-47.5	0.00	-30.2
Percentage of persons without a high school diploma (block group, ACS 2009–2013)												
First quartile	32,420	46,762	30.4	27.6	2.9*	9.4	0.08	28.9	1.3*	4.6	0.08	-53.3
Second quartile	30,772	46,673	28.1	26.7	1.4*	5.1	0.07	27.3	0.7*	2.4	0.06	-53.6
Third quartile	28,218	46,720	24.2	25.0	-0.7*	-3.0	0.08	24.7	-0.3*	-1.2	0.08	-59.0
Fourth quartile	23,921	46,687	17.2	20.8	-3.6*	-20.8	0.07	19.1	-1.7*	-8.9	0.06	-52.3
Missing	11	22	0.0	0.0	0.0	-23.8	0.00	0.0	0.0	-4.9	0.00	-75.7
Percentage of persons who are Black (block group, ACS 2009–2013)												
First quartile	31,577	47,025	28.9	26.8	2.1*	7.4	0.09	27.7	0.9*	3.2	0.08	-58.2
Second quartile	30,504	46,461	27.7	26.3	1.5*	5.3	0.08	27.0	0.8*	2.9	0.08	-47.3
Third quartile	28,448	46,671	25.2	25.6	-0.4*	-1.8	0.10	25.5	-0.2	-0.6	0.10	-65.5
Fourth quartile	24,802	46,688	18.1	21.3	-3.2*	-17.4	0.08	19.8	-1.5*	-7.7	0.08	-52.1
Missing	11	19	0.0	0.0	0.0	-5.2	0.00	0.0	0.0	10.8	0.00	144.5

See notes at end of table.

Table 10-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 screener—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percentage of respondents	Percentage of eligible sample	Estimated bias	Percentage of relative bias	Standard error of bias	Percentage of respondents	Estimated bias	Percentage of relative bias	Standard error of bias	Percentage change in bias
Percentage of persons speaking a non-English language (block group, ACS 2009–2013)												
First quartile	30,584	46,779	27.8	26.5	1.3*	4.7	0.08	26.8	0.3*	0.9	0.07	-80.6
Second quartile	31,135	46,681	28.6	26.8	1.8*	6.3	0.08	27.6	0.8*	3.1	0.08	-53.1
Third quartile	29,091	46,679	26.0	26.0	0.0	0.0	0.07	26.1	0.1*	0.5	0.07	1531.6
Fourth quartile	24,521	46,706	17.6	20.7	-3.1*	-17.5	0.07	19.5	-1.2*	-6.3	0.07	-60.2
Missing	11	19	0.0	0.0	0.0	-5.2	0.00	0.0	0.0	10.8	0.00	144.5

* Indicates a statistically significant difference ($p < .05$, Student's t test).

¹ Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

² Incentives in the modeled group were assigned according to predicted response propensity, with households with a higher predicted response propensity receiving a lower incentive.

NOTE: Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Survey Program (NHES) of 2016.

Table 10-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 PFI Parent and Family Involvement in Education topical survey

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Total	14,075	18,714	100.0	100.0				100.0				
PFI questionnaire type												
PFI-Enrolled	13,523	17,790	96.7	96.0	0.7*	0.7	0.11	96.3	0.3*	0.3	0.11	-51.9
PFI-Homeschooled	552	924	3.3	4.0	-0.7*	-21.1	0.11	3.7	-0.3*	-9.2	0.11	-51.9
Race/ethnicity stratum												
25 percent or more Black	2,034	2,941	12.6	13.9	-1.3*	-10.6	0.21	13.7	-0.2	-1.5	0.20	-84.6
40 percent or more Hispanic	1,961	2,875	10.7	11.9	-1.1*	-10.5	0.18	11.8	0.0	-0.4	0.19	-96.3
Other	10,080	12,898	76.7	74.3	2.5*	3.2	0.25	74.5	0.2	0.3	0.18	-89.9
Tract poverty rate												
20 percent or higher	3,253	4,736	23.1	25.1	-1.9*	-8.4	0.28	24.5	-0.6*	-2.4	0.28	-69.5
Less than 20 percent	10,822	13,978	76.9	74.9	1.9*	2.5	0.28	75.5	0.6*	0.8	0.28	-69.5
Language of screener response												
English	13,363	17,599	94.6	93.7	0.8*	0.9	0.16	93.9	0.2	0.2	0.17	-82.2
Spanish	712	1,115	5.4	6.3	-0.8*	-15.7	0.16	6.1	-0.2	-2.5	0.17	-82.2

See notes at end of table.

Table 10-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Parent and Family Involvement in Education topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Topical incentive level¹												
\$0	1,778	1,866	12.7	10.0	2.8*	21.7	0.12	10.0	0.0	0.0	0.00	-100.0
\$5	9,704	12,572	68.4	66.6	1.7*	2.5	0.24	66.6	0.0	0.0	0.00	-100.0
\$10	174	267	1.2	1.4	-0.2*	-12.7	0.06	1.5	0.2	10.0	0.09	-1.6
\$15	2,419	3,994	17.7	22.0	-4.3*	-24.3	0.23	21.9	-0.1	-0.5	0.09	-97.6
No topical mailings received ²	0	15	0.0	0.0	0.0*	0.0	0.02	0.0	0.0*	0.0	0.02	0.0
Census region³												
Northeast	2,427	3,163	17.2	17.0	0.1	0.8	0.19	17.0	-0.1	-0.4	0.20	-55.3
South	5,154	7,050	35.6	36.6	-1.0*	-2.8	0.23	36.1	-0.5*	-1.3	0.24	-53.1
Midwest	3,136	4,059	23.8	23.3	0.5*	2.1	0.23	23.2	-0.1	-0.4	0.24	-81.2
West	3,358	4,442	23.5	23.1	0.4	1.6	0.23	23.8	0.6*	2.6	0.24	62.6
Ability to match address to phone number												
Phone number available	10,668	13,924	74.3	72.8	1.5*	2.0	0.29	73.8	1.0*	1.4	0.30	-32.3
No phone number available	3,407	4,790	25.7	27.2	-1.5*	-5.9	0.29	26.2	-1.0*	-3.9	0.30	-32.3
Marital status of head of household												
Single	2,521	3,693	17.7	19.7	-2.0*	-11.2	0.26	18.4	-1.2*	-6.7	0.27	-37.9
Married	10,356	13,268	73.3	70.5	2.8*	3.8	0.32	72.3	1.8*	2.5	0.32	-36.4
Missing	1,198	1,753	9.0	9.9	-0.8*	-9.2	0.21	9.3	-0.6*	-6.0	0.22	-32.7

See notes at end of table.

Table 10-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Parent and Family Involvement in Education topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights				Percent change in bias	
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	
Ethnicity of head of household												
White	7,263	9,199	52.1	49.5	2.6*	5.0	0.26	50.8	1.3*	2.5	0.26	-50.6
Black	1,209	1,718	7.7	8.4	-0.8*	-9.8	0.16	8.2	-0.3	-3.2	0.17	-65.3
Hispanic	1,848	2,702	12.6	14.1	-1.5*	-11.8	0.21	13.3	-0.7*	-5.4	0.22	-51.6
Asian or Pacific Islander	667	867	4.7	4.6	0.1	1.7	0.11	4.6	0.0	-1.0	0.11	-39.2
Other	19	27	0.1	0.1	0.0	-7.1	0.02	0.1	0.0	-3.0	0.02	-56.7
Missing	3,069	4,201	22.8	23.2	-0.4	-1.8	0.28	23.0	-0.2	-1.1	0.29	-40.5
Education of head of household												
Less than high school diploma	1,348	1,970	9.9	10.9	-1.0*	-10.4	0.17	10.4	-0.6*	-5.4	0.18	-46.2
High school diploma	2,366	3,264	16.0	16.8	-0.8*	-4.8	0.22	16.1	-0.6*	-4.0	0.23	-15.3
Some college	3,486	4,621	24.6	24.6	0.0	-0.1	0.24	24.5	-0.1	-0.4	0.26	640.4
Bachelor's degree	2,623	3,231	18.6	17.2	1.5*	7.9	0.22	18.1	1.0*	5.4	0.21	-34.0
Graduate degree	1,486	1,802	10.2	9.3	0.9*	8.7	0.17	9.9	0.7*	6.6	0.17	-25.7
Missing	2,766	3,826	20.7	21.2	-0.6*	-2.7	0.28	20.9	-0.3	-1.6	0.29	-39.8

See notes at end of table.

Table 10-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Parent and Family Involvement in Education topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Household income												
Under \$15,000	906	1,302	6.7	7.3	-0.7*	-10.1	0.16	7.0	-0.3	-4.5	0.18	-52.8
\$15,000 to \$24,999	921	1,341	6.5	7.2	-0.7*	-10.6	0.15	6.7	-0.5*	-8.0	0.15	-22.5
\$25,000 to \$34,999	894	1,287	6.4	7.0	-0.6*	-9.9	0.16	6.5	-0.4*	-6.8	0.17	-29.3
\$35,000 to \$49,999	1,156	1,646	8.0	8.5	-0.5*	-6.8	0.14	8.2	-0.3	-3.6	0.16	-45.9
\$50,000 to \$74,999	2,246	3,021	15.1	15.3	-0.1	-0.8	0.21	15.2	0.0	-0.3	0.23	-64.1
\$75,000 to \$99,999	2,416	3,089	17.3	16.4	0.9*	5.2	0.18	17.1	0.7*	4.0	0.20	-24.5
\$100,000 to \$124,999	1,481	1,856	10.8	10.2	0.6*	5.3	0.18	10.5	0.3*	3.3	0.17	-39.6
\$125,000 to \$149,999	1,190	1,448	8.1	7.5	0.6*	7.9	0.14	7.8	0.3*	3.9	0.15	-53.1
\$150,000 to \$174,999	494	623	3.3	3.1	0.2*	5.8	0.08	3.2	0.1	3.0	0.09	-49.5
\$175,000 to \$199,999	440	526	3.3	2.9	0.3*	10.4	0.07	3.1	0.2*	5.9	0.07	-45.5
\$200,000 to \$249,999	429	506	3.1	2.8	0.4*	12.0	0.07	3.0	0.3*	9.0	0.08	-27.4
\$250,000 or higher	544	662	3.9	3.6	0.3*	8.8	0.10	3.8	0.2*	5.5	0.09	-39.8
Missing	958	1,407	7.5	8.2	-0.7*	-9.1	0.19	7.8	-0.4*	-5.7	0.20	-35.7
Home tenure												
Own	10,413	13,272	71.6	68.3	3.4*	4.7	0.29	70.4	2.1*	3.0	0.30	-37.7
Rent	2,537	3,788	19.6	22.2	-2.6*	-13.0	0.29	20.6	-1.6*	-7.8	0.31	-37.4
Missing	1,125	1,654	8.8	9.6	-0.8*	-9.4	0.21	9.1	-0.5*	-5.6	0.21	-38.7

See notes at end of table.

Table 10-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Parent and Family Involvement in Education topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Age of sampled child (reported on screener)												
0–4	15	30	0.1	0.2	0.0	-37.1	0.02	0.2	0.0	-9.9	0.03	-66.9
5–6	1,322	1,762	11.0	11.0	0.0	0.0	0.20	11.0	0.1	0.7	0.20	4143.7
7–8	1,779	2,390	14.6	14.7	-0.1	-0.8	0.24	14.7	0.0	-0.2	0.25	-70.7
9–10	1,903	2,473	15.7	15.2	0.5*	3.2	0.21	15.7	0.4*	2.9	0.19	-10.3
11–12	2,058	2,719	15.5	15.3	0.1	0.7	0.19	15.4	0.0	0.2	0.19	-69.6
13–14	2,278	3,023	15.9	15.9	0.1	0.5	0.20	15.8	0.0	-0.1	0.19	-86.2
15–16	2,700	3,472	15.7	15.7	0.1	0.5	0.20	15.7	0.1	0.6	0.20	14.5
17–18	1,856	2,434	10.6	10.4	0.2	1.9	0.16	10.5	0.1	1.3	0.16	-31.7
19–20	79	160	0.4	0.7	-0.2*	-56.8	0.05	0.4	-0.2*	-54.0	0.05	-3.3
Not reported	85	251	0.5	1.1	-0.6*	-110.7	0.07	0.6	-0.5*	-86.3	0.08	-11.8
Sex of sampled child (reported on screener)												
Male	7,119	9,448	50.7	50.5	0.2	0.3	0.29	50.7	0.2	0.4	0.32	17.0
Female	6,749	8,911	48.0	47.7	0.2	0.5	0.29	47.9	0.1	0.3	0.32	-39.7
Not reported	207	355	1.3	1.7	-0.4*	-30.9	0.08	1.4	-0.3*	-24.4	0.08	-17.0

See notes at end of table.

Table 10-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Parent and Family Involvement in Education topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Enrollment status of sampled child (reported on screener)												
Homeschooled	552	927	3.3	4.0	-0.7*	-21.9	0.11	3.7	-0.4*	-9.8	0.11	-50.2
Public or private school, or preschool	12,980	16,873	92.8	91.2	1.6*	1.7	0.17	91.7	0.6*	0.6	0.09	-65.1
Other, not in school, or not reported	543	914	3.9	4.8	-0.9*	-21.8	0.13	4.6	-0.2	-4.2	0.10	-77.7
Grade of sampled child (reported on screener)												
Kindergarten/prekindergarten	864	1,185	7.0	7.1	-0.1	-1.1	0.13	7.2	0.1	1.6	0.14	44.6
1 st –2 nd grade	1,601	2,150	13.5	13.6	-0.1	-0.7	0.19	13.5	-0.1	-0.5	0.20	-32.0
3 rd –4 th grade	1,712	2,193	14.2	13.7	0.6*	4.0	0.18	14.0	0.3*	2.1	0.14	-48.1
5 th –6 th grade	1,801	2,366	14.4	14.3	0.1	0.8	0.21	14.2	-0.1	-0.5	0.21	-36.3
7 th –8 th grade	1,996	2,617	14.1	13.9	0.2	1.5	0.20	14.0	0.1	0.7	0.20	-56.0
9 th –10 th grade	2,315	2,998	14.7	14.6	0.2	1.1	0.21	14.6	0.0	0.2	0.21	-81.5
11 th –12 th grade	2,557	3,354	14.4	14.2	0.2	1.1	0.16	14.2	0.0	0.1	0.16	-90.1
Other or not reported	1,229	1,851	7.7	8.7	-1.1*	-13.8	0.16	8.3	-0.4*	-5.0	0.15	-60.8

See notes at end of table.

Table 10-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Parent and Family Involvement in Education topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Number of persons age 20 or younger in household (reported on screener)												
1	4,974	6,590	18.0	17.8	0.2	1.0	0.15	17.9	0.1	0.6	0.14	-38.4
2	5,991	7,793	41.2	40.1	1.1*	2.8	0.25	40.7	0.6*	1.5	0.27	-44.9
3	2,255	3,098	25.1	25.4	-0.3	-1.2	0.25	25.2	-0.2	-0.9	0.26	-24.4
4 or more	855	1,233	15.7	16.7	-1.0*	-6.4	0.32	16.2	-0.5	-3.1	0.31	-50.1
Number of persons age 21 or older in household (reported on screener)												
0	86	188	0.5	0.8	-0.3*	-50.5	0.04	0.6	-0.2*	-31.8	0.05	-28.1
1	2,329	3,308	14.4	15.9	-1.5*	-10.4	0.23	15.6	-0.3*	-1.8	0.20	-80.9
2	9,310	11,925	70.6	68.3	2.4*	3.4	0.26	69.1	0.8*	1.2	0.25	-66.1
3	1,678	2,287	9.8	10.0	-0.2	-2.1	0.17	10.0	0.0	-0.5	0.18	-77.3
4 or more	672	1,006	4.6	5.0	-0.4*	-8.9	0.11	4.8	-0.3*	-6.0	0.12	-31.0
Screener mailing protocol and response mode ⁴												
Paper-only protocol	11,611	15,782	82.5	84.4	-1.9*	-2.3	0.18	84.4	0.0	0.0	0.16	-98.2
Web protocol, responded by Web	1,810	1,932	12.9	10.3	2.6*	20.4	0.12	10.1	-0.1*	-1.3	0.04	-95.2
Web protocol, responded by paper	654	1,000	4.6	5.4	-0.7*	-15.8	0.12	5.5	0.1	1.7	0.15	-87.2

See notes at end of table.

Table 10-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Parent and Family Involvement in Education topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights				Percent change in bias	
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	
Screener incentive protocol⁵												
\$5 only	10,997	14,591	78.1	77.9	0.1	0.1	0.20	77.4	-0.6*	-0.8	0.21	459.4
\$2 only	655	857	4.6	4.6	0.1	1.3	0.11	4.7	0.2	3.5	0.12	180.7
Modeled												
\$0	41	58	0.2	0.2	0.0	-0.2	0.02	0.2	0.0	-1.6	0.02	849.4
\$2	524	645	3.3	3.0	0.3*	8.5	0.07	3.2	0.2*	6.7	0.07	-22.1
\$5	1,631	2,200	12.2	12.3	-0.1	-0.8	0.18	12.4	0.1	1.2	0.18	46.7
\$10	227	363	1.6	2.0	-0.3*	-21.2	0.09	2.0	0.1	2.9	0.10	-83.0

* Indicates a statistically significant difference ($p < .05$, Student's t test).

¹ Households that completed a web screener and proceeded directly to the topical received no additional topical incentive. Other households received a \$5 topical incentive if they received a \$0, \$2, or \$5 screener incentive and responded to one of the first two screener mailings; a \$10 topical incentive if they received a \$10 screener incentive and responded to one of the first two screener mailings; and a \$15 incentive if they responded to the third or fourth screener mailing.

² The “No topical mailings received” category consists of households that, resulting from an operational error, did not receive any topical mailings despite being sampled for a topical survey, and therefore did not receive a topical incentive.

³ Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma City. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

⁴ Households in the web group that responded to the screener on the web received the web protocol at the topical stage. Households in the web group that responded to the screener in paper form received the paper protocol at the topical stage. Households in the web group received a \$5 screener incentive. Households in the web group that proceeded directly from the web screener instrument to the web topical instrument, without receiving any topical mailings, did not receive an additional topical incentive. Households in the web group that received a topical mailing received a \$5 topical incentive with the first topical mailing, unless they had responded to the screener after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

⁵ Screener incentives in the modeled group were assigned according to predicted response propensity, with households with a higher predicted response propensity receiving a lower incentive. Households that received a \$0, \$2, or \$5 screener incentive received a \$5 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive. Households that received a \$10 screener incentive received a \$10 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

NOTE: Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Survey Program (NHES) of 2016.

Table 10-6. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Early Childhood Program Participation topical survey

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights				Percent change in bias	
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	
Total	5,844	7,390	100.0	100.0				100.0				
Race/ethnicity stratum												
25 percent or more Black	845	1,283	11.8	13.4	-1.6*	-13.6	0.29	12.7	-0.7*	-5.6	0.29	-55.2
40 percent or more Hispanic	821	1,210	10.2	11.2	-1.0*	-9.9	0.25	11.0	-0.2	-1.9	0.28	-79.2
Other	4,178	5,437	78.0	75.4	2.6*	3.3	0.28	76.4	0.9*	1.2	0.28	-64.5
Tract poverty rate												
20 percent or higher	1,345	2,013	21.7	24.0	-2.3*	-10.6	0.33	22.8	-1.2*	-5.2	0.34	-48.2
Less than 20 percent	4,499	5,917	78.3	76.0	2.3*	2.9	0.33	77.2	1.2*	1.5	0.34	-48.2
Language of screener response												
English	5,565	7,485	95.7	94.8	0.8*	0.9	0.17	95.2	0.4*	0.4	0.18	-52.7
Spanish	279	445	4.3	5.2	-0.8*	-19.3	0.17	4.8	-0.4*	-8.3	0.18	-52.7
Census region ¹												
Northeast	975	1,294	16.3	15.9	0.4	2.3	0.26	16.1	0.2	1.1	0.28	-54.1
South	2,111	2,951	35.8	36.8	-1.0*	-2.9	0.39	36.0	-0.8*	-2.2	0.40	-21.7
Midwest	1,300	1,708	23.5	22.6	0.8*	3.6	0.31	23.1	0.5	2.0	0.30	-44.6
West	1,458	1,977	24.5	24.6	-0.2	-0.8	0.36	24.8	0.2	0.7	0.37	-9.8

See notes at end of table.

Table 10-6. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Early Childhood Program Participation topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Topical incentive level ²												
\$0	722	767	12.6	9.8	2.8*	22.0	0.20	9.8	0.0	0.0	0.00	-100.0
\$5	3,920	5,219	66.7	65.3	1.5*	2.2	0.38	65.2	-0.1	-0.1	0.11	-94.6
\$10	92	133	1.6	1.7	-0.1	-3.7	0.10	1.8	0.1	4.4	0.11	31.9
\$15	1,110	1,810	19.1	23.2	-4.2*	-21.8	0.37	23.2	0.0	0.0	0.00	-99.9
No topical mailings received ³	0	1	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.00	0.0
Ability to match address to phone number												
Phone number available	3,700	4,977	63.0	62.4	0.6	1.0	0.36	62.9	0.5	0.8	0.39	-18.4
No phone number available	2,144	2,953	37.0	37.6	-0.6	-1.6	0.36	37.1	-0.5	-1.3	0.39	-18.4
Marital status of head of household												
Single	1,330	1,944	22.5	24.5	-2.0*	-8.8	0.33	23.3	-1.2*	-5.2	0.35	-39.6
Married	3,914	5,053	67.2	63.8	3.4*	5.1	0.38	66.2	2.4*	3.6	0.39	-30.0
Missing	600	933	10.3	11.7	-1.4*	-13.8	0.25	10.5	-1.2*	-11.3	0.26	-16.5
Ethnicity of head of household												
White	2,970	3,790	52.7	49.7	3.0*	5.7	0.46	51.3	1.7*	3.2	0.48	-44.2
Black	441	666	6.6	7.6	-0.9*	-14.1	0.21	7.1	-0.5*	-7.5	0.22	-43.5
Hispanic	741	1,081	11.7	12.6	-0.8*	-7.2	0.31	12.4	-0.1	-1.0	0.34	-84.8
Asian or Pacific Islander	264	352	4.4	4.4	0.0	0.3	0.16	4.4	0.0	-0.4	0.16	56.7
Other	6	14	0.2	0.2	0.0	-25.3	0.04	0.2	0.0	-28.5	0.04	10.1
Missing	1,422	2,027	24.4	25.5	-1.2*	-4.8	0.38	24.6	-0.9*	-3.8	0.42	-19.9

See notes at end of table.

Table 10-6. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Early Childhood Program Participation topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights				Standard error of bias	Percent change in bias
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias		
Education of head of household												
Less than high school diploma	556	823	9.1	10.2	-1.1*	-11.9	0.31	9.4	-0.8*	-8.2	0.31	-28.3
High school diploma	856	1,247	14.9	15.8	-0.9*	-6.1	0.30	15.2	-0.6*	-4.1	0.32	-30.9
Some college	1,486	1,956	25.3	24.5	0.8*	3.2	0.35	25.2	0.7*	2.8	0.34	-12.3
Bachelor's degree	1,090	1,339	18.6	16.9	1.7*	9.3	0.26	18.1	1.2*	6.8	0.26	-29.6
Graduate degree	543	686	9.6	8.9	0.6*	6.6	0.22	9.3	0.4	4.0	0.22	-41.9
Missing	1,313	1,879	22.5	23.7	-1.2*	-5.4	0.38	22.8	-0.9*	-4.0	0.42	-24.6
Household income												
Under \$15,000	449	678	8.4	9.1	-0.7*	-8.7	0.24	8.8	-0.3	-3.6	0.25	-56.1
\$15,000 to \$24,999	469	662	8.1	8.6	-0.5	-5.9	0.31	8.3	-0.2	-2.9	0.32	-50.2
\$25,000 to \$34,999	430	628	7.4	7.9	-0.6*	-7.8	0.21	7.5	-0.5*	-6.4	0.22	-17.3
\$35,000 to \$49,999	608	885	10.1	11.0	-0.9*	-8.8	0.27	10.3	-0.7*	-7.1	0.30	-18.2
\$50,000 to \$74,999	902	1,213	15.0	14.7	0.3	1.7	0.26	15.0	0.3	2.1	0.26	26.4
\$75,000 to \$99,999	862	1,125	14.7	14.1	0.6*	4.2	0.29	14.3	0.2	1.7	0.27	-61.0
\$100,000 to \$124,999	747	903	13.1	11.5	1.6*	12.3	0.20	12.8	1.4*	10.6	0.20	-15.0
\$125,000 to \$149,999	282	352	4.6	4.3	0.3	6.2	0.17	4.4	0.1	2.5	0.16	-61.5
\$150,000 to \$174,999	179	217	2.9	2.6	0.3*	10.5	0.09	2.8	0.2	6.2	0.09	-43.6
\$175,000 to \$199,999	209	236	3.5	3.0	0.5*	13.5	0.14	3.4	0.3*	9.9	0.15	-29.9
\$200,000 to \$249,999	79	106	1.4	1.5	-0.1	-4.5	0.12	1.4	-0.1	-8.3	0.12	76.4
\$250,000 or higher	149	179	2.6	2.3	0.3*	12.4	0.10	2.5	0.2*	9.7	0.10	-23.8
Missing	479	746	8.2	9.4	-1.1*	-13.7	0.24	8.5	-0.9*	-10.7	0.26	-19.3

See notes at end of table.

Table 10-6. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Early Childhood Program Participation topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Home tenure												
Own	3,887	4,999	65.1	61.4	3.7*	5.7	0.46	64.0	2.6*	4.1	0.48	-29.7
Rent	1,396	2,064	25.1	27.6	-2.5*	-10.1	0.41	25.9	-1.7*	-6.6	0.44	-32.0
Missing	561	867	9.8	10.9	-1.2*	-12.0	0.26	10.1	-0.9*	-8.8	0.27	-24.7
Age of sampled child (reported on screener)												
0	1,099	1,484	18.6	18.5	0.1	0.8	0.28	18.7	0.2	1.1	0.29	41.5
1	1,097	1,457	17.6	17.3	0.4	2.1	0.26	17.5	0.2	1.1	0.29	-51.1
2	1,079	1,453	18.7	18.6	0.1	0.7	0.33	18.9	0.3	1.7	0.33	154.8
3	1,094	1,466	18.8	18.5	0.2	1.2	0.33	18.7	0.2	0.8	0.33	-32.5
4	1,088	1,435	19.0	18.5	0.5	2.6	0.31	19.0	0.5	2.7	0.30	3.1
5–6	378	538	7.1	7.4	-0.3	-3.7	0.24	7.1	-0.3	-3.7	0.24	0.2
Not reported	9	97	0.2	1.3	-1.1*	-706.6	0.17	0.2	-1.1*	-705.2	0.17	0.0
Sex of sampled child (reported on screener)												
Male	2,956	3,960	50.7	50.2	0.5	1.0	0.39	50.4	0.2	0.5	0.40	-52.7
Female	2,780	3,730	47.4	46.7	0.7	1.5	0.44	47.6	0.9	1.8	0.46	23.0
Not reported	108	240	1.9	3.1	-1.2*	-61.8	0.22	2.0	-1.1*	-54.2	0.22	-8.0

See notes at end of table.

Table 10-6. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Early Childhood Program Participation topical survey—Continued

Characteristic	Unweighted counts			Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias	
Enrollment status of sampled child (reported on screener)													
Homeschooled	84	119	2.4	2.4	0.0	-2.0	0.20	2.3	-0.1	-5.5	0.18	165.8	
Public or private school, or preschool	1,900	2,503	32.2	31.3	0.9*	2.8	0.37	31.4	0.0	0.1	0.36	-96.9	
Other, not in school, or not reported	3,860	5,308	65.4	66.2	-0.9*	-1.3	0.40	66.3	0.1	0.1	0.37	-88.4	
Grade of sampled child (reported on screener)													
Prekindergarten	2,073	2,711	36.2	34.7	1.5*	4.2	0.40	35.3	0.6	1.7	0.33	-61.8	
Other or not reported	3,771	5,219	63.8	65.3	-1.5*	-2.4	0.40	64.7	-0.6	-0.9	0.33	-61.8	
Number of persons age 20 or younger in household (reported on screener)													
1	2,203	2,947	24.1	23.7	0.4	1.8	0.25	24.2	0.5	2.1	0.27	20.2	
2	2,207	2,883	40.8	39.0	1.8*	4.4	0.39	40.1	1.1*	2.7	0.38	-39.0	
3	961	1,377	21.8	22.5	-0.7*	-3.3	0.36	21.9	-0.5	-2.4	0.37	-26.1	
4 or more	473	723	13.3	14.8	-1.5*	-11.3	0.36	13.7	-1.1*	-7.8	0.33	-28.3	

See notes at end of table.

Table 10-6. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Early Childhood Program Participation topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights				Percent change in bias	
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias relative bias	Percent error of bias	Standard error of bias	Percent of respondents	Estimated bias relative bias	Percent error of bias	Standard error of bias	
Number of persons age 21 or older in household (reported on screener)												
0	19	57	0.3	0.7	-0.4*	-145.8	0.11	0.3	-0.4*	-117.3	0.11	-9.0
1	462	758	7.2	9.0	-1.8*	-24.8	0.24	8.5	-0.5*	-5.7	0.22	-72.7
2	4,545	5,874	80.3	76.4	3.9*	4.9	0.35	77.9	1.5*	1.9	0.29	-61.6
3	487	715	7.4	8.1	-0.7*	-9.7	0.21	7.9	-0.1	-1.9	0.20	-79.1
4 or more	331	526	4.8	5.8	-1.0*	-21.0	0.22	5.3	-0.5*	-9.6	0.22	-49.5
Screener mailing protocol and response mode ⁴												
Paper-only protocol	4,821	6,702	82.1	84.3	-2.2*	-2.7	0.26	84.5	0.1	0.2	0.10	-93.8
Web protocol, responded by Web	746	812	12.9	10.3	2.6*	20.1	0.20	10.2	-0.1	-1.1	0.06	-95.5
Web protocol, responded by paper	277	416	5.0	5.4	-0.4*	-8.1	0.18	5.4	0.0	-0.3	0.07	-95.5

See notes at end of table.

Table 10-6. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Early Childhood Program Participation topical survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Screening incentive protocol⁵												
\$5 only	4,569	6,216	78.1	78.5	-0.4	-0.5	0.31	77.4	-1.1*	-1.4	0.32	173.5
\$2 only	274	349	4.7	4.5	0.2	4.3	0.18	4.8	0.3	6.6	0.19	56.4
Modeled												
\$0	13	14	0.2	0.1	0.0*	23.4	0.02	0.2	0.1*	28.8	0.02	32.9
\$2	131	158	2.1	1.9	0.2*	10.4	0.10	2.1	0.2*	11.1	0.11	7.6
\$5	744	1,010	12.9	12.8	0.2	1.4	0.25	13.2	0.5	3.6	0.25	159.4
\$10	113	183	2.0	2.3	-0.3*	-12.7	0.12	2.3	0.0	-1.0	0.15	-91.2

* Indicates a statistically significant difference ($p < .05$, Student's t test).

¹ Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arizona, Louisiana, Texas, and Oklahoma. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

² Households that completed a web screener and proceeded directly to the topical received no additional topical incentive. Other households received a \$5 topical incentive if they received a \$0, \$2, or \$5 screener incentive and responded to one of the first two screener mailings; a \$10 topical incentive if they received a \$10 screener incentive and responded to one of the first two screener mailings; and a \$15 incentive if they responded to the third or fourth screener mailing.

³ The “No topical mailings received” category consists of households that, resulting from an operational error, did not receive any topical mailings despite being sampled for a topical survey, and therefore did not receive a topical incentive.

⁴ Households in the web group that responded to the screener on the Web received the web protocol at the topical stage. Households in the web group that responded to the screener in paper form received the paper protocol at the topical stage. Households in the web group received a \$5 screener incentive. Households in the web group that proceeded directly from the web screener instrument to the web topical instrument, without receiving any topical mailings, did not receive an additional topical incentive. Households in the web group that received a topical mailing received a \$5 topical incentive with the first topical mailing, unless they had responded to the screener after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

⁵ Screener incentives in the modeled group were assigned according to predicted response propensity, with households with a higher predicted response propensity receiving a lower incentive. Households that received a \$0, \$2, or \$5 screener incentive received a \$5 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive. Households that received a \$10 screener incentive received a \$10 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

NOTE: Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Adult Training and Education Survey

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Total	47,744	63,831	100.0	100.0				100.0				
Race/ethnicity stratum												
25 percent or more Black	7,464	10,802	12.3	13.6	-1.4*	-11.2	0.16	13.5	-0.2	-1.3	0.13	-87.4
40 percent or more Hispanic	5,358	7,607	9.3	10.2	-1.0*	-10.6	0.13	10.1	-0.1	-1.0	0.11	-89.8
Other	34,922	45,422	78.5	76.1	2.4*	3.0	0.17	76.4	0.3*	0.4	0.08	-88.4
Tract poverty rate												
20 percent or higher	11,563	16,501	21.6	23.5	-1.9*	-8.9	0.17	22.6	-0.9*	-4.1	0.17	-51.4
Less than 20 percent	36,181	47,330	78.4	76.5	1.9*	2.5	0.17	77.4	0.9*	1.2	0.17	-51.4
Language of screener response												
English	46,777	62,207	97.0	96.3	0.7*	0.7	0.11	96.6	0.3*	0.3	0.11	-52.9
Spanish	967	1,624	3.0	3.7	-0.7*	-23.2	0.11	3.4	-0.3*	-9.7	0.11	-52.9
Census region ¹												
Northeast	8,608	11,432	18.7	18.6	0.1	0.4	0.17	18.5	-0.1	-0.7	0.18	59.9
South	17,420	23,904	34.5	35.4	-0.9*	-2.7	0.19	34.9	-0.5*	-1.4	0.20	-47.7
Midwest	11,182	14,460	23.4	22.7	0.8*	3.3	0.15	23.0	0.4*	1.6	0.15	-54.0
West	10,534	14,035	23.4	23.4	0.1	0.3	0.15	23.6	0.3	1.1	0.17	306.3
Topical incentive level ²												
\$0	4,020	4,168	7.9	6.0	1.9*	23.7	0.08	6.0	0.0	0.0	0.00	-100.0
\$5	36,264	47,275	75.9	73.6	2.3*	3.0	0.15	73.6	0.0	0.0	0.00	-100.0
\$10	567	818	1.2	1.3	-0.1	-9.8	0.06	1.5	0.3*	17.5	0.07	136.1
\$15	6,893	11,553	15.1	19.1	-4.0	-26.9	0.17	18.9	-0.3*	-1.3	0.07	-93.8
No topical mailings ³	0	17	0.0	0.0	0.0*	0.0	0.01	0.0	0.0*	0.0	0.01	0.0

See notes at end of table.

Table 10-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Adult Training and Education Survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Ability to match address to phone number												
Phone number available	33,907	44,556	71.5	70.6	0.8*	1.2	0.18	70.9	0.2	0.3	0.18	-70.5
No phone number available	13,837	19,275	28.5	29.4	-0.8*	-2.9	0.18	29.1	-0.2	-0.8	0.18	-70.5
Marital status of head of household												
Single	13,895	19,230	23.8	25.1	-1.4*	-5.8	0.19	24.3	-0.8*	-3.4	0.19	-40.0
Married	28,139	36,417	65.8	63.5	2.4*	3.6	0.21	65.1	1.6*	2.5	0.21	-30.8
Missing	5,710	8,184	10.4	11.4	-1.0*	-9.5	0.12	10.6	-0.8*	-7.6	0.13	-18.0
Ethnicity of head of household												
White	25,964	33,355	53.8	51.6	2.2*	4.1	0.18	52.6	1.0*	1.9	0.17	-54.5
Black	4,050	5,923	7.3	8.0	-0.7*	-9.9	0.11	7.8	-0.3*	-3.2	0.10	-65.3
Hispanic	3,823	5,471	10.1	10.9	-0.8*	-8.2	0.14	10.6	-0.3	-2.5	0.14	-67.5
Asian or Pacific Islander	1,692	2,188	4.7	4.4	0.2*	4.7	0.07	4.7	0.3*	5.4	0.07	17.2
Other	68	91	0.1	0.1	0.0	3.7	0.01	0.1	0.0	4.2	0.01	13.9
Missing	12,147	16,803	24.0	24.9	-0.9*	-3.7	0.16	24.1	-0.7*	-3.1	0.18	-15.7

See notes at end of table.

Table 10-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Adult Training and Education Survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Education of head of household												
Less than high school diploma	3,500	5,067	8.0	8.7	-0.7*	-8.5	0.14	8.3	-0.4*	-5.3	0.15	-35.3
High school diploma	10,320	13,808	19.9	20.1	-0.2	-0.9	0.16	19.9	-0.2	-0.9	0.17	-4.7
Some college	10,506	13,960	23.9	23.7	0.2	0.8	0.16	24.0	0.3	1.1	0.18	31.8
Bachelor's degree	7,243	9,182	15.9	15.0	0.9*	5.9	0.14	15.7	0.7*	4.5	0.15	-23.4
Graduate degree	5,015	6,274	10.5	9.8	0.8*	7.1	0.12	10.3	0.5*	4.5	0.12	-38.8
Missing	11,160	15,540	21.7	22.7	-1.0*	-4.7	0.16	21.9	-0.8*	-3.7	0.17	-19.2
Household income												
Under \$15,000	3,608	5,204	6.9	7.5	-0.5*	-7.9	0.09	7.2	-0.3*	-4.1	0.10	-45.8
\$15,000 to \$24,999	3,828	5,381	6.9	7.4	-0.5*	-7.9	0.10	7.0	-0.4*	-5.7	0.11	-25.9
\$25,000 to \$34,999	3,472	4,813	6.6	7.0	-0.4*	-5.5	0.11	6.8	-0.2	-3.0	0.11	-43.5
\$35,000 to \$49,999	5,166	7,140	9.8	10.4	-0.5*	-5.4	0.12	10.0	-0.4*	-3.8	0.12	-28.8
\$50,000 to \$74,999	9,414	12,218	17.8	17.4	0.4*	2.3	0.15	17.7	0.4*	2.1	0.15	-5.0
\$75,000 to \$99,999	6,982	8,913	16.8	15.9	0.9*	5.4	0.12	16.5	0.6*	3.7	0.13	-33.1
\$100,000 to \$124,999	3,889	5,009	9.3	9.1	0.3*	3.0	0.13	9.3	0.2	2.0	0.13	-32.4
\$125,000 to \$149,999	2,335	2,949	6.1	5.7	0.4*	6.5	0.10	6.0	0.2*	4.1	0.10	-38.3
\$150,000 to \$174,999	1,467	1,871	3.4	3.2	0.2*	6.2	0.06	3.3	0.2*	5.0	0.07	-19.0
\$175,000 to \$199,999	1,056	1,275	2.7	2.4	0.3*	12.1	0.05	2.6	0.2*	9.2	0.05	-26.6
\$200,000 to \$249,999	931	1,154	2.3	2.0	0.2*	10.7	0.05	2.2	0.2*	7.4	0.04	-33.0
\$250,000 or higher	1,207	1,512	3.1	2.9	0.2*	6.9	0.07	3.0	0.1	3.5	0.06	-51.2
Missing	4,389	6,392	8.2	9.2	-1.0*	-12.1	0.12	8.4	-0.8*	-9.8	0.12	-17.9

See notes at end of table.

Table 10-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Adult Training and Education Survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Home tenure												
Own	33,100	42,671	70.0	67.0	3.0*	4.3	0.18	69.0	2.0*	2.9	0.18	-33.5
Rent	9,537	13,710	20.5	22.3	-1.8*	-8.7	0.18	21.3	-1.0*	-4.6	0.18	-45.2
Missing	5,107	7,450	9.5	10.7	-1.2*	-12.7	0.12	9.7	-1.0*	-10.4	0.13	-16.3
Age of sampled adult (reported on screener)												
16–24	3,908	5,839	11.8	12.9	-1.1*	-9.8	0.12	12.9	0.0	0.2	0.12	-97.2
25–34	7,043	9,989	17.7	18.9	-1.2*	-6.9	0.18	18.9	0.1	0.4	0.12	-93.7
35–44	5,738	8,015	19.0	19.4	-0.4*	-2.0	0.16	19.4	0.0	0.0	0.02	-97.8
45–54	10,262	13,837	23.4	22.6	0.8*	3.4	0.17	22.6	0.0	0.0	0.02	-99.6
55–65	20,716	25,927	28.1	26.0	2.1*	7.4	0.15	26.0	0.0	0.0	0.00	-99.9
Not reported	77	224	0.1	0.2	-0.1*	-100.8	0.02	0.1	-0.1*	-79.2	0.02	-11.9
Sex of sampled adult (reported on screener)												
Male	21,697	29,705	46.4	47.3	-0.9*	-1.9	0.23	47.1	-0.2	-0.4	0.17	-76.6
Female	25,617	33,412	52.7	51.6	1.1*	2.1	0.22	52.0	0.4*	0.8	0.16	-64.0
Not reported	430	714	0.8	1.1	-0.2*	-27.9	0.05	0.9	-0.2*	-22.2	0.05	-16.5

See notes at end of table.

Table 10-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Adult Training and Education Survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Enrollment status of sampled adult (reported on screener)												
Homeschooled	172	304	0.3	0.4	-0.1*	-28.5	0.03	0.3	-0.1*	-23.4	0.03	-14.8
Public or private school, or preschool	351	582	1.0	1.2	-0.2*	-19.4	0.05	1.1	-0.1*	-11.8	0.05	-35.1
College, university or vocational school	4,405	6,148	11.7	12.1	-0.4*	-3.5	0.13	12.5	0.3*	2.8	0.13	-14.4
Not in school	41,815	55,128	84.7	83.4	1.2*	1.4	0.14	83.7	0.3*	0.4	0.14	-75.7
Not reported	1,001	1,669	2.3	2.8	-0.5*	-23.3	0.08	2.4	-0.4*	-18.6	0.08	-17.0
Number of persons age 20 or younger in household (reported on screener)												
0	40,068	53,007	52.8	51.4	1.3*	2.5	0.23	51.8	0.3	0.6	0.20	-75.3
1	4,316	6,044	19.1	19.5	-0.4*	-1.9	0.17	19.4	0.0	-0.1	0.19	-93.1
2	2,259	3,134	17.9	17.9	0.0	0.1	0.18	18.2	0.3*	1.9	0.17	2031.6
3	765	1,123	7.0	7.5	-0.5*	-7.1	0.18	7.2	-0.3	-4.6	0.19	-33.4
4 or more	336	523	3.2	3.7	-0.5*	-14.8	0.12	3.4	-0.3*	-9.3	0.14	-34.2

See notes at end of table.

Table 10-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Adult Training and Education Survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Number of persons age 21 or older in household (reported on screener)												
0	104	206	0.2	0.3	-0.1*	-48.6	0.02	0.2	-0.1*	-41.3	0.02	-10.6
1	13,777	18,394	14.0	14.0	0.0	-0.1	0.09	14.0	0.0	-0.1	0.09	32.0
2	25,640	33,682	59.6	58.4	1.3*	2.1	0.18	59.1	0.7*	1.2	0.18	-43.2
3	6,054	8,342	17.1	17.2	-0.1	-0.7	0.14	17.3	0.1	0.5	0.15	-35.1
4 or more	2,169	3,207	9.1	10.1	-1.0*	-11.4	0.18	9.4	-0.7*	-7.5	0.18	-32.2
Screener mailing protocol and response mode ⁴												
Paper-only protocol	39,632	53,849	82.7	84.1	-1.4*	-1.7	0.13	83.7	-0.4*	-0.5	0.13	-72.4
Web protocol, responded by Web	5,696	6,394	12.5	10.6	1.9*	15.4	0.12	10.7	0.1	0.5	0.08	-97.0
Web protocol, responded by paper	2,416	3,588	4.8	5.3	-0.5*	-10.3	0.09	5.6	0.3*	6.0	0.11	-31.2

See notes at end of table.

Table 10-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2016 Adult Training and Education Survey—Continued

Characteristic	Unweighted counts		Percentages estimated with base weights				Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Screener incentive protocol⁵												
\$5 only	37,393	49,788	78.4	78.1	0.3	0.3	0.17	77.9	-0.2	-0.3	0.18	-8.9
\$2 only	2,251	3,064	4.8	4.8	-0.1	-1.1	0.08	4.9	0.0	0.4	0.09	-59.3
Modeled												
\$0	353	433	0.4	0.4	0.0*	8.2	0.02	0.4	0.0	2.1	0.02	-76.0
\$2	2,128	2,683	4.1	3.7	0.3*	8.5	0.06	3.9	0.2*	4.9	0.06	-44.3
\$5	4,927	6,797	10.9	11.2	-0.3*	-3.1	0.13	11.0	-0.2	-1.6	0.13	-45.7
\$10	692	1,066	1.4	1.7	-0.3*	-18.9	0.07	1.9	0.2*	10.7	0.09	-24.3

* Indicates a statistically significant difference ($p < .05$, Student's t test).

¹ Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

² Households that completed a web screener and proceeded directly to the topical received no additional topical incentive. Other households received a \$5 topical incentive if they received a \$0, \$2, or \$5 screener incentive and responded to one of the first two screener mailings; a \$10 topical incentive if they received a \$10 screener incentive and responded to one of the first two screener mailings; and a \$15 incentive if they responded to the third or fourth screener mailing.

³ The “No topical mailings received” category consists of households that, resulting from an operational error, did not receive any topical mailings despite being sampled for a topical survey, and therefore did not receive a topical incentive.

⁴ Households in the web group that responded to the screener on the Web received the web protocol at the topical stage. Households in the web group that responded to the screener in paper form received the paper protocol at the topical stage. Households in the web group received a \$5 screener incentive. Households in the web group that proceeded directly from the web screener instrument to the web topical instrument, without receiving any topical mailings, did not receive an additional topical incentive. Households in the web group that received a topical mailing received a \$5 topical incentive with the first topical mailing, unless they had responded to the screener after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

⁵ Screener incentives in the modeled group were assigned according to predicted response propensity, with households with a higher predicted response propensity receiving a lower incentive. Households that received a \$0, \$2, or \$5 screener incentive received a \$5 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive. Households that received a \$10 screener incentive received a \$10 topical incentive, unless they responded after the third or fourth screener mailing, in which case they received a \$15 topical incentive.

NOTE: Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

10.2.2 Comparison of Estimates Between Early and Late Responders

Under the continuum of resistance model of survey nonresponse (Olson 2013), households that respond after a small number of contact attempts are thought of as easy-to-reach households, whereas those that require a larger number of contact attempts are thought of as harder-to-reach households, and those that do not respond at all are thought of as the hardest-to-reach households. Under this framework, if significant differences occurred between easy-to-reach respondents and harder-to-reach respondents for a survey estimate, it suggests a relationship between the ease of contact and the estimate. This, in turn, suggests that additional differences in the estimate would be observed among the hardest-to-reach households—the nonrespondents—implying that the estimate is subject to unit nonresponse bias. The implicit assumption is that, because harder-to-reach households would likely have been nonrespondents had the additional contact attempts not been made, then harder-to-reach households are more similar to nonresponding households than are easy-to-reach households (Lin and Schaeffer 1995).

The continuum of resistance model therefore implies that differences in an estimate between easy-to-reach and harder-to-reach respondents may be indicative of nonresponse bias in that estimate. As part of the NHES:2016 nonresponse bias analysis, base-weighted key survey estimates for each topical survey were compared between early screener responders and late screener responders, and between early topical responders and late topical responders. For the purpose of this analysis, early responders were defined as those that responded after the initial mailing or the first follow-up mailing. Late responders were defined as those that responded after the second or third follow-up mailing. A statistically significant difference of at least 1 percentage point in an estimate between early and late screener responders is interpreted as suggesting the potential for bias resulting from screener nonresponse; similarly, a statistically significant difference of at least 1 percentage point between early and late topical responders is interpreted as suggesting the potential for bias resulting from topical nonresponse.

Unlike the analysis discussed in section 10.2.1, this analysis uses only respondents to the NHES:2016 topical surveys; it does not require any information about nonrespondents. Thus, this analysis allows bias to be evaluated for key survey estimates, although its validity rests on the assumption that harder-to-reach respondents are similar to nonrespondents. It should be noted that the pool of late responders is relatively small for the child topical surveys; therefore, for some estimates, true differences between early and late responders may not be detected because of limited statistical power. A further limitation of this analysis is that, although significant differences between early and late responders may be indicative of bias, the magnitude of the potential bias remains unknown.

For each estimate, the percentage of relative difference (PRD) was calculated to provide a measure of the difference between early and late responders that is independent of the distribution of a particular variable:

$$PRD = \frac{p_l - p_e}{p_e}$$

where

p_l is the estimate among late responders.

p_e is the estimate among early responders.

For each topical survey, table 10-8 shows the mean and median PRD between early and late screener respondents, the percentage of estimates showing statistically significant differences greater than 1 percentage point between early and late screener respondents, and the same measures for differences between early and late topical respondents. Overall, the results suggest that some risk of bias resulting from screener and topical nonresponse in the base-weighted key survey estimates. For the PFI, 22 out of 55 estimates (40 percent) showed significant differences between early and late screener respondents, and 23 (42 percent) showed significant differences between early and late topical respondents. For the ECPP, 28 out of 48 estimates (58 percent) showed significant differences between early and late screener respondents, and 15 (31 percent) showed significant differences between early and late topical respondents. For the ATES, 19 out of 33 estimates (58 percent) showed significant differences between early and late screener respondents, and 17 (52 percent) showed significant differences between early and late topical respondents.

Tables 10-9 through 10-11 show differences in key survey estimates between early and late responders for the PFI, ECPP, and ATES topical surveys.

Table 10-8. Summary of differences in NHES:2016 estimates by mailing wave

Survey	Comparison by screener wave			Comparison by topical wave		
	Mean absolute relative difference between early and late respondents (percent)	Median absolute relative difference between early and late respondents (percent)	Percent of estimates showing statistically and practically significant difference between early and late respondents	Mean absolute relative difference between early and late respondents (percent)	Median absolute relative difference between early and late respondents (percent)	Percent of estimates showing statistically and practically significant difference between early and late respondents
PFI	13.2	6.3	40.0	11.6	8.7	41.8
ECPP	17.0	9.4	58.3	13.0	7.3	31.3
ATES	12.8	7.6	57.6	9.6	7.0	51.5

NOTE: A statistically significant difference is one with $p < .05$ (Student's t test). A practically significant difference is one with an absolute value greater than 1 percentage point.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-9. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by mailing wave returned

Characteristic	Screener mailing wave returned					Topical mailing wave returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Child and household demographic characteristics										
Race/ethnicity of child										
White, non-Hispanic	61.1	0.64	50.1	1.04	-17.9*	59.5	0.53	51.5	1.38	-13.3*
Black, non-Hispanic	8.5	0.38	9.9	0.53	16.3*	8.5	0.32	10.5	0.73	22.4*
Hispanic	17.7	0.58	27.8	0.96	57.3*	19.7	0.49	24.4	1.25	24.0*
Other	12.7	0.47	12.1	0.70	-4.6	12.3	0.40	13.6	0.99	10.5
Sex of child										
Male	51.5	0.64	50.9	0.98	-1.3	51.5	0.59	50.8	1.23	-1.3
Female	48.5	0.64	49.1	0.98	1.4	48.5	0.59	49.2	1.23	1.4

See notes at end of table.

Table 10-9. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by mailing wave returned—Continued

Characteristic	Screener mailing wave returned					Topical mailing wave returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Highest educational attainment of either parent										
Less than high school diploma	5.5	0.28	9.1	0.66	65.9*	6.1	0.28	8.6	0.79	42.3*
High school diploma or GED	10.0	0.38	14.5	0.70	44.7*	10.5	0.39	14.5	1.12	37.8*
Vocational/some college	28.4	0.56	30.9	0.96	8.9*	28.8	0.58	30.5	1.19	5.8
Bachelor's degree	28.4	0.53	26.3	0.97	-7.4	28.4	0.53	25.0	1.05	-12.2*
Graduate or professional degree	27.7	0.64	19.2	0.93	-30.8*	26.2	0.64	21.5	1.12	-18.1*
Parents' language										
Both parents speak English	89.0	0.38	82.8	0.73	-7.0*	87.6	0.43	85.8	0.77	-2.1
One parent speaks English	3.0	0.26	4.0	0.33	34.7*	3.2	0.25	3.7	0.45	15.5
Neither parent speaks English	8.0	0.33	13.2	0.68	64.6*	9.2	0.37	10.5	0.64	14.2
Family structure										
Two parents and sibling(s)	66.2	0.53	62.7	1.06	-5.3*	66.1	0.51	61.6	1.18	-6.8*
Two parents, no siblings	9.3	0.24	8.5	0.39	-8.1	9.2	0.24	8.4	0.51	-8.6
One parent and sibling(s)	14.5	0.44	19.5	0.92	34.3*	15.0	0.40	20.0	1.25	33.5*
One parent, no sibling	6.5	0.20	6.1	0.34	-5.7	6.3	0.20	7.1	0.51	12.7
Other	3.5	0.23	3.1	0.26	-9.9	3.5	0.19	2.9	0.36	-15.8
Household income										
\$50,000 or less	32.9	0.61	43.1	1.13	30.8*	34.6	0.66	41.1	1.40	18.7*
\$50,001 to \$100,000	29.9	0.46	29.4	1.00	-1.8	29.6	0.49	30.5	1.23	2.9
\$100,001 to \$150,000	17.8	0.47	13.8	0.66	-22.2*	17.3	0.44	13.8	0.88	-20.2*
\$150,001 or more	19.4	0.46	13.7	0.74	-29.2*	18.5	0.41	14.6	0.86	-20.8*

See notes at end of table.

Table 10-9. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by mailing wave returned—Continued

Characteristic	Screener mailing wave returned					Topical mailing wave returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Key estimates										
Child is homeschooled ¹										
Yes—full time	2.5	0.23	2.7	0.36	7.0	2.7	0.23	1.9	0.29	-30.8*
Yes—part time	0.8	0.09	1.0	0.16	21.8	0.8	0.09	0.9	0.19	9.0
No	96.7	0.26	96.3	0.39	-0.4	96.4	0.26	97.2	0.37	0.8*
Child's parents participate in three or more activities in child's school										
Yes	84.5	0.57	83.8	0.78	-0.8	84.6	0.48	82.9	1.21	-2.0
No	15.5	0.57	16.2	0.78	4.2	15.4	0.48	17.1	1.21	11.2
School tells family how child is doing in school										
Yes—does very well	58.0	0.65	56.4	1.02	-2.8	57.9	0.63	55.9	1.42	-3.4
Yes—does just okay	28.7	0.58	30.1	1.02	5.0	29.0	0.54	29.5	1.20	1.9
Yes—does not very well	7.0	0.38	7.0	0.53	0.1	6.6	0.29	8.5	0.92	28.5
No	6.3	0.33	6.5	0.52	2.3	6.5	0.34	6.0	0.62	-6.8
School provides information about how to help child with homework										
Yes—does very well	40.5	0.66	42.7	0.99	5.4	40.6	0.60	43.0	1.40	5.9
Yes—does just okay	32.7	0.65	31.8	0.93	-2.6	33.0	0.51	30.1	1.03	-8.7*
Yes—does not very well	12.1	0.42	12.2	0.70	0.7	12.1	0.39	12.6	0.82	4.4
No	14.7	0.49	13.3	0.72	-9.6	14.3	0.48	14.3	1.13	-0.4
Child's parents told child a story in the last week										
Yes	58.7	0.63	58.5	0.99	-0.2	59.0	0.61	57.2	1.30	-2.9
No	41.3	0.63	41.5	0.99	0.3	41.0	0.61	42.8	1.30	4.2

See notes at end of table.

Table 10-9. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by mailing wave returned—Continued

Characteristic	Screener mailing wave returned					Topical mailing wave returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Child's parents and child went to a zoo or aquarium last month										
Yes	20.1	0.48	26.4	0.82	31.1*	20.5	0.46	28.0	1.09	36.7*
No	79.9	0.48	73.6	0.82	-7.8*	79.5	0.46	72.0	1.09	-9.5*
Parent considered other schools for child										
Yes	30.0	0.58	28.7	0.83	-4.2	30.3	0.57	26.9	1.24	-11.2*
No	70.0	0.58	71.3	0.83	1.8	69.7	0.57	73.1	1.24	4.9*

* Indicates a statistically significant difference ($p < .05$, Student's t test).

¹ Homeschoolers are defined as children whose parents responded to the PFI—Homeschooled, or whose parents responded to the PFI—Enrolled and indicated that the child is homeschooled for some or all classes. Children in public/private school for more than 25 hours per week, or whose parents indicated that they are homeschooled only because of a temporary illness, are excluded. Full-time homeschoolers are those who do not spend any time in public/private school. Part-time homeschoolers are those who spend up to 25 hours per week in public/private school.

² Category includes all respondents to the PFI—Homeschooled (for whom the school type item was not asked) as well as all PFI—Enrolled respondents classified as full-time homeschoolers. PFI—Enrolled respondents classified as part-time homeschoolers are included in either the private or public category, depending on the school type reported on the questionnaire.

NOTE: s.e. is standard error. Details may not sum to totals because of rounding. Percentages are estimated using person-level base weights. Early respondents are those who responded to the first or second mailing wave, and late respondents are those who responded to the second or third mailing wave.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-10. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by mailing wave returned

Characteristic	Screener mailing wave returned						Topical mailing wave returned					
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference		
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.		Percent	s.e.
Child and household demographic characteristics												
Race/ethnicity of child												
White, non-Hispanic	64.2	0.88	54.6	1.41	-14.9*	62.6	0.88	55.3	1.63	-11.6*		
Black, non-Hispanic	7.0	0.45	7.6	0.70	8.1	6.8	0.39	8.7	0.93	27.5		
Hispanic	16.1	0.67	24.3	1.22	50.7*	17.7	0.59	22.9	1.53	29.4*		
Other	12.7	0.66	13.5	0.82	6.2	12.9	0.58	13.1	1.03	1.6		
Sex of child												
Male	51.7	0.97	51.1	1.12	-1.3	50.9	0.84	54.3	1.74	6.7		
Female	48.3	0.97	48.9	1.12	1.3	49.1	0.84	45.7	1.74	-6.9		
Highest educational attainment of either parent												
Less than high school diploma	3.7	0.39	6.1	0.58	64.2*	4.1	0.39	6.1	0.82	49.8*		
High school diploma or GED	9.1	0.53	13.9	0.89	53.1*	10.0	0.50	12.9	1.28	28.6*		
Vocational/some college	25.7	0.74	27.6	1.05	7.3	25.8	0.62	28.4	1.28	10.0		
Bachelor's degree	30.3	0.94	26.7	1.09	-12.0*	29.7	0.85	27.0	1.33	-9.2		
Graduate or professional degree	31.1	0.72	25.7	1.16	-17.5*	30.3	0.72	25.6	1.53	-15.7*		
Parents' language												
Both parents speak English	90.6	0.53	84.3	1.02	-7.0*	89.1	0.50	86.6	1.26	-2.9*		
One parent speaks English	2.3	0.28	4.0	0.44	73.8*	2.6	0.25	3.8	0.69	44.5		
Neither parent speaks English	7.1	0.48	11.7	0.98	64.9*	8.2	0.48	9.6	1.08	16.9		

See notes at end of table.

Table 10-10. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by mailing wave returned—Continued

Characteristic	Screener mailing wave returned					Topical mailing wave returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Family structure										
Two parents and sibling(s)	64.2	0.88	62.2	1.13	-3.0	63.9	0.81	61.9	1.60	-3.2
Two parents, no siblings	20.4	0.66	17.5	0.73	-14.3*	20.1	0.57	17.1	1.10	-14.8*
One parent and sibling(s)	8.3	0.52	11.8	0.91	42.1*	8.9	0.52	11.3	1.14	27.0*
One parent, no sibling	5.4	0.33	6.9	0.58	26.8*	5.4	0.30	7.9	0.77	46.8*
Other	1.7	0.22	1.6	0.30	-5.1	1.6	0.19	1.7	0.40	7.3
Household income										
\$50,000 or less	32.6	0.88	42.6	1.40	30.8*	34.4	0.76	40.9	1.68	19.0*
\$50,001 to \$100,000	33.3	0.94	29.9	1.40	-10.3*	32.7	0.83	30.4	1.70	-7.1
\$100,001 to \$150,000	17.7	0.71	13.5	0.82	-23.7*	16.9	0.63	14.2	1.37	-16.2
\$150,001 or more	16.4	0.62	14.0	0.92	-14.6*	16.0	0.60	14.5	1.19	-9.2
Key estimates										
Child receiving any nonparental care (at least weekly)										
Yes	65.2	1.02	60.8	1.41	-6.8*	64.2	0.98	62.4	1.68	-2.8
No	34.8	1.02	39.2	1.41	12.7*	35.8	0.98	37.6	1.68	5.1
Child receiving relative care (at least weekly)										
Yes	22.6	0.74	24.6	1.14	8.7	23.0	0.73	24.3	1.44	5.8
No	77.4	0.74	75.4	1.14	-2.5	77.0	0.73	75.7	1.44	-1.7

See notes at end of table.

Table 10-10. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by mailing wave returned—Continued

Characteristic	Screener mailing wave returned					Topical mailing wave returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Child receiving nonrelative care (at least weekly)										
Yes	14.3	0.65	14.3	0.99	0.3	14.8	0.62	12.2	1.13	-17.4*
No	85.7	0.65	85.7	0.99	0.0	85.2	0.62	87.8	1.13	3.0*
Child receiving center-based care (at least weekly)										
Yes	43.8	0.89	36.7	1.19	-16.3*	42.0	0.88	39.9	1.58	-5.2
No	56.2	0.89	63.3	1.19	12.7*	58.0	0.88	60.1	1.58	3.8
Can count higher than 10										
Yes	61.6	1.24	57.8	1.59	-6.1*	60.4	1.25	60.7	2.09	0.5
No	38.4	1.24	42.2	1.59	9.7*	39.6	1.25	39.3	2.09	-0.7
Knows all letters										
Yes	34.2	1.23	30.1	1.56	-12.1*	32.7	1.19	34.1	1.85	4.2
No	65.8	1.23	69.9	1.56	6.3*	67.3	1.19	65.9	1.85	-2.1
Can write own name										
Yes	44.4	1.31	41.8	1.42	-6.0	43.0	1.34	46.1	1.79	7.2
No	55.6	1.31	58.2	1.42	4.8	57.0	1.34	53.9	1.79	-5.4
Child has a disability										
Yes	10.1	0.61	11.6	0.91	15.1	10.0	0.51	13.0	1.74	29.0
No	89.9	0.61	88.4	0.91	-1.7	90.0	0.51	87.0	1.74	-3.2

See notes at end of table.

Table 10-10. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by mailing wave returned—Continued

Characteristic	Screener mailing wave returned					Topical mailing wave returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Good choices for child care and early childhood programs										
Yes	62.7	0.94	59.5	1.36	-5.0*	62.0	0.87	60.6	1.61	-2.2
No	15.9	0.81	16.4	1.02	3.1	16.2	0.75	15.5	1.25	-4.0
Don't know	21.4	0.76	24.1	1.34	12.2	21.9	0.72	23.9	1.34	9.1
Number of times child read to in past week										
Not at all	6.3	0.45	10.9	0.87	72.7*	7.5	0.49	8.8	0.93	18.0
1 or 2 times	8.4	0.47	11.5	0.98	37.0*	8.7	0.41	12.0	1.11	37.4*
3 or more times	85.3	0.67	77.6	0.99	-9.0*	83.8	0.62	79.2	1.42	-5.5*
Someone in family taught letters, words, or numbers										
Not at all	9.7	0.56	10.0	0.77	3.1	10.1	0.52	8.4	0.89	-16.3
1 or 2 times	26.1	0.81	26.2	1.25	0.4	25.3	0.76	29.6	1.70	16.9*
3 or more times	64.3	1.03	63.9	1.40	-0.6	64.6	0.91	62.0	1.74	-4.1

* Indicates a statistically significant difference ($p < .05$, Student's t test).

NOTE: s.e. is standard errors. Details may not sum to totals due to rounding. Percentages are estimated using person-level base weights. Early respondents are those who responded to the first or second mailing wave, and late respondents are those who responded to the second or third mailing wave.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-11. Adult Training and Education Survey demographic characteristics and key survey estimates by mailing wave returned

Characteristic	Screener mailing wave returned						Topical mailing wave returned					
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference		
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.			
Demographic characteristics												
Race/ethnicity												
White, non-Hispanic	71.3	0.45	61.3	0.64	-14.1*	69.9	0.45	63.9	0.79	-8.6*		
Black, non-Hispanic	7.5	0.18	9.8	0.43	31.5*	7.6	0.19	10.2	0.59	33.9*		
Hispanic	11.6	0.29	18.7	0.69	61.7*	12.7	0.31	16.4	0.76	28.8*		
Other	9.6	0.30	10.1	0.42	5.5	9.8	0.25	9.6	0.48	-2.4		
Sex												
Male	46.7	0.40	45.7	0.79	-2.0	46.2	0.39	47.2	0.82	2.2		
Female	53.3	0.40	54.3	0.79	1.7	53.8	0.39	52.8	0.82	-1.9		
Educational attainment												
Less than high school diploma	6.2	0.21	9.9	0.51	58.8*	6.8	0.25	8.5	0.54	24.6*		
High school diploma or GED	21.2	0.33	23.0	0.67	8.6*	21.4	0.34	22.7	0.79	6.3		
Some college or Associate's degree	31.8	0.38	33.1	0.74	3.9	31.9	0.38	33.2	0.77	4.0		
Bachelor's degree	24.9	0.36	21.6	0.65	-13.1*	24.4	0.29	22.5	0.77	-8.0*		
Graduate or professional degree	15.9	0.33	12.4	0.48	-21.9*	15.5	0.28	13.1	0.71	-15.3*		
Age of adult												
16–25	12.6	0.28	13.1	0.47	4.1	12.2	0.29	15.0	0.69	23.3*		
26–35	17.2	0.33	19.3	0.60	12.1*	17.4	0.34	19.2	0.61	10.1*		
36–45	19.0	0.37	20.7	0.60	8.7*	18.8	0.34	22.0	0.82	16.8*		
46–55	23.7	0.40	23.9	0.64	0.9	24.1	0.38	22.2	0.64	-7.8*		
56–65	27.5	0.36	23.0	0.44	-16.3*	27.5	0.32	21.6	0.50	-21.3*		

See notes at end of table.

Table 10-11. Adult Training and Education Survey demographic characteristics and key survey estimates by mailing wave returned—Continued

Characteristic	Screener mailing wave returned					Topical mailing wave returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Marital status										
Now married	59.6	0.42	56.2	0.76	-5.7*	59.4	0.43	55.9	0.86	-5.9*
Widowed	1.8	0.08	2.1	0.15	18.6*	1.9	0.08	2.1	0.20	12.7
Divorced	10.6	0.20	12.0	0.40	13.3*	11.0	0.23	10.4	0.43	-6.0
Separated	1.9	0.10	2.3	0.24	19.3	1.9	0.11	2.2	0.25	14.3
Never married	26.2	0.36	27.5	0.76	5.0	25.8	0.37	29.4	0.88	14.1*
Speaks a language other than English at home										
Yes	18.2	0.38	22.7	0.68	24.9*	18.9	0.37	21.2	0.72	12.4*
No	81.8	0.38	77.3	0.68	-5.5*	81.1	0.37	78.8	0.72	-2.9*
Annual earnings										
\$50,000 or less ¹	67.1	0.43	69.8	0.68	3.9*	67.3	0.44	69.9	0.79	3.9*
\$50,001 to \$75,000	14.4	0.27	14.7	0.53	2.1	14.5	0.29	14.0	0.55	-3.8
\$75,001 to \$150,000	13.9	0.30	12.0	0.40	-13.6*	13.8	0.29	12.0	0.53	-12.7*
\$150,001 or more	4.5	0.18	3.5	0.27	-22.9*	4.3	0.16	4.0	0.35	-7.0
Key estimates										
Has a certification or license										
Yes	24.9	0.30	24.0	0.63	-3.8	24.7	0.29	24.7	0.79	0.0
No	75.1	0.30	76.0	0.63	1.3	75.3	0.29	75.3	0.79	0.0
Has an educational certificate										
Yes	12.9	0.25	12.0	0.43	-6.8	12.8	0.24	12.3	0.49	-3.9
No	87.1	0.25	88.0	0.43	1.0	87.2	0.24	87.7	0.49	0.6

See notes at end of table.

Table 10-11. Adult Training and Education Survey demographic characteristics and key survey estimates by mailing wave returned—Continued

Characteristic	Screener mailing wave returned					Topical mailing wave returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Completed a work experience program										
Yes	24.1	0.38	22.3	0.57	-7.6*	23.7	0.35	23.4	0.90	-1.0
No	75.9	0.38	77.7	0.57	2.4*	76.3	0.35	76.6	0.90	0.3

* Indicates a statistically significant difference ($p < .05$, Student's t test).

¹ Includes persons who have not worked in the past 12 months.

NOTE: s.e. is standard error. GED = general equivalency diploma. Details may not sum to totals because of rounding. Percentages are estimated using person-level base weights. Early respondents are those who responded to the first or second mailing wave, and late respondents are those who responded to the second or third mailing wave.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

10.2.3 A Comparison of Survey Estimates Based on Nonresponse Adjusted and Base Weights

In addition to the analysis presented in earlier tables, based on the topical survey responses, selected person and family characteristics were examined to determine the effects of the unit nonresponse adjustment on the PFI, ECPP, and ATES components of the NHES:2016. This analysis (shown in tables 10-14, 10-15, and 10-16 for the PFI, ECPP, and ATES surveys, respectively) compares estimates constructed using the unit nonresponse-adjusted weights and the base weights. In addition, key survey estimates were computed by race/ethnicity separately for the PFI, ECPP, and ATES surveys, using the nonresponse-adjusted weights and the base weights. Separate estimates for subgroups formed by race/ethnicity are considered in this analysis because they are key analytic subgroups. Results for all three surveys are summarized in table 10-13. The difference between a base-weighted and a nonresponse-adjusted estimate provides a measure of the potential reduction in unit nonresponse bias attributable to the nonresponse adjustment procedure. The actual magnitude of the existing bias prior to and after nonresponse adjustment remains unknown.

Table 10-12. Summary of changes in NHES:2016 estimates from use of nonresponse-adjusted weights

Survey	Overall estimates			Estimates by race/ethnicity		
	Mean absolute change in estimates (percentage points)	Median absolute change in estimates (percentage points)	Percentage of estimates showing statistically and practically significant change	Mean absolute change in estimates (percentage points)	Median absolute change in estimates (percentage points)	Percentage of estimates showing statistically and practically significant change
PFI	0.4	0.2	10.9	0.3	0.2	4.4
ECPP	0.5	0.4	10.4	0.4	0.3	7.4
ATES	0.6	0.4	18.2	0.5	0.3	19.8

NOTE: ATES = Adult Training and Education Survey. ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Changes are considered statistically significant if $p < .05$ (Student's t test). Changes are considered practically significant if the absolute value of the change in the estimate exceeds 1 percentage point.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

For both the ECPP and the PFI, significant differences were observed between the base-weighted and adjusted percentages for the White, non-Hispanic plus Hispanic race/ethnicity categories. Significant differences also were observed in both child surveys (overall and within at least one race/ethnicity subgroup) for the Graduate/professional parental education category; the Two parents and sibling(s) and One parent and sibling(s) family structure categories; and the \$50,000 or less household income category. For the ECPP, a significant difference also was observed in the Male and Female categories within the Black, non-Hispanic subgroup; and in the Bachelor's

degree parental education category within the Hispanic subgroup. For the PFI, significant differences also were observed in the Both parents speak English and the Neither parent speaks English parental language categories within the Hispanic subgroup. For the ATES, a significant difference was observed between the base-weighted and adjusted percentage for the White, non-Hispanic category. Significant differences also were observed for the ATES (overall and within at least one race/ethnicity subgroup) for the 16–25, 26–35, 46–55, and 56 and over age categories; and for the Married and Never married categories. These estimates (out of 632 examined) were the only topical estimates that showed statistically significant differences greater than 1 percentage point between the adjusted and base-weighted percentages of respondents. The fact that measurable differences were observed for only a small number of demographic items, without key survey estimates, suggests that few characteristics measured by the topical surveys were powerful predictors of unit response propensity. Therefore, the unit nonresponse adjustment had little effect on any potential bias in the estimates.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Overall estimates				
Race/ethnicity of child				
White, non-Hispanic	56.4	58.0	-1.6*	0.11
Black, non-Hispanic	9.5	8.9	0.6*	0.08
Hispanic	21.8	20.6	1.2*	0.09
Other	12.4	12.5	-0.2*	0.05
Sex of child				
Male	51.4	51.3	0.1	0.09
Female	48.6	48.7	-0.1	0.09
Highest educational attainment of either parent				
Less than high school diploma	7.1	6.5	0.6*	0.06
High school diploma or GED	11.8	11.3	0.5*	0.07
Vocational/some college	29.4	29.1	0.3*	0.07
Bachelor's degree	27.4	27.8	-0.4*	0.08
Graduate or professional degree	24.3	25.3	-1.0*	0.08
Parents' language				
Both parents speak English	86.5	87.2	-0.7*	0.07
One parent speaks English	3.4	3.3	0.1*	0.03
Neither parent speaks English	10.0	9.5	0.6*	0.06
Family structure				
Two parents and sibling(s)	64.1	65.2	-1.1*	0.14
Two parents, no siblings	8.8	9.0	-0.3*	0.04
One parent and sibling(s)	17.0	15.9	1.1*	0.09
One parent, no sibling	6.7	6.4	0.3*	0.06
Other	3.5	3.4	0.1*	0.04
Household income				
\$50,000 or less	37.5	35.8	1.7*	0.12
\$50,001 to \$100,000	29.6	29.8	-0.2*	0.08
\$100,001 to \$150,000	16.0	16.7	-0.7*	0.06
\$150,001 or more	16.9	17.7	-0.8*	0.07
Child is homeschooled ¹				
Yes—full time	2.8	2.6	0.2*	0.06
Yes—part time	0.9	0.9	0.1*	0.02
No	96.3	96.6	-0.3*	0.07
Child's parents participate in three or more activities in child's school				
Yes	84.0	84.3	-0.3*	0.07
No	16.0	15.7	0.3*	0.07

See notes at end of table.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
School tells family how child is doing in school				
Yes—does very well	57.4	57.5	-0.1	0.09
Yes—does just okay	29.2	29.1	0.1	0.08
Yes—does not very well	7.0	7.0	0.0	0.05
No	6.4	6.4	0.0	0.04
School provides information about how to help child with homework				
Yes—does very well	41.1	41.1	0.0	0.09
Yes—does just okay	32.5	32.4	0.1	0.08
Yes—does not very well	12.1	12.2	0.0	0.05
No	14.2	14.3	-0.1	0.06
Child's parents told child a story in the last week				
Yes	58.5	58.6	-0.1	0.08
No	41.5	41.4	0.1	0.08
Child's parents and child visited a zoo/aquarium in the last month				
Yes	22.7	21.9	0.7*	0.08
No	77.3	78.1	-0.7*	0.08
Child's parents and child went to a sporting event in the last month				
Yes	42.4	42.3	0.0	0.08
No	57.6	57.7	0.0	0.08
Parents check to see that child's homework gets done				
Never	4.1	4.2	-0.1*	0.04
Rarely	8.2	8.3	-0.1*	0.04
Sometimes	24.5	24.6	-0.1	0.08
Always	63.2	62.8	0.4*	0.10
Parents expect child to earn a college degree or higher				
Yes	73.0	73.3	-0.3*	0.08
No	27.0	26.7	0.3*	0.08
Child has a disability				
Yes	24.0	23.8	0.2*	0.08
No	76.0	76.2	-0.2*	0.08
School type				
Private	10.0	10.2	-0.3*	0.05
Public	86.3	86.4	-0.1	0.08
Homeschool ²	3.8	3.4	0.4*	0.07
Parent considered other schools for child				
Yes	29.6	29.6	0.0	0.08
No	70.4	70.4	0.0	0.08

See notes at end of table.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
White, non-Hispanic				
Sex of child				
Male	51.9	51.9	0.0	0.11
Female	48.1	48.1	0.0	0.11
Highest educational attainment of either parent				
Less than high school diploma	1.9	1.8	0.1*	0.03
High school diploma or GED	9.6	9.3	0.3*	0.09
Vocational/some college	28.6	28.4	0.2*	0.09
Bachelor's degree	31.7	31.8	0.0	0.11
Graduate or professional degree	28.2	28.8	-0.6*	0.10
Parents' language				
Both parents speak English	97.8	97.9	0.0	0.03
One parent speaks English	0.6	0.6	0.0	0.01
Neither parent speaks English	1.5	1.5	0.0	0.02
Family structure				
Two parents and sibling(s)	69.4	70.2	-0.8*	0.14
Two parents, no siblings	9.3	9.5	-0.2*	0.05
One parent and sibling(s)	13.1	12.3	0.8*	0.10
One parent, no sibling	5.6	5.4	0.2*	0.06
Other	2.6	2.6	0.1*	0.02
Household income				
\$50,000 or less	25.7	24.8	0.9*	0.12
\$50,001 to \$100,000	33.0	32.8	0.1	0.10
\$100,001 to \$150,000	19.7	20.2	-0.5*	0.08
\$150,001 or more	21.6	22.2	-0.6*	0.08
Child is homeschooled ¹				
Yes—full time	3.5	3.1	0.4*	0.08
Yes—part time	0.7	0.7	0.1*	0.02
No	95.8	96.2	-0.5*	0.09
Child's parents participate in three or more activities in child's school				
Yes	88.0	88.1	-0.1	0.06
No	12.0	11.9	0.1	0.06
School tells family how child is doing in school				
Yes—does very well	58.2	58.2	0.0	0.11
Yes—does just okay	28.3	28.3	0.0	0.10
Yes—does not very well	6.6	6.7	-0.1	0.06
No	6.8	6.8	0.0	0.05

See notes at end of table.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
School provides information about how to help child with homework				
Yes—does very well	41.0	40.9	0.1	0.11
Yes—does just okay	32.1	32.1	0.0	0.10
Yes—does not very well	11.7	11.7	0.0	0.06
No	15.3	15.3	0.0	0.07
Child's parents told child a story in the last week				
Yes	61.3	61.2	0.1	0.11
No	38.7	38.8	-0.1	0.11
Child's parents and child visited a zoo/aquarium in the last month				
Yes	19.3	18.7	0.6*	0.09
No	80.7	81.3	-0.6*	0.09
Child's parents and child went to a sporting event in the last month				
Yes	44.8	44.8	0.0	0.10
No	55.2	55.2	0.0	0.10
Parents check to see that child's homework gets done				
Never	4.8	4.9	-0.1*	0.04
Rarely	9.5	9.5	-0.1	0.06
Sometimes	24.9	24.9	0.0	0.09
Always	60.9	60.7	0.2	0.11
Parents expect child to earn a college degree or higher				
Yes	70.9	71.4	-0.5*	0.10
No	29.1	28.6	0.5*	0.10
Child has a disability				
Yes	26.3	26.0	0.2*	0.10
No	73.7	74.0	-0.2*	0.10
School type				
Private	11.7	11.8	-0.1*	0.06
Public	84.2	84.5	-0.3*	0.10
Homeschool ²	4.1	3.7	0.5*	0.09
Parent considered other schools for child				
Yes	27.9	28.1	-0.2	0.09
No	72.1	71.9	0.2	0.09
Black, non-Hispanic				
Sex of child				
Male	48.3	48.1	0.2	0.32
Female	51.7	51.9	-0.2	0.32

See notes at end of table.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Highest educational attainment of either parent				
Less than high school diploma	8.4	8.1	0.2	0.15
High school diploma or GED	15.0	14.7	0.3	0.18
Vocational/some college	39.1	38.8	0.3	0.31
Bachelor's degree	21.9	22.1	-0.2	0.24
Graduate or professional degree	15.5	16.3	-0.7*	0.19
Parents' language				
Both parents speak English	96.4	96.2	0.2*	0.08
One parent speaks English	1.6	1.7	-0.1	0.06
Neither parent speaks English	2.0	2.1	-0.1	0.06
Family structure				
Two parents and sibling(s)	36.2	37.3	-1.2*	0.30
Two parents, no siblings	6.5	6.7	-0.2*	0.09
One parent and sibling(s)	34.4	33.4	1.1*	0.28
One parent, no sibling	13.4	13.1	0.3*	0.15
Other	9.5	9.5	0.0	0.18
Household income				
\$50,000 or less	64.5	63.3	1.2*	0.29
\$50,001 to \$100,000	23.9	24.5	-0.6*	0.24
\$100,001 to \$150,000	7.3	7.7	-0.4*	0.13
\$150,001 or more	4.3	4.5	-0.2*	0.11
Child is homeschooled ¹				
Yes—full time	0.9	0.9	0.0	0.05
Yes—part time	1.3	1.3	0.0	0.05
No	97.8	97.9	0.0	0.07
Child's parents participate in three or more activities in child's school				
Yes	82.0	82.2	-0.2	0.25
No	18.0	17.8	0.2	0.25
School tells family how child is doing in school				
Yes—does very well	58.7	58.7	0.0	0.29
Yes—does just okay	27.8	27.8	0.0	0.26
Yes—does not very well	8.7	8.5	0.2	0.13
No	4.8	5.0	-0.1	0.10
School provides information about how to help child with homework				
Yes—does very well	44.1	44.1	0.0	0.34
Yes—does just okay	28.1	28.0	0.1	0.30
Yes—does not very well	13.3	13.4	-0.1	0.16
No	14.5	14.5	0.0	0.23

See notes at end of table.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Child's parents told child a story in the last week				
Yes	56.9	56.6	0.3	0.30
No	43.1	43.4	-0.3	0.30
Child's parents and child visited a zoo/aquarium in the last month				
Yes	27.3	27.1	0.2	0.29
No	72.7	72.9	-0.2	0.29
Child's parents and child went to a sporting event in the last month				
Yes	45.0	44.6	0.3	0.30
No	55.0	55.4	-0.3	0.30
Parents check to see that child's homework gets done				
Never	2.1	2.1	0.0	0.06
Rarely	5.7	5.7	0.0	0.11
Sometimes	23.2	23.4	-0.2	0.25
Always	69.1	68.8	0.2	0.28
Parents expect child to earn a college degree or higher				
Yes	67.0	67.0	-0.1	0.30
No	33.0	33.0	0.1	0.30
Child has a disability				
Yes	24.6	24.4	0.2	0.30
No	75.4	75.6	-0.2	0.30
School type				
Private	8.5	8.9	-0.4*	0.15
Public	89.6	89.2	0.4*	0.16
Homeschool ²	1.9	1.9	0.0	0.06
Parent considered other schools for child				
Yes	32.2	32.3	-0.1	0.27
No	67.8	67.7	0.1	0.27
Hispanic				
Sex of child				
Male	51.4	51.3	0.1	0.19
Female	48.6	48.7	-0.1	0.19
Highest educational attainment of either parent				
Less than high school diploma	21.7	20.7	1.0*	0.18
High school diploma or GED	17.9	17.5	0.5*	0.17
Vocational/some college	30.5	30.5	0.0	0.17
Bachelor's degree	17.4	18.0	-0.6*	0.15
Graduate or professional degree	12.5	13.3	-0.9*	0.14

See notes at end of table.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Parents' language				
Both parents speak English	56.3	57.5	-1.2*	0.22
One parent speaks English	10.3	10.3	0.0	0.12
Neither parent speaks English	33.4	32.2	1.2*	0.20
Family structure				
Two parents and sibling(s)	61.3	62.3	-1.0*	0.25
Two parents, no siblings	7.5	7.8	-0.3*	0.09
One parent and sibling(s)	22.0	20.9	1.1*	0.19
One parent, no sibling	6.2	6.1	0.1	0.07
Other	3.0	3.0	0.1	0.10
Household income				
\$50,000 or less	59.0	57.5	1.6*	0.21
\$50,001 to \$100,000	25.4	25.9	-0.4*	0.15
\$100,001 to \$150,000	8.6	9.2	-0.6*	0.09
\$150,001 or more	7.0	7.5	-0.5*	0.09
Child is homeschooled ¹				
Yes—full time	2.5	2.4	0.1	0.09
Yes—part time	1.3	1.2	0.1*	0.04
No	96.1	96.4	-0.2*	0.10
Child's parents participate in three or more activities in child's school				
Yes	76.1	76.5	-0.3*	0.16
No	23.9	23.5	0.3*	0.16
School tells family how child is doing in school				
Yes—does very well	54.0	54.3	-0.3	0.22
Yes—does just okay	32.4	32.2	0.2	0.20
Yes—does not very well	7.7	7.6	0.0	0.14
No	5.9	5.9	0.0	0.12
School provides information about how to help child with homework				
Yes—does very well	40.1	40.3	-0.1	0.21
Yes—does just okay	34.8	34.4	0.4*	0.21
Yes—does not very well	13.2	13.3	-0.1	0.13
No	11.8	12.0	-0.2	0.12
Child's parents told child a story in the last week				
Yes	52.2	52.5	-0.4*	0.19
No	47.8	47.5	0.4*	0.19
Child's parents and child visited a zoo/aquarium in the last month				
Yes	29.6	28.8	0.8*	0.19
No	70.4	71.2	-0.8*	0.19

See notes at end of table.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Child's parents and child went to a sporting event in the last month				
Yes	40.3	40.2	0.0	0.19
No	59.7	59.8	0.0	0.19
Parents check to see that child's homework gets done				
Never	2.8	2.8	-0.1	0.06
Rarely	5.7	5.8	-0.1	0.10
Sometimes	23.6	23.9	-0.3	0.17
Always	67.9	67.5	0.4*	0.19
Parents expect child to earn a college degree or higher				
Yes	75.6	75.8	-0.2	0.18
No	24.4	24.2	0.2	0.18
Child has a disability				
Yes	19.8	19.6	0.2	0.17
No	80.2	80.4	-0.2	0.17
School type				
Private	6.3	6.4	-0.1	0.07
Public	89.3	89.6	-0.2	0.12
Homeschool ²	4.4	4.0	0.3*	0.11
Parent considered other schools for child				
Yes	30.8	30.7	0.1	0.20
No	69.2	69.3	-0.1	0.20
Other, non-Hispanic				
Sex of child				
Male	51.7	51.2	0.5*	0.22
Female	48.3	48.8	-0.5*	0.22
Highest educational attainment of either parent				
Less than high school diploma	4.6	4.3	0.3*	0.10
High school diploma or GED	8.0	7.9	0.1	0.09
Vocational/some college	23.9	23.5	0.4*	0.21
Bachelor's degree	29.5	29.3	0.2	0.20
Graduate or professional degree	34.0	35.1	-1.1*	0.23
Parents' language				
Both parents speak English	80.7	80.6	0.1	0.20
One parent speaks English	5.3	5.3	0.0	0.13
Neither parent speaks English	14.0	14.1	-0.1	0.16

See notes at end of table.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Family structure				
Two parents and sibling(s)	66.3	66.8	-0.5*	0.23
Two parents, no siblings	10.2	10.6	-0.4*	0.08
One parent and sibling(s)	12.9	12.2	0.7*	0.16
One parent, no sibling	7.1	6.9	0.2*	0.10
Other	3.4	3.5	0.0	0.06
Household income				
\$50,000 or less	32.9	31.7	1.2*	0.24
\$50,001 to \$100,000	25.7	25.8	-0.2	0.16
\$100,001 to \$150,000	18.9	19.1	-0.2	0.18
\$150,001 or more	22.5	23.3	-0.8*	0.18
Child is homeschooled ¹				
Yes—full time	1.7	1.5	0.2	0.11
Yes—part time	0.9	0.9	0.0	0.06
No	97.4	97.6	-0.2	0.13
Child's parents participate in three or more activities in child's school				
Yes	81.2	81.3	-0.1	0.18
No	18.8	18.7	0.1	0.18
School tells family how child is doing in school				
Yes—does very well	58.7	58.8	-0.1	0.19
Yes—does just okay	28.9	28.7	0.2	0.21
Yes—does not very well	6.2	6.2	-0.1	0.09
No	6.2	6.2	0.0	0.11
School provides information about how to help child with homework				
Yes—does very well	41.3	41.2	0.1	0.20
Yes—does just okay	33.7	33.7	0.0	0.22
Yes—does not very well	11.5	11.5	0.0	0.14
No	13.5	13.6	-0.1	0.14
Child's parents told child a story in the last week				
Yes	58.3	58.2	0.1	0.21
No	41.7	41.8	-0.1	0.21
Child's parents and child visited a zoo/aquarium in the last month				
Yes	22.2	21.8	0.4*	0.16
No	77.8	78.2	-0.4*	0.16
Child's parents and child went to a sporting event in the last month				
Yes	33.1	32.9	0.2	0.19
No	66.9	67.1	-0.2	0.19

See notes at end of table.

Table 10-13. Parent and Family Involvement in Education child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Parents check to see that child's homework gets done				
Never	5.0	5.1	-0.1	0.07
Rarely	9.0	9.0	0.0	0.13
Sometimes	25.5	25.6	-0.1	0.22
Always	60.6	60.4	0.2	0.23
Parents expect child to earn a college degree or higher				
Yes	82.3	82.5	-0.2	0.17
No	17.7	17.5	0.2	0.17
Child has a disability				
Yes	20.4	19.9	0.5*	0.21
No	79.6	80.1	-0.5*	0.21
School type				
Private	9.8	10.1	-0.3*	0.12
Public	87.6	87.6	0.1	0.17
Homeschool ²	2.6	2.3	0.3*	0.12
Parent considered other schools for child				
Yes	33.1	33.2	0.0	0.17
No	66.9	66.8	0.0	0.17

* Indicates a statistically significant difference ($p < .05$, Student's t test).

¹ Homeschoolers are defined as children whose parents responded to the PFI—Homeschooled, or whose parents responded to the PFI—Enrolled and indicated that the child is homeschooled for some or all classes. Children in public/private school for more than 25 hours per week, or whose parents indicated that they are homeschooled only because of a temporary illness, are excluded. Full-time homeschoolers are those who do not spend any time in public/private school. Part-time homeschoolers are those who spend up to 25 hours per week in public/private school.

² Category includes all respondents to the PFI—Homeschooled (for whom the school type item was not asked) as well as all PFI—Enrolled respondents classified as full-time homeschoolers. PFI—Enrolled respondents classified as part-time homeschoolers are included in either the Private or Public category, depending on the school type reported on the questionnaire.

NOTE: s.e. is standard error. GED = general equivalency diploma. Details may not sum to total because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-14. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Overall estimates				
Race/ethnicity of child				
White, non-Hispanic	59.6	61.2	-1.7*	0.16
Black, non-Hispanic	7.7	7.2	0.5*	0.08
Hispanic	19.7	18.6	1.1*	0.11
Other	13.0	12.9	0.0	0.09
Sex of child				
Male	51.3	51.5	-0.2	0.11
Female	48.7	48.5	0.2	0.11
Highest educational attainment of either parent				
Less than high school diploma	4.8	4.4	0.4*	0.07
High school diploma or GED	11.3	10.6	0.8*	0.09
Vocational/some college	26.9	26.3	0.6*	0.13
Bachelor's degree	28.6	29.2	-0.7*	0.11
Graduate or professional degree	28.4	29.5	-1.0*	0.13
Parents' language				
Both parents speak English	88.2	88.7	-0.5*	0.08
One parent speaks English	3.0	2.8	0.2*	0.04
Neither parent speaks English	8.8	8.5	0.3*	0.07
Family structure				
Two parents and sibling(s)	62.2	63.6	-1.4*	0.19
Two parents, no siblings	19.2	19.6	-0.4*	0.12
One parent and sibling(s)	10.3	9.4	1.0*	0.11
One parent, no sibling	6.6	5.9	0.7*	0.08
Other	1.7	1.6	0.1*	0.04
Household income				
\$50,000 or less	37.2	35.6	1.6*	0.18
\$50,001 to \$100,000	31.9	32.3	-0.3*	0.14
\$100,001 to \$150,000	15.8	16.4	-0.7*	0.09
\$150,001 or more	15.1	15.7	-0.6*	0.10
Child receiving any nonparental care (at least weekly)				
Yes	36.6	36.1	0.4*	0.12
No	63.4	63.9	-0.4*	0.12
Child receiving relative care (at least weekly)				
Yes	76.4	76.8	-0.4*	0.11
No	23.6	23.2	0.4*	0.11

See notes at end of table.

Table 10-14. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Child receiving nonrelative care (at least weekly)				
Yes	85.8	85.7	0.1	0.10
No	14.2	14.3	-0.1	0.10
Child receiving center-based care (at least weekly)				
Yes	59.1	58.4	0.8*	0.17
No	40.9	41.6	-0.8*	0.17
Can count higher than 10				
Yes	60.1	60.4	-0.3	0.21
No	39.9	39.6	0.3	0.21
Knows all letters				
Yes	32.5	33.0	-0.4*	0.17
No	67.5	67.0	0.4*	0.17
Can write own name				
Yes	43.2	43.6	-0.4	0.23
No	56.8	56.4	0.4	0.23
Child has a disability				
Yes	10.8	10.6	0.2*	0.07
No	89.2	89.4	-0.2*	0.07
Good choices for child care and early childhood programs				
Yes	61.2	61.7	-0.5*	0.14
No	16.2	16.1	0.1	0.09
Don't know	22.6	22.2	0.4*	0.12
Number of times child read to in past week				
Not at all	8.1	7.7	0.3*	0.07
1 or 2 times	9.6	9.3	0.3*	0.09
3 or more times	82.3	82.9	-0.6*	0.11
Someone in family taught letters, words, or numbers				
Not at all	9.7	9.8	-0.1	0.08
1 or 2 times	26.1	26.1	0.0	0.11
3 or more times	64.2	64.1	0.1	0.14
White, non-Hispanic				
Sex of child				
Male	51.0	51.1	-0.1	0.15
Female	49.0	48.9	0.1	0.15
Highest educational attainment of either parent				
Less than high school diploma	2.0	1.9	0.1*	0.05
High school diploma or GED	8.3	7.8	0.5*	0.09
Vocational/some college	24.8	24.3	0.5*	0.17
Bachelor's degree	31.9	32.4	-0.5*	0.14
Graduate or professional degree	33.0	33.7	-0.7*	0.16

See notes at end of table.

Table 10-14. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Parents' language				
Both parents speak English	97.1	97.2	-0.1*	0.05
One parent speaks English	0.6	0.6	0.0	0.03
Neither parent speaks English	2.3	2.3	0.1	0.04
Family structure				
Two parents and sibling(s)	67.8	68.9	-1.0*	0.22
Two parents, no siblings	20.4	20.7	-0.2	0.14
One parent and sibling(s)	5.7	5.1	0.6*	0.10
One parent, no sibling	4.8	4.2	0.6*	0.09
Other	1.2	1.1	0.1*	0.04
Household income				
\$50,000 or less	26.2	25.4	0.8*	0.19
\$50,001 to \$100,000	36.0	36.0	0.0	0.17
\$100,001 to \$150,000	19.5	20.0	-0.4*	0.11
\$150,001 or more	18.2	18.7	-0.4*	0.14
Child receiving any nonparental care (at least weekly)				
Yes	35.0	34.6	0.4*	0.15
No	65.0	65.4	-0.4*	0.15
Child receiving relative care (at least weekly)				
Yes	78.1	78.4	-0.3	0.14
No	21.9	21.6	0.3	0.14
Child receiving nonrelative care (at least weekly)				
Yes	83.5	83.5	0.1	0.12
No	16.5	16.5	-0.1	0.12
Child receiving center-based care (at least weekly)				
Yes	57.1	56.5	0.6*	0.20
No	42.9	43.5	-0.6*	0.20
Can count higher than 10				
Yes	62.2	62.3	-0.1	0.25
No	37.8	37.7	0.1	0.25
Knows all letters				
Yes	34.0	34.2	-0.2	0.23
No	66.0	65.8	0.2	0.23
Can write own name				
Yes	44.4	44.6	-0.2	0.27
No	55.6	55.4	0.2	0.27
Child has a disability				
Yes	10.2	10.1	0.1	0.09
No	89.8	89.9	-0.1	0.09

See notes at end of table.

Table 10-14. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Good choices for child care and early childhood programs				
Yes	65.8	65.9	-0.2	0.13
No	14.7	14.7	0.0	0.11
Don't know	19.6	19.4	0.2	0.14
Number of times child read to in past week				
Not at all	5.0	4.8	0.2*	0.07
1 or 2 times	6.7	6.6	0.1	0.08
3 or more times	88.3	88.5	-0.3*	0.11
Someone in family taught letters, words, or numbers				
Not at all	10.6	10.7	-0.1	0.09
1 or 2 times	25.7	25.8	-0.1	0.13
3 or more times	63.7	63.5	0.2	0.16
Black, non-Hispanic				
Sex of child				
Male	49.7	50.9	-1.2*	0.48
Female	50.3	49.1	1.2*	0.48
Highest educational attainment of either parent				
Less than high school diploma	8.0	7.3	0.7*	0.24
High school diploma or GED	16.2	15.7	0.5	0.35
Vocational/some college	34.7	34.7	-0.1	0.39
Bachelor's degree	23.3	23.1	0.2	0.44
Graduate or professional degree	17.9	19.2	-1.3*	0.30
Parents' language				
Both parents speak English	94.6	94.3	0.3	0.19
One parent speaks English	1.0	1.0	0.0	0.06
Neither parent speaks English	4.4	4.7	-0.3	0.18
Family structure				
Two parents and sibling(s)	36.7	39.0	-2.3*	0.46
Two parents, no siblings	9.6	10.0	-0.4*	0.20
One parent and sibling(s)	32.6	30.7	1.9*	0.41
One parent, no sibling	15.4	14.4	1.0*	0.27
Other	5.6	5.8	-0.1	0.24
Household income				
\$50,000 or less	63.7	62.4	1.4*	0.42
\$50,001 to \$100,000	24.5	25.2	-0.6	0.43
\$100,001 to \$150,000	6.3	6.9	-0.5*	0.26
\$150,001 or more	5.4	5.6	-0.2	0.24

See notes at end of table.

Table 10-14. Early Childhood Program Participation child and household demographic characteristics, and key survey estimates, by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Child receiving any nonparental care (at least weekly)				
Yes	29.6	29.8	-0.2	0.52
No	70.4	70.2	0.2	0.52
Child receiving relative care (at least weekly)				
Yes	68.2	68.5	-0.4	0.50
No	31.8	31.5	0.4	0.50
Child receiving nonrelative care (at least weekly)				
Yes	86.2	86.3	-0.1	0.33
No	13.8	13.7	0.1	0.33
Child receiving center-based care (at least weekly)				
Yes	57.8	57.9	-0.1	0.45
No	42.2	42.1	0.1	0.45
Can count higher than 10				
Yes	62.4	61.9	0.5	0.51
No	37.6	38.1	-0.5	0.51
Knows all letters				
Yes	31.4	31.4	-0.1	0.49
No	68.6	68.6	0.1	0.49
Can write own name				
Yes	41.0	40.7	0.3	0.53
No	59.0	59.3	-0.3	0.53
Child has a disability				
Yes	13.8	13.2	0.6	0.31
No	86.2	86.8	-0.6	0.31
Good choices for child care and early childhood programs				
Yes	59.4	59.1	0.2	0.49
No	19.6	19.8	-0.2	0.39
Don't know	21.0	21.1	0.0	0.39
Number of times child read to in past week				
Not at all	12.4	12.5	-0.1	0.28
1 or 2 times	13.6	13.2	0.4	0.38
3 or more times	74.1	74.4	-0.3	0.40
Someone in family taught letters, words, or numbers				
Not at all	6.6	6.4	0.2	0.22
1 or 2 times	22.7	22.7	0.0	0.38
3 or more times	70.7	71.0	-0.2	0.42

See notes at end of table.

Table 10-14. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Hispanic				
Sex of child				
Male	51.6	51.8	-0.2	0.32
Female	48.4	48.2	0.2	0.32
Highest educational attainment of either parent				
Less than high school diploma	13.8	13.3	0.5*	0.24
High school diploma or GED	19.7	19.0	0.7*	0.22
Vocational/some college	32.1	31.7	0.4	0.25
Bachelor's degree	20.6	21.6	-1.0*	0.23
Graduate or professional degree	13.9	14.5	-0.6*	0.19
Parents' language				
Both parents speak English	63.0	63.4	-0.4	0.27
One parent speaks English	9.7	9.6	0.2	0.15
Neither parent speaks English	27.3	27.1	0.2	0.28
Family structure				
Two parents and sibling(s)	59.9	60.9	-1.0*	0.32
Two parents, no siblings	16.5	16.7	-0.2	0.17
One parent and sibling(s)	14.6	14.0	0.6*	0.25
One parent, no sibling	7.1	6.6	0.5*	0.13
Other	1.8	1.7	0.1	0.09
Household income				
\$50,000 or less	59.8	58.5	1.3*	0.27
\$50,001 to \$100,000	24.0	24.3	-0.3	0.25
\$100,001 to \$150,000	8.8	9.2	-0.4*	0.19
\$150,001 or more	7.4	8.0	-0.6*	0.16
Child receiving any nonparental care (at least weekly)				
Yes	43.6	43.4	0.2	0.25
No	56.4	56.6	-0.2	0.25
Child receiving relative care (at least weekly)				
Yes	73.8	74.5	-0.7*	0.22
No	26.2	25.5	0.7*	0.22
Child receiving nonrelative care (at least weekly)				
Yes	91.4	91.5	-0.1	0.16
No	8.6	8.5	0.1	0.16
Child receiving center-based care (at least weekly)				
Yes	66.7	65.8	0.9*	0.25
No	33.3	34.2	-0.9*	0.25

See notes at end of table.

Table 10-14. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Can count higher than 10				
Yes	50.3	51.0	-0.7*	0.36
No	49.7	49.0	0.7*	0.36
Knows all letters				
Yes	23.9	24.6	-0.7*	0.29
No	76.1	75.4	0.7*	0.29
Can write own name				
Yes	38.6	39.2	-0.7	0.39
No	61.4	60.8	0.7	0.39
Child has a disability				
Yes	12.0	11.8	0.2	0.18
No	88.0	88.2	-0.2	0.18
Good choices for child care and early childhood programs				
Yes	50.3	50.9	-0.6*	0.29
No	18.9	18.7	0.2	0.21
Don't know	30.8	30.4	0.4	0.24
Number of times child read to in past week				
Not at all	12.8	12.3	0.5*	0.19
1 or 2 times	14.7	14.3	0.4	0.22
3 or more times	72.5	73.4	-0.9*	0.25
Someone in family taught letters, words, or numbers				
Not at all	8.7	8.5	0.2	0.15
1 or 2 times	28.6	28.4	0.3	0.26
3 or more times	62.6	63.1	-0.5	0.29
Other, non-Hispanic				
Sex of child				
Male	53.5	53.5	0.0	0.40
Female	46.5	46.5	0.0	0.40
Highest educational attainment of either parent				
Less than high school diploma	2.4	2.3	0.1	0.15
High school diploma or GED	9.6	8.8	0.7*	0.23
Vocational/some college	23.8	23.3	0.4	0.34
Bachelor's degree	28.7	28.8	-0.1	0.31
Graduate or professional degree	35.6	36.8	-1.2*	0.36
Parents' language				
Both parents speak English	81.9	81.7	0.2	0.30
One parent speaks English	4.9	4.9	0.1	0.18
Neither parent speaks English	13.1	13.4	-0.3	0.24

See notes at end of table.

Table 10-14. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Family structure				
Two parents and sibling(s)	54.8	56.0	-1.1*	0.43
Two parents, no siblings	23.3	23.8	-0.5	0.29
One parent and sibling(s)	11.9	10.9	1.0*	0.28
One parent, no sibling	8.5	7.9	0.5*	0.19
Other	1.6	1.5	0.1	0.08
Household income				
\$50,000 or less	37.6	36.3	1.4*	0.45
\$50,001 to \$100,000	29.8	30.0	-0.2	0.34
\$100,001 to \$150,000	14.4	15.3	-0.8*	0.24
\$150,001 or more	18.2	18.5	-0.3	0.27
Child receiving any nonparental care (at least weekly)				
Yes	37.2	36.4	0.8*	0.41
No	62.8	63.6	-0.8*	0.41
Child receiving relative care (at least weekly)				
Yes	77.4	77.1	0.3	0.22
No	22.6	22.9	-0.3	0.22
Child receiving nonrelative care (at least weekly)				
Yes	87.8	87.8	0.0	0.31
No	12.2	12.2	0.0	0.31
Child receiving center-based care (at least weekly)				
Yes	57.6	56.7	0.9*	0.46
No	42.4	43.3	-0.9*	0.46
Can count higher than 10				
Yes	64.5	64.6	-0.1	0.47
No	35.5	35.4	0.1	0.47
Knows all letters				
Yes	40.1	40.3	-0.2	0.51
No	59.9	59.7	0.2	0.51
Can write own name				
Yes	46.8	47.2	-0.4	0.53
No	53.2	52.8	0.4	0.53
Child has a disability				
Yes	9.9	9.9	0.0	0.23
No	90.1	90.1	0.0	0.23

See notes at end of table.

Table 10-14. Early Childhood Program Participation child and household demographic characteristics and key survey estimates by race/ethnicity of child and weighting type—Continued

Characteristic (by race/ethnicity of child)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Good choices for child care and early childhood programs				
Yes	58.0	58.7	-0.7	0.38
No	17.0	16.6	0.4	0.28
Don't know	25.0	24.7	0.3	0.34
Number of times child read to in past week				
Not at all	12.4	12.1	0.2	0.21
1 or 2 times	13.1	13.0	0.1	0.19
3 or more times	74.5	74.9	-0.3	0.25
Someone in family taught letters, words, or numbers				
Not at all	9.0	9.0	0.0	0.18
1 or 2 times	26.0	26.3	-0.3	0.32
3 or more times	65.0	64.7	0.3	0.35

* Indicates a statistically significant difference ($p < .05$, Student's t test.)

NOTE: s.e. is standard error. GED = general equivalency diploma. Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-15. Adult Training and Education Survey respondent demographic characteristics and key survey estimates by race/ethnicity and weighting type

Characteristic (by race/ethnicity)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Overall estimates				
Race/ethnicity				
White, non-Hispanic	67.4	68.8	-1.4*	0.08
Black, non-Hispanic	8.6	8.1	0.5*	0.05
Hispanic	14.2	13.4	0.8*	0.07
Other	9.8	9.7	0.1	0.04
Sex				
Male	47.1	46.4	0.7*	0.13
Female	52.9	53.6	-0.7*	0.13
Educational attainment				
Less than high school diploma	7.4	7.2	0.3*	0.04
High school diploma or GED	21.9	21.6	0.2*	0.06
Some college or Associate's degree	32.3	32.1	0.2*	0.07
Bachelor's degree	23.8	24.1	-0.2*	0.05
Graduate or professional degree	14.6	15.0	-0.4*	0.04
Age of adult				
16–25	13.9	12.7	1.2*	0.12
26–35	19.0	17.7	1.2*	0.12
36–45	19.8	19.4	0.3*	0.14
46–55	22.9	23.7	-0.8*	0.15
56–65	24.5	26.4	-1.9*	0.14
Marital status				
Now married	57.3	58.7	-1.4*	0.10
Widowed	1.8	1.9	-0.1*	0.01
Divorced	10.7	10.9	-0.2*	0.04
Separated	2.0	2.0	0.0	0.02
Never married	28.2	26.5	1.7*	0.12
Speaks a language other than English at home				
Yes	19.9	19.3	0.6*	0.06
No	80.1	80.7	-0.6*	0.06
Annual earnings				
\$50,000 or less ¹	68.5	67.8	0.6*	0.07
\$50,001 to \$75,000	14.3	14.4	-0.1*	0.04
\$75,001 to \$150,000	13.1	13.5	-0.4*	0.05
\$150,001 or more	4.1	4.3	-0.2*	0.02

See notes at end of table.

Table 10-15. Adult Training and Education Survey respondent demographic characteristics and key survey estimates by race/ethnicity and weighting type—Continued

Characteristic (by race/ethnicity)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Has a certification or license				
Yes	24.3	24.7	-0.4*	0.05
No	75.7	75.3	0.4*	0.05
Has an educational certificate				
Yes	12.4	12.7	-0.2*	0.04
No	87.6	87.3	0.2*	0.04
Completed a work experience program				
Yes	23.6	23.6	-0.1	0.06
No	76.4	76.4	0.1	0.06
White, non-Hispanic				
Sex				
Male	47.9	47.2	0.7*	0.14
Female	52.1	52.8	-0.7*	0.14
Educational attainment				
Less than high school diploma	4.0	3.9	0.1*	0.02
High school diploma or GED	21.4	21.3	0.0	0.06
Some college or Associate's degree	32.7	32.6	0.2*	0.07
Bachelor's degree	26.1	26.2	0.0	0.06
Graduate or professional degree	15.8	16.0	-0.2*	0.04
Age of adult				
16–25	12.6	11.6	1.0*	0.12
26–35	18.0	16.9	1.1*	0.12
36–45	18.7	18.3	0.4*	0.14
46–55	23.2	23.9	-0.7*	0.15
56–65	27.4	29.3	-1.9*	0.15
Marital status				
Now married	60.2	61.4	-1.2*	0.10
Widowed	1.8	1.9	-0.1*	0.01
Divorced	11.3	11.5	-0.2*	0.04
Separated	1.3	1.3	0.0	0.01
Never married	25.4	24.0	1.4*	0.12
Speaks a language other than English at home				
Yes	6.3	6.2	0.1*	0.04
No	93.7	93.8	-0.1*	0.04
Annual earnings				
\$50,000 or less ¹	64.4	64.2	0.3*	0.07
\$50,001 to \$75,000	15.8	15.7	0.0	0.04
\$75,001 to \$150,000	14.8	15.0	-0.2*	0.05
\$150,001 or more	5.0	5.1	-0.1*	0.03

See notes at end of table.

Table 10-15. Adult Training and Education Survey respondent demographic characteristics and key survey estimates by race/ethnicity and weighting type—Continued

Characteristic (by race/ethnicity)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Has a certification or license				
Yes	26.8	27.0	-0.2*	0.05
No	73.2	73.0	0.2*	0.05
Has an educational certificate				
Yes	12.6	12.8	-0.2*	0.04
No	87.4	87.2	0.2*	0.04
Completed a work experience program				
Yes	25.7	25.6	0.1*	0.06
No	74.3	74.4	-0.1*	0.06
Black, non-Hispanic				
Sex				
Male	42.5	42.0	0.5*	0.26
Female	57.5	58.0	-0.5*	0.26
Educational attainment				
Less than high school diploma	10.5	10.3	0.2	0.16
High school diploma or GED	25.9	25.6	0.2	0.22
Some college or Associate's degree	38.1	38.1	-0.1	0.24
Bachelor's degree	16.2	16.3	-0.1	0.16
Graduate or professional degree	9.4	9.6	-0.2	0.13
Age of adult				
16–25	15.2	13.5	1.7*	0.24
26–35	17.4	15.7	1.7*	0.26
36–45	19.0	18.8	0.2	0.24
46–55	23.4	24.5	-1.1*	0.25
56–65	25.0	27.5	-2.5*	0.25
Marital status				
Now married	39.3	40.5	-1.2*	0.22
Widowed	2.5	2.7	-0.2*	0.03
Divorced	12.8	13.4	-0.6*	0.10
Separated	4.3	4.5	-0.2*	0.08
Never married	41.1	38.8	2.3*	0.25
Speaks a language other than English at home				
Yes	12.5	12.4	0.1	0.15
No	87.5	87.6	-0.1	0.15
Annual earnings				
\$50,000 or less ¹	80.1	79.3	0.7*	0.16
\$50,001 to \$75,000	11.0	11.3	-0.3*	0.13
\$75,001 to \$150,000	7.9	8.3	-0.4*	0.10
\$150,001 or more	0.9	1.0	-0.1	0.05

See notes at end of table.

Table 10-15. Adult Training and Education Survey respondent demographic characteristics and key survey estimates by race/ethnicity and weighting type—Continued

Characteristic (by race/ethnicity)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Has a certification or license				
Yes	22.4	22.8	-0.4*	0.17
No	77.6	77.2	0.4*	0.17
Has an educational certificate				
Yes	15.6	16.0	-0.5*	0.12
No	84.4	84.0	0.5*	0.12
Completed a work experience program				
Yes	19.5	19.6	-0.1	0.17
No	80.5	80.4	0.1	0.17
Hispanic				
Sex				
Male	46.2	45.6	0.6*	0.20
Female	53.8	54.4	-0.6*	0.20
Educational attainment				
Less than high school diploma	22.4	22.3	0.1	0.17
High school diploma or GED	26.1	25.7	0.5*	0.17
Some college or Associate's degree	29.8	29.5	0.3	0.20
Bachelor's degree	13.9	14.3	-0.4*	0.10
Graduate or professional degree	7.8	8.3	-0.5*	0.11
Age of adult				
16–25	16.3	15.0	1.4*	0.21
26–35	23.1	21.9	1.2*	0.22
36–45	23.4	23.4	0.1	0.24
46–55	21.9	23.1	-1.2*	0.27
56–65	15.2	16.7	-1.4*	0.16
Marital status				
Now married	54.3	55.6	-1.3*	0.27
Widowed	1.5	1.6	-0.1*	0.02
Divorced	9.0	9.3	-0.3*	0.08
Separated	4.3	4.3	0.0	0.08
Never married	30.8	29.1	1.7*	0.24
Speaks a language other than English at home				
Yes	65.2	64.9	0.3	0.23
No	34.8	35.1	-0.3	0.23
Annual earnings				
\$50,000 or less ¹	80.5	79.6	0.9*	0.17
\$50,001 to \$75,000	10.7	10.9	-0.2*	0.10
\$75,001 to \$150,000	6.7	7.1	-0.4*	0.09
\$150,001 or more	2.1	2.3	-0.3*	0.07

See notes at end of table.

Table 10-15. Adult Training and Education Survey respondent demographic characteristics and key survey estimates by race/ethnicity and weighting type—Continued

Characteristic (by race/ethnicity)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Has a certification or license				
Yes	17.1	17.4	-0.2	0.14
No	82.9	82.6	0.2	0.14
Has an educational certificate				
Yes	11.0	11.4	-0.3*	0.11
No	89.0	88.6	0.3*	0.11
Completed a work experience program				
Yes	14.8	14.9	-0.2	0.14
No	85.2	85.1	0.2	0.14
Other, non-Hispanic				
Sex				
Male	46.5	45.8	0.7*	0.26
Female	53.5	54.2	-0.7*	0.26
Educational attainment				
Less than high school diploma	6.7	6.7	0.0	0.11
High school diploma or GED	15.5	15.0	0.5*	0.15
Some college or Associate's degree	28.0	27.7	0.3	0.18
Bachelor's degree	29.0	29.0	0.1	0.17
Graduate or professional degree	20.8	21.7	-0.9*	0.12
Age of adult				
16–25	18.3	16.7	1.6*	0.21
26–35	20.7	19.6	1.1*	0.19
36–45	22.1	22.5	-0.4	0.20
46–55	22.1	23.2	-1.1*	0.22
56–65	16.8	18.0	-1.2*	0.15
Marital status				
Now married	57.9	59.5	-1.6*	0.20
Widowed	1.7	1.8	0.0	0.05
Divorced	6.6	6.9	-0.2*	0.07
Separated	1.4	1.5	0.0	0.03
Never married	32.3	30.3	1.9*	0.24
Speaks a language other than English at home				
Yes	54.4	54.9	-0.5*	0.20
No	45.6	45.1	0.5*	0.20
Annual earnings				
\$50,000 or less ¹	68.4	67.6	0.8*	0.17
\$50,001 to \$75,000	12.5	12.7	-0.1	0.11
\$75,001 to \$150,000	15.2	15.5	-0.3*	0.13
\$150,001 or more	3.9	4.2	-0.3*	0.07

See notes at end of table.

Table 10-15. Adult Training and Education Survey respondent demographic characteristics and key survey estimates by race/ethnicity and weighting type—Continued

Characteristic (by race/ethnicity)	Nonresponse-adjusted weights	Base weights	Difference	s.e. of difference
Has a certification or license				
Yes	19.6	19.8	-0.3*	0.13
No	80.4	80.2	0.3*	0.13
Has an educational certificate				
Yes	10.5	10.7	-0.2	0.17
No	89.5	89.3	0.2	0.17
Completed a work experience program				
Yes	25.3	25.2	0.1	0.15
No	74.7	74.8	-0.1	0.15

* Indicates a statistically significant difference ($p < .05$, Student's t test).

¹ Includes persons who have not worked in the past 12 months.

NOTE: s.e. is standard error. GED = general equivalency diploma. Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

10.2.4 A Comparison of NHES:2016 Estimates With Estimates From External Data Sources

In addition to the nonresponse bias analyses presented earlier, the assessment of nonresponse bias also included a comparison of the NHES:2016 estimates with estimates from prior NHES collections, the CPS, and the ACS, which contain the same or comparable items. Tables displaying these comparisons appear in appendix C.

All differences discussed in this section are statistically significant differences that are of substantive importance (defined as differences of 5 percentage points or more).⁷⁸ Using this threshold, most of the comparisons do not show statistically significant and substantively important differences. The 5 percentage point threshold was used for this analysis because it is a reasonable threshold for NHES:2016 estimates given the sample design. It also is important to note that the most recent ECPP and PFI data collections took place 4 years prior to the NHES:2016; therefore, changes in the population across time are likely. In addition, unlike NHES:2012, some NHES:2016 respondents responded to the screener or the topical on the Web, which could impact the comparison of estimates in unknown ways. Finally, comparisons between NHES:2016 and the CPS and ACS could be impacted by differences in item wording, the data collection mode, the timing of data collection, weighting methods, and other factors.

Tables C-2A through C-2D show estimates and standard errors for the NHES and CPS by age and grade. Tables C-2E and C-2F show the differences in percentages, and the standard errors of the differences, between the NHES and CPS estimates. Some differences can be expected in age by grade between the NHES and CPS based on the time of data collection. The NHES grades were reported in January through August 2016, whereas CPS grades are reported in October 2015. Some children move up a grade between fall and spring school terms. The comparison of estimates shows some differences of 5 percentage points or more in single year of age by grade; however, as shown in tables C-2A and C-2C, almost all children are in the one of the two expected modal grades for their age (e.g., 93 percent of 6-year-olds in the NHES and 90 percent of 6-year-olds in the CPS are in kindergarten or first grade).

Comparing the NHES:2016 PFI to the NHES:2012 PFI, differences were observed in estimates of parental education by race (table C-8): the Graduate/professional degree category for White children, the Some college category for Black children, and the Some college and Graduate/professional degree categories for Asian/Pacific Islander children and children in the Other, non-Hispanic racial category. The percentage of children whose parents were contacted by

⁷⁸ When estimates are presented as the number of students or children, numbers were converted to percentages to evaluate differences.

the school about the child's behavior increased by approximately 6 percentage points; and the percentage of children in public schools assigned by their district decreased by approximately 6 percentage points (table C-10).

Differences between the NHES:2016 ECPP and the 2015 ACS were observed in estimates of the \$20,001 to \$40,000 and the Over \$60,000 categories for children in the Other, non-Hispanic racial category (table C-13).

Comparing the NHES:2016 ECPP to the NHES:2012 ECPP, differences were observed in estimates of parental education by race (table C-14): the Graduate/professional degree category for White children; the Some college, Bachelor's degree, and Graduate/professional degree categories for Black children; the Bachelor's degree and Graduate/professional degree categories for Asian/Pacific Islander children; and the Less than high school diploma category for children in the Other, non-Hispanic racial category. The percentage of Hispanic children in relative care declined by approximately 5 percentage points (table C-16). Of Asian/Pacific Islander children who are in relative care, the percentage who are in relative care weekly increased by approximately 15 percentage points (table C-17). Among low-income children (i.e., those in households with an annual income of \$20,000 or less), the percentage in center-based care increased by approximately 6 percentage points (table C-18).

No NHES:2016 ATES estimates showed statistically significant differences of 5 percentage points or more when compared with the 2015 ACS or the 2015 CPS. Because NHES:2016 represents the first administration of the ATES, no comparisons to prior administrations were conducted.

10.3 Item Nonresponse Bias Analysis

In the NHES PFI, ECPP, and ATES surveys, as in most surveys, the responses to some data items are not obtained for all interviews. Numerous reasons account for item nonresponse. Some respondents do not know the answer for the item or do not wish to respond for other reasons. Item nonresponse also may be encountered because responses provided by the respondent are not internally consistent. In such cases, the items that are not internally consistent are set to missing and imputed. In self-administered mail surveys (such as those used in the NHES:2016), respondents might inadvertently skip items that should have been answered. This section evaluates the potential for bias resulting from item nonresponse.

Section 10.3.1 examines the potential for item nonresponse bias by imposing extreme assumptions on the item nonrespondents. Because item nonresponse bias may be viewed as a function of both the item nonresponse rate and the extent to which item nonrespondents differ from item

respondents, bounds on the item nonresponse bias may be obtained by imposing extreme assumptions on the responses that would have been provided by item nonrespondents. Extreme assumptions are created by imputing alternative values that fall in the tails of the original distribution (e.g., in the 5th or 95th percentiles). Section 10.3.2 examines the potential impact of imputation on item nonresponse bias by comparing estimates that include imputed values to those that do not.

10.3.1 Comparison of Extreme Imputed and Unimputed Values

To assess possible nonresponse bias for items from each topical interview, sets of alternative imputed values were generated by imposing extreme assumptions on the item nonrespondents. This analysis was conducted on items for which the item response rate fell under 85 percent, excluding items that required a verbatim text response. Verbatim text responses tend to be too idiosyncratic for a given respondent to act as an eligible response option for a nonrespondent. For most items, two sets of alternative imputed values—one based on a low assumption and one based on a high assumption—were created. For continuous variables, a low imputed value variable was created by setting missing values to the value at the 5th percentile of the original distribution; a high imputed value variable was created by setting missing values to the value at the 95th percentile of the original distribution.⁷⁹ For dichotomous and ordered polytomous variables, a low imputed value variable was created by setting missing values to the lowest value in the original distribution, and a high imputed value variable was created by setting missing values to the highest value in the original distribution.⁸⁰ For polytomous variables with response options that do not follow a natural order, a low imputed value variable was created by setting missing values to the least common response in the original distribution, and a high imputed value variable was created by setting missing values to the most common response (the modal response) in the original distribution. The means (for continuous variables) and percentage distributions (for dichotomous and polytomous variables) of the low imputed value variables and the high imputed value variables were compared with those of the original variable on the NHES:2016 data file (including the actual imputed values).

The purpose of creating extreme assumption variables and comparing them with the original distributions is to place bounds on the potential for item nonresponse bias in an estimate through the use of worst-case scenarios. For example, the distribution of the low imputed value variable represents the distribution that would result if all item nonrespondents had provided the low response to the item; and thus, the difference between this distribution and the original distribution

⁷⁹ For continuous variables, means rather than percentage distributions are presented in tables 10-16, 10-17, and 10-18.

⁸⁰ Yes/No items are coded as 1 = Yes and 2 = No, meaning that Yes represents the low extreme assumption and No represents the high extreme assumption.

represents the bias that would exist in the NHES:2016 estimates in that worst-case scenario. Because the distributions of many of the variables included in this evaluation are highly skewed, the extreme assumptions imposed here may, in many cases, be unrealistic. Also, in general, a very high correlation exists between estimates when comparing the extreme imputed value variables to the original variables because these estimates are based on the same sets of cases, and the data for respondents did not change. Only a small portion of the two distributions are different (less than 34 percent) because the item response rates for all the variables in this analysis are greater than 66 percent, and, therefore, most of the values compared are the same. Because of the high level of overlap between the response distribution in the unimputed and imputed versions of variables, the two are highly correlated. As a result, even small differences may be statistically significant, so it is important to also consider the practical or substantive significance of such differences. For the purpose of this analysis, a statistically significant difference of 1 percentage point or greater between the extreme imputed value percentage and the original percentage is considered a substantively relevant difference for percentage distributions. A statistically significant relative difference of 5 percent or greater between the extreme imputed value mean and the original mean is considered to be a substantively relevant difference for means.

Extreme imputed value variables were formulated for 14 variables from the PFI survey. Both low and high extreme imputed value variables were created as described earlier. The original distributions or means were compared with the low and high imputed value variable distributions or means (see table 10-16). Among the PFI variables considered, measurable differences were observed for all variables tested. Differences were observed between the original and both extreme value percentages for most categories of GRADE and HSMOSTX; the higher categories of GRADEEQ; and both the Yes and No response options to HSDISABLX, HSSPCLNDX, HSALTX, HSCEDPUBX, HSCORGX, HSCCHURX, and HSCPUBLX. Differences were observed between the original and the low extreme value percentage for HSILLX and HSCPRIX. For HMSCHARR, the “Homeschooled for all classes” category shows a measurable difference between the original percentage and the low extreme value percentage; the “Not homeschooled” category shows a measurable difference between the original percentage and the high extreme value percentage; and the “Homeschooled for some classes” percentage shows a measurable difference between the original percentage and both extreme value percentages. For HSSCHR, the original mean differs significantly from both extreme value means. However, the original distributions of HSDISABLX, HSILLX, HSSPCLNDX, HSALTX, HSCCHURX, HSCPUBLX, and HSCPRIX are skewed toward higher values, making the low extreme assumption potentially unrealistic, whereas the original distribution of HSSCHR is skewed toward lower values, making the high extreme assumption potentially unrealistic.

Extreme imputed value variables were created for nine variables from the ECPP survey. Comparisons for all variables analyzed for the ECPP are shown in table 10-17. Among the ECPP variables considered, measurable differences were observed for all variables tested. Differences were observed between the original and both extreme value percentages for the Yes and No response options for HDSCHLX, HDGOVTX, HDOCTORX, and HDOUT. Differences were observed between the original and the low extreme value for both response options to HDPRISCH. For HDSCHLX and HDOCTORX, the original distribution is skewed toward Yes responses, so the high extreme assumption (which assumes that all item nonrespondents would have given a response of No) is likely to be unrealistic. Conversely, for HDOUT and HDPRISCH, the original distribution is skewed toward No responses, making the low extreme assumption unrealistic.

For the continuous variables RCSTRTY, NCSTRTY, and CMOVEAGE, differences were observed between the original mean and the mean calculated using low and high extreme assumptions. The original distributions of these variables are highly skewed toward lower values, making the high extreme assumptions somewhat unrealistic. For the continuous variable NCTLHR, a difference was observed between the original mean and the mean calculated using the high extreme assumption.

Extreme imputed values were formulated for eighteen variables from the ATES survey, with measurable differences observed for all (see table 10-18). All categories of CNPRP_COLLG2, CNPRP_TRAIN2, CNPRP_ONOWN2, LCRED, CNREVOKE2, CNCURRJOB2, CNUSE_GET2, CNPROV3, CNREVOKE3, and EEL5YRS showed measurable differences between the original and both extreme value percentages for all categories. Additionally, CNPROV2, CNUSE_KEEP2, CNUSE_MRKT2, and CNUSE_SKLS2 showed measurable differences between the original and both extreme percentages for all but one category. Finally, CNPRP_TRAIN1, CNPRP_ONOWN1 and WEAPPRE showed measurable differences between the original and the low extreme value percentage for both categories. However, the original distributions of these variables are skewed toward higher values, making the low extreme assumption potentially unrealistic.

The results of the extreme value analysis suggest that, if major differences are evident between the responses that were actually imputed for item nonrespondents and those that the nonrespondents would have provided if they had answered the items, estimates derived from NHES:2016 items with response rates less than 85 percent would be susceptible to measurable bias. However, as noted previously, the low and high extreme value distributions and means represent worst-case scenarios for item nonresponse bias. For many of the variables analyzed, the original distribution is skewed in a way that makes at least one of the extreme value assumptions unrealistic. The actual

amount of item nonresponse bias in these estimates is likely to be lower than the differences shown in tables 10-16 through 10-18.

Table 10-16. Percentage distribution or mean of Parent and Family Involvement in Education NHES:2016 variables with item response rates less than 85 percent, original estimate versus estimate with extreme imputed values

Variable	Estimate with low imputed values		Original estimate		Estimate with high imputed values	
	Percentage or mean	s.e.	Percentage or mean	s.e.	Percentage or mean	s.e.
Categorical variables						
GRADE						
Full-time kindergarten	27.8*	0.59	8.8	0.35	8.2*	0.34
Part-time kindergarten	1.1	0.16	1.1	0.16	1.1	0.16
1 st grade	6.2*	0.36	8.0	0.36	6.2*	0.36
2 nd grade	6.0*	0.29	7.7	0.30	6.0*	0.29
3 rd grade	6.2*	0.27	7.8	0.26	6.2*	0.27
4 th grade	6.3*	0.25	7.8	0.29	6.3*	0.25
5 th grade	6.6*	0.27	7.9	0.26	6.6*	0.27
6 th grade	6.0*	0.27	7.4	0.28	6.0*	0.27
7 th grade	5.9*	0.23	7.3	0.24	5.9*	0.23
8 th grade	6.3*	0.26	7.9	0.29	6.3*	0.26
9 th grade	5.8*	0.23	7.6	0.24	5.8*	0.23
10 th grade	5.7*	0.25	7.7	0.24	5.7*	0.25
11 th grade	5.3*	0.18	6.7	0.20	5.3*	0.18
12 th grade	4.7*	0.15	6.3	0.17	24.3*	0.53
HMSCHARR						
Homeschooled for all classes	39.5*	5.89	22.1	5.32	12.4	3.59
Homeschooled for some classes	39.0*	5.16	49.0	5.31	39.0*	5.16
Not homeschooled	21.4	4.64	28.9	5.90	48.6*	6.82
HSDISABLX						
Yes	29.3*	2.55	13.9	1.60	11.6*	1.56
No	70.7*	2.55	86.1	1.60	88.4*	1.56
HSILLX						
Yes	24.5*	3.60	8.1	3.52	7.4*	3.56
No	75.5*	3.60	91.9	3.52	92.6*	3.56
HSSPCLNDX						
Yes	34.0*	2.33	19.4	1.75	17.0*	1.81
No	66.0*	2.33	80.6	1.75	83.0*	1.81
HSALTX						
Yes	52.3*	3.54	39.1	3.99	35.2*	4.10
No	47.7*	3.54	60.9	3.99	64.8*	4.10

See notes at end of table.

Table 10-16. Percentage distribution or mean of Parent and Family Involvement in Education NHES:2016 variables with item response rates less than 85 percent, original estimate versus estimate with extreme imputed values—Continued

Variable	Estimate with low imputed values		Original estimate		Estimate with high imputed values	
	Percentage or mean	s.e.	Percentage or mean	s.e.	Percentage or mean	s.e.
GRADEEQ						
Kindergarten	31.5*	3.86	13.4	4.26	13.3	4.28
1 st grade	4.3	1.20	5.1	1.54	4.3	1.20
2 nd grade	6.1*	1.15	6.9	1.20	6.1*	1.15
3 rd grade	4.0	0.91	5.1	1.09	4.0	0.91
4 th grade	4.9	0.98	5.8	0.98	4.9	0.98
5 th grade	5.8	1.17	9.5	2.19	5.8	1.17
6 th grade	6.6	1.52	8.4	1.69	6.6	1.52
7 th grade	4.5	1.17	6.2	1.50	4.5	1.17
8 th grade	5.0*	1.31	6.5	1.41	5.0*	1.31
9 th grade	6.3	1.38	6.4	1.38	6.3	1.38
10 th grade	9.2*	1.34	11.2	1.40	9.2*	1.34
11 th grade	5.8*	1.01	7.8	1.31	5.8*	1.01
12 th grade	5.9*	0.93	7.7	1.21	24.1*	2.90
HSCEDPUBX						
Yes	57.1*	4.00	44.4	3.58	36.9*	2.97
No	42.9*	4.00	55.6	3.58	63.1*	2.97
HSCORGX						
Yes	61.0*	2.83	49.6	3.47	40.8*	3.85
No	39.0*	2.83	50.4	3.47	59.2*	3.85
HSCCHURX						
Yes	54.3*	2.95	36.5	4.33	32.9*	4.49
No	45.7*	2.95	63.5	4.33	67.1*	4.49
HSCPUBLX						
Yes	47.5*	3.34	34.5	4.12	28.5*	4.08
No	52.5*	3.34	65.5	4.12	71.5*	4.08
HSCPRIX						
Yes	30.5*	2.66	7.6	1.15	6.8*	1.10
No	69.5*	2.66	92.4	1.15	93.2*	1.10

See notes at end of table.

Table 10-16. Percentage distribution or mean of Parent and Family Involvement in Education NHES:2016 variables with item response rates less 85 percent, original estimate versus estimate with extreme imputed values—Continued

Variable	Estimate with low imputed values		Original estimate		Estimate with high imputed values	
	Percentage or mean	s.e.	Percentage or mean	s.e.	Percentage or mean	s.e.
HSMOSTX						
Concerned about school environment	20.0*	1.91	31.3	2.78	47.7*	3.47
Dissatisfied with other schools' instruction	14.9*	2.14	18.9	2.30	14.9*	2.14
Provide religious instruction	11.8*	2.23	13.5	2.25	11.8*	2.23
Provide moral instruction	4.0	1.10	4.3	1.12	4.0	1.10
Long-term health problem	4.4*	0.90	5.5	1.02	4.4*	0.90
Temporary illness	28.6*	3.65	4.7	3.59	0.8	0.31
Other special needs	3.9*	0.92	5.1	1.14	3.9*	0.92
Interested in nontraditional approach	3.9*	0.91	5.3	1.14	3.9*	0.91
Other reason	8.5*	1.47	11.4	1.68	8.5*	1.47
Continuous variables						
HSSCHR	14.2*	1.17	16.7	1.27	20.5*	1.27

* Indicates a statistically significant ($p < .05$, Student's t test) difference between the low or high imputed estimate and the original estimate.

NOTE: s.e. is standard error. Estimates shown are percentages for categorical variables and means for continuous variables. The original estimate includes the original imputed values for the variable. The estimates with low and high imputed values include alternative imputed values using extreme assumptions. The low imputed value is the lowest response option (for dichotomous and ordered polytomous variables), the least commonly selected response option (for unordered polytomous variables), or the 5th percentile of the original distribution (for continuous variables). The high imputed value is the highest response option (for dichotomous and ordered polytomous variables), the most commonly selected response option (for unordered polytomous variables), or the 95th percentile of the original distribution (for continuous variables). Estimates are calculated using final person-level weights.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-17. Percentage distribution or mean of Early Childhood Program Participation NHES:2016 variables with item response rates less than 85 percent, original estimate versus estimate with extreme imputed values

Variable	Estimate with low imputed values		Original estimate		Estimate with high imputed values	
	Percentage or mean	s.e.	Percentage or mean	s.e.	Percentage or mean	s.e.
Categorical variables						
HDSCHLX						
Yes	59.1*	2.83	39.1	3.26	36.0*	3.37
No	40.9*	2.83	60.9	3.26	64.0*	3.37
HDGOVTX						
Yes	50.3*	3.33	31.5	3.16	27.9*	3.06
No	49.7*	3.33	68.5	3.16	72.1*	3.06
HDDOCTORX						
Yes	73.8*	2.84	58.8	3.05	54.0*	3.01
No	26.2*	2.84	41.2	3.05	46.0*	3.01
HDPRISCH						
Yes	30.9*	2.71	2.9	0.91	2.9	0.91
No	69.1*	2.71	97.1	0.91	97.1	0.91
HDOUT						
Yes	29.7*	2.82	15.5	2.19	12.4*	1.87
No	70.3*	2.82	84.5	2.19	87.6*	1.87
Continuous variables						
RCSTRTY	0.7*	0.04	0.8	0.04	2.2*	0.06
NCSTRTY	0.9*	0.05	0.9	0.06	2.0*	0.08
NCTLHR	10.7	2.38	13.6	2.50	19.0*	3.38
CMOVEAGE	1.0*	0.13	1.3	0.13	2.6*	0.18

* Indicates a statistically significant ($p < .05$, Student's t test) difference between the low or high imputed estimate and the original estimate.

NOTE: s.e. is standard error. Estimates shown are percentages for categorical variables and means for continuous variables. The original estimate includes the original imputed values for the variable. The estimates with low and high imputed values include alternative imputed values using extreme assumptions. The low imputed value is the lowest response option (for dichotomous and ordered polytomous variables), the least commonly selected response option (for unordered polytomous variables), or the 5th percentile of the original distribution (for continuous variables). The high imputed value is the highest response option (for dichotomous and ordered polytomous variables), the most commonly selected response option (for unordered polytomous variables), or the 95th percentile of the original distribution (for continuous variables). Estimates are calculated using final person-level weights.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-18. Percentage distribution of Adult Training and Education Survey NHES:2016 variables with item response rates less than 85 percent, original estimate versus estimate with extreme imputed values

Variable	Estimate with low imputed values		Original estimate		Estimate with high imputed values	
	Percentage or mean	s.e.	Percentage or mean	s.e.	Percentage or mean	s.e.
Categorical variables						
CNPRP_TRAIN1						
Yes	58.5*	0.83	38.2	0.73	37.4*	0.73
No	41.5*	0.83	61.8	0.73	62.6*	0.73
CNPRP_ONOWN1						
Yes	72.7*	0.64	51.1	0.70	50.2*	0.70
No	27.3*	0.64	48.9	0.70	49.8*	0.70
CNPRP_COLLG2						
Yes	69.9*	1.07	49.0	1.16	36.5*	0.99
No	30.1*	1.07	51.0	1.16	63.5*	0.99
CNPRP_TRAIN2						
Yes	70.8*	1.13	46.6	1.32	35.0*	1.23
No	29.2*	1.13	53.4	1.32	65.0*	1.23
CNPRP_ONOWN2						
Yes	79.9*	0.85	56.4	1.17	42.4*	1.27
No	20.1*	0.85	43.6	1.17	57.6*	1.27
LCRED						
Yes	60.8*	1.02	42.8	1.02	39.8*	1.10
No	39.2*	1.02	57.2	1.02	60.2*	1.10
WEAPPRE						
Yes	19.1*	0.60	3.4	0.25	3.2*	0.26
No	80.9*	0.60	96.6	0.25	96.8*	0.26
CNPROV2						
Yes	52.4*	1.13	69.4	1.14	77.6*	0.85
No	19.0*	0.85	26.6	1.16	19.0*	0.85
Don't know	28.7*	1.17	4.1	0.43	3.4*	0.35
CNREVOKE2						
Yes	49.6*	1.21	64.3	1.26	74.8*	0.99
No	14.8*	0.92	20.4	1.05	14.8*	0.92
Don't know	35.6*	1.24	15.3	1.00	10.4*	0.73
CNCURRJOB2						
Not applicable	33.5*	1.10	12.1	0.71	9.7*	0.62
No	18.6*	0.85	24.6	0.91	18.6*	0.85
Yes	47.9*	1.21	63.3	1.10	71.7*	1.04

See notes at end of table

Table 10-18. Percentage distribution of Adult Training and Education Survey NHES:2016 variables with item response rates less than 85 percent, original estimate versus estimate with extreme imputed values—Continued

Variable	Estimate with low imputed values		Original estimate		Estimate with high imputed values	
	Percentage or mean	s.e.	Percentage or mean	s.e.	Percentage or mean	s.e.
CNUSE_GET2						
Not useful	6.9*	0.60	10.2	0.68	6.9*	0.60
Somewhat useful	17.2*	0.86	23.1	1.05	17.2*	0.86
Very useful	46.7*	1.25	62.4	1.15	72.9*	0.91
Too soon to tell	29.2*	1.11	4.3	0.55	3.0*	0.40
CNUSE_KEEP2						
Not useful	8.3*	0.59	12.2	0.77	8.3*	0.59
Somewhat useful	15.7*	0.87	20.4	0.99	15.7*	0.87
Very useful	47.5*	1.17	64.1	1.04	73.7*	0.91
Too soon to tell	28.6*	1.11	3.4	0.49	2.4*	0.35
CNUSE_MRKT2						
Not useful	5.3*	0.55	8.2	0.73	5.3*	0.55
Somewhat useful	14.8*	0.71	19.9	0.79	14.8*	0.71
Very useful	51.9*	1.25	69.5	0.97	78.1*	0.85
Too soon to tell	28.0*	1.05	2.4	0.32	1.8*	0.28
CNUSE_SKLS2						
Not useful	9.7*	0.68	13.6	0.82	9.7*	0.68
Somewhat useful	20.0*	1.10	26.6	1.13	20.0*	1.10
Very useful	43.0*	1.40	58.5	1.23	69.3*	1.13
Too soon to tell	27.3*	1.09	1.4	0.27	1.0*	0.25
CNPROV3						
Yes	40.4*	1.84	65.6	1.82	77.6*	1.84
No	19.3*	1.68	30.1	1.79	19.3*	1.68
Don't know	40.4*	2.21	4.4	0.87	3.1*	0.81
CNREVOKE3						
Yes	36.9*	1.73	59.3	2.03	74.2*	1.74
No	15.9*	1.58	24.7	1.74	15.9*	1.58
Don't know	47.2*	2.29	16.0	1.79	9.9*	1.25
EEL5YRS						
Yes	28.9*	0.68	33.5	0.66	28.9*	0.68
No	36.5*	0.58	44.9	0.58	52.9*	0.61
Don't know	34.6*	0.64	21.6	0.58	18.2*	0.53

See notes at end of table

Table 10-18. Percentage distribution of Adult Training and Education Survey NHES:2016 variables with item response rates less than 85 percent, original estimate versus estimate with extreme imputed values—Continued

Variable	Estimate with low imputed values		Original estimate		Estimate with high imputed values	
	Percentage or mean	s.e.	Percentage or mean	s.e.	Percentage or mean	s.e.
Continuous variables						
CNYEAR2	1,998*	0.35	2,005	0.21	2,008*	0.19

* Indicates a statistically significant ($p < .05$, Student's t test) difference between the low or high imputed estimate and the original estimate.

NOTE: s.e. is standard error. Estimates shown are percentages for categorical variables. The original estimate includes the original imputed values for the variable. The estimates with low and high imputed values include alternative imputed values using extreme assumptions. The low imputed value is the lowest response option (for dichotomous and ordered polytomous variables) or the least commonly selected response option (for unordered polytomous variables). The high imputed value is the highest response option (for dichotomous and ordered polytomous variables) or the most commonly selected response option (for unordered polytomous variables). Estimates are calculated using final person-level weights.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

10.3.2 Comparison of Imputed and Unimputed Distributions

Hot-deck imputation was used to fill in missing data for most NHES:2016 variables. A complete description of the NHES:2016 imputation procedures is provided in chapter 6. Hot-deck imputation can reduce bias resulting from item nonresponse if the variables used to match recipients to donors are correlated with the variable being imputed. The difference between an estimate that includes imputed values and that same estimate that excludes imputed values provides a measure of the potential reduction in item nonresponse bias attributable to imputation. The actual magnitude of the existing bias prior to and after imputation remains unknown.

For the same variables identified in section 10.3.1, tables 10-19 through 10-21 show the mean (for continuous variables) or percentage distribution (for dichotomous and polytomous variables) with and without imputed values. As with the extreme values analysis, a statistically significant change of at least 1 percentage point is considered to be a meaningful change in a percentage estimate, whereas a statistically significant relative change of at least 5 percent is considered to be a meaningful change in a mean estimate.

For the PFI (table 10-19), the full-time kindergarten category of GRADE, as well as the kindergarten and ninth-grade categories of GRADEEQ, show statistically significant changes of at least 1 percentage point. The “Yes” and “No” categories of HSALTX, HSCCHURX, and HSCPRIX also show statistically significant changes of at least 1 percentage point, as do the Religious instruction and Moral instruction categories of HSMOSTX. No other PFI variables show meaningful differences in the distribution or mean as a result of imputation.

For the ECPP (table 10-20), the dichotomous variables HDSCHLX, HDGOVTX, HDOCTORX, and HDPRISCH show statistically significant changes of at least 1 percentage point in the percentages for the “Yes” and “No” categories. The distribution of HDOUT does not show a statistically significant change as a result of imputation. The means of the continuous variables RCSTRTY, NCSTRTY, and CMOVEAGE show statistically significant relative changes of at least 5 percent as a result of imputation; the mean of NCTLHR does not show a statistically significant change.

For the ATES (table 10-21), the “Yes” and “No” categories of CNPRP_TRAIN1, CNPRP_ONOWN1, CNPRP_COLLG2, CNPRP_TRAIN2, CNPRP_ONOWN2, LCRED, CNREVOKE2, and EEL5YRS show statistically significant changes of at least 1 percentage point.

Therefore, for the majority of variables with response rates less than 85 percent for which imputation could be performed, imputation did lead to meaningful changes in mean or percentage estimates. This suggests that the NHES:2016 imputation procedure may have helped to mitigate item nonresponse bias, although the actual amount of bias is unobservable. It should be noted, however, that it cannot be known definitively that the imputation procedure led to more accurate estimates compared to the unimputed distributions. Analysts can use the imputation flags described in section 6-3 to identify cases with and without imputed data for any variable.

Table 10-19. Percentage distribution or mean of Parent and Family Involvement in Education NHES:2016 variables with response rates less than 85 percent, original imputed estimate versus estimate with imputed values excluded

Variable	Original imputed estimate		Unimputed estimate	
	Percentage or mean	s.e.	Percentage or mean	s.e.
Categorical variables				
GRADE				
Full-time kindergarten	8.8	0.35	10.3*	0.42
Part-time kindergarten	1.1	0.16	1.4*	0.20
1 st grade	8.0	0.36	7.7	0.45
2 nd grade	7.7	0.30	7.5	0.35
3 rd grade	7.8	0.26	7.7	0.33
4 th grade	7.8	0.29	7.8	0.31
5 th grade	7.9	0.26	8.2	0.33
6 th grade	7.4	0.28	7.4	0.33
7 th grade	7.3	0.24	7.4	0.28
8 th grade	7.9	0.29	7.9	0.33
9 th grade	7.6	0.24	7.2*	0.28
10 th grade	7.7	0.24	7.1*	0.30
11 th grade	6.7	0.20	6.5	0.22
12 th grade	6.3	0.17	5.8*	0.19
HMSCHARR				
Homeschooled for all classes	22.1	5.32	17.0	4.37
Homeschooled for some classes	49.0	5.31	53.6	5.37
Not homeschooled	28.9	5.90	29.4	6.05
HSDISABLX				
Yes	13.9	1.60	14.1	1.97
No	86.1	1.60	85.9	1.97
HSILLX				
Yes	8.1	3.52	8.9	4.27
No	91.9	3.52	91.1	4.27
HSSPCLNDX				
Yes	19.4	1.75	20.5	2.19
No	80.6	1.75	79.5	2.19

See notes at end of table.

Table 10-19. Percentage distribution or mean of Parent and Family Involvement in Education NHES:2016 variables with response rates less than 85 percent, original imputed estimate versus estimate with imputed values excluded—Continued

Variable	Original imputed estimate		Unimputed estimate	
	Percentage or mean	s.e.	Percentage or mean	s.e.
HSALTX				
Yes	39.1	3.99	42.5*	4.57
No	60.9	3.99	57.5*	4.57
GRADEEQ				
Kindergarten	13.4	4.26	16.3*	5.05
1 st grade	5.1	1.54	5.2	1.47
2 nd grade	6.9	1.20	7.4	1.40
3 rd grade	5.1	1.09	4.9	1.12
4 th grade	5.8	0.98	6.0	1.23
5 th grade	9.5	2.19	7.1	1.43
6 th grade	8.4	1.69	8.1	1.83
7 th grade	6.2	1.50	5.5	1.47
8 th grade	6.5	1.41	6.1	1.61
9 th grade	6.4	1.38	7.7*	1.75
10 th grade	11.2	1.40	11.3	1.58
11 th grade	7.8	1.31	7.1	1.24
12 th grade	7.7	1.21	7.2	1.19
HSCEDPUBX				
Yes	44.4	3.58	46.2	4.15
No	55.6	3.58	53.8	4.15
HSCORGX				
Yes	49.6	3.47	51.2	4.00
No	50.4	3.47	48.8	4.00
HSCCHURX				
Yes	36.5	4.33	41.8*	4.80
No	63.5	4.33	58.2*	4.80
HSCPUBLX				
Yes	34.5	4.12	35.2	4.60
No	65.5	4.12	64.8	4.60

See notes at end of table.

Table 10-19. Percentage distribution or mean of Parent and Family Involvement in Education NHES:2016 variables with response rates less than 85 percent, original imputed estimate versus estimate with imputed values excluded—Continued

Variable	Original imputed estimate		Unimputed estimate	
	Percentage or mean	s.e.	Percentage or mean	s.e.
HSCPRIX				
Yes	7.6	1.15	8.9*	1.46
No	92.4	1.15	91.1*	1.46
HSMOSTX				
Concerned about school environment	31.3	2.78	27.7	2.51
Dissatisfied with other schools' instruction	18.9	2.30	20.7	2.88
Provide religious instruction	13.5	2.25	16.4*	2.77
Provide moral instruction	4.3	1.12	5.6*	1.46
Long-term health problem	5.5	1.02	6.0	1.22
Temporary illness	4.7	3.59	1.1	0.42
Other special needs	5.1	1.14	5.4	1.21
Interested in nontraditional approach	5.3	1.14	5.4	1.28
Other reason	11.4	1.68	11.8	1.97
Continuous variables				
HSSCHR	16.7	1.27	16.7	1.24

* Indicates a statistically significant difference ($p < .05$, Student's t test) between the unimputed and imputed estimate.

NOTE: s.e. is standard error. Estimates shown are percentages for categorical variables and means for continuous variables. Estimates are calculated using person-level final weights.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-20. Percentage distribution or mean of Early Childhood Program Participation NHES:2016 variables with response rates than 85 percent, original imputed estimate versus estimate with imputed values excluded

Variable	Original imputed estimate		Unimputed estimate	
	Percentage or mean	s.e.	Percentage or mean	s.e.
Categorical variables				
HDSCHLX				
Yes	39.1	3.26	46.8*	3.67
No	60.9	3.26	53.2*	3.67
HDGOVTX				
Yes	31.5	3.16	36.0*	3.83
No	68.5	3.16	64.0*	3.83
HDDOCTORX				
Yes	58.8	3.05	67.3*	3.37
No	41.2	3.05	32.7*	3.37
HDPRISCH				
Yes	2.9	0.91	4.0*	1.25
No	97.1	0.91	96.0*	1.25
HDOUT				
Yes	15.5	2.19	15.0	2.24
No	84.5	2.19	85.0	2.24
Continuous variables				
RCSTRTY	0.8	0.04	1.2*	0.06
NCSTRTY	0.9	0.06	1.2*	0.07
NCTLHR	13.6	2.50	13.0	2.88
CMOVEAGE	1.3	0.13	1.6*	0.16

*Indicates a statistically significant difference ($p < .05$, Student's t test) between the unimputed and imputed estimate.

NOTE: s.e. is standard error. Estimates shown are percentages for categorical variables and means for continuous variables. Estimates are calculated using person-level final weights.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

Table 10-21. Percentage distribution of Adult Training and Education Survey NHES:2016 variables with response rates less than 85 percent, original imputed estimate versus estimate with imputed values excluded

Variable	Original imputed estimate		Unimputed estimate	
	Percentage	s.e.	Percentage	s.e.
CNPRP_TRAIN1				
Yes	38.2	0.73	47.4*	0.90
No	61.8	0.73	52.6*	0.90
CNPRP_ONOWN1				
Yes	51.1	0.70	64.8*	0.77
No	48.9	0.70	35.2*	0.77
CNPRP_ONOWN1				
Yes	49.0	1.16	54.8*	1.36
No	51.0	1.16	45.2*	1.36
CNPRP_TRAIN2				
Yes	46.6	1.32	54.5*	1.61
No	53.4	1.32	45.5*	1.61
CNPRP_ONOWN2				
Yes	56.4	1.17	67.9*	1.33
No	43.6	1.17	32.1*	1.33
LCRED				
Yes	42.8	1.02	50.4*	1.23
No	57.2	1.02	49.6*	1.23
WEAPPRE				
Yes	3.4	0.25	3.8*	0.30
No	96.6	0.25	96.2*	0.30
CNPROV2				
Yes	69.4	1.14	70.1	1.05
No	26.6	1.16	25.4	1.07
Don't know	4.1	0.43	4.5*	0.47
CNREVOKE2				
Yes	64.3	1.26	66.3*	1.25
No	20.4	1.05	19.8	1.18
Don't know	15.3	1.00	13.9*	0.98

See notes at end of table.

Table 10-21. Percentage distribution of Adult Training and Education Survey NHES:2016 variables with response rates less than 85 percent, original imputed estimate versus estimate with imputed values excluded—Continued

Variable	Original imputed estimate		Unimputed estimate	
	Percentage	s.e.	Percentage	s.e.
CNCURRJOB2				
Not applicable	12.1	0.71	12.7	0.79
No	24.6	0.91	24.4	1.09
Yes	63.3	1.10	62.9	1.28
CNUSE_GET2				
Not useful	10.2	0.68	9.4	0.80
Somewhat useful	23.1	1.05	23.3	1.19
Very useful	62.4	1.15	63.3	1.24
Too soon to tell	4.3	0.55	4.0	0.55
CNUSE_KEEP2				
Not useful	12.2	0.77	11.2	0.82
Somewhat useful	20.4	0.99	21.2	1.12
Very useful	64.1	1.04	64.3	1.19
Too soon to tell	3.4	0.49	3.2	0.48
CNUSE_MRKT2				
Not useful	8.2	0.73	7.2	0.76
Somewhat useful	19.9	0.79	20.0	0.97
Very useful	69.5	0.97	70.3	1.16
Too soon to tell	2.4	0.32	2.5	0.38
CNUSE_SKLS2				
Not useful	13.6	0.82	13.2	0.94
Somewhat useful	26.6	1.13	27.1	1.45
Very useful	58.5	1.23	58.4	1.54
Too soon to tell	1.4	0.27	1.4	0.34
CNPROV3				
Yes	65.6	1.82	64.4	2.34
No	30.1	1.79	30.7	2.27
Don't know	4.4	0.87	4.9	1.25
CNREVOKE3				
Yes	59.3	2.03	58.8	2.08
No	24.7	1.74	25.4	2.21
Don't know	16.0	1.79	15.7	1.91

See notes at end of table.

Table 10-21. Percentage distribution of Adult Training and Education Survey NHES:2016 variables with response rates less than 85 percent, original imputed estimate versus estimate with imputed values excluded—Continued

Variable	Original imputed estimate		Unimputed estimate	
	Percentage	s.e.	Percentage	s.e.
EEL5YRS				
Yes	33.5	0.66	34.6*	0.79
No	44.9	0.58	43.6*	0.65
Don't know	21.6	0.58	21.8	0.62
Continuous variables				
CNYEAR2	2,005	0.21	2,005	0.23

*Indicates a statistically significant difference ($p < .05$, Student's t test) between the unimputed and imputed estimate.

NOTE: s.e. is standard error. Estimates shown are percentages for categorical variables. Estimates are calculated using person-level final weights.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

10.4 Summary of Nonresponse Bias Findings

The potential for nonresponse bias is an important concern to survey methodologists and data analysts. This chapter has included assessments of the potential for both unit and item nonresponse bias in the NHES:2016 screener and topical (ECPP, PFI, and ATES) surveys.

At the screener phase, significant differences were observed between respondents and the eligible sample in the distributions of characteristics available in or linked to the sample frame. Similarly, for each topical survey, significant differences were observed between respondents and the eligible sample in the distributions of characteristics available in or linked to the sample frame or collected on the screener. However, this observed bias was greatly reduced by the nonresponse weighting adjustments. The adjustment for household-level nonresponse reduced the percentage of screener-level characteristics with statistically significant bias greater than 1 percentage point from 57 percent to 34 percent (from 59 to 35 out of 103 estimates examined). The adjustment for person-level nonresponse reduced the percentage of topical-level characteristics with statistically significant bias greater than 1 percentage point from 29 percent to 7 percent for the PFI (corresponding to a reduction from 27 to 7 estimates showing bias); 40 percent to 20 percent for the ECPP (corresponding to a reduction from 33 to 16 estimates showing bias); and 29 percent to 5 percent for the ATES (corresponding to a reduction from 24 to 4 estimates showing bias).

For each topical survey, base-weighted key survey estimates were compared between (1) early and late screener respondents to assess the potential for bias resulting from screener-level nonresponse and (2) early and late topical respondents to assess the potential for bias resulting from topical-level nonresponse. For the PFI, 40 percent of estimates (22 estimates out of 55 examined) showed statistically significant and meaningful differences between early and late screener respondents, and 42 percent (23 estimates out of 55 examined) showed statistically significant and meaningful differences between early and late topical respondents. For the ECPP, 58 percent of estimates (28 estimates out of 48 examined) showed statistically significant and meaningful differences between early and late screener respondents, and 31 percent (15 estimates out of 48 examined) showed statistically significant and meaningful differences between early and late topical respondents. For the ATES, 58 percent of estimates (19 estimates out of 33 examined) showed statistically significant and meaningful differences between early and late screener respondents, and 52 percent (17 estimates out of 33 examined) showed statistically significant and meaningful differences between early and late topical respondents. To the extent that late respondents resemble nonrespondents in the characteristics measured by the NHES survey instruments, differences between early and late respondents suggest a potential for unit nonresponse bias in the estimates.

When key survey estimates generated with base-weighted and nonresponse-adjusted weights were compared, only a small number of measurable differences were observed. This suggests that few of these variables were powerful predictors of unit response. Therefore, the unit nonresponse adjustment had little effect on any potential bias, but it also is possible that little bias needed to be removed.

It also is possible that unit nonresponse bias may still be present in other variables that were not studied. For this reason, it is important to consider other methods of examining unit nonresponse bias. One such method is benchmarking, or comparing final NHES survey estimates to estimates from external sources. Benchmarking is routinely done during the preparation of the NHES data files. When estimates from the NHES:2016 surveys were compared with external estimates—from the CPS, the ACS, and previous administrations of NHES—some measurable differences were found. However, the majority of the differences were between estimates from the NHES:2016 and the previous administration of the NHES, 4 years prior to the current one; therefore, changes in the population across time are likely.

The analysis of item nonresponse bias revealed that 33 items (15 from the PFI survey, 10 from the ECPP survey, and 23 from the ATES) had item response rates less than 85 percent.⁸¹ The high item response for almost all the survey items indicates that the potential for item nonresponse bias is extremely low for most estimates.

The comparison of means or distributions based on extreme assumptions to the original means or distributions did reveal some differences. If the item nonrespondents are extremely different from the respondents, the potential for bias exists in the PFI variables GRADE, HMSCHARR, HSDISABLX, HSILLX, HSSPCLNDX, HSALTX, GRADEEQ, HSCEDPUBX, HSCORGX, HSCCHURX, HSCPUBLX, HSCPRIVX, HSMOSTX, and HSSCHR; the ECPP variables HDSCHLX, HDGOVTX, HDOCTORX, HDPRISCH, HDOUT, RCSTRTY, NCSTRTY, NCTLHR, and CMOVEAGE; and the ATES variables CNPRP_TRAIN1, CNPRP_ONOWN1, CNPRP_COLLG2, CNPRP_TRAIN2, CNPRP_ONOWN2, LCRED, CNREVOKE2, CNCURRJOB2, CNUSE_GET2, CNPROV2, CNUSE_KEEP2, CNUSE_MRKT2, CNUSE_SKLS2, CNPROV3, CNREVOKE3, WEAPPRE and EEL5YRS. These variables all showed item response rates less than 85 percent, and their distributions or means changed meaningfully when extreme low or high values were imputed. However, the original distributions of many of these variables are skewed; therefore, some extreme assumptions used in this analysis

⁸¹ Six of these (one each from the PFI, ECPP, and four from the ATES) were verbatim text items and thus were not included in the analysis of item nonresponse bias.

are likely to be unrealistic. Other measurable differences that were observed in extremes are likely the result of high correlations between the two sets of values or a large range of values in the original distributions. Furthermore, for most items analyzed, the NHES:2016 imputation procedures led to meaningful changes in the distribution or mean, suggesting that item nonresponse bias may have been reduced by imputation.

10.5 References

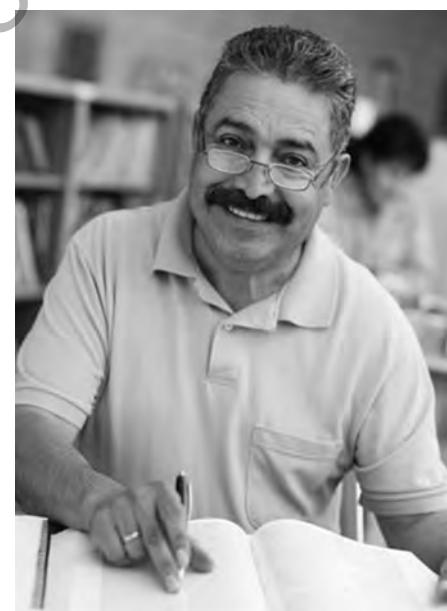
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Appendix A. Questionnaires

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau



National Household Education Survey



The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC §9543). The U.S. Census Bureau is administering this survey on behalf of NCES.

NHES-SCRN
(08/05/2015)



National Household Education Survey

Start Here

The Department of Education is studying the education and training experiences of adults and children. Each household is different, and we need your response so we can send you a survey that is right for your household.

- Return this form even if there are only one or two people in the household.
- This survey should be filled out by an adult household member living at this address.
- Please use a blue or black pen if available.

1. How many people live in this household?

Include adults and children who are temporarily away from home (for example, living in college housing) if they have no other permanent home.

► Continue answering questions 2 through 6 for each person living in this household. Include all adults and children. Start with yourself.

You / Person 1

2. What is his or her first name, initials, or nickname?

First name/initials/nickname

First names will be used only to ask you questions about the education of a specific person.

3. What is this person's month and year of birth?

month

year of birth

4. What is this person's sex?

Male

Female

5. Is this person currently in . . .

Mark [X] ONE only.

- Homeschool instead of attending a public or private school for some or all classes,
- Public or private school, or preschool,
- College, university or vocational school, or
- Not in school?

6. What is this person's current grade or equivalent?

- Preschool
- Kindergarten

write grade 1 through 12

- College, university or vocational school
- None of these

Person 2

First name/initials/nickname

First name/initials/nickname

month

year of birth

Male

Female

Homeschool instead of attending a public or private school for some or all classes,

Public or private school, or preschool,

College, university or vocational school, or

Not in school?

► GO TO person 3.

- Preschool
- Kindergarten

write grade 1 through 12

- College, university or vocational school
- None of these



**Conducted for:
U.S. Department of Education
National Center for Education Statistics**

Person 3

First name/initials/nickname

- Male
- Female

- Homeschool instead of attending a public or private school for some or all classes,
 - Public or private school, or preschool,
 - College, university or vocational school, or
 - Not in school?

→ *GO TO person 4.*

- Preschool
 - Kindergarten
 - write grade
1 through 12
 - College, university or
vocational school
 - None of these

Person 4

First name/initials/nickname

1 / 4

- Male
 - Female

- Homeschool instead of attending a public or private school for some or all classes,
 - Public or private school, or preschool,
 - College, university or vocational school, or
 - Not in school?

→ *GO TO person 5.*

- Preschool
 - Kindergarten
 - write grade
1 through 12
 - College, university or
vocational school
 - None of these

Person 5

First name/initials/nickname

- Male
 Female

- Homeschool instead of attending a public or private school for some or all classes,
 - Public or private school, or preschool,
 - College, university or vocational school, or
 - Not in school?

→ *GO TO page 4.*

- Preschool
 - Kindergarten
 - write grade
1 through 12
 - College, university or
vocational school
 - None of these

► **If there are more than 5 people in your household, continue on the next page. Otherwise, stop here and return this form in the postage-paid envelope provided.**



National Household Education Survey

Continue

If there are more than 5 people in your household, please continue answering for each person living in this household.

If you have finished answering about everyone in the household please return the survey in the postage-paid envelope provided.

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2. What is his or her first name, initials, or nickname?

First name/initials/nickname

3. What is this person's month and year of birth?

month

year of birth

4. What is this person's sex?

- Male
 Female

5. Is this person currently in . . .
Mark [X] ONE only.

- Homeschool instead of attending a public or private school for some or all classes,
 Public or private school, or preschool,
 College, university or vocational school, or
 Not in school?

6. What is this person's current grade or equivalent?

- Preschool

- Kindergarten

write grade 1 through 12

- College, university or vocational school
 None of these

Person 6

Person 7

First name/initials/nickname

First name/initials/nickname

month

year of birth

- Male
 Female

month

year of birth

- Male
 Female

- Homeschool instead of attending a public or private school for some or all classes,

- Public or private school, or preschool,

- College, university or vocational school, or

- Not in school?

↳ **GO TO person 8.**

- Preschool

- Kindergarten

write grade 1 through 12

- College, university or vocational school

- None of these



Person 8

--	--	--	--	--	--	--	--	--	--	--	--

First name/initials/nickname

--	--	--	--	--	--	--	--	--	--	--	--

month / year of birth

- Male
 Female

- Homeschool instead of attending a public or private school for some or all classes,
 Public or private school, or preschool,
 College, university or vocational school, or
 Not in school?

↳ **GO TO person 9.**

- Preschool
 Kindergarten

--	--	--	--	--	--	--	--	--	--	--	--

write grade 1 through 12

- College, university or vocational school
 None of these

Person 9

--	--	--	--	--	--	--	--	--	--	--	--

First name/initials/nickname

--	--	--	--	--	--	--	--	--	--	--	--

month / year of birth

- Male
 Female

- Homeschool instead of attending a public or private school for some or all classes,
 Public or private school, or preschool,
 College, university or vocational school, or
 Not in school?

↳ **GO TO person 10.**

- Preschool
 Kindergarten

--	--	--	--	--	--	--	--	--	--	--	--

write grade 1 through 12

- College, university or vocational school
 None of these

Person 10

--	--	--	--	--	--	--	--	--	--	--	--

First name/initials/nickname

--	--	--	--	--	--	--	--	--	--	--	--

month / year of birth

- Male
 Female

- Homeschool instead of attending a public or private school for some or all classes,
 Public or private school, or preschool,
 College, university or vocational school, or
 Not in school?

↳ **Return survey.**

- Preschool
 Kindergarten

--	--	--	--	--	--	--	--	--	--	--	--

write grade 1 through 12

- College, university or vocational school
 None of these

► Please verify you have filled out a column for everyone in your household.

► Thank you. Please return this form in the postage-paid envelope provided or mail it to:

U.S. Census Bureau
ATTN: DCB 60-A
1201 E. 10th Street
Jeffersonville, IN 47132-0001

Toll-free number for questions: 1-888-840-8353



INFORMATIONAL COPY

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Thank you.

*Please return this questionnaire in the postage-paid envelope provided.
If you have lost the envelope, mail the completed questionnaire to:*

**U.S. Census Bureau
ATTN: DCB 60-A
1201 E. 10th Street
Jeffersonville, IN 47132-0001**

INFORMATIONAL COPY



Commonly Asked Questions

Q: How did you get my address?

A: Your address was randomly selected from among all of the home addresses in the nation. It was selected using scientific sampling methods to represent other households in the U.S.

Q: Why don't you ask more questions about education in this questionnaire?

A: The purpose of this questionnaire is to find out if anyone in your household is eligible for the next stage of the survey. If so, we will send a second questionnaire that will ask about educational experiences of a member of your household.

Q: If there are no children or anyone currently in school in my household, should I respond?

A: Yes, you should respond to this survey. Once you return the questionnaire, the study will be able to see if anyone in your household is eligible for the next and final survey. If no one is eligible, you will not receive another survey.

Q: Why should I take part in this study? Do I have to do this?

A: This survey is the only way that the Department of Education can learn about children's early care and education, students' schooling, and adult training and education, from your perspective. You represent thousands of other households like yours, and you cannot be replaced. Your answers and opinions are very important to the success of this study. You may choose not to answer any or all questions in this survey. In order for the survey to be representative, it is important that you complete and return this questionnaire. Those who do not return the survey will not be represented in key statistics used by policymakers and researchers.

Q: How will the information I provide be used? Will my privacy be protected?

A: Your responses will be combined with those of others to produce statistical summaries and reports. Your individual data will not be reported. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 USC § 9573).

Q: How much time will it take?

A: On average, it should take 8 minutes or less for you to respond, including the time for reviewing instructions and completing and reviewing the collection of information.

Q: Who is sponsoring the study?

A: The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC § 9543). The U.S. Census Bureau is administering this survey on behalf of NCES. This study has been approved by the Office of Management and Budget (OMB), the office that reviews all federally sponsored surveys. If you have any comments concerning the accuracy of the time estimate, suggestions for improving this survey, or any comments or concerns regarding the status of your individual submission of this survey, please write to: Sarah Grady, National Household Education Survey, National Center for Education Statistics, 1990 K Street, NW, Room 9016, Washington, DC 20006-5650. Do not return the completed form to this address. You may send email to NHES@census.gov. If you have any questions about the study, contact the Census Bureau toll-free at 1-888-840-8353.



A Survey About Students' and Families' Experience with Their Schools

Part of the 2016 National Household Education Survey



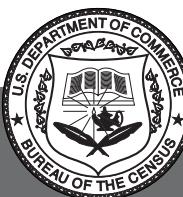
Information Copy

Thank you for helping us with this survey. Based on the information we received from your household in your last survey, we're asking you to complete this final step.

24036014

Administered by

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau



NHES-PFI
Informational Copy

Instructions

- ◆ In response to the survey you answered earlier, we recorded that the child/youth listed below attends school. If this child is homeschooled instead of attending public or private school, or if this child has not yet started kindergarten, please call us toll-free at 1-888-840-8353 to let us know.
- ◆ These questions should be filled in by a parent or guardian who knows about:

Please answer all the survey questions thinking about this child or youth.

- ◆ To answer a question, simply mark **X** the box that best represents your answer.
- ◆ Please use a black or blue pen, if available, to complete this survey.
- ◆ Please return the completed survey using the postage-paid envelope provided.

The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC §9543). The U.S. Census Bureau is administering this survey on behalf of NCES. You do not have to provide the information requested. However, the information you provide will help the Department of Education's ongoing efforts to learn more about the educational experiences of children and families. There are no penalties should you choose not to participate in this study. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C., §9573). Your responses will be combined with those from other participants to produce summary statistics and reports.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this voluntary survey is 1850-0768. The time required to complete this survey is estimated to average 20 minutes per response, including the time to review instructions, gather the data needed, and complete and review the survey. If you have any comments concerning the accuracy of the time estimate, suggestions for improving this survey, or any comments or concerns regarding the status of your individual submission of this survey, please write to: Sarah Grady, National Household Education Survey, National Center for Education Statistics, 1990 K Street, NW, Room 9016, Washington, DC 20006-5650. Do not return the completed form to this address. You may send email to NHES@census.gov. If you have any questions about the study, contact the Census Bureau toll-free at 1-888-840-8353.

Child's Schooling

- **Thank you for your help with the previous survey your household completed.**
- **Answer all the survey questions thinking about the child listed below:**

1. What is this child's current grade or year of school?

If this child is not assigned a specific grade, mark or write the grade he/she would be in at a school with regular grades.

Child has not yet started kindergarten

Please STOP now and call 1-888-840-8353 so we can verify that you received the correct survey.

Full-day kindergarten

Partial-day kindergarten

GRADEAT



grade (1 through 12)

GRADEBT

2. What type of school does this child attend?

Private, Catholic

Private, religious but not Catholic

Private, not religious

Public school

SCPUBRI

GO TO question 5

3. Is it his/her district-assigned school?

A district-assigned school is the school that your local public school district told you that this child can attend, based on the location of your residence.

No

DISTASSI

Yes

4. Is this school a charter school?

No

SCHRTSCHL

Yes

5. Did you move to your current neighborhood so that this child could attend his/her current school?

No

SNEIGHBRX

Yes

6. Does your public school district let you choose which public school you want this child to attend?

This may include applying to a magnet program in a public school, transferring to another public school within the district, or transferring to a public school outside of the district.

No

SPUBCHOIX

Yes

Don't know

7. Did you consider other schools for this child?

No

GO TO question 9

Yes

SCONSIDR

8. In deciding between schools, did you seek information on the performance of the schools you were considering, like test scores, dropout rates, and so on?

No

SPERFORM

Yes

9. Is the school this child attends your first choice, that is, the school you wanted most for him/her to attend?

No

S1STCHOI

Yes

10. Since the beginning of this school year, has this child been in the same school?

No

SSAMSC

Yes

11. In which month did this child start at his/her current school this school year?



month (1 through 12)

SMVMTH

12. How much do you agree or disagree with the following statement:

"This child enjoys school."

- Strongly agree
 Agree
 Disagree
 Strongly disagree

SEENJOY

13. Please tell us about this child's grades during this school year. Overall, across all subjects, what grades does this child get?

- Mostly A's
 Mostly B's
 Mostly C's
 Mostly D's or lower
 This child's school does not give these grades

SEGRADES

14. Is he/she currently enrolled in any high school Advanced Placement (AP) classes?

Advanced Placement is a program that offers college-level courses to high school students, with the option for students to take AP exams to earn college credit.

- No
 Yes

SEADPLCXX

15. Since the beginning of this school year, how many times have any of this child's teachers or school staff contacted your household about...

Write '0' if none.

Number

- a. Behavior problems this child is having in school

SEBEHAVX

- b. Problems this child is having with school work

SESCHWRK

- c. Very good behavior

SEGBEHAV

- d. Very good school work

SEGWORK

16. Since the beginning of this school year, how many days has this child been absent from school?

days

SEABSNT

17. Since starting kindergarten, has this child repeated any grades?

- No → GO TO question 19

- Yes

SEREPEAT

18. What grade or grades did he/she repeat?

Mark all that apply.

Elementary through Middle school

- Kindergarten SEREPTK
 First grade SEREPT1
 Second grade SEREPT2
 Third grade SEREPT3
 Fourth grade SEREPT4
 Fifth grade SEREPT5
 Sixth grade SEREPT6
 Seventh grade SEREPT7
 Eighth grade SEREPT8

High school

- Ninth grade - freshman SEREPT9
 Tenth grade - sophomore SEREPT10
 Eleventh grade - junior SEREPT11
 Twelfth grade - senior SEREPT12

19. Has this child ever had the following experiences?

Mark ONE box for each item below.

No Yes

- a. An out-of-school suspension SESUSOUT
 An in-school suspension not counting detentions SESUSPIN
 Been expelled from school SEEXPTEL



20. How far do you expect this child to go in his/her education?

- Mark **X** ONE only. **SEFUTUREX**
- Complete less than a high school diploma
 - Graduate from high school
 - Attend a vocational or technical school after high school
 - Attend two or more years of college
 - Earn a bachelor's degree
 - Earn a graduate degree or professional degree beyond a bachelor's

21. How would you describe his/her work at school?

- Mark **X** ONE only. **SEGRADEQ**

- Excellent
- Above average
- Average
- Below average
- Failing

22. Is this child taking any school-related courses online instead of in-person with the teacher?

Do not include courses that use the Internet only for selected assignments.

- No → **GO TO question 25**
- Yes

SNETCRSX

23. Is that instruction provided by any of the following places?

Mark **X** all that apply.

- Your local public school **SPBSCH**
- Your state **SSTATE**
- A charter school **SCHRTR**
- Another public school **SAPBSCH**
- A private school **SPRIVSCH**
- A college, community college, or university **SUNIVSCH**
- Someplace else — Specify: **SOTHSCS**

SOTHSCOS

24. Is there a charge or fee for that instruction?

- No
- Yes

SINSTFEE

25. Some parents decide to educate their children at home rather than send them to a public or private school. Is this child being schooled at home instead of at school for at least some classes or subjects?

- No → **GO TO question 30**
- Yes

HOMESCHLX

26. Which of the following statements best describes your homeschooling arrangement for this child?

- This child is homeschooled for all classes or subject areas.
- This child is homeschooled for some classes or subject areas and also attends a public or private school.
- This child is not homeschooled. This child attends a public or private school for all classes or subject areas.

GO TO question 27

GO TO question 30

27. How many hours each week does this child usually go to a public or private school for instruction? Do not include time spent in extracurricular activities.

hours

HSSCHR

28. There are many different reasons that parents choose to homeschool their children. Did your family choose to homeschool this child because:

Mark **X** ONE box for each item below.

- a. You are concerned about the school environment, such as safety, drugs, or negative peer pressure?.....
- b. You are dissatisfied with the academic instruction at other schools?.....
- c. You prefer to teach this child at home so that you can provide religious instruction?
- d. You prefer to teach this child at home so that you can provide moral instruction?.....
- e. This child has a physical or mental health problem that has lasted six months or more?
- f. This child has a temporary illness that prevents him/her from going to school?.....
- g. This child has other special needs that you feel the school can't or won't meet?...
- h. You are interested in a nontraditional approach to children's education?.....
- i. You have another reason for homeschooling your child? — Specify: 

No
▼

Yes
▼

HSSAFETYX

HSDISSATX

HSRELGON

HSMORAL

HSDISABLX

HSILLX

HSSPCLNDX

HSALTX

HSOTHERX

HSOTHERXOS

29. Of the reasons your family chose to homeschool this child, which one would you say is the most important to you?

Write the letter from question 28 for the most important reason you chose to homeschool your child.

HSMOSTX

 letter from question 28



Families & School

- 30. Since the beginning of this school year, has any adult in this child's household done any of the following things at this child's school?**

Mark **X** ONE box for each item below.

No Yes
▼ ▼

- a. Attended a school or class event, such as a play, dance, sports event, or science fair.
FSSPORTX
- b. Served as a volunteer in this child's classroom or elsewhere in the school.
FSVOL
- c. Attended a general school meeting, for example, an open house, or a back-to-school night.
FSMTNG
- d. Attended a meeting of the parent-teacher organization or association.
FSPTMTNG
- e. Gone to a regularly scheduled parent-teacher conference with this child's teacher.
FSATCNFN
- f. Participated in fundraising for the school.
FSFUNDRS
- g. Served on a school committee.
FSCOMMTE
- h. Met with a guidance counselor in person.
FSCOUNSLR

- 31. During this school year, how many times has any adult in the household gone to meetings or participated in activities at this child's school?**

FSFREQ

number of times

- 32. During this school year, has your family received any of the following:**

- a. **Notes or emails specifically about this child from his/her teachers or school administrators?**

No FSNOTESX
 Yes

- b. **Newsletters, memos, emails, or notices addressed to all parents?**

No FSMEMO
 Yes

- c. **Phone calls specifically about this child from his/her teachers or school administrators?**

No FSPHONCHX
 Yes

- 33. How well has this child's school been doing the following things during this school year?**

- a. **Letting you know how this child is doing in school between report cards.**

Very well FSSPPERF
 Just okay
 Not very well
 Does not do it at all

- b. **Providing information about how to help this child with homework.**

Very well FSSPHW
 Just okay
 Not very well
 Does not do it at all

c. Providing information about why this child is placed in particular groups or classes.

- Very well
- Just okay
- Not very well
- Does not do it at all

FSSPCOUR

d. Providing information on your expected role at this child's school.

- Very well
- Just okay
- Not very well
- Does not do it at all

FSSPROLE

e. Providing information on how to help this child plan for college or vocational school.

- Very well
- Just okay
- Not very well
- Does not do it at all
- Does not apply

FSSPCOLL

34. How satisfied or dissatisfied are you with each of the following:

a. The school this child attends this year?

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

FCSCHOOL

b. The teachers this child has this year?

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

FCTEACHR

c. The academic standards of the school?

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

FCSTDs

d. The order and discipline at the school?

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

FCORDER

e. The way that school staff interacts with parents?

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

FCSUPPRT

Homework

35. How often does this child do homework at home, at an after-school program, or somewhere else outside of school?

- Less than once a week **FHHOME**
- 1 to 2 days a week
- 3 to 4 days a week
- 5 or more days a week
- Never
- Child does not have homework

*GO TO
question 42*

36. In an average week, how many hours does this child spend on homework outside of school?



number of hours per week

FHWKhrs

37. How do you feel about the amount of homework this child is assigned?

- The amount is about right
- It's too much **FHAMOUNT**
- It's too little

38. How does this child feel about the amount of homework he or she is assigned?

- The amount is about right
- It's too much **FHCAMT**
- It's too little

39. Is there a place in your home that is set aside for this child to do homework?

- No **FPLACE**
- Yes
- Child does not do homework at home

40. How often does any adult in your household check to see that this child's homework is done?

- Never
- Rarely
- Sometimes
- Always

FHCHECKX

41. During this school year, about how many days in an average week does anyone in your household help this child with his/her homework?

- Less than once a week
- 1 to 2 days a week
- 3 to 4 days a week
- 5 or more days a week
- Never

FHHELP

Family Activities

42. **In the past week, has anyone in your family done the following things with this child?**

Mark **X** ONE box for each item below.

a. Told him/her a story (Do not include reading to this child).	No ▼	Yes ▼
	<input type="checkbox"/>	<input type="checkbox"/>
FOSTORY2X		
b. Done activities like arts and crafts, coloring, painting, pasting, or using clay.	No ▼	Yes ▼
	<input type="checkbox"/>	<input type="checkbox"/>
FOCRAFTS		
c. Played board games or did puzzles with him/her	No ▼	Yes ▼
	<input type="checkbox"/>	<input type="checkbox"/>
FOGAMES		
d. Worked on a project like building, making, or fixing something.	No ▼	Yes ▼
	<input type="checkbox"/>	<input type="checkbox"/>
FOBUILDX		
e. Played sports, active games, or exercised together.	No ▼	Yes ▼
	<input type="checkbox"/>	<input type="checkbox"/>
FOSPORT		
f. Discussed with him/her how to manage time.	No ▼	Yes ▼
	<input type="checkbox"/>	<input type="checkbox"/>
FORESPON		
g. Talked with him/her about the family's history or ethnic heritage.	No ▼	Yes ▼
	<input type="checkbox"/>	<input type="checkbox"/>
FOHISTX		

43. **In the past week, how many days has your family eaten the evening meal together?**

Write '0' if none.

days

FODINNERX

44. **In the past month, has anyone in your family done the following things with this child?**

Mark **X** ONE box for each item below.

a. Visited a library	No ▼	Yes ▼
FOLIBRAYX	<input type="checkbox"/>	<input type="checkbox"/>
b. Visited a bookstore	No ▼	Yes ▼
FOBOOKSTX	<input type="checkbox"/>	<input type="checkbox"/>
c. Gone to a play, concert, or other live show	No ▼	Yes ▼
FOCONCRTX	<input type="checkbox"/>	<input type="checkbox"/>
d. Visited an art gallery, museum, or historical site	No ▼	Yes ▼
FOMUSEUMX	<input type="checkbox"/>	<input type="checkbox"/>
e. Visited a zoo or aquarium	No ▼	Yes ▼
FOZOOX	<input type="checkbox"/>	<input type="checkbox"/>
f. Attended an event sponsored by a community, religious, or ethnic group	No ▼	Yes ▼
FOGROUPX	<input type="checkbox"/>	<input type="checkbox"/>
g. Attended an athletic or sporting event outside of school in which this child was not a player	No ▼	Yes ▼
FOSPRTEVX	<input type="checkbox"/>	<input type="checkbox"/>

Child's Health

45. In general, how would you describe this child's health?

- | | |
|------------------------------------|----------|
| <input type="checkbox"/> Excellent | HDHEALTH |
| <input type="checkbox"/> Very good | |
| <input type="checkbox"/> Good | |
| <input type="checkbox"/> Fair | |
| <input type="checkbox"/> Poor | |

46. Has a health or education professional told you that this child has any of the following conditions?

Mark **X** ONE box for each item below.

- | | No | Yes | |
|---|--------------------------|-------------------------------------|-----------|
| a. An intellectual disability (mental retardation) | <input type="checkbox"/> | <input type="checkbox"/> | HDINTDIS |
| b. A speech or language impairment | <input type="checkbox"/> | <input type="checkbox"/> | HDSPEECHX |
| c. A serious emotional disturbance | <input type="checkbox"/> | <input type="checkbox"/> | HDDISTRBX |
| d. Deafness or another hearing impairment | <input type="checkbox"/> | <input checked="" type="checkbox"/> | HDDEAFIMX |
| e. Blindness or another visual impairment not corrected with glasses. | <input type="checkbox"/> | <input type="checkbox"/> | HDBLINDX |
| f. An orthopedic impairment. | <input type="checkbox"/> | <input type="checkbox"/> | HDORTHOX |
| g. Autism. | <input type="checkbox"/> | <input type="checkbox"/> | HDAUTISM |
| h. Pervasive Developmental Disorder (PDD). | <input type="checkbox"/> | <input type="checkbox"/> | HDPDDX |
| i. Attention Deficit Disorder, ADD or ADHD | <input type="checkbox"/> | <input type="checkbox"/> | HDADDX |
| j. A specific learning disability. | <input type="checkbox"/> | <input type="checkbox"/> | HDLEARNX |
| k. A developmental delay. | <input type="checkbox"/> | <input type="checkbox"/> | HDDELAYX |
| l. Traumatic brain injury. | <input type="checkbox"/> | <input type="checkbox"/> | HDTRBRAIN |
| m. Another health impairment lasting 6 months or more. | <input type="checkbox"/> | <input type="checkbox"/> | HDOTHERX |

47. Did you mark yes to any condition in question 46?

No → **GO TO question 55**

Yes

Question not on data file

48. Is this child receiving services for his/her condition?

No → **GO TO question 53**

Yes

HDRECSER

49. Are these services provided by any of the following sources?

Mark **X** ONE box for each item below.

No Yes

HDSCHLX

HDGOVTX

HDOCTORX

HDPRISCH

50. Are any of these services provided through an Individualized Education Program (IEP) or services plan?

No → **GO TO question 53**

Yes

HDIEPX

51. Did any adult in your household work with the service provider or school to develop or change this child's IEP or services plan?

No HDDEVIEPX

Yes

52. Since September, how satisfied or dissatisfied have you been with the following aspects of this child's IEP or services plan?

a. The service provider's or school's communication with your family?

- Very satisfied **HDCOMMUX**
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied
- Does not apply

b. The child's special needs teacher or therapist?

- Very satisfied **HDTCHR**
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied
- Does not apply

c. The service provider's or school's ability to accommodate this child's special needs?

- Very satisfied **HDACCOMX**
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied
- Does not apply

d. The service provider's or school's commitment to help this child learn?

- Very satisfied **HDCOMMITX**
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied
- Does not apply

53. Is this child currently enrolled in any special education classes or services?

- No **HDSPCLED**
- Yes

54. Does this child's condition interfere with his/her ability to do any of the following things?

Mark **X** ONE box for each item below.

No **▼** Yes **▼**

- a. Learn **HDLEARN**
- b. Participate in sports, clubs, or other organized activities. . . **HDPLAY**
- c. Attend school on a regular basis **HDOUT**
- d. Make friends **HDFRNDS**

Child's Background

55. In what month and year was this child born?

month	/	year
CDOBMM		CDOBYY

month CDOBMM year CDOBYY

56. Where was this child born?

- One of the 50 United States or the District of Columbia
 One of the U.S. territories (Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands)
 Another country

GO TO question 58

CPLCBRTH

57. How old was this child when he/she first moved to the 50 United States or the District of Columbia?

age

CMOVEAGE

age

58. Is this child of Hispanic, Latino, or Spanish origin?

- No CHISPAN
 Yes

59. What is this child's race? You may mark one or more races.

- American Indian or Alaska Native CAMIND
 Asian CASIAN
 Black or African American CBLACK
 Native Hawaiian or other Pacific Islander CPACI
 White CWHITE

60. What is this child's sex?

- Male CSEX
 Female

61. Does this child live at this address and another address (for example, because of a joint custody arrangement)?

Do not include vacation properties.

No → GO TO question 63

Yes CLIVYN

62. If yes, does this child... CLIVELSWX

- spend most time at this address?
 spend most time at another address?
 spend equal time at both addresses?

63. What language does this child speak most at home?

Mark ONE only.

- Child is not able to speak
 English
 Spanish
 A language other than English or Spanish
 English and Spanish equally
 English and another language equally

CSPEAKX

GO TO question 65

64. Is this child currently enrolled in English as a second language, bilingual education, or an English immersion program?

- No CENGLPRG
 Yes

Child's Family

PARENT 1 LIVING IN HOUSEHOLD

Answer questions 69 to 89 about yourself if you are the child's parent or guardian.

If you are not the child's parent or guardian, answer questions 69 to 89 about one of this child's parents or guardians living in the household.

69. Is this parent or guardian the child's...

- Biological parent **P1REL**
- Adoptive parent
- Stepparent
- Foster parent
- Grandparent
- Other guardian

70. Is this person male or female?

- Male **P1SEX**
- Female

71. What is this person's current marital status?

- Mark ONE only. **P1MRSTA**
- Now married → **GO TO question 73**
 - Widowed
 - Divorced
 - Separated
 - Never married

72. Is this person currently living with a boyfriend/girlfriend or partner in this household?

- No **P1BFGF**
- Yes

73. What was the first language this parent or guardian learned to speak?

Mark ONE only. **P1FRLNG**

- English → **GO TO question 78**
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

74. What language does this person speak most at home now?

Mark ONE only. **P1SPEAK**

- English → **GO TO question 78**
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

75. How difficult is it for this person to participate in activities at this child's school because he/she speaks a language other than English?

- Very difficult **P1DIFFI**
- Somewhat difficult
- Not at all difficult

76. Does the school have interpreters who speak this person's native language for meetings or parent-teacher conferences?

- No **P1SCINT**
- Yes

77. Does the school have written materials, such as newsletters or school notices, that are translated into this person's native language?

- No **P1WRML**
- Yes

78. Where was this parent or guardian born?

- One of the 50 United States or the District of Columbia



GO TO question 80

P1PLCBRTH

- One of the U.S. territories (*Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands*)
- Another country

79. How old was this person when he or she first moved to the 50 United States or the District of Columbia?



P1AGEMV

age

80. Is this person of Hispanic, Latino, or Spanish origin?

- No
- Yes

P1HISPAN

81. What is this person's race? You may mark one or more races.

- American Indian or Alaska Native **P1AMIND**
- Asian **P1ASIAN**
- Black or African American **P1BLACK**
- Native Hawaiian or other Pacific Islander **P1PACI**
- White **P1WHITE**

82. What is the highest grade or level of school that this parent or guardian completed?

Mark **X** ONE only. **P1EDUC**

- 8th grade or less
- High school, but no diploma
- High school diploma or equivalent (GED)
- Vocational diploma after high school
- Some college, but no degree
- Associate's degree (AA, AS)
- Bachelor's degree (BA, BS)
- Some graduate or professional education, but no degree
- Master's degree (MA, MS)
- Doctorate degree (PhD, EdD)
- Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

83. Is he or she currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?

- No **P1ENRL**
- Yes

84. Which of the following best describes this person's employment status?

Mark ONE only. P1EMPL

- Employed for pay or income
- Self-employed
- Unemployed or out of work → **GO TO question 86**
- Full-time student
- Stay at home parent
- Retired
- Disabled or unable to work

GO TO question 87

85. (If employed or self-employed) About how many hours per week does he or she usually work for pay or income, counting all jobs?

→ **GO TO question 87**

P1HRSWK

hours

86. (If unemployed or out of work) Has this parent or guardian been actively looking for work in the past 4 weeks?

- No P1LKWRK
- Yes

87. In the past 12 months, how many months (if any) has this person worked for pay or income?

P1MTHSWRK

months

88. How old is this person?

P1AGE

age

89. How old was this person when he or she first became a parent to any child?

P1AGEPAR

age

- Don't know P1AGEPARDK

PARENT 2 LIVING IN HOUSEHOLD

Answer questions 90 to 111 about a second parent or guardian living in the household.

90. Is there a second parent or guardian living in this household?

No → **GO TO question 112**

Yes P2GUARD

91. Is this person the child's...

- Biological parent P2REL
- Adoptive parent
- Stepparent
- Foster parent
- Grandparent
- Other guardian

92. Is this person male or female?

- Male P2SEX
- Female

93. What is this person's current marital status?

Mark ONE only.

- Now married → **GO TO question 95**
- Widowed
- Divorced
- Separated
- Never married

94. Is this person currently living with a boyfriend/girlfriend or partner in this household?

- No P2BFGF
- Yes

95. What was the first language this parent or guardian learned to speak?

Mark ONE only. P2FRLNG

- English → **GO TO question 100**
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

96. What language does this person speak most at home now?

Mark ONE only. P2SPEAK

- English → **GO TO question 100**
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

97. How difficult is it for this person to participate in activities at this child's school because he/she speaks a language other than English?

- Very difficult P2DIFFI
- Somewhat difficult
- Not at all difficult

98. Does the school have interpreters who speak this person's native language for meetings or parent-teacher conferences?

- No P2SCINT
- Yes

99. Does the school have written materials, such as newsletters or school notices, that are translated into this person's native language?

- No P2WRMLT
- Yes

100. Where was this parent or guardian born?

One of the 50 United States or the District of Columbia

→ **GO TO question 102**

One of the U.S. territories (*Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands*)

Another country P2PLCBRTH

101. How old was this person when he or she first moved to the 50 United States or the District of Columbia?



P2AGEMV

age

102. Is this person of Hispanic, Latino, or Spanish origin?

- No P2HISPAN
- Yes

103. What is this person's race? You may mark one or more races.

- American Indian or Alaska Native P2AMIND
- Asian P2ASIAN
- Black or African American P2BLACK
- Native Hawaiian or other Pacific Islander P2PACI
- White P2WHITE

104. What is the highest grade or level of school that this parent or guardian completed?

Mark **X** ONE only. **P2EDUC**

- 8th grade or less
- High school, but no diploma
- High school diploma or equivalent (GED)
- Vocational diploma after high school
- Some college, but no degree
- Associate's degree (AA, AS)
- Bachelor's degree (BA, BS)
- Some graduate or professional education, but no degree
- Master's degree (MA, MS)
- Doctorate degree (PhD, EdD)
- Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

105. Is he or she currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?

- No **P2ENRL**
- Yes

106. Which of the following best describes this person's employment status?

Mark **X** ONE only. **P2EMPL**

- Employed for pay or income
- Self-employed
- Unemployed or out of work
- Full-time student
- Stay at home parent
- Retired
- Disabled or unable to work

GO TO question 108

GO TO question 109

107. (If employed or self-employed) About how many hours per week does he or she usually work for pay or income, counting all jobs?

hours **GO TO question 109**

P2HRSWK

108. (If unemployed or out of work) Has this parent or guardian been actively looking for work in the past 4 weeks?

- No **P2LKWRK**
- Yes

109. In the past 12 months, how many months (if any) has this person worked for pay or income?

months **P2MTHSWRK**

110. How old is this person?

age **P2AGE**

111. How old was this person when he or she first became a parent to any child?

age **P2AGEPAR**

Don't know **P2AGEPARDK**

Your Household

112. In the past 12 months, did your family ever receive benefits from any of the following programs?

Mark **X** ONE box for each item below.

	No	Yes	
a. Temporary Assistance for Needy Families, or TANF.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HWELFTAN
b. Your state welfare or family assistance program.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HWELFST
c. Women, Infants, and Children, or WIC.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HWIC
d. Food Stamps.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HFOODST
e. Medicaid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HMEDICAID
f. Child Health Insurance Program (CHIP).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCHIP
g. Section 8 housing assistance...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HSECN8

113. Which category best fits the total income of all persons in your household over the past 12 months?

Include your own income.

Include money from jobs or other earnings, pensions, interest, rent, Social Security payments, and so on.

<input type="checkbox"/> \$0 to \$10,000	TTLHHINC
<input type="checkbox"/> \$10,001 to \$20,000	
<input type="checkbox"/> \$20,001 to \$30,000	
<input type="checkbox"/> \$30,001 to \$40,000	
<input type="checkbox"/> \$40,001 to \$50,000	
<input type="checkbox"/> \$50,001 to \$60,000	
<input type="checkbox"/> \$60,001 to \$75,000	
<input type="checkbox"/> \$75,001 to \$100,000	
<input type="checkbox"/> \$100,001 to \$150,000	
<input type="checkbox"/> \$150,001 or more	

114. How many years have you lived at this address?

Write '0' if less than 1 year. **YRSADDR**

years at this address

115. Is this house...

Mark **X** ONE only. **OWNRNTHB**

- Owned or being bought by someone in this household,
- Rented by someone in this household, or
- Occupied by some other arrangement?

116. Do you have Internet access on a cell phone?

No **HVINTPHO**

Yes

117. Do you have Internet access at home on a computer or tablet?

No **HVINTCOM**

Yes

118. How often do you use the Internet?

- Everyday **USEINTRNT**
- A few times a week
- A few times a month
- A few times a year
- Never

119. We would like to identify this child's school so we can include information about the school in our study. RSCHOOL

**Using the list of schools below, mark the box next to the school this child attends.
If this child's school is not in this list, GO TO question 120.**

24036212





If you found and marked this child's school in the list provided in question 119, then SKIP this question and return your survey in the postage-paid envelope. Otherwise, continue with question 120.

120. To help us identify the school this child attends, write the name and address of this child's school in the spaces below.

Please use block or capital letters, for example:

S C H O O L

a. School name SCHNAME

SCHOOL NAME

b. School street address SCHADDRE

NUMBER AND STREET ADDRESS

c. School city SCHCITY

CITY

d. School state SCHST

STATE

e. School zip code SCHZIP

ZIP



Thank you.

*Please return this questionnaire in the postage-paid envelope provided.
If you have lost the envelope, mail the completed questionnaire to:*

**U.S. Census Bureau
ATTN: DCB 60-A (7198)
1201 E. 10th Street
Jeffersonville, IN 47132-0001**

24036238



Commonly Asked Questions

Q: How did you get my address?

A: Your address was randomly selected from among all of the home addresses in the nation. It was selected using scientific sampling methods to represent other households in the United States.

Q: How did you get my child's name and grade?

A: When you returned the initial National Household Education Survey to us, we randomly chose one child to ask additional questions about. We are interested in understanding your child's experiences with schooling.

Q: Why should I take part in this study? Do I have to do this?

A: You represent thousands of other households like yours, and you cannot be replaced. Your answers and opinions are very important to the success of this study. You may choose not to answer any or all questions in this survey. In order for the survey to be representative, it is important that you complete and return this questionnaire. Those who do not return the survey will not be represented in key statistics used by policymakers and researchers.

Q: How will the information I provide be used? Will my privacy be protected?

A: Your responses will be combined with those of others to produce statistical summaries and reports. Your individual data will not be reported. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 USC § 9573).

Q: I have more than one child in my household. Will I receive additional surveys for the other children in my household?

A: No, each household will receive a survey for only one child, even if there are multiple children living in the household. In households with multiple children, one child was randomly selected to be included in the study.

Q: How will my response help the Department of Education?

A: The Department of Education wants to understand the condition of education in the United States. This survey is the only way that the Department of Education can learn about schooling from your perspective. Your responses will be combined with those from other households to inform educators, policymakers, schools, and universities about changes in the condition of education in the United States. Reports from past surveys can be found at www.nces.ed.gov/nhes.

Q: Who is sponsoring the study?

A: The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC § 9543). The U.S. Census Bureau is administering this survey on behalf of NCES. This study has been approved by the Office of Management and Budget (OMB), the office that reviews all federally sponsored surveys.

A Survey About Homeschooling in America

Part of the 2016 National Household Education Survey



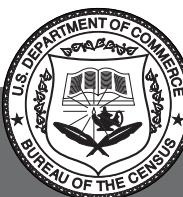
Informational Copy

Thank you for helping us with this survey. Based on the information we received from your household in your last survey, we're asking you to complete this final step.

24236010

Administered by

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau



NHES-PFIHS
Informational Copy



Instructions

- ◆ In response to the survey you answered earlier, we recorded that the child/youth listed below is currently homeschooled for at least some classes. If this child attends public or private school instead of homeschooling, or is not homeschooled for kindergarten through 12th grade or equivalent, please call us toll-free at 1-888-840-8353 to let us know.
- ◆ These questions should be filled in by a parent or guardian who knows about:

Please answer all the survey questions thinking about this child or youth.

- ◆ To answer a question, simply mark the box that best represents your answer.
- ◆ Please use a black or blue pen, if available, to complete this survey.
- ◆ Please return the completed survey using the postage-paid envelope provided.

The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC §9543). The U.S. Census Bureau is administering this survey on behalf of NCES. You do not have to provide the information requested. However, the information you provide will help the Department of Education's ongoing efforts to learn more about the educational experiences of children and families. There are no penalties should you choose not to participate in this study. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C., §9573). Your responses will be combined with those from other participants to produce summary statistics and reports.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this voluntary survey is 1850-0768. The time required to complete this survey is estimated to average 20 minutes per response, including the time to review instructions, gather the data needed, and complete and review the survey. If you have any comments concerning the accuracy of the time estimate, suggestions for improving this survey, or any comments or concerns regarding the status of your individual submission of this survey, please write to: Sarah Grady, National Household Education Survey, National Center for Education Statistics, 1990 K Street, NW, Room 9016, Washington, DC 20006-5650. Do not return the completed form to this address. You may send email to NHES@census.gov. If you have any questions about the study, contact the Census Bureau toll-free at 1-888-840-8353.

Child's Homeschooling

- **Thank you for your help with the previous survey your household completed.**
- **Answer all the survey questions thinking about the child listed below:**

1. **Who is the person that mainly provides this child's home instruction?**

- Mother **HSWHOX**
- Father
- Grandparent
- Brother/sister
- Another person

→ Who is that?

HSWHOOSX

2. **Is any of this child's home instruction provided by a private tutor or teacher?**

- No **HSTUTOR**
- Yes

3. **Is any of this child's instruction provided by a local homeschooling group or co-op?**

- No **HSCOOP**
- Yes

4. **Does this child attend a public or private school or a college or university for instruction?**

- No → **GO TO question 7**
- Yes **HSCOLL**

5. **What type of school(s) does this child attend?**

Mark **X** all that apply.

- Public school (K - 12) **HSPUBLIC**
- Private school (K - 12) **HSPRIVATE**
- College, community college, or university **HSCOLLEGE**

6. **How many hours each week does this child usually go to a school for instruction? Do not include time spent in extracurricular activities.**

hours

HSSCHR

7. **What grade or year would this child be in if he/she was attending school?**

Mark **ONE** only.

Kindergarten

GRADEEQA

Grade (1 through 12) **GRADEEQB**

8. **These next questions ask you to estimate the amount of time you homeschool this child.**

- a. **How many days each week is this child homeschooled?**

days each week

HSDAYS

- b. **About how many total hours each week is he/she homeschooled?**

hours per week

HSHOURS

9. **Since September, has this child participated in activities with other children who are homeschooled?**

No

Yes

HSKACTIV

10. **Which of the following statements best describes the teaching style used to homeschool this child?**

Mark **ONE** only.

HSSTYL

- We strictly follow a formal curriculum.
- We mostly follow a formal curriculum, but also use informal learning (i.e. child-led learning, "teaching moments").
- We mostly use informal learning, but sometimes use a formal curriculum.
- We always use informal learning, and never follow a formal curriculum.

11. **Thinking about sources of curriculum or books you use to homeschool this child, please tell us about all the sources that apply to you.**

Since September, have you used materials from...

Mark **ONE** box for each item below.

No
▼

Yes
▼

a. A public library?

HSCLIBRX

b. A homeschooling catalog, publisher, or individual who specializes in homeschooling materials?

HSCHSPUBX

c. Another educational publisher?

HSCEDPUBX

d. A homeschooling organization?

HSCORGX

e. A church, synagogue, or other religious organization?

HSCCHRX

f. Your local public school or school district?

HSCPUBLX

g. A private school?

HSCPRIX

h. A bookstore or other store (including online)?

HSCRELX

i. Websites, excluding retailers?

HSCNETX

j. Other source — Specify: ▶

HSCOTHOS

12. **In the past year, have you or another family member taken any courses, either online or in-person, to help you prepare your child's home instruction?**

No

HSCOURS

Yes, both online and in-person

Yes, online only

Yes, in-person only

13. Some homeschooled children take courses over the Internet taught by people outside the household. Is this child receiving any instruction this way?

No → **GO TO question 16**

Yes

HSINTNET

14. Is that instruction provided by any of the following places?

Mark **X** all that apply.

- | | |
|--|------------------|
| <input type="checkbox"/> Your local public school | HSINTPUB |
| <input type="checkbox"/> Your state | HSINTST |
| <input type="checkbox"/> A charter school | HSINTCH |
| <input type="checkbox"/> Another public school | HSINTAPB |
| <input type="checkbox"/> A private school | HSINTPRI |
| <input type="checkbox"/> A college, community college, or university | HSINTCOL |
| <input type="checkbox"/> Someplace else — Specify: | ↓ HSINTOH |

15. Is there a charge or fee for that instruction?

No **HSFEE**

Yes

16. Thinking about typical grade levels, for which grades was this child schooled at home for at least some classes or subjects?

Mark **X** all that apply.

Include the current year.

Elementary through Middle School

- | | |
|--|---------------|
| <input type="checkbox"/> Kindergarten (Including transitional K and Pre-first grade) | HOMEKX |
| <input type="checkbox"/> First grade | HOME1 |
| <input type="checkbox"/> Second grade | HOME2 |
| <input type="checkbox"/> Third grade | HOME3 |
| <input type="checkbox"/> Fourth grade | HOME4 |
| <input type="checkbox"/> Fifth grade | HOME5 |
| <input type="checkbox"/> Sixth grade | HOME6 |
| <input type="checkbox"/> Seventh grade | HOME7 |
| <input type="checkbox"/> Eighth grade | HOME8 |

High School

- | | |
|--|---------------|
| <input type="checkbox"/> Ninth grade - freshman | HOME9 |
| <input type="checkbox"/> Tenth grade - sophomore | HOME10 |
| <input type="checkbox"/> Eleventh grade - junior | HOME11 |
| <input type="checkbox"/> Twelfth grade - senior | HOME12 |

17. There are many different reasons that parents choose to homeschool their children. Did your family choose to homeschool this child because:

Mark **X** ONE box for each item below.

No Yes

- a. You are concerned about the school environment, such as safety, drugs, or negative peer pressure?.....
- b. You are dissatisfied with the academic instruction at other schools?.....
- c. You prefer to teach this child at home so that you can provide religious instruction?.. .
- d. You prefer to teach this child at home so that you can provide moral instruction?....
- e. This child has a physical or mental health problem that has lasted six months or more?.....
- f. This child has a temporary illness that prevents him/her from going to school?.....
- g. This child has other special needs that you feel the school can't or won't meet?... .
- h. You are interested in a nontraditional approach to children's education?.....
- i. You have another reason for homeschooling your child?....

Specify: ↗

HSSAFETYX

HSDISSATX

HSRELGON

HSMORAL

HSDISABLX

HSILLX

HSSPCLNDX

HSALTX

HSOTHERX

18. Of the reasons your family chose to homeschool this child, which one would you say is the most important to you?

Write the letter from question 17 for the most important reason you chose to homeschool your child.

HSMOSTX
letter from question 17

19. How far do you expect this child to go in his/her education?

Mark **X** ONE only. **HSFUTUREX**

- Complete less than a high school diploma
- Graduate from high school
- Attend a vocational or technical school after high school
- Attend two or more years of college
- Earn a bachelor's degree
- Earn a graduate degree or professional degree beyond a bachelor's

20. Thinking about all years this child has been homeschooled, which of the following subject areas has this child been taught during his or her home instruction?

Mark **X** all that apply.

- | | |
|--|-----------------|
| <input type="checkbox"/> Art | HSART |
| <input type="checkbox"/> Music | HSMUSIC |
| <input type="checkbox"/> Arithmetic | HSARITH |
| <input type="checkbox"/> Basic algebra (Algebra I) | HSALG1 |
| <input type="checkbox"/> Advanced algebra (Algebra II) | HSALG2 |
| <input type="checkbox"/> Geometry | HSGEOM |
| <input type="checkbox"/> Calculus | HSCALC |
| <input type="checkbox"/> Probability | HSPROB |
| <input type="checkbox"/> Scientific inquiry or experiments | HSSCIEN |
| <input type="checkbox"/> Earth sciences or geology | HSGEOL |
| <input type="checkbox"/> Biology | HSBIOL |
| <input type="checkbox"/> Chemistry or physics | HSCHEM |
| <input type="checkbox"/> Geography | HSGEOG |
| <input type="checkbox"/> Basic reading/ reading skills | HSREAD |
| <input type="checkbox"/> Spelling | HSSPELL |
| <input type="checkbox"/> English or literature | HSENGL |
| <input type="checkbox"/> Computer science (e.g., computer programming) | HSCOMSCI |
| <input type="checkbox"/> Social science, history, social studies | HSHIST |
| <input type="checkbox"/> Foreign language | HSFOLANG |
| <input type="checkbox"/> Physical education or gym | HSPHYED |
| <input type="checkbox"/> Health | HSHEALTH |

21. Which of the following subject areas are being taught to this child now?

Mark **X** all that apply.

- | | |
|--|------------------|
| <input type="checkbox"/> Art | HSNART |
| <input type="checkbox"/> Music | HSNMUSIC |
| <input type="checkbox"/> Arithmetic | HSNARITH |
| <input type="checkbox"/> Basic algebra (Algebra I) | HSNALG1 |
| <input type="checkbox"/> Advanced algebra (Algebra II) | HSNALG2 |
| <input type="checkbox"/> Geometry | HSNGEOM |
| <input type="checkbox"/> Calculus | HSNCALC |
| <input type="checkbox"/> Probability | HSNPROB |
| <input type="checkbox"/> Scientific inquiry or experiments | HSNSCIEN |
| <input type="checkbox"/> Earth sciences or geology | HSNGEOL |
| <input type="checkbox"/> Biology | HSNBIOL |
| <input type="checkbox"/> Chemistry or physics | HSNCHEM |
| <input type="checkbox"/> Geography | HSNGEOG |
| <input type="checkbox"/> Basic reading/ reading skills | HSNREAD |
| <input type="checkbox"/> Spelling | HSNSPELL |
| <input type="checkbox"/> English or literature | HSNENGL |
| <input type="checkbox"/> Computer science (e.g., computer programming) | HSNCOMSCI |
| <input type="checkbox"/> Social science, history, social studies | HSNHIST |
| <input type="checkbox"/> Foreign language | HSNFOLANG |
| <input type="checkbox"/> Physical education or gym | HSNPHYED |
| <input type="checkbox"/> Health | HSNHEALTH |

Family Activities

22. **In the past week, has anyone in your family done the following things with this child?**

Mark **X** ONE box for each item below.

- | a. | No
▼ | Yes
▼ | |
|--|--------------------------|--------------------------|------------------|
| a. Told him/her a story (Do not include reading to this child). | <input type="checkbox"/> | <input type="checkbox"/> | FOSTORY2X |
| b. Done activities like arts and crafts, coloring, painting, pasting, or using clay. | <input type="checkbox"/> | <input type="checkbox"/> | FOCRAFTS |
| c. Played board games or did puzzles with him/her | <input type="checkbox"/> | <input type="checkbox"/> | FOGAMES |
| d. Worked on a project like building, making, or fixing something. | <input type="checkbox"/> | <input type="checkbox"/> | FOBUILDX |
| e. Played sports, active games, or exercised together. | <input type="checkbox"/> | <input type="checkbox"/> | FOSPORT |
| f. Discussed with him/her how to manage time. | <input type="checkbox"/> | <input type="checkbox"/> | FORESPON |
| g. Talked with him/her about the family's history or ethnic heritage. | <input type="checkbox"/> | <input type="checkbox"/> | FOHISTX |

23. **In the past week, how many days has your family eaten the evening meal together?**

Write '0' if none.

FODINNERX

24236085

24. **In the past month, has anyone in your family done the following things with this child?**

Mark **X** ONE box for each item below.

No
▼ Yes
▼

- | | | | |
|--|--------------------------|--------------------------|------------------|
| a. Visited a library | <input type="checkbox"/> | <input type="checkbox"/> | FOLIBRAYX |
| b. Visited a bookstore | <input type="checkbox"/> | <input type="checkbox"/> | FOBOOKSTX |
| c. Gone to a play, concert, or other live show | <input type="checkbox"/> | <input type="checkbox"/> | FOCONCRTX |
| d. Visited an art gallery, museum, or historical site | <input type="checkbox"/> | <input type="checkbox"/> | FOMUSEUMX |
| e. Visited a zoo or aquarium | <input type="checkbox"/> | <input type="checkbox"/> | FOZOOX |
| f. Attended an event sponsored by a community, religious, or ethnic group | <input type="checkbox"/> | <input type="checkbox"/> | FOGROUPX |
| g. Attended an athletic or sporting event outside of school in which this child was not a player | <input type="checkbox"/> | <input type="checkbox"/> | FOSPRTEVX |

25. **Does your family participate in the activities or meetings of a local homeschooling association, co-op, or other local homeschool group?**

- No → **GO TO question 27**
- Yes **HSASSNX**

26. **Since September, how many times has your family gone to meetings or participated in the activities of a local homeschooling association, co-op, or other local homeschool group?**

HSFREQX
number of times

27. **Is your family or someone in your household a member of a national homeschooling organization?**

- No **HSNATL**
- Yes

Child's Health

28. In general, how would you describe this child's health?

- Excellent
- Very good
- Good
- Fair
- Poor

HDHEALTH

29. Has a health or education professional told you that this child has any of the following conditions?

Mark **X** ONE box for each item below.

- | | No | Yes | |
|---|--------------------------|-------------------------------------|------------------|
| a. An intellectual disability (mental retardation) | <input type="checkbox"/> | <input type="checkbox"/> | HDINTDIS |
| b. A speech or language impairment | <input type="checkbox"/> | <input type="checkbox"/> | HDSPEECHX |
| c. A serious emotional disturbance | <input type="checkbox"/> | <input type="checkbox"/> | HDDISTRBX |
| d. Deafness or another hearing impairment | <input type="checkbox"/> | <input checked="" type="checkbox"/> | HDDEAFIMX |
| e. Blindness or another visual impairment not corrected with glasses. | <input type="checkbox"/> | <input type="checkbox"/> | HDBLINDX |
| f. An orthopedic impairment. | <input type="checkbox"/> | <input type="checkbox"/> | HDORTHOX |
| g. Autism. | <input type="checkbox"/> | <input type="checkbox"/> | HDAUTISMX |
| h. Pervasive Developmental Disorder (PDD). | <input type="checkbox"/> | <input type="checkbox"/> | HDPDDX |
| i. Attention Deficit Disorder, ADD or ADHD | <input type="checkbox"/> | <input type="checkbox"/> | HDADDX |
| j. A specific learning disability. | <input type="checkbox"/> | <input type="checkbox"/> | HDLEARNX |
| k. A developmental delay. | <input type="checkbox"/> | <input type="checkbox"/> | HDDELAYX |
| l. Traumatic brain injury. | <input type="checkbox"/> | <input type="checkbox"/> | HDTRBRAIN |
| m. Another health impairment lasting 6 months or more. | <input type="checkbox"/> | <input type="checkbox"/> | HDOTHERX |

30. Did you mark yes to any condition in question 29?

No → **GO TO question 38**

Yes

Question not on data file

31. Is this child receiving services for his/her condition?

No → **GO TO question 36**

Yes

HDRECSER

32. Are these services provided by any of the following sources?

Mark **X** ONE box for each item below.

No Yes

a. Your local school district

HDSCHLX

b. A state or local health or social service agency

HDGOVTX

c. A doctor, clinic, or other health care provider

HDDOCTORX

d. This child's private school

HDPRISCH

33. Are any of these services provided through an Individualized Education Program (IEP) or services plan?

No → **GO TO question 36**

Yes

HDIEPX

34. Did any adult in your household work with the service provider or school to develop or change this child's IEP or services plan?

No

HDDEVIEPX

Yes

35. Since September, how satisfied or dissatisfied have you been with the following aspects of this child's IEP or services plan?

a. The service provider's or school's communication with your family?

Very satisfied **HDCOMMUX**

Somewhat satisfied

Somewhat dissatisfied

Very dissatisfied

Does not apply

b. The child's special needs teacher or therapist?

Very satisfied **HDTCHR**

Somewhat satisfied

Somewhat dissatisfied

Very dissatisfied

Does not apply

c. The service provider's or school's ability to accommodate this child's special needs?

Very satisfied **HDACCOMX**

Somewhat satisfied

Somewhat dissatisfied

Very dissatisfied

Does not apply

d. The service provider's or school's commitment to help this child learn?

Very satisfied **HDCOMMITX**

Somewhat satisfied

Somewhat dissatisfied

Very dissatisfied

Does not apply

36. Is this child currently enrolled in any special education classes or services?

No

HDSPCLED

Yes

37. Does this child's condition interfere with his/her ability to do any of the following things?

Mark **X** ONE box for each item below.

No  Yes 

a. Learn

HDLEARN

b. Participate in sports, clubs, or other organized activities . . .

HDPLAY

c. Attend school on a regular basis

HDOUT

d. Make friends

HDFRNDS

Child's Background

38. In what month and year was this child born?

month year

month year

39. CDOBMM CDOBTF

- One of the 50 United States or the District of Columbia

 **GO TO question 41** CPLCBRTH

One of the U.S. territories (*Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands*)

Another country

40. How old was this child when he/she first moved to the 50 United States or the District of Columbia?

1

COMVEAGE

age

41. Is this child of Hispanic, Latino, or Spanish origin?

- No **CHISPA**
 Yes

42. What is this child's race? You may mark one or more races.

- American Indian or Alaska Native **CAMIND**
 - Asian **CASIAN**
 - Black or African American **CBLACK**
 - Native Hawaiian or other Pacific Islander **CPACI**
 - White **CWHITE**

43. What is this child's sex?

- Male **CSEX**
 - Female

44. Does this child live at this address and another address (for example, because of a joint custody arrangement)?

Do not include vacation properties.

- No ***GO TO question 46***

- Yes **CLIVYN**

45. If yes, does this child... CLIVE/SWX

- spend most time at this address?
 - spend most time at another address?
 - spend equal time at both addresses?

46. What language does this child speak most at home?

Mark **X** ONE only.

CSPEAKX

- Child is not able to speak
 - English
 - Spanish
 - A language other than English or Spanish
 - English and Spanish equally
 - English and another language equally

GO TO question 48

47. Is this child currently enrolled in English as a second language, bilingual education, or an English immersion program?

- No
 - Yes

Household Members

48. How many people live in this household?

Include adults and children who are temporarily away from home (for example, living in college housing) if they have no other permanent home.

people

HHTOTALXX

49. How many of the following people live in this household with this child?

Do not include this child in your answer.

Example: Brother(s)

2

Write '0' if none.

This child's...

Number

a. Brother(s)

HHBROSX

b. Sister(s)

HHSISSX

c. Mother (birth, adoptive, step, or foster)

HHMOM

d. Father (birth, adoptive, step, or foster)

HHDAD

e. Aunt(s)

HHAUNTSX

f. Uncle(s)

HHUNCLSX

g. Grandmother(s)

HHGMASX

h. Grandfather(s)

HHGPASX

i. Cousin(s)

HHCSNSX

j. Parent's girlfriend/boyfriend/partner

HHPRTNRSX

k. Other relative(s)

HHORELSX

l. Other non-relative(s)

HHONRELSX

50. How are you related to this child?

Mark ONE only.

RELATION

- Mother (birth, adoptive, step, or foster)
- Father (birth, adoptive, step, or foster)
- Aunt
- Uncle
- Grandmother
- Grandfather
- Parent's girlfriend/boyfriend/partner
- Other relationship – Specify:

RELATIONOS

51. Which language(s) are spoken at home by the adults in this household?

Mark all that apply.

- English HHENGLISH
- Spanish or Spanish Creole HHSPANISH
- French (including Patois, Creole, Cajun) HHFRENCH
- Chinese HHCHINESE
- Other languages – Specify: HHOTHLANG

HHOTHLANGOS

Child's Family

PARENT 1 LIVING IN HOUSEHOLD

Answer questions 52 to 69 about yourself if you are the child's parent or guardian.

If you are not the child's parent or guardian, answer questions 52 to 69 about one of this child's parents or guardians living in the household.

52. Is this parent or guardian the child's...

- Biological parent **P1REL**
- Adoptive parent
- Stepparent
- Foster parent
- Grandparent
- Other guardian

53. Is this person male or female?

- Male **P1SEX**
- Female

54. What is this person's current marital status?

Mark **X** ONE only.

- Now married **GO TO question 56**
- Widowed **P1MRSTA**
- Divorced
- Separated
- Never married

55. Is this person currently living with a boyfriend/girlfriend or partner in this household?

- No **P1BFGF**
- Yes

56. What was the first language this parent or guardian learned to speak?

Mark **X** ONE only. **P1FRLNG**

- English **GO TO question 58**
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

57. What language does this person speak most at home now?

Mark **X** ONE only. **P1SPEAK**

- English
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

58. Where was this parent or guardian born?

- One of the 50 United States or the District of Columbia

GO TO question 60 **P1PLCBRTH**

- One of the U.S. territories (Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands)
- Another country

59. How old was this person when he or she first moved to the 50 United States or the District of Columbia?

P1AGEMV

age

60. Is this person of Hispanic, Latino, or Spanish origin?

- No **P1HISPAN**
- Yes

61. What is this person's race? You may mark one or more races.

- American Indian or Alaska Native **P1AMIND**
- Asian **P1ASIAN**
- Black or African American **P1BLACK**
- Native Hawaiian or other Pacific Islander **P1PACI**
- White **P1WHITE**

62. What is the highest grade or level of school that this parent or guardian completed?

Mark **X** ONE only. **P1EDUC**

- 8th grade or less
- High school, but no diploma
- High school diploma or equivalent (GED)
- Vocational diploma after high school
- Some college, but no degree
- Associate's degree (AA, AS)
- Bachelor's degree (BA, BS)
- Some graduate or professional education, but no degree
- Master's degree (MA, MS)
- Doctorate degree (PhD, EdD)
- Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

63. Is he or she currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?

- No **P1ENRL**
- Yes

64. Which of the following best describes this person's employment status?

Mark **X** ONE only. **P1EMPL**

- Employed for pay or income
- Self-employed
- Unemployed or out of work
- Full-time student
- Stay at home parent
- Retired
- Disabled or unable to work

GO TO question 66

GO TO question 67

65. (If employed or self-employed) About how many hours per week does he or she usually work for pay or income, counting all jobs?

hours **P1HRSWK**

66. (If unemployed or out of work) Has this parent or guardian been actively looking for work in the past 4 weeks?

- No **P1LKWRK**
- Yes

67. In the past 12 months, how many months (if any) has this person worked for pay or income?

months **P1MTHSWRK**

68. How old is this person?

P1AGE

age

69. How old was this person when he or she first became a parent to any child?

P1AGEPAR

age

Don't know P1AGEPARDK

PARENT 2 LIVING IN HOUSEHOLD

Answer questions 70 to 88 about a second parent or guardian living in the household.

70. Is there a second parent or guardian living in this household?

No

Yes

GO TO question 89

P2GUARD

71. Is this person the child's...

Biological parent

P2REL

Adoptive parent

Stepparent

Foster parent

Grandparent

Other guardian

72. Is this person male or female?

Male

P2SEX

Female

73. What is this person's current marital status?

Mark **X** ONE only.

P2MRSTA

Now married

GO TO question 75

Widowed

Divorced

Separated

Never married

74. Is this person currently living with a boyfriend/girlfriend or partner in this household?

P2BFGF

Yes

75. What was the first language this parent or guardian learned to speak?

Mark **ONE only.** **P2FRLNG**

- English → **GO TO question 77**
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

76. What language does this person speak most at home now?

Mark **ONE only.**

P2SPEAK

- English
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

77. Where was this parent or guardian born?

- One of the 50 United States or the District of Columbia

→ **GO TO question 79**

- One of the U.S. territories (*Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands*)
- Another country **P2PLCBRTH**

78. How old was this person when he or she first moved to the 50 United States or the District of Columbia?

P2AGEMV

age

79. Is this person of Hispanic, Latino, or Spanish origin?

No **P2HISPAN**

Yes

80. What is this person's race? You may mark one or more races.

- American Indian or Alaska Native **P2AMIND**
- Asian **P2ASIAN**
- Black or African American **P2BLACK**
- Native Hawaiian or other Pacific Islander **P2PACI**
- White **P2WHITE**

81. What is the highest grade or level of school that this parent or guardian completed?

Mark **ONE only.** **P2EDUC**

- 8th grade or less
- High school, but no diploma
- High school diploma or equivalent (GED)
- Vocational diploma after high school
- Some college, but no degree
- Associate's degree (AA, AS)
- Bachelor's degree (BA, BS)
- Some graduate or professional education, but no degree
- Master's degree (MA, MS)
- Doctorate degree (PhD, EdD)
- Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

82. Is he or she currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?

No
 Yes

P2ENRL

83. Which of the following best describes this person's employment status?

Mark **X** ONE only. P2EMPL

- Employed for pay or income
 Self-employed
 Unemployed or out of work
 Full-time student
 Stay at home parent
 Retired
 Disabled or unable to work

GO TO question 85

GO TO question 86

84. (If employed or self-employed) About how many hours per week does he or she usually work for pay or income, counting all jobs?

hours

P2HRSWK

GO TO question 86

85. (If unemployed or out of work) Has this parent or guardian been actively looking for work in the past 4 weeks?

No
 Yes

P2LKWRK

86. In the past 12 months, how many months (if any) has this person worked for pay or income?

months

P2MTHSWRK

87. How old is this person?

age

P2AGE

88. How old was this person when he or she first became a parent to any child?

age

P2AGEPAR

Don't know

P2AGEPARDK

Your Household

- 89. In the past 12 months, did your family ever receive benefits from any of the following programs?**

Mark **X** ONE box for each item below.

	No ▼	Yes ▼	
a. Temporary Assistance for Needy Families, or TANF.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HWELFTAN
b. Your state welfare or family assistance program.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HWELFST
c. Women, Infants, and Children, or WIC.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HWIC
d. Food Stamps.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HFOODST
e. Medicaid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HMEDICAID
f. Child Health Insurance Program (CHIP).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCHIP
g. Section 8 housing assistance...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HSECN8

- 90. Which category best fits the total income of all persons in your household over the past 12 months?**

Include your own income.

Include money from jobs or other earnings, pensions, interest, rent, Social Security payments, and so on.

<input type="checkbox"/>	\$0 to \$10,000	TTLHHINC
<input type="checkbox"/>	\$10,001 to \$20,000	
<input type="checkbox"/>	\$20,001 to \$30,000	
<input type="checkbox"/>	\$30,001 to \$40,000	
<input type="checkbox"/>	\$40,001 to \$50,000	
<input type="checkbox"/>	\$50,001 to \$60,000	
<input type="checkbox"/>	\$60,001 to \$75,000	
<input type="checkbox"/>	\$75,001 to \$100,000	
<input type="checkbox"/>	\$100,001 to \$150,000	
<input type="checkbox"/>	\$150,001 or more	

- 91. How many years have you lived at this address?**

Write '0' if less than 1 year. **YRSADDR**

years at this address

- 92. Is this house...**

Mark **X** ONE only. **OWNRNTHB**

- Owned or being bought by someone in this household,
 Rented by someone in this household, or
 Occupied by some other arrangement?

- 93. Do you have Internet access on a cell phone?**

No **HVINTPHO**

Yes

- 94. Do you have Internet access at home on a computer or tablet?**

No **HVINTCOM**

Yes

- 95. How often do you use the Internet?**

- Everyday **USEINTRNT**
 A few times a week
 A few times a month
 A few times a year
 Never

Thank you.

*Please return this questionnaire in the postage-paid envelope provided.
If you have lost the envelope, mail the completed questionnaire to:*

**U.S. Census Bureau
ATTN: DCB 60-A (7198)
1201 E. 10th Street
Jeffersonville, IN 47132-0001**

24236192



Commonly Asked Questions

Q: How did you get my address?

A: Your address was randomly selected from among all of the home addresses in the nation. It was selected using scientific sampling methods to represent other households in the United States.

Q: How did you get my child's name and age?

A: When you returned the initial National Household Education Survey to us, we randomly chose one child to ask additional questions about. We are interested in understanding your child's experiences with homeschooling.

Q: Why should I take part in this study? Do I have to do this?

A: You represent thousands of other households like yours, and you cannot be replaced. Your answers and opinions are very important to the success of this study. You may choose not to answer any or all questions in this survey. In order for the survey to be representative, it is important that you complete and return this questionnaire. Those who do not return the survey will not be represented in key statistics used by policymakers and researchers.

Q: How will the information I provide be used? Will my privacy be protected?

A: Your responses will be combined with those of others to produce statistical summaries and reports. Your individual data will not be reported. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 USC § 9573).

Q: I have more than one child in my household. Will I receive additional surveys for the other children in my household?

A: No, each household will receive a survey for only one child, even if there are multiple children living in the household. In households with multiple children, one child was randomly selected to be included in the study.

Q: How will my response help the Department of Education?

A: The Department of Education wants to understand the condition of education in the United States. This survey is the only way that the Department of Education can learn about homeschooling from your perspective. It is the Department of Education's primary source of information on homeschooling in America. Your responses will be combined with those from other households to inform educators, policymakers, schools, and universities about changes in the condition of education in the United States. Reports from past surveys can be found at www.nces.ed.gov/nhes.

Q: Who is sponsoring the study?

A: The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC § 9543). The U.S. Census Bureau is administering this survey on behalf of NCES. This study has been approved by the Office of Management and Budget (OMB), the office that reviews all federally sponsored surveys.

Our Children's Future: A Survey of Young Children's Care and Education

Part of the 2016 National Household Education Survey



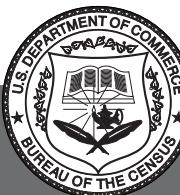
Informational Copy

Thank you for helping us with this survey. Based on the information we received from your household in your last survey, we're asking you to complete this final step.

24026015

Administered by

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau



NHES-ECPP
Informational Copy

Instructions

- ◆ In response to the survey you answered earlier, we recorded that the child listed below has not yet started kindergarten. If this child is attending public or private school or is homeschooled for kindergarten through 12th grade or equivalent, please call us toll-free at 1-888-840-8353 to let us know.
- ◆ These questions should be filled in by a parent or guardian who knows about:

Please answer all the survey questions thinking about this child.

- ◆ To answer a question, simply mark the box that best represents your answer.
- ◆ Please use a black or blue pen, if available, to complete this survey.
- ◆ Please return the completed survey using the postage-paid envelope provided.

The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC §9543). The U.S. Census Bureau is administering this survey on behalf of NCES. You do not have to provide the information requested. However, the information you provide will help the Department of Education's ongoing efforts to learn more about the educational experiences of children and families. There are no penalties should you choose not to participate in this study. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C., §9573). Your responses will be combined with those from other participants to produce summary statistics and reports.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this voluntary survey is 1850-0768. The time required to complete this survey is estimated to average 20 minutes per response, including the time to review instructions, gather the data needed, and complete and review the survey. If you have any comments concerning the accuracy of the time estimate, suggestions for improving this survey, or any comments or concerns regarding the status of your individual submission of this survey, please write to: Sarah Grady, National Household Education Survey, National Center for Education Statistics, 1990 K Street, NW, Room 9016, Washington, DC 20006-5650. Do not return the completed form to this address. You may send email to NHES@census.gov. If you have any questions about the study, contact the Census Bureau toll-free at 1-888-840-8353.



Childhood Care and Programs

- ▶ **Thank you for your help with the previous survey your household completed.**
- ▶ **Answer all the survey questions thinking about the child listed below:**
- ▶ **Care Your Child Receives from Relatives**

i These questions ask about different types of child care this child may now receive on a regular basis from a relative other than his/her parents or guardians.

1. **Is this child now receiving care from a relative other than a parent or guardian on a regular basis, for example, from grandparents, brothers or sisters, or any other relatives?**

No → **GO TO question 17**

Yes **RCNOW**

2. **Are any of these care arrangements regularly scheduled at least once a week?**

No → **GO TO question 17**

Yes **RCWEEK**

3. **These next questions are about the care that this child receives from the relative who provides the most care. How is that relative related to this child?**

Mark **X** **ONE** only.

Grandmother/Grandfather

Aunt/Uncle

RCTYPE

Brother/Sister

Another relative

4. **How old is the relative who provides the most care to this child?**

RCAGE

age

5. **Is this care provided in your home or another home?**

Own home

Other home

RCPLACE

Both

6. **How many days each week does this child receive care from this relative?**

days each week

RC DAYS

7. **How many hours each week does this child receive care from this relative?**

hours each week

RCHRS

8. **How old was this child in years and months when this particular regular care arrangement with this relative began?**

RCSTRY

months

RCSTRM

9. **What language does this relative speak most when caring for this child?**

English

RCSPEAK

Spanish

A language other than English or Spanish

English and Spanish equally

English and another language equally

10. Will this relative care for this child when the child is...

No Yes
▼ ▼

- a. Sick but does not have a fever?

RCSKNFV

- b. Sick and has a fever?

RCSKFV

11. Is there any charge or fee for the care this child receives from this relative, paid either by you or some other person or agency?

No → **GO TO question 15**

Yes

RCFEE

12. Do any of the following people, programs, or organizations help pay for this relative to care for this child?

Mark **X** ONE box for each item below.

- a. A relative of this child outside your household who provides money specifically for that care, not including general child support

No Yes
▼ ▼

RCREL

- b. Temporary Assistance for Needy Families, or TANF

RCTANF

- c. Another social service, welfare, or child care agency...

RCSSAC

- d. An employer, not including a tax-free spending account for child care

RCEMPL

- e. Someone else

RCOTHER

13. How much does your household pay for this relative to care for this child, not counting any money that may be received from others to help pay for care?

Write '0' if your household does not pay this relative for care.

↙ \$.00 RCCOST

Is that amount per...

Hour RCUNIT

Day

Week

Month

Year

Every 2 weeks

Other — Specify: ↘ RCUNITOS

14. How many children from your household is this amount for, including this child?

This child only

RCCSTHNX

2 children

3 children

4 children

5 or more children

15. Does this child have any other care arrangements with a relative on a regular basis?

No → **GO TO question 17**

Yes RCOTHC

16. How many total hours each week does this child spend in those other care arrangements with relatives?

hours each week

RCTLHR

► **Care Your Child Receives from Non-relatives**

i The next questions ask about any care this child receives from someone not related to him/her, either in your home or someone else's home. This includes home child care providers or neighbors, but not day care centers or preschools.

17. Is this child now receiving care in your home or another home on a regular basis from someone who is not related to him/her?

No → **GO TO question 35**

Yes **NCNOW**

18. Are any of these care arrangements regularly scheduled at least once a week?

No → **GO TO question 35**

Yes **NCWEEK**

19. These next questions are about the care that this child receives from someone who is not related to him/her who provides the most care.

Is this care provided in your own home or in another home?

Own home **NCPLACE**
 Other home
 Both

20. Does this person who cares for this child live in your household?

No **NCINHH**
 Yes

21. How many days each week does this child receive care from this person?

days each week **NCDAYS**

22. How many hours each week does this child receive care from this person?

hours each week **NCHRS**

23. How old was this child in years and months when this particular regular care arrangement with this person began?

years months **NCSTRTM**

24. Was this care provider someone you already knew?

No **NCALKNE**
 Yes

25. Is this child's care provider age 18 or older?

No **NCAGE**
 Yes

26. What language does this care provider speak most when caring for this child?

English **NCSPEAK**
 Spanish
 A language other than English or Spanish
 English and Spanish equally
 English and another language equally

27. Will this care provider care for this child when this child is...

No **▼** Yes **▼**

a. Sick but does not have a fever? **NCSKNFV**

b. Sick and has a fever? **NCSKFV**

28. Would you recommend this care provider to another parent?

- No NCRCMDPT
 Yes

29. Is there any charge or fee for the care this child receives from this care provider, paid either by you or some other person or agency?

- No → **GO TO question 33**
 Yes NCFEE

30. Do any of the following people, programs, or organizations help pay for this person to care for this child?

Mark **X** ONE box for each item below.

- a. A relative of this child outside your household who provides money specifically for that care, not including general child support No  Yes 
- NCREL
 NCTANF
 NCSSAC
 NCEMPL
 NCOTHER
- b. Temporary Assistance for Needy Families, or TANF
- c. Another social service, welfare, or child care agency
- d. An employer, not including a tax-free spending account for child care
- e. Someone else

31. How much does your household pay for this person to care for this child, not counting any money that may be received from others to help pay for care?

Write '0' if your household does not pay this non-relative for care.

 \$.00 NCCOST

Is that amount per...

- Hour NCUNIT
 Day
 Week
 Month
 Year
 Every 2 weeks
 Other – Specify:  NCUNITOS

32. How many children from your household is this amount for, including this child?

- This child only
 2 children NCCSTHNX
 3 children
 4 children
 5 or more children

33. Does this child have any other home-based care arrangements on a regular basis with someone who is not a relative? Do not include arrangements at day care centers or preschools.

- No → **GO TO question 35**
 Yes NCOTHC

34. How many total hours each week does this child spend in those other care arrangements with non-relatives?

hours each week NCTLHR

► **Day Care Centers and Preschool Programs Your Child Attends**

i The next questions ask about any day care centers and early childhood programs that this child attends. This does not include care provided in a private home.

35. Is this child now attending a day care center, preschool, or prekindergarten not in a private home?

No → **GO TO question 54**

Yes **CPNNOWX**

36. Does this child go to a day care center, preschool, or prekindergarten, at least once each week?

No → **GO TO question 54**

Yes **CPWEEKX**

37. The next questions ask about the program where this child spends the most time.

Is this child's current program a day care program, a preschool program, or a prekindergarten program?

Day care **CPTYPE**
 Preschool
 Prekindergarten

38. Is this program a Head Start or Early Head Start program?

i Head Start and Early Head Start are federally sponsored preschool programs primarily for children from low-income families.

No **CPHEADST**
 Yes
 Don't know

39. Where is this program located?

Mark **X** ONE only. **CPPLACEX**

- In a church, synagogue, or other place of worship
- In a public elementary or secondary school
- In a private elementary or secondary school
- At a college or university
- At a community center
- At a public library
- In its own building, office space, or storefront
- Some other place – Specify: **CPPLACOSX**

40. Is this program run by a church, synagogue, or other religious group?

No **CPSPRLG**
 Yes

41. Is this program located at your workplace or this child's other parent's workplace?

No **CPWORK**
 Yes

42. How many days each week does this child go to this program?

CPDAYS
 days each week

43. How many hours each week does this child go to this program?

CPHRS
 hours each week

44. How old was this child in years and months when he/she started going to this particular program?

CPSTRY **CPSTRM**
 years months

45. **What language does this child's main care provider or teacher at this program speak most when caring for this child?**

- English **CPSPEAK**
 Spanish
 A language other than English or Spanish
 English and Spanish equally
 English and another language equally

46. **Would you recommend this program to another parent?**

- No **CPRCMDPT**
 Yes

47. **Does this program provide any of the following services to this child or your family?**

Mark **X** ONE box for each item below.

- | | No
▼ | Yes
▼ |
|---|--------------------------|---|
| a. Hearing, speech, or vision testing..... | <input type="checkbox"/> | <input type="checkbox"/> CPTEST |
| b. Physical examinations..... | <input type="checkbox"/> | <input type="checkbox"/> CPPHYSE |
| c. Dental examinations..... | <input type="checkbox"/> | <input type="checkbox"/> CPDENTA |
| d. Formal testing for developmental or learning problems..... | <input type="checkbox"/> | <input type="checkbox"/> CPDISAB |
| e. Sick child care when this child is sick but does not have a fever..... | <input type="checkbox"/> | <input type="checkbox"/> CPSKNFV |
| f. Sick child care when this child is sick and has a fever..... | <input type="checkbox"/> | <input type="checkbox"/> CPSKfv |

48. **Is there any charge or fee for this program, paid either by you or some other person or agency?**

- No → **GO TO question 52**
 Yes **CPFEE**

49. **Do any of the following people, programs, or organizations help pay for this child to go to this program?**

Mark **X** ONE box for each item below.

- a. A relative of this child outside your household who provides money specifically for that care, not including general child support..... **No** **Yes**
CPREL
- b. Temporary Assistance for Needy Families, or TANF..... **CPTANF**
- c. Another social service, welfare, or child care agency..... **CPSSAC**
- d. An employer, not including a tax-free spending account for child care..... **CPEMPL**
- e. Someone else..... **CPOTHER**

50. **How much does your household pay for this child to go to this program, not counting any money that you may receive from others to help pay for care?**

Write '0' if your household does not pay for this program.

↓

\$.00
----	--	-----

CPCOST

Is that amount per...

- Hour **CPUNIT**
 Day
 Week
 Month
 Year
 Every 2 weeks
 Other — Specify: ↓

CPUNITOS

51. How many children from your household is this amount for, including this child?

- This child only
- 2 children
- 3 children
- 4 children
- 5 or more children

CPCSTHNX

52. Does this child have any other care arrangements at a day care center or preschool on a regular basis?

- No → **GO TO question 54**
- Yes

CPOTHC

53. How many total hours each week does this child spend at those day care centers or preschools?

hours each week

CPTLHR

Finding and Choosing Care for Your Child

54. Has this child ever attended a Head Start or Early Head Start program?

i Head Start and Early Head Start are federally sponsored preschool programs primarily for children from low-income families.

- No
- Yes
- Don't know

PCEVRHDX

55. What is the main reason your household wanted a care program for this child in the past year?

Mark **ONE** only.

MAINRESN

- To provide care when a parent was at work or school
- To prepare child for school
- To provide cultural or language learning
- To make time for running errands or relaxing
- Some other reason
- Did not have care in the past year

56. Do you feel there are good choices for child care or early childhood programs where you live?

- No
- Yes
- Don't know

PPCHOIC

57. How much difficulty did you have finding the type of child care or early childhood program you wanted for this child?

- Have not tried to find care → **GO TO question 60**
- No difficulty → **GO TO question 59**
- A little difficulty
- Some difficulty
- A lot of difficulty
- Did not find the child care program you wanted

PPDIFCLT

58. What was the primary reason for the difficulty finding care?

Mark **X** **ONE** only.

- Cost
- Location
- Quality
- Lack of open slots for new children
- Needed a program for children with special needs
- Other reason – Specify:

WHYDIFCLT

59. How important was each of these reasons when you chose the child care arrangement or program where this child spends the most time?

a. The location of the arrangement?

- Not at all important
- A little important
- Somewhat important
- Very important

DCLOA

b. The cost of the arrangement?

- Not at all important
- A little important
- Somewhat important
- Very important

DCOST

c. The reliability of the arrangement?

- Not at all important
- A little important
- Somewhat important
- Very important

DRELY

d. The learning activities at the arrangement?

- Not at all important
- A little important
- Somewhat important
- Very important

DLERN

e. The child spending time with other kids his/her age?

- Not at all important
- A little important
- Somewhat important
- Very important

DCHIL

f. The times during the day that this caregiver is able to provide care?

- Not at all important
- A little important
- Somewhat important
- Very important

DHROP

g. The number of other children in the child's care group?

- Not at all important
- A little important
- Somewhat important
- Very important

DNBGRP

h. Ratings on a website?

- Not at all important
- A little important
- Somewhat important
- Very important

DRTWEB

i. Recommendations from friends and family?

- Not at all important
- A little important
- Somewhat important
- Very important

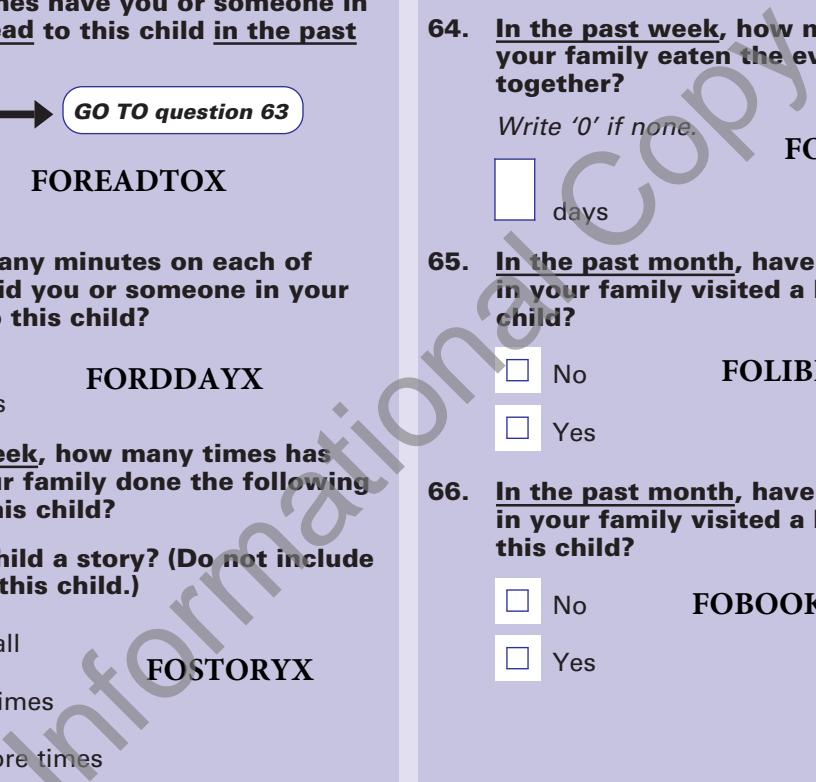
DRECFAM

j. The religious orientation of the program?

- Not at all important
- A little important
- Somewhat important
- Very important

DRELOR

Family Activities

 **i** The next questions ask about this child's activities with family members in the past week or month.

60. About how many books does this child have of his/her own, including those shared with brothers or sisters?

1	2	3
4	5	6
7	8	9

number of books **HABOOKS**

61. How many times have you or someone in your family read to this child in the past week?

Not at all → **GO TO question 63**

1	2	3
4	5	6
7	8	9

FOREADTOX

times

62. About how many minutes on each of those times did you or someone in your family read to this child?

1	2	3
4	5	6
7	8	9

minutes

FORDDAYX

63. In the past week, how many times has anyone in your family done the following things with this child?

- a. Told this child a story? (Do not include reading to this child.)

Not at all

1 or 2 times

3 or more times

FOSTORYX

- b. Taught this child letters, words, or numbers?

Not at all

1 or 2 times

3 or more times

FOWORDSX

- c. Sang songs with this child?

- Not at all
 1 or 2 times
 3 or more times

FOSANG

- d. Worked on arts and crafts with this child?

- Not at all
 1 or 2 times
 3 or more times

FOCRAFTSX

64. In the past week, how many days has your family eaten the evening meal together?

Write '0' if none.

0	1	2
3	4	5
6	7	8

days

FODINNERX

65. In the past month, have you or someone in your family visited a library with this child?

- No
 Yes

FOLIBRAY

66. In the past month, have you or someone in your family visited a bookstore with this child?

- No
 Yes

FOBOOKST

Things Your Child May be Learning

i These next questions ask about things that different children do at different ages. These things may or may not be true for this child.

67. Is this child under 2 years old or is he/she 2 years old or older?

- Under 2 years → **GO TO question 75**
 2 years or older **DPIAGE**

68. Can this child identify the colors red, yellow, blue, and green by name?

- No **DPCOLOR**
 Yes, some of them
 Yes, all of them

69. Can this child recognize the letters of the alphabet?

- No **DPLETTER**
 Yes, some of them
 Yes, most of them
 Yes, all of them

70. How high can this child count?

- This child cannot count
 Up to 5 **DPCOUNT**
 Up to 10
 Up to 20
 Up to 50
 Up to 100 or more

71. Can this child write his/her first name, even if some of the letters are backwards?

- No **DPNAME**
 Yes

72. Does this child ever read or pretend to read storybooks on his/her own?

- No → **GO TO question 75**
 Yes **HAPRETRD**

73. Does this child actually read the words written in the book, or does he/she look at the book and pretend to read?

- Pretends to read **HAWORDSX**
 Actually reads the written words
 Does both } **GO TO question 75**

74. When this child pretends to read a book, does it sound like a connected story, or does he/she tell what is in each picture without much connection between them?

- Sounds like connected story
 Tells what's in each picture
 Does both **HACONECTX**
 Does neither

Child's Health

75. In general, how would you describe this child's health?

- Excellent
- Very good
- Good
- Fair
- Poor

HDHEALTH

76. Has a health, education, or early intervention professional told you that this child has any of the following conditions?

Mark **X** ONE box for each item below.

- | | No | Yes |
|---|--------------------------|--------------------------|
| a. An intellectual disability (mental retardation) | <input type="checkbox"/> | <input type="checkbox"/> |
| b. A speech or language impairment | <input type="checkbox"/> | <input type="checkbox"/> |
| c. A serious emotional disturbance | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Deafness or another hearing impairment | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Blindness or another visual impairment not corrected with glasses. | <input type="checkbox"/> | <input type="checkbox"/> |
| f. An orthopedic impairment. | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Autism. | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Pervasive Developmental Disorder (PDD). | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Attention Deficit Disorder, ADD or ADHD | <input type="checkbox"/> | <input type="checkbox"/> |
| j. A specific learning disability. | <input type="checkbox"/> | <input type="checkbox"/> |
| k. A developmental delay. | <input type="checkbox"/> | <input type="checkbox"/> |
| l. Traumatic brain injury. | <input type="checkbox"/> | <input type="checkbox"/> |
| m. Another health impairment lasting 6 months or more. | <input type="checkbox"/> | <input type="checkbox"/> |

HDINTDIS

HDSPEECHX

HDDISTRBX

HDDEAFIMX

HDBLINDX

HDORTHDX

HDAUTISMX

HPDDDX

HDADDX

HDLEARNX

HDDELAYX

HDTRBRAIN

HDOOTHERX

77. (If child is under 3 years old) Has a health, education, or early intervention professional told you this child is "at-risk" for a substantial developmental delay?

- No HDDLYRSK
- Yes
- Child is age 3 or older

78. Did you mark yes to any condition in question 76 or question 77?

- No → **GO TO question 86**

Question not on data file

79. Is this child receiving services for his/her condition?

- No → **GO TO question 84**
- Yes

HDRECSER

80. Are these services provided by any of the following sources?

Mark **X** ONE box for each item below.

- | | No | Yes |
|---|--------------------------|--------------------------|
| a. Your local school district | <input type="checkbox"/> | <input type="checkbox"/> |
| b. A state or local health or social service agency | <input type="checkbox"/> | <input type="checkbox"/> |
| c. A doctor, clinic, or other health care provider | <input type="checkbox"/> | <input type="checkbox"/> |
| d. This child's <u>private</u> school | <input type="checkbox"/> | <input type="checkbox"/> |

HDSCHLX

HDGOVTX

HDDOCTORX

HDPRISCH

81. Are any of these services provided through an Individualized Family Service Plan (IFSP), Individualized Education Program (IEP) or services plan?

No **GO TO question 84**

Yes **HDIEPX**

82. Did any adult in your household work with the service provider or school to develop or change this child's IFSP, IEP or services plan?

No **HDDEVIEPX**

Yes

83. Since September, how satisfied or dissatisfied have you been with the following aspects of this child's IFSP, IEP or services plan?

- a. The service provider's or school's communication with your family?

Very satisfied **HDCOMMUX**

Somewhat satisfied

Somewhat dissatisfied

Very dissatisfied

Does not apply

- b. The child's special needs teacher or therapist?

HDTCHR

Very satisfied

Somewhat satisfied

Somewhat dissatisfied

Very dissatisfied

Does not apply

- c. The service provider's or school's ability to accommodate this child's special needs?

HDACCOMX

Very satisfied

Somewhat satisfied

Somewhat dissatisfied

Very dissatisfied

Does not apply

- d. The service provider's or school's commitment to help this child learn?

HDCOMMITX

Very satisfied

Somewhat satisfied

Somewhat dissatisfied

Very dissatisfied

Does not apply

84. Is this child currently enrolled in any special education classes or services?

HDSPCLED

No

Yes

85. Does this child's condition interfere with his/her ability to do any of the following things?

Mark **X** ONE box for each item below.

	No	Yes
a. Learn	<input type="checkbox"/>	<input type="checkbox"/>
b. Participate in play with other children	<input type="checkbox"/>	<input type="checkbox"/>
c. Go on outings	<input type="checkbox"/>	<input type="checkbox"/>
d. Make friends	<input type="checkbox"/>	<input type="checkbox"/>

HDLEARN
HDPLAY
HDOUT
HDFRNDs

Child's Background

86. In what month and year was this child born?

month

CDOBMM

year

CDOBYY

87. Where was this child born?

One of the 50 United States or the District of Columbia

→ **GO TO question 89** CPLCBRTH

One of the U.S. territories (Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands)

Another country

88. How old was this child when he/she first moved to the 50 United States or the District of Columbia?

CMOVEAGE

age

89. Is this child of Hispanic, Latino, or Spanish origin?

No

CHISPAN

Yes

90. What is this child's race? You may mark one or more races.

American Indian or Alaska Native

CAMIND

Asian

CASIAN

Black or African American

CBLACK

Native Hawaiian or other Pacific Islander

CPACI

White

CWHITE

91. What is this child's sex?

Male

CSEX

Female

92. Does this child live at this address and another address (for example, because of a joint custody arrangement)?

Do not include vacation properties.

No → **GO TO question 94**

Yes

CLIVYN

93. If yes, does this child... CLIVELSWX

spend most time at this address?

spend most time at another address?

spend equal time at both addresses?

94. What language does this child speak most at home?

Mark ONE only.

Child has not started to speak

English

Spanish

A language other than English or Spanish

English and Spanish equally

English and another language equally

→ **GO TO question 96**

CSPEAKX

95. Is this child currently enrolled in English as a second language, bilingual education, or an English immersion program?

No

CENGLPRG

Yes

Household Members

96. How many people live in this household?

Include adults and children who are temporarily away from home (for example, living in college housing) if they have no other permanent home.

people

HHTOTALXX

97. How many of the following people live in this household with this child?

Do not include this child in your answer.

Example: Brother(s)

2

Write '0' if none.

This child's...

Number

a. Brother(s)

HHBROSX

b. Sister(s)

HHSISSX

c. Mother (birth, adoptive, step, or foster)

HHMOM

d. Father (birth, adoptive, step, or foster)

HHDAD

e. Aunt(s)

HHAUNTSX

f. Uncle(s)

HHUNCLSX

g. Grandmother(s)

HHGMASX

h. Grandfather(s)

HHGPASX

i. Cousin(s)

HHCSNSX

j. Parent's girlfriend/boyfriend/partner

HHPRTNRSX

k. Other relative(s)

HHORELSX

l. Other non-relative(s)

HHONRELSX

98. How are you related to this child?

Mark **X** ONE only.

RELATION

- Mother (birth, adoptive, step, or foster)
- Father (birth, adoptive, step, or foster)
- Aunt
- Uncle
- Grandmother
- Grandfather
- Parent's girlfriend/boyfriend/partner
- Other relationship – Specify:

RELATIONOS

99. Which language(s) are spoken at home by the adults in this household?

Mark **X** all that apply. **HHADLTLANG**

- English **HHENGLISH**
- Spanish or Spanish Creole **HHSPANISH**
- French (including Patois, Creole, Cajun) **HHFRENCH**
- Chinese **HHCHINESE**
- Other languages – Specify:

HHOTHLANGOS

Child's Family

PARENT 1 LIVING IN HOUSEHOLD

Answer questions 100 to 117 about yourself if you are the child's parent or guardian.

If you are not the child's parent or guardian, answer questions 100 to 117 about one of this child's parents or guardians living in the household.

100. Is this parent or guardian the child's...

- Biological parent
- Adoptive parent
- Stepparent
- Foster parent
- Grandparent
- Other guardian

P1REL

101. Is this person male or female?

- Male
- Female

P1SEX

102. What is this person's current marital status?

Mark ONE only.

- Now married
- Widowed
- Divorced
- Separated
- Never married

GO TO question 104

P1MRSTA

103. Is this person currently living with a boyfriend/girlfriend or partner in this household?

- No
- Yes

P1BFGF

104. What was the first language this parent or guardian learned to speak?

Mark ONE only. P1FRLNG

- English → GO TO question 106
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

105. What language does this person speak most at home now?

Mark ONE only.

- English P1SPEAK
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

106. Where was this parent or guardian born?

- One of the 50 United States or the District of Columbia

GO TO question 108

P1PLCBRTH

- One of the U.S. territories (Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands)
- Another country

107. How old was this person when he or she first moved to the 50 United States or the District of Columbia?



P1AGEMV

age

108. Is this person of Hispanic, Latino, or Spanish origin?

- No P1HISPAN
- Yes

109. What is this person's race? You may mark one or more races.

- American Indian or Alaska Native **P1AMIND**
- Asian **P1ASIAN**
- Black or African American **P1BLACK**
- Native Hawaiian or other Pacific Islander **P1PACI**
- White **P1WHITE**

110. What is the highest grade or level of school that this parent or guardian completed?

Mark **X** ONE only. **P1EDUC**

- 8th grade or less
- High school, but no diploma
- High school diploma or equivalent (GED)
- Vocational diploma after high school
- Some college, but no degree
- Associate's degree (AA, AS)
- Bachelor's degree (BA, BS)
- Some graduate or professional education, but no degree
- Master's degree (MA, MS)
- Doctorate degree (PhD, EdD)
- Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

111. Is he or she currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?

- No **P1ENRL**
- Yes

112. Which of the following best describes this person's employment status?

Mark **X** ONE only. **P1EMPL**

- Employed for pay or income
- Self-employed
- Unemployed or out of work
- Full-time student
- Stay at home parent
- Retired
- Disabled or unable to work

GO TO question 114

GO TO question 115

113. (If employed or self-employed) About how many hours per week does he or she usually work for pay or income, counting all jobs?

P1HRSWK

hours **GO TO question 115**

114. (If unemployed or out of work) Has this parent or guardian been actively looking for work in the past 4 weeks?

- No **P1LKWRK**
- Yes

115. In the past 12 months, how many months (if any) has this person worked for pay or income?

months **P1MTHSWRK**

116. How old is this person?

age **P1AGE**

117. How old was this person when he or she first became a parent to any child?

age **P1AGEPAR**

- Don't know **P1AGEPARDK**

PARENT 2 LIVING IN HOUSEHOLD

Answer questions 118 to 136 about a second parent or guardian living in the household.

118. Is there a second parent or guardian living in this household?

No → **GO TO question 137**

Yes **P2GUARD**

119. Is this person the child's...

- Biological parent **P2REL**
- Adoptive parent
- Stepparent
- Foster parent
- Grandparent
- Other guardian

120. Is this person male or female?

- Male **P2SEX**
- Female

121. What is this person's current marital status?

Mark ONE only.

→ **GO TO question 123**

- Now married → **GO TO question 123**
- Widowed
- Divorced
- Separated
- Never married

122. Is this person currently living with a boyfriend/girlfriend or partner in this household?

- No **P2BFGF**
- Yes

123. What was the first language this parent or guardian learned to speak?

Mark ONE only. **P2FRLNG**

- English → **GO TO question 125**
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

124. What language does this person speak most at home now?

Mark ONE only.

- English **P2SPEAK**
- Spanish
- A language other than English or Spanish
- English and Spanish equally
- English and another language equally

125. Where was this parent or guardian born?

- One of the 50 United States or the District of Columbia

→ **GO TO question 127** **P2PLCBRTH**

- One of the U.S. territories (*Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands*)
- Another country

126. How old was this person when he or she first moved to the 50 United States or the District of Columbia?



P2AGEMV

age

127. Is this person of Hispanic, Latino, or Spanish origin?

- No **P2HISPAN**
- Yes

128. What is this person's race? You may mark one or more races.

- American Indian or Alaska Native **P2AMIND**
- Asian **P2ASIAN**
- Black or African American **P2BLACK**
- Native Hawaiian or other Pacific Islander **P2PACI**
- White **P2WHITE**

129. What is the highest grade or level of school that this parent or guardian completed?

Mark **X** *ONE only.* **P2EDUC**

- 8th grade or less
- High school, but no diploma
- High school diploma or equivalent (GED)
- Vocational diploma after high school
- Some college, but no degree
- Associate's degree (AA, AS)
- Bachelor's degree (BA, BS)
- Some graduate or professional education, but no degree
- Master's degree (MA, MS)
- Doctorate degree (PhD, EdD)
- Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

130. Is he or she currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?

- No
- Yes **P2ENRL**

131. Which of the following best describes this person's employment status?

Mark **X** *ONE only.* **P2EMPL**

- Employed for pay or income
- Self-employed
- Unemployed or out of work
- Full-time student
- Stay at home parent
- Retired
- Disabled or unable to work

GO TO question 133

GO TO question 134

132. (If employed or self-employed) About how many hours per week does he or she usually work for pay or income, counting all jobs?

P2HRSWK

133. (If unemployed or out of work) Has this parent or guardian been actively looking for work in the past 4 weeks?

- No **P2LKWRK**
- Yes

134. In the past 12 months, how many months (if any) has this person worked for pay or income?

P2MTHSWRK

months

135. How old is this person?

P2AGE

age

136. How old was this person when he or she first became a parent to any child?

P2AGEPAR

age

- Don't know **P2AGEPARDK**

Your Household

137. In the past 12 months, did your family ever receive benefits from any of the following programs?

Mark **X** ONE box for each item below.

- | | No
▼ | Yes
▼ | |
|--|--------------------------|--------------------------|------------------|
| a. Temporary Assistance for Needy Families, or TANF..... | <input type="checkbox"/> | <input type="checkbox"/> | HWELFTAN |
| b. Your state welfare or family assistance program..... | <input type="checkbox"/> | <input type="checkbox"/> | HWELFST |
| c. Women, Infants, and Children, or WIC..... | <input type="checkbox"/> | <input type="checkbox"/> | HWIC |
| d. Food Stamps..... | <input type="checkbox"/> | <input type="checkbox"/> | HFOODST |
| e. Medicaid | <input type="checkbox"/> | <input type="checkbox"/> | HMEDICAID |
| f. Child Health Insurance Program (CHIP)..... | <input type="checkbox"/> | <input type="checkbox"/> | HCHIP |
| g. Section 8 housing assistance... | <input type="checkbox"/> | <input type="checkbox"/> | HSECN8 |

138. Which category best fits the total income of all persons in your household over the past 12 months?

Include your own income.

Include money from jobs or other earnings, pensions, interest, rent, Social Security payments, and so on.

- | | |
|---|-----------------|
| <input type="checkbox"/> \$0 to \$10,000 | TTLHHINC |
| <input type="checkbox"/> \$10,001 to \$20,000 | |
| <input type="checkbox"/> \$20,001 to \$30,000 | |
| <input type="checkbox"/> \$30,001 to \$40,000 | |
| <input type="checkbox"/> \$40,001 to \$50,000 | |
| <input type="checkbox"/> \$50,001 to \$60,000 | |
| <input type="checkbox"/> \$60,001 to \$75,000 | |
| <input type="checkbox"/> \$75,001 to \$100,000 | |
| <input type="checkbox"/> \$100,001 to \$150,000 | |
| <input type="checkbox"/> \$150,001 or more | |

139. How many years have you lived at this address?

Write '0' if less than 1 year.

years at this address **YRSADDR**

140. Is this house...

Mark **X** ONE only. **OWNRNTHB**

- Owned or being bought by someone in this household,
- Rented by someone in this household, or
- Occupied by some other arrangement?

141. Do you have Internet access on a cell phone?

No **HVINTSPHO**

Yes

142. Do you have Internet access at home on a computer or tablet?

No **HVINTCOM**

Yes

143. How often do you use the Internet?

- Everyday **USEINTRNT**
- A few times a week
- A few times a month
- A few times a year
- Never

Thank you.

*Please return this questionnaire in the postage-paid envelope provided.
If you have lost the envelope, mail the completed questionnaire to:*

**U.S. Census Bureau
ATTN: DCB 60-A (7198)
1201 E. 10th Street
Jeffersonville, IN 47132-0001**

24026239



Commonly Asked Questions

Q: How did you get my address?

A: Your address was randomly selected from among all of the home addresses in the nation. It was selected using scientific sampling methods to represent other households in the United States.

Q: How did you get my child's name and age?

A: When you returned the initial National Household Education Survey to us, we randomly chose one child to ask additional questions about. We are interested in understanding your child's experiences with care and early education.

Q: Why should I take part in this study? Do I have to do this?

A: You represent thousands of other households like yours, and you cannot be replaced. Your answers and opinions are very important to the success of this study. You may choose not to answer any or all questions in this survey. In order for the survey to be representative, it is important that you complete and return this questionnaire. Those who do not return the survey will not be represented in key statistics used by policymakers and researchers.

Q: How will the information I provide be used? Will my privacy be protected?

A: Your responses will be combined with those of others to produce statistical summaries and reports. Your individual data will not be reported. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 USC § 9573).

Q: I have more than one child in my household. Will I receive additional surveys for the other children in my household?

A: No, each household will receive a survey for only one child, even if there are multiple children living in the household. In households with multiple children, one child was randomly selected to be included in the study.

Q: How will my response help the Department of Education?

A: The Department of Education wants to understand the care and early education of children. This survey is the only way that the Department of Education can learn about the types of care and early learning activities children receive. Your responses will be combined with those from other households to inform educators, policymakers, schools, and universities about changes in the condition of education in the United States. Reports from past surveys can be found at www.nces.ed.gov/nhes.

Q: Who is sponsoring the study?

A: The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC § 9543). The U.S. Census Bureau is administering this survey on behalf of NCES. This study has been approved by the Office of Management and Budget (OMB), the office that reviews all federally sponsored surveys.

Adult Training and Education Survey

Part of the 2016 National Household Education Survey

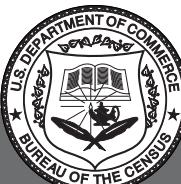


Thank you for helping us with this survey. Based on the information we received from your household in your last survey, we're asking you to complete this final step.

24046013

Administered by

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau



NHES-ATES
Informational Copy



Instructions

- ◆ In response to the survey you answered earlier, we recorded that the person listed below is between the ages of 16 to 65, is not in high school, and lives in this household. If this information is not correct, please call us toll-free at 1-888-840-8353 to let us know.
- ◆ These questions should be filled out by:

No one else in the household should fill out the survey.

- ◆ To answer a question, simply mark the box that best represents your answer.
- ◆ Please use a black or blue pen, if available, to complete this survey.
- ◆ Please return the completed survey using the postage-paid envelope provided.

The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC § 9543). The U.S. Census Bureau is administering this survey on behalf of NCES. You do not have to provide the information requested. However, the information you provide will help the Department of Education's ongoing efforts to learn more about the educational experiences of children and families. There are no penalties should you choose not to participate in this study. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 USC § 9573). Your responses will be combined with those from other participants to produce summary statistics and reports.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this voluntary survey is 1850-0768. The time required to complete this survey is estimated to average 10 minutes per response, including the time to review instructions, gather the data needed, and complete and review the survey. If you have any comments concerning the accuracy of the time estimate, suggestions for improving this survey, or any comments or concerns regarding the status of your individual submission of this survey, please write to: Sarah Grady, National Household Education Survey, National Center for Education Statistics, 1990 K Street, NW, Room 9016, Washington, DC 20006. Do not return the completed form to this address. You may send email to NHES@census.gov. If you have any questions about the study, contact the Census Bureau toll-free at 1-888-840-8353.

Education

1. What is the highest degree or level of school you have completed?

Mark **X** ONE only. **EDUATTN**

- Elementary or high school, but no high school diploma or GED®
- High school diploma
- GED® or alternative high school credential
- Some college credit but less than one year of college credit
- 1 or more years of college credit, no degree
- Associate's degree (for example, AA, AS)
- Bachelor's degree (for example, BA, BS)
- Master's degree (for example, MA, MS, MEng, MEd, MSW, MBA)
- Professional degree beyond a bachelor's degree (for example, MD, DDS, DVM, LLB, JD)
- Doctorate degree (for example, PhD, EdD)

2. Which one of the following best describes the field of study for the highest level of school you have completed?

Mark **X** ONE only. **EDUFOS**

If there was more than one, please choose the one you consider most important.

- General studies, no major, or undeclared major
- Accounting, finance, insurance, or real estate
- Administrative support
- Agriculture
- Audio, broadcasting, multimedia, or graphic technologies
- Business management, administration, or marketing
- Communications or journalism
- Computer science or information technology
- Construction, repair, manufacturing, or transportation
- Cosmetology
- Education
- Engineering or architecture
- English language or literature
- Fine arts or music
- Healthcare
- Law or legal studies
- Law enforcement, security, or firefighting
- Liberal arts
- Psychology
- Religious vocations or theology
- Science or mathematics
- Social or human services or public administration
- Social sciences, political science, economics, or history
- Other — Specify: **EDUFOSOS**

3. Are you currently enrolled at a college, university, technical or trade school, or other school?

No ENROLL
 Yes, as a part-time student
 Yes, as a full-time student

4. Since leaving high school, have you taken any classes to learn English as a second language, sometimes called ESL or ESOL classes?

No ESLCLA
 Yes

5. Since leaving high school, have you taken any literacy classes to help improve your reading? Do not include college-level classes.

No READCLA
 Yes

Certifications and Licenses

6. Do you have a currently active professional certification or a state or industry license? Do not include business licenses, such as a liquor license or vending license.

A professional certification or license shows you are qualified to perform a specific job and includes things like Licensed Realtor, Certified Medical Assistant, Certified Teacher, or an IT certification.

No → GO TO question 30
 Yes CNMAIN

7. If yes, how many currently active certifications and licenses do you have?

If you had to get a certification in order to get a license, count each certification and license separately.

CNNUM
number of certifications and licenses

8. The next few questions ask about the certification and license that you consider to be your most important. What is the name of your most important certification or license? CNNAME1W

9. What kind of work is your most important certification or license for? CNSUBJ1

10. Is your most important certification or license required by a federal, state, or local government agency in order to do that kind of work?

- No
- Yes
- Don't know

CNPROV1

11. Can your most important certification or license be revoked or suspended for any reason?

- No
- Yes
- Don't know

CNREVOKE1

12. In what year did you first get your most important certification or license?

CNYEAR1

13. Did you prepare for getting your most important certification or license by...

Mark **X** ONE box for EACH ITEM below.

No Yes

a. taking classes from a college, technical school, or trade school?

CNPRP_COLLG1

b. taking classes or training from a company, association, union, or private instructor?

CNPRP_TRAIN1

c. studying on my own using textbooks or online resources?

CNPRP_ONOWN1

14. Is your most important certification or license for your current job?

- Not applicable, not currently working
- No
- Yes

CNCURRJOB1

15. How useful has your most important certification or license been for each of the following?

a. Getting a job CNUSE_GET1

- Not useful
- Somewhat useful
- Very useful
- Too soon to tell

b. Keeping a job CNUSE_KEEP1

- Not useful
- Somewhat useful
- Very useful
- Too soon to tell

c. Keeping you marketable to employers or clients CNUSE_MRKT1

- Not useful
- Somewhat useful
- Very useful
- Too soon to tell

d. Improving your work skills

- Not useful CNUSE_SKLS1
- Somewhat useful
- Very useful
- Too soon to tell

16. Do you have another currently active certification or license?

No GO TO question 30

Yes CNMAIN2

17. If yes, what is the name of your second-most important certification or license? CNNAME2W

--

18. What kind of work is your second-most important certification or license for?

CNSUBJ2

19. Is your second-most important certification or license required by a federal, state, or local government agency in order to do that kind of work?

- No CNPROV2
- Yes
- Don't know

20. Can your second-most important certification or license be revoked or suspended for any reason?

- No CNREVOKE2
- Yes
- Don't know

21. In what year did you first get your second-most important certification or license?

CNYEAR2

22. Did you prepare for getting your second-most important certification or license by...

Mark **X** ONE box for EACH ITEM below.

No Yes
▼ ▼

- a. taking classes from a college, technical school, or trade school? CNPRP_COLLG2
- b. taking classes or training from a company, association, union, or private instructor? CNPRP_TRAIN2
- c. studying on my own using textbooks or online resources? CNPRP_ONOWN2

23. Is your second-most important certification or license for your current job? CNCURRJOB2

- Not applicable, not currently working
- No
- Yes

24. How useful has your second-most important certification or license been for each of the following?

a. Getting a job CNUSE_GET2

- Not useful
- Somewhat useful
- Very useful
- Too soon to tell

b. Keeping a job CNUSE_KEEP2

- Not useful
- Somewhat useful
- Very useful
- Too soon to tell

c. Keeping you marketable to employers or clients CNUSE_MRKT2

- Not useful
- Somewhat useful
- Very useful
- Too soon to tell

d. Improving your work skills

- Not useful CNUSE_SKLS2
- Somewhat useful
- Very useful
- Too soon to tell

25. Do you have another currently active certification or license?

No → **GO TO question 30**

Yes CNMAIN3

26. If yes, what is the name of your third-most important certification or license?

CNNAME3W

27. What kind of work is your third-most important certification or license for?

CSUBJ3

28. Is your third-most important certification or license required by a federal, state, or local government agency in order to do that kind of work?

No CNPROV3

Yes

Don't know

29. Can your third-most important certification or license be revoked or suspended for any reason?

No CNREVOKE3

Yes

Don't know

Certificates

30. People sometimes earn certificates from an education or training program. These are different from certifications or licenses. Do not include certifications or licenses here. Have you ever earned any of the following types of certificates?

a. A certificate for completing a training program from an employer, employment agency, union, software or equipment manufacturer, or other training provider

No CERTTRAIN

Yes

b. A certificate for completing a vocational program at a high school

No CERTVOC

Yes

c. A high school equivalency certificate, such as a GED®

No CERTHS

Yes

d. A certificate—not a degree—for completing a program at a community or technical college, or other school after high school. Do not include teaching certificates or college degrees CERTPROG

No → **GO TO question 39**

Yes

31. If yes: We will refer to the certificates in question 30d as "post-secondary certificates." What was the field of study for your last post-secondary certificate?

Mark ONE only. PSFOS

- Accounting, finance, insurance, or real estate
- Administrative support
- Agriculture
- Audio, broadcasting, multimedia, or graphic technologies
- Business management, administration, or marketing
- Computer science or information technology
- Construction trades
- Cosmetology
- Culinary arts
- Education
- Engineering technologies or drafting
- Fine arts or music
- Funeral service or mortuary science
- Healthcare
- Law enforcement, security, or firefighting
- Law or legal studies
- Liberal arts
- Manufacturing or production (for example machinist, welder, boilermaker)
- Mechanic or repair technologies
- Transportation
- Other - Specify: PSFOSOS

32. Who gave you your last post-secondary certificate?

Mark ONE only. LASTPSCER

- A community college
- A vocational, technical, trade, or business school
- Another college or university
- Someplace else — Specify:

LASTPSCEROS

33. About how many hours of instruction did you complete in order to earn your last post-secondary certificate?

- 960 hours (1 full-time school year) or more
- 480 hours (half a full-time school year) to 959 hours
- 160 to 479 hours
- 40-159 hours
- Less than 40 hours

LCHOURS

34. Which one of the following was required for enrolling in your last post-secondary certificate program?

Mark ONE only. LCENROLL

- Being enrolled in or having completed an advanced degree program (Master's or higher)
- Being enrolled in or having completed a Bachelor's degree program
- Having completed high school or a high school equivalency (such as a GED®)
- None of the above

35. To earn your last post-secondary certificate did you have to complete...

Mark ONE box for EACH ITEM below.

No Yes

a. a minimum number of credits?

LCRED

b. a minimum number of instructional hours?

LCINHRS

36. Was your last post-secondary certificate part of the training you took for a professional certification or license?

- No LCTRAIN
 Yes

37. Is your current job related to your last post-secondary certificate? LCCURRJOB

- Not applicable, not currently working
 No
 Yes, somewhat related
 Yes, very related

38. How useful has your last post-secondary certificate been for each of the following?

a. Getting a job LCUSE_GET

- Not useful
 Somewhat useful
 Very useful
 Too soon to tell

b. Increasing your pay LCUSE_PAY

- Not useful
 Somewhat useful
 Very useful
 Too soon to tell

c. Improving your work skills LCUSE_SKLS

- Not useful
 Somewhat useful
 Very useful
 Too soon to tell

Work Experience Programs

39. Have you ever completed an internship, co-op, practicum, clerkship, externship, residency, clinical experience, apprenticeship, or similar program?

WEPROG

- No, and I am not in one now

- No, but I am in one now

- Yes, I have completed this type of program

GO TO question 50

We will refer to these as "work experience programs." If you have NOT completed a work experience program, go to question 50. If you HAVE completed a program, continue on the next page, answering for the last work experience program you completed.

40. If yes, what type of work was your last work experience program for?

Mark **X** ONE only. **WEFOLP**

Building or construction trades:

- Carpenter
- Electrician
- Plumber or pipefitter
- Sheet metal worker or structural steel worker
- Other building and construction trades

Healthcare:

- Medical doctor
- Nursing or nursing assistant
- Other healthcare

Other types of work:

- Accounting, finance, insurance, or real estate
- Chef, cook, or food preparation
- Computer networking or information technology
- Cosmetology
- Driving, piloting, or other transportation
- Engineering or architecture
- Funeral service or mortuary science
- Law enforcement, security, or firefighting
- Legal practice
- Machinist or tool and die maker
- Management or administration
- Mechanic or repair work
- Printing
- Social work, counseling, or religious vocations
- Teaching
- Utility or telecommunications technician
- Other — Specify: **WEFOLPOS**

41. How long did your last work experience program last?

WELONG

- Less than 3 months
- 3 months to less than 6 months
- 6 months to less than 1 year
- 1 year to less than 2 years
- 2 years to less than 3 years
- 3 years or more

42. What wage did you earn as part of your last work experience program?

WEWAGE

- No wage
- A training wage that was lower than the wage of a fully qualified worker
- The same wage as a fully qualified worker

43. As a part of your last work experience program did you...

Mark **X** ONE box for EACH ITEM below.

No  Yes 

- a. have instruction or training from a co-worker or supervisor? **WEPRP_INSTR**
- b. take classes from a college, technical school, or trade school? **WEPRP_COLLG**
- c. take classes or training from a company, association, union, or private instructor? **WEPRP_TRAIN**

44. Do the following statements describe your last work experience program?

Mark **X** ONE box for EACH ITEM below.

No  Yes 

- a. I was evaluated by a co-worker or supervisor **WEEVAL**
- b. I got college credit
- c. I received journeyman status at the end of an apprenticeship **WEJOURN**
- d. I got a state or federal apprenticeship number. **WEAPPRE**

45. Which one of the following best describes your last work experience program?

Mark **X** ONE only. **WEDEGR**

- It was not part of a formal education program
- It was part of a high school program
- It was part of a school program after high school and below an Associate's degree
- It was part of an Associate's degree program
- It was part of a Bachelor's degree program
- It was part of an advanced degree program or other program beyond a Bachelor's degree

46. Did (or will) your last work experience program help you earn a professional certification or license?

- No **WECERT**
- Yes

47. Is your current job related to your last work experience program?

WECURJO

- Not applicable, not currently working
- No
- Yes, somewhat related
- Yes, very related

48. In your current job, how often do you use the skills or knowledge that you learned during your last work experience program?

WESKILL

- Not applicable, not currently working
- Never or almost never
- Sometimes
- All or most of the time

49. How useful was your last work experience program for each of the following?

a. Getting a job **WEUSE_GET**

- Not useful
- Somewhat useful
- Very useful
- Too soon to tell

b. Increasing your pay **WEUSE_PAY**

- Not useful
- Somewhat useful
- Very useful
- Too soon to tell

c. Improving your work skills

- WEUSE_SKLS**
- Not useful
- Somewhat useful
- Very useful
- Too soon to tell

Employment

50. **Last week, were you employed for pay at a job or business?**

If you were temporarily absent from a job or business (on vacation, temporarily ill, on maternity leave, etc.), answer "Yes".

No → **GO TO question 56**

Yes **EEMAIN**

51. If yes, for the job or business you were in last week, were you a member of a labor union or an employee association similar to a union (for example, AFL-CIO, Change to Win Federation, NEA)?

No **EEUNION**

Yes

52. **Last week, how many jobs did you have?**

number of jobs **EEJOB**

53. **Last week, did you work at a full-time job (a job where you work 35 hours or more per week)?**

No **EEFTJOB**

Yes

54. **Last week, did you work at a part-time job (a job where you work fewer than 35 hours per week)?**

No → **GO TO question 60**

Yes **EEPTJOB**

55. If yes, would you have preferred for your part-time job to be a full-time job?

No } **GO TO question 60**

Yes **EEPREFFT**

56. **Last week, were you on layoff from a job?**

No **EELAYOFF**

Yes

57. **During the last 4 weeks, have you been actively looking for work?**

No **EEL4WKS**

Yes → **GO TO question 59**

58. If no, do you intend to look for work within the next 5 years?

No **EEL5YRS**

Yes

Don't know

59. **When did you last work, even for a few days?**

EELWRK

Never worked for pay

→ **GO TO question 71**

Over 12 months ago

→ **GO TO question 63**

Within the past 12 months

60. **During the past 12 months (52 weeks), how many weeks did you work, including paid vacation, paid sick leave, and military service?**

50 to 52 weeks **EEWKS**

48 to 49 weeks

40 to 47 weeks

27 to 39 weeks

14 to 26 weeks

13 weeks or less

61. **During the past 12 months, in the weeks you worked, how many hours did you usually work each WEEK?**

usual hours worked each WEEK **EEHRS**

62. Which category best fits your earnings from wages, salary, commissions, bonuses, or tips, from all jobs over the past 12 months?

Report amount before deductions for taxes, bonds, dues, or other items.

- \$0 to \$10,000
- \$10,001 to \$20,000
- \$20,001 to \$30,000
- \$30,001 to \$40,000
- \$40,001 to \$50,000
- \$50,001 to \$60,000
- \$60,001 to \$75,000
- \$75,001 to \$150,000
- \$150,001 or more

EEEARN

63. The next few questions ask about your current or last job. If you had more than one job, describe the one at which you worked the most hours. In your current or last job, for whom did you work?

EEWHOA

- If now on active duty in the Armed Forces, mark (X) this box and print the branch of the Armed Forces below.

Name of company, business, or other employer

EECOMP

64. What kind of business or industry was this?

(For example: hospital, newspaper publishing, mail order house, auto engine manufacturing, bank)

EEWHOW

65. Which one of the following were you?

EEEMPL

- An employee of a private company, business, or individual, for wages, salary, or commission
- A local (city, county, etc.), state, or federal government employee
- Self-employed in own business, professional practice, or farm
- Working without pay for family business or farm

66. What kind of work were you doing?

(For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant)

EEWRKW

67. What were your most important activities or duties?

(For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records)

EEDUTIESW

68. Did you have a license that was required by a federal, state, or local government agency to do this job?

- No EELICES
- Yes

69. What kind of position did you hold?

Permanent → **GO TO question 71**

Temporary **EEPOSIT**

70. Would you have preferred to work at a permanent job?

No **EEPERM**

Yes

Background

71. Have you ever served on active duty in the U.S. Armed Forces, Reserves, or National Guard?

XXMIL

No, never served in the military

→ **GO TO question 73**

Yes, but only on active duty for training in the Reserve or National Guard

Yes, on active duty now or in past

72. Have you served on active duty since September 2001?

No **XXACTV**

Yes

73. Are you male or female?

Male **XXSEX**

Female

74. What is your current marital status?

Mark **X** ONE only.

Now Married → **GO TO question 76**

XXMARIT

Widowed

Divorced

Separated

Never married

75. Are you currently living with a boyfriend/girlfriend or partner in this household?

XXBFGF

No

Yes

76. Do you speak a language other than English at home?

No → **GO TO question 78**

Yes **XXLANG**

77. How well do you speak English?

Very well **XXENG**

Well

Not well

Not at all

78. How old are you?

XXAGE

years old

79. Are you of Hispanic, Latino, or Spanish origin?

No **XXRACE_HISP**

Yes

80. What is your race? You may mark one or more races.

American Indian or Alaska Native **XXRACE_AMIND**

Asian **XXRACE_ASIAN**

Black or African American **XXRACE_BLACK**

Native Hawaiian or other Pacific Islander **XXRACE_PACI**

White **XXRACE_WHITE**

81. Do you have Internet access on a cell phone?

No **XXINTCELL**

Yes

82. Do you have Internet access at home on a computer or tablet?

No **XXINTHOME**

Yes

83. How often do you use the Internet?

Every day **XXINTFREQ**

A few times a week

A few times a month

A few times a year

Never

Thank you.

Please return this questionnaire in the postage-paid envelope provided. If you have lost the envelope, mail the completed questionnaire to:

**National Household Education Survey
U.S. Census Bureau
ATTN: DCB 60-A (7198)
1201 E. 10th Street
Jeffersonville, IN 47132-0001**

Commonly Asked Questions

Q: How was my household chosen?

- A: Your address was randomly selected from among all of the home addresses in the nation. It was selected using scientific sampling methods to represent other U.S. households. The sample was designed so that surveys of only a few thousand people will accurately describe the educational experiences of almost all Americans.

Q: Why should I participate? Do I have to do this?

- A: Your answers are very important to the success of this study. You represent thousands of other adults like yourself, and you cannot be replaced. This survey is voluntary. You may choose not to answer any or all questions in this survey, but in order for the survey to be representative, it is important that you complete and return it. Those who do not return the survey will not be represented in statistics used by policymakers and researchers. There are no penalties should you choose not to participate in the study.

Q: Will the information I provide be kept confidential? Will my privacy be protected?

- A: Your responses will be combined with those from other adults to produce statistical summaries and reports about education and training in the United States. Your individual data will not be reported. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 USC § 9573).

Q: How will my response help the Department of Education?

- A: The U.S. Department of Education wants to understand how adults acquire and maintain the skills they need for work. This survey is the only way our nation can learn about the education and training that adults receive from schools, employers, and other training sponsors. The survey will allow policymakers and researchers to better understand the demand for education and training programs, and can help direct national policy in these areas. Your responses will be combined with those from other households to inform educators, policymakers, and schools about how adults in the U.S. learn the skills needed for work.

Q: Who is sponsoring this study?

- A: The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct this study by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 USC § 9543). The U.S. Census Bureau is administering this survey on behalf of NCES. This study has been approved by the Office of Management and Budget (OMB), the office that reviews all federally sponsored surveys.

Q: What if I have other questions?

- A: If you have any questions about the study, you may send e-mail to NHES@census.gov or you may call the Census Bureau toll-free at 1-888-840-8353.

Appendix B. Data File Layout and Position Order

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASMIN	Unique child identifier	C	11	1	11
2	RCVDATE	Survey Date	C	8	12	19
3	PATH	D-Questionnaire path	C	1	20	20
4	QTYPE	D-Survey Path	N	1	21	21
5	RCNOW	1. Regular care from relative	N	1	22	22
6	RCWEEK	2. Care from relative regularly scheduled	N	2	23	24
7	RCTYPE	3. Relative related to child	N	2	25	26
8	RCAGE	4. Age of relative care provider	N	2	27	28
9	RCPLACE	5. Care in home or another home	N	2	29	30
10	RC DAYS	6. Days a week child receives care from relative	N	2	31	32
11	RCHRS	7. Hours a week child receives care from relative	N	2	33	34
12	RCSTRTY	8. Child's age when care began from relative (Years)	N	2	35	36
13	RCSTRTM	8. Child's age when care began from relative (Months)	N	2	37	38
14	RCSPEAK	9. Language spoken by relative when caring for child	N	2	39	40
15	RCSKNFV	10. Relative care for child sick without a fever	N	2	41	42
16	RCSKFV	10. Relative care for child sick with a fever	N	2	43	44
17	RCFEE	11. Charge for care by relative	N	2	45	46
18	RCREL	12. Outside relative pays for care by relative	N	2	47	48
19	RCTANF	12. TANF pays for care by relative	N	2	49	50
20	RCSSAC	12. Other social service pays for care by relative	N	2	51	52
21	RCEMPL	12. Employer pays for care by relative	N	2	53	54
22	RCOTHER	12. Someone else pays for care by relative	N	2	55	56
23	RCCOST	13. Amount household pays for care by relative	N	5	57	61
24	RCUNIT	13. Unit of time for cost of relative care	N	2	62	63
25	RCUNITOS	13. Unit of time for cost of relative care (Other)	C	36	64	99
26	RCCSTHDX	14. Number of children in household amount covers for relative care	N	2	100	101
27	RCOTHC	15. Other regular care arrangements	N	2	102	103
28	RCTLHR	16. Hours each week spent in other care	N	2	104	105
29	NCNOW	17. Care from non-relative	N	1	106	106
30	NCWEEK	18. Care from non-relative regularly scheduled	N	2	107	108
31	NCPLACE	19. Care in own home	N	2	109	110
32	NCINHH	20. Care provider live in household	N	2	111	112
33	NCDAYS	21. Days a week child receives non-relative care	N	2	113	114
34	NCHRS	22. Hours each week child receives non-relative care	N	2	115	116
35	NCSTRTY	23. Child's age when care began from non-relative (Years)	N	2	117	118
36	NCSTRTM	23. Child's age when care began from non-relative (Months)	N	2	119	120
37	NCALKNE	24. Care provider already known	N	2	121	122
38	NCAGE	25. Care provider 18 or older	N	2	123	124
39	NCSPEAK	26. Language spoken by non-relative when caring for child	N	2	125	126
40	NCSKNFV	27. Non-relative care for child sick without a fever	N	2	127	128
41	NCSKFV	27. Non-relative care for child sick with a fever	N	2	129	130
42	NCRCMDPT	28. Recommend care provider to another	N	2	131	132
43	NCFEE	29. Charge for care by non-relative	N	2	133	134
44	NCREL	30. Relative pays for care by non-relative	N	2	135	136
45	NCTANF	30. TANF pays for care by non-relative	N	2	137	138
46	NCSSAC	30. Other social service pays for care by non-relative	N	2	139	140
47	NCEMPL	30. Employer pays for care by non-relative	N	2	141	142
48	NCOTHER	30. Someone else pays for care by non-relative	N	2	143	144
49	NCCOST	31. Amount household pays for care by non-relative	N	5	145	149
50	NCUNIT	31. Unit of time for cost of non-relative care	N	2	150	151
51	NCUNITOS	31. Unit of time for cost of non-relative care (Other)	C	63	152	214
52	NCCSTHDX	32. Number of children in household amount covers for non-relative care	N	2	215	216
53	NCOTHC	33. Other home-based care	N	2	217	218
54	NCTLHR	34. Total hours per week in care with non-relatives	N	2	219	220
55	CPNNOWX	35. Attending program not in private home	N	1	221	221
56	CPWEEKX	36. Attend program at least once a week	N	2	222	223
57	CPTYPE	37. Kind of program	N	2	224	225
58	CPHEADST	38. Kind of program, HS or EHS	N	2	226	227
59	CPPLACEX	39. Program location	N	2	228	229
60	CPPLACOSX	39. Program location (Other)	C	61	230	290
61	CPSPLRG	40. Program run by religious group	N	2	291	292
62	CPWORK	41. Program location at workplace	N	2	293	294
63	CPDAYS	42. Days each week child attends program	N	2	295	296
64	CPHRS	43. Hours each week child attends program	N	2	297	298
65	CPSTRTY	44. Age of child when starting program (Years)	N	2	299	300
66	CPSTRTM	44. Age of child when starting program (Months)	N	2	301	302
67	CPSPEAK	45. Language spoken by program provider when caring for child	N	2	303	304
68	CPRCMDPT	46. Recommend program to another	N	2	305	306

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
69	CPTEST	47. Provide hearing, speech, vision testing	N	2	307	308
70	CPPHYSE	47. Provide physical examinations	N	2	309	310
71	CPDENTA	47. Provide dental examinations	N	2	311	312
72	CPDISAB	47. Provide testing for learning problems	N	2	313	314
73	CPSKNFV	47. Provide care when child is sick without fever	N	2	315	316
74	CPSKFW	47. Provide care when child is sick with fever	N	2	317	318
75	CPFEE	48. Charge for program	N	2	319	320
76	CPREL	49. Relative pays for program care	N	2	321	322
77	CPTANF	49. TANF pays for program care	N	2	323	324
78	CPSSAC	49. Other social service pays for program care	N	2	325	326
79	CPEMPL	49. Employer pays for program care	N	2	327	328
80	CPOTHER	49. Someone else pays for program care	N	2	329	330
81	CPCOST	50. Amount household pays for program care	N	5	331	335
82	CPUNIT	50. Unit of time for cost of program care	N	2	336	337
83	CPUNITOS	50. Unit of time for cost of program care (Other)	C	60	338	397
84	CPCSTHNX	51. Number of children in household amount covers for program	N	2	398	399
85	CPOTHC	52. Other care arrangements	N	2	400	401
86	CPTLHR	53. Total hours per week at daycare/preschool	N	2	402	403
87	PCEVRHDX	54. Ever attended HS or EHS	N	1	404	404
88	MAINRESN	55. Reason for wanting program	N	1	405	405
89	PPCHOIC	56. Good choice of program	N	1	406	406
90	PPDIFCLT	57. Difficulty finding program	N	1	407	407
91	WHYDIFCLT	58. Reason finding care was difficult	N	2	408	409
92	WHYDIFCLTOS	58. Reason finding care was difficult (specify)	C	80	410	489
93	DCLOA	59. Importance of location	N	2	490	491
94	DCOST	59. Importance of cost	N	2	492	493
95	DRELY	59. Importance of reliability	N	2	494	495
96	DLERN	59. Importance of learning activities	N	2	496	497
97	DCHIL	59. Importance of child interaction with other kids	N	2	498	499
98	DHROP	59. Importance of caregiver availability	N	2	500	501
99	DNBGRP	59. Importance of number of children in group	N	2	502	503
100	DRTWEB	59. Importance of website ratings	N	2	504	505
101	DRECFAM	59. Importance of number of family recommendations	N	2	506	507
102	DRELOR	59. Importance of religious orientation	N	2	508	509
103	HABOOKS	60. Books child owns	N	3	510	512
104	FOREADTOX	61. Time spent reading to child	N	2	513	514
105	FORDDAYX	62. Minutes spent each time reading to child	N	2	515	516
106	FOSTORYX	63. In the past week, times child has been told a story	N	1	517	517
107	FOWORDSX	63. In the past week, times child has been taught letters, words, or numbers	N	1	518	518
108	FOSANG	63. In the past week, times sang with child	N	1	519	519
109	FOCRAFTSX	63. In the past week, time spent on arts and crafts	N	1	520	520
110	FODINNERX	64. Eaten the evening meal together in past week	N	1	521	521
111	FOLIBRAY	65. Visited a library in the past month	N	1	522	522
112	FOBOOKST	66. Visited a bookstore in the past month	N	1	523	523
113	DPIAGE	67. Child older or younger than 2 years	N	1	524	524
114	DPCOLOR	68. Identify colors by name	N	2	525	526
115	DPLETTER	69. Recognize letters of alphabet	N	2	527	528
116	DPCOUNT	70. Counting skills	N	2	529	530
117	DPNAME	71. Ability to write first name	N	2	531	532
118	HAPRETRD	72. Read by him/herself	N	2	533	534
119	HAWORDSX	73. Read the words or pretend to read	N	2	535	536
120	HACONECTX	74. Connected story when pretending to read	N	2	537	538
121	HDHEALTH	75. Health of child	N	1	539	539
122	HDINTDIS	76. Intellectual disability	N	1	540	540
123	HDSPEECHX	76. Speech or language impairment	N	1	541	541
124	HDDISTRBX	76. Serious emotional disturbance	N	1	542	542
125	HDDEAFIMX	76. Deafness or other hearing impairment	N	1	543	543
126	HDBLINDX	76. Blindness or other visual impairment	N	1	544	544
127	HDORTHOX	76. Orthopedic impairment	N	1	545	545
128	HDAUTISMX	76. Autism	N	1	546	546
129	HDPDDX	76. Pervasive Developmental Disorder	N	1	547	547
130	HDADDX	76. Attention Deficit Disorder	N	1	548	548
131	HDLEARNX	76. Learning disability	N	1	549	549
132	HDDELAYX	76. Developmental Delay	N	1	550	550
133	HDTRBRAIN	76. Traumatic Brain Injury	N	1	551	551
134	HDOOTHERX	76. Another health impairment	N	1	552	552
135	HDDLYRSK	77. At-risk for delay	N	1	553	553
136	HDRECER	79. Receiving services for condition	N	2	554	555

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
137	HDSCHLX	80. Local school district provides services	N	2	556	557
138	HDGOVTX	80. Local health or service agency provides services	N	2	558	559
139	HDDOCTORX	80. Doctor, clinic, or other provider provides services	N	2	560	561
140	HDPRISCH	80. Private school provides services	N	2	562	563
141	HDIEPX	81. Services provided by IEP or IFSP	N	2	564	565
142	HDDEVIEPX	82. Develop/change IEP	N	2	566	567
143	HDCOMMUX	83. Satisfied with service provider communication	N	2	568	569
144	HDTCHR	83. Satisfied with special needs teacher/therapist	N	2	570	571
145	HDACCOMX	83. Satisfied with ability to accommodate child's needs	N	2	572	573
146	HDCOMMITX	83. Satisfied with commitment to help child	N	2	574	575
147	HDSPCLED	84. Enrollment in special education classes	N	2	576	577
148	HDLEARN	85. Condition interferes with learning	N	2	578	579
149	HDPLAY	85. Condition interferes with participation in play	N	2	580	581
150	HDOUT	85. Condition interferes with going on outings	N	2	582	583
151	HDFRNDS	85. Condition interferes with making friends	N	2	584	585
152	CDOBMM	86. Month born	N	2	586	587
153	CDOBYY	86. Year born	N	4	588	591
154	CPLCBRTH	87. Country where child born	N	1	592	592
155	CMOVEAGE	88. Age of child when first moved to US	N	2	593	594
156	CHISPAN	89. Child Spanish, Hispanic, or Latino	N	1	595	595
157	CAMIND	90. Child Race - American Indian or Alaska Native	N	1	596	596
158	CASIAN	90. Child Race - Asian	N	1	597	597
159	CBLACK	90. Child Race - Black or African American	N	1	598	598
160	CPACI	90. Child Race - Native Hawaiian or other Pacific Islander	N	1	599	599
161	CWHITE	90. Child Race, White	N	1	600	600
162	CHISPRM	90. Child Hispanic - race not reported	N	1	601	601
163	CSEX	91. Child Sex	N	1	602	602
164	CLIVYN	92. Where child lived for school year	N	1	603	603
165	CLIVELSWX	93. Where child spends time	N	2	604	605
166	CSPEAKX	94. Language spoken by child at home	N	1	606	606
167	CENGLPRG	95. Enrolled in language program	N	2	607	608
168	HHTOTALXX	96. Total people in household	N	2	609	610
169	HHBROSX	97. Brothers	N	1	611	611
170	HHSISSX	97. Sisters	N	1	612	612
171	HHMOM	97. Mother	N	1	613	613
172	HHDAD	97. Father	N	1	614	614
173	HHAUNTSX	97. Aunts	N	1	615	615
174	HHUNCLSX	97. Uncles	N	1	616	616
175	HHGMASX	97. Grandmothers	N	1	617	617
176	HHGPASX	97. Grandfathers	N	1	618	618
177	HHCSNSX	97. Cousins	N	1	619	619
178	HHPRTNRSX	97. Parent's girlfriend/boyfriend/partner	N	1	620	620
179	HHORELSX	97. Other relatives	N	1	621	621
180	HHONRELSX	97. Other non-relatives	N	1	622	622
181	RELATION	98. Respondent relation to child	N	1	623	623
182	RELATIONOS	98. Respondent relation to child (Other)	C	80	624	703
183	HHENGLISH	99. Language spoken at home - English	N	1	704	704
184	HHSPANISH	99. Language spoken at home - Spanish	N	1	705	705
185	HHFRENCH	99. Language spoken at home - French	N	1	706	706
186	HHCHINESE	99. Language spoken at home - Chinese	N	1	707	707
187	HHOTHLANG	99. Language spoken at home - Other	N	1	708	708
188	HHOTHLANGOS	99. Language spoken at home - Other (Specify)	C	46	709	754
189	PIREL	100. First parent/guardian relation to child	N	1	755	755
190	P1SEX	101. First parent/guardian sex	N	1	756	756
191	P1MRSTA	102. First parent/guardian marital status	N	1	757	757
192	P1BFGF	103. First parent/guardian living with boyfriend/girlfriend	N	2	758	759
193	P1FRLNG	104. First parent/guardian first language	N	1	760	760
194	P1SPEAK	105. First parent/guardian language spoken most often at home	N	2	761	762
195	P1PLCBRTH	106. First parent/guardian country where born	N	1	763	763
196	P1AGEMV	107. First parent/guardian age when first moved to US	N	2	764	765
197	P1HISPAN	108. First parent/guardian of Spanish, Hispanic, or Latino origin	N	1	766	766
198	P1AMIND	109. First parent/guardian Race - American Indian or Alaska Native	N	1	767	767
199	P1ASIAN	109. First parent/guardian Race - Asian	N	1	768	768
200	P1BLACK	109. First parent/guardian Race - Black or African American	N	1	769	769
201	PIPACI	109. First parent/guardian Race - Native Hawaiian or other Pacific Islander	N	1	770	770
202	P1WHITE	109. First parent/guardian Race - White	N	1	771	771
203	P1HISPRM	109. First parent/guardian Race - Hispanic, race not reported	N	1	772	772
204	PIEDUC	110. First parent/guardian highest grade level completed	N	2	773	774

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
205	PIENRL	111. First parent/guardian attending school	N	1	775	775
206	P1EMPL	112. First parent/guardian employment status	N	1	776	776
207	P1HRSWK	113. First parent/guardian hours worked per week	N	2	777	778
208	P1LKWRK	114. First parent/guardian looking for work	N	2	779	780
209	P1MTHSWRK	115. First parent/guardian months worked	N	2	781	782
210	P1AGE	116. First parent/guardian age	N	2	783	784
211	P1AGEPAR	117. First parent/guardian age when became parent	N	2	785	786
212	P1AGEPARDK	117. First parent/guardian age when became parent (Don't know)	N	2	787	788
213	P2GUARD	118. Second parent/guardian	N	1	789	789
214	P2REL	119. Second parent/guardian relation to child	N	2	790	791
215	P2SEX	120. Second parent/guardian sex	N	2	792	793
216	P2MRSTA	121. Second parent/guardian marital status	N	2	794	795
217	P2BFGF	122. Second parent/guardian living with boyfriend/girlfriend	N	2	796	797
218	P2FRLNG	123. Second parent/guardian first language	N	2	798	799
219	P2SPEAK	124. Second parent/guardian language spoken most often at home	N	2	800	801
220	P2PLCBRTH	125. Second parent/guardian country where born	N	2	802	803
221	P2AGEMV	126. Second parent/guardian age when first moved to US	N	2	804	805
222	P2HISPAN	127. Second parent/guardian of Spanish, Hispanic, or Latino origin	N	2	806	807
223	P2AMIND	128. Second parent/guardian Race - American Indian or Alaska Native	N	2	808	809
224	P2ASIAN	128. Second parent/guardian Race - Asian	N	2	810	811
225	P2BLACK	128. Second parent/guardian Race - Black or African American	N	2	812	813
226	P2PACI	128. Second parent/guardian Race - Native Hawaiian or other Pacific Islander	N	2	814	815
227	P2WHITE	128. Second parent/guardian Race - White	N	2	816	817
228	P2HISPRM	128. Second parent/guardian race - Hispanic, race not reported	N	2	818	819
229	P2EDUC	129. Second parent/guardian highest grade level completed	N	2	820	821
230	P2ENRL	130. Second parent/Guardian attending school	N	2	822	823
231	P2EMPL	131. Second parent/guardian employment status	N	2	824	825
232	P2HRSWK	132. Second parent/guardian hours worked per week	N	2	826	827
233	P2LKWRK	133. Second parent/guardian looking for work	N	2	828	829
234	P2MTHSWRK	134. Second parent/guardian months worked	N	2	830	831
235	P2AGE	135. Second parent/guardian age	N	2	832	833
236	P2AGEPAR	136. Second parent/guardian age when became parent	N	2	834	835
237	P2AGEPARDK	136. Second parent/guardian age when became parent (Don't Know)	N	2	836	837
238	HWELFTAN	137. Received TANF in past 12 months	N	1	838	838
239	HWELFST	137. Received welfare or family assistance in past 12 months	N	1	839	839
240	HWIC	137. Received WIC in past 12 months	N	1	840	840
241	HFOODST	137. Received food stamps in past 12 months	N	1	841	841
242	HMEDICAID	137. Received Medicaid in past 12 months	N	1	842	842
243	HCHIP	137. Received CHIP in past 12 months	N	1	843	843
244	HSECN8	137. Received Section 8 in past 12 months	N	1	844	844
245	TTLHHINC	138. Total income	N	2	845	846
246	YRSADDR	139. Years at address	N	2	847	848
247	OWNRNTHB	140. Own/rent house	N	1	849	849
248	HVINTSPHO	141. Internet access on a cell phone	N	1	850	850
249	HVINTCOM	142. Internet access on a computer or tablet	N	1	851	851
250	USEINTRNT	143. How often use Internet	N	1	852	852
251	DISABLTYX	D-Child currently has disability	N	1	853	853
252	DISBLTY2X	D-Child has disability including autism, ADD and PDD	N	1	854	854
253	PAR1EDUC	D-Educational attainment of child's parent or guardian	N	1	855	855
254	PAR1EMPL	D-Work status of child's parent or guardian	N	1	856	856
255	PAR1FTFY	D-Parent 1 or Guardian 1 works full time	N	1	857	857
256	PAR1MARST	D-Parent 1 marital status	N	1	858	858
257	PAR1TYPE	D-Specific relationship of parent/guardian 1 to child	N	1	859	859
258	PAR2EDUC	D-Educational attainment of child's parent 2 or guardian 2	N	2	860	861
259	PAR2EMPL	D-Work status of child's parent 2 or guardian 2	N	2	862	863
260	PAR2FTFY	D-Parent 2 or Guardian 2 works full time	N	2	864	865
261	PAR2MARST	D-Parent 2 marital status	N	2	866	867
262	PAR2TYPE	D-Specific relationship of parent/guardian 2 to child	N	2	868	869
263	HHPARN16X	D-Parents in household including same sex parents/partners	N	1	870	870
264	HHPARN16_BRD	D-Parents or guardians in household including same sex parents/partners	N	1	871	871
265	NUMSIBSX	D-Number of child's siblings	N	1	872	872
266	FAMILY16X	D-Family type including same sex parents/partners	N	1	873	873
267	FAMILY16_BRD	D-Family type parent 2	N	1	874	874
268	HHUNDR6X	D-Number of household members younger than age 6	N	1	875	875
269	HHUNDR10X	D-Number of household members younger than age 10	N	1	876	876
270	HHUNDR16X	D-Number of household members younger than age 16	N	1	877	877
271	HHUNDR18X	D-Number of household members younger than age 18	N	1	878	878
272	HHUNID	D-Other household member, not identified	N	1	879	879

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
273	LANGUAGEX	D-English spoken most by parents including same sex partners	N	1	880	880
274	PARGRADEX	D-Parent/guardian highest education including same sex partners	N	1	881	881
275	RACEETHN	D-Race and ethnicity of child	N	1	882	882
276	RACEETH2	D-Detailed race and ethnicity of child	N	1	883	883
277	INTACC	D-Internet access	N	1	884	884
278	ANYCAREX	D-Child participates in any nonparental care or program arrangements	N	1	885	885
279	ANYCARE2X	D-Child has nonparental care at least once a week	N	1	886	886
280	CAREHOURX	D-Total hours a week child is in nonparental care	N	3	887	889
281	CPARRNEWX	D-Number of center-based programs at least once a week	N	1	890	890
282	MOSTHRSX	D-Care arrangement in which the child spends the most hours per week	N	2	891	892
283	NCARRNEWX	D-Number of nonrelative arrangements at least once a week	N	1	893	893
284	RCARRNEWX	D-Number of relative care arrangements at least once a week	N	1	894	894
285	CENREG	D-Census region where child lives	N	1	895	895
286	ZIP18PO2	D-Percent of families in zipcode with children <18 below the poverty line	N	1	896	896
287	ZIPBLHI2	D-Percent of persons in zipcode who were Black or Hispanic	N	1	897	897
288	ZIPLOCL	D-Zip code classification by community type	C	2	898	899
289	BLHISCNT	D-Number of persons in zipcode who were Black or Hispanic	N	6	900	905
290	FAM18POV	D-Number of families in zipcode w/related children <18 below the poverty line	N	4	906	909
291	PCT18POV	D-Percent of families in zipcode w/related children <18 below the poverty line	N	2	910	911
292	PCTBLHIS	D-Percent of persons in zipcode who were Black or Hispanic alone	N	2	912	913
293	REGION	D-Department of Education Region	N	1	914	914
294	RSTATE	D-Respondent's state	C	2	915	916
295	ZCTA	D-Respondent ZCTA (Zip Code Tabulation Area)	C	5	917	921
296	P005003	D-Inside urbanized areas, population count	N	6	922	927
297	P005004	D-Inside urban clusters, population count	N	5	928	932
298	P005005	D-Rural population count	N	5	933	937
299	P007001	D-Total population count	N	6	938	943
300	P007004	D-Black/African American alone population count	N	5	944	948
301	P007010	D-Hispanic or Latino population count	N	5	949	953
302	P090001	D-Total families in Zip Code	N	5	954	958
303	P090004	D-In poverty and married couples with children under 18	N	4	959	962
304	P090011	D-In poverty and headed by male, no wife, with children under 18	N	3	963	965
305	P090017	D-In poverty and headed by female, no husband, with children under 18	N	4	966	969
306	ENGLSPANX	D-Questionnaire in English or Spanish	N	1	970	970
307	AGE2015	D-Child's Age as of Dec 31, 2015	N	1	971	971
308	MODECOMP	D-Completed on Web or Paper	N	1	972	972
309	HHMAGE1	D-HH Member 1 Age	N	2	973	974
310	HHMAGE2	D-HH Member 2 Age	N	2	975	976
311	HHMAGE3	D-HH Member 3 Age	N	2	977	978
312	HHMAGE4	D-HH Member 4 Age	N	2	979	980
313	HHMAGE5	D-HH Member 5 Age	N	2	981	982
314	HHMAGE6	D-HH Member 6 Age	N	2	983	984
315	HHMAGE7	D-HH Member 7 Age	N	2	985	986
316	HHMAGE8	D-HH Member 8 Age	N	2	987	988
317	HHMAGE9	D-HH Member 9 Age	N	2	989	990
318	HHMSEX1	D-HH Member 1 Sex	N	2	991	992
319	HHMSEX2	D-HH Member 2 Sex	N	2	993	994
320	HHMSEX3	D-HH Member 3 Sex	N	2	995	996
321	HHMSEX4	D-HH Member 4 Sex	N	2	997	998
322	HHMSEX5	D-HH Member 5 Sex	N	2	999	1000
323	HHMSEX6	D-HH Member 6 Sex	N	2	1001	1002
324	HHMSEX7	D-HH Member 7 Sex	N	2	1003	1004
325	HHMSEX8	D-HH Member 8 Sex	N	2	1005	1006
326	HHMSEX9	D-HH Member 9 Sex	N	2	1007	1008
327	HHMENRL1	D-HH Member 1 Enrollment Status	N	2	1009	1010
328	HHMENRL2	D-HH Member 2 Enrollment Status	N	2	1011	1012
329	HHMENRL3	D-HH Member 3 Enrollment Status	N	2	1013	1014
330	HHMENRL4	D-HH Member 4 Enrollment Status	N	2	1015	1016
331	HHMENRL5	D-HH Member 5 Enrollment Status	N	2	1017	1018
332	HHMENRL6	D-HH Member 6 Enrollment Status	N	2	1019	1020
333	HHMENRL7	D-HH Member 7 Enrollment Status	N	2	1021	1022
334	HHMENRL8	D-HH Member 8 Enrollment Status	N	2	1023	1024
335	HHMENRL9	D-HH Member 9 Enrollment Status	N	2	1025	1026
336	HHMGRD1	D-HH Member 1 Grade Level	N	2	1027	1028
337	HHMGRD2	D-HH Member 2 Grade Level	N	2	1029	1030
338	HHMGRD3	D-HH Member 3 Grade Level	N	2	1031	1032
339	HHMGRD4	D-HH Member 4 Grade Level	N	2	1033	1034
340	HHMGRD5	D-HH Member 5 Grade Level	N	2	1035	1036

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
341	HHMGRD6	D-HH Member 6 Grade Level	N	2	1037	1038
342	HHMGRD7	D-HH Member 7 Grade Level	N	2	1039	1040
343	HHMGRD8	D-HH Member 8 Grade Level	N	2	1041	1042
344	HHMGRD9	D-HH Member 9 Grade Level	N	2	1043	1044
345	EPSU	PSU FOR TAYLOR SERIES VAR EST	N	4	1045	1048
346	ESTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	1049	1049
347	UPW	PERSON - LEVEL BASE WEIGHT	N	16	1050	1065
348	HBW	HOUSEHOLD-LEVEL BASE WEIGHT	N	16	1066	1081
349	SNIAF	SCREENER NON-INTERVIEW ADJUSTMENT FACTOR	N	16	1082	1097
350	HHW	FINAL HOUSEHOLD-LEVEL BASE WEIGHT	N	16	1098	1113
351	FEWT	FINAL INTV WEIGHT	N	16	1114	1129
352	FEWT1	FINAL INTV REPPLICATE WEIGHT, FEWT1	N	16	1130	1145
353	FEWT2	FINAL INTV REPPLICATE WEIGHT, FEWT2	N	16	1146	1161
354	FEWT3	FINAL INTV REPPLICATE WEIGHT, FEWT3	N	16	1162	1177
355	FEWT4	FINAL INTV REPPLICATE WEIGHT, FEWT4	N	16	1178	1193
356	FEWT5	FINAL INTV REPPLICATE WEIGHT, FEWT5	N	16	1194	1209
357	FEWT6	FINAL INTV REPPLICATE WEIGHT, FEWT6	N	16	1210	1225
358	FEWT7	FINAL INTV REPPLICATE WEIGHT, FEWT7	N	16	1226	1241
359	FEWT8	FINAL INTV REPPLICATE WEIGHT, FEWT8	N	16	1242	1257
360	FEWT9	FINAL INTV REPPLICATE WEIGHT, FEWT9	N	16	1258	1273
361	FEWT10	FINAL INTV REPPLICATE WEIGHT, FEWT10	N	16	1274	1289
362	FEWT11	FINAL INTV REPPLICATE WEIGHT, FEWT11	N	16	1290	1305
363	FEWT12	FINAL INTV REPPLICATE WEIGHT, FEWT12	N	16	1306	1321
364	FEWT13	FINAL INTV REPPLICATE WEIGHT, FEWT13	N	16	1322	1337
365	FEWT14	FINAL INTV REPPLICATE WEIGHT, FEWT14	N	16	1338	1353
366	FEWT15	FINAL INTV REPPLICATE WEIGHT, FEWT15	N	16	1354	1369
367	FEWT16	FINAL INTV REPPLICATE WEIGHT, FEWT16	N	16	1370	1385
368	FEWT17	FINAL INTV REPPLICATE WEIGHT, FEWT17	N	16	1386	1401
369	FEWT18	FINAL INTV REPPLICATE WEIGHT, FEWT18	N	16	1402	1417
370	FEWT19	FINAL INTV REPPLICATE WEIGHT, FEWT19	N	16	1418	1433
371	FEWT20	FINAL INTV REPPLICATE WEIGHT, FEWT20	N	16	1434	1449
372	FEWT21	FINAL INTV REPPLICATE WEIGHT, FEWT21	N	16	1450	1465
373	FEWT22	FINAL INTV REPPLICATE WEIGHT, FEWT22	N	16	1466	1481
374	FEWT23	FINAL INTV REPPLICATE WEIGHT, FEWT23	N	16	1482	1497
375	FEWT24	FINAL INTV REPPLICATE WEIGHT, FEWT24	N	16	1498	1513
376	FEWT25	FINAL INTV REPPLICATE WEIGHT, FEWT25	N	16	1514	1529
377	FEWT26	FINAL INTV REPPLICATE WEIGHT, FEWT26	N	16	1530	1545
378	FEWT27	FINAL INTV REPPLICATE WEIGHT, FEWT27	N	16	1546	1561
379	FEWT28	FINAL INTV REPPLICATE WEIGHT, FEWT28	N	16	1562	1577
380	FEWT29	FINAL INTV REPPLICATE WEIGHT, FEWT29	N	16	1578	1593
381	FEWT30	FINAL INTV REPPLICATE WEIGHT, FEWT30	N	16	1594	1609
382	FEWT31	FINAL INTV REPPLICATE WEIGHT, FEWT31	N	16	1610	1625
383	FEWT32	FINAL INTV REPPLICATE WEIGHT, FEWT32	N	16	1626	1641
384	FEWT33	FINAL INTV REPPLICATE WEIGHT, FEWT33	N	16	1642	1657
385	FEWT34	FINAL INTV REPPLICATE WEIGHT, FEWT34	N	16	1658	1673
386	FEWT35	FINAL INTV REPPLICATE WEIGHT, FEWT35	N	16	1674	1689
387	FEWT36	FINAL INTV REPPLICATE WEIGHT, FEWT36	N	16	1690	1705
388	FEWT37	FINAL INTV REPPLICATE WEIGHT, FEWT37	N	16	1706	1721
389	FEWT38	FINAL INTV REPPLICATE WEIGHT, FEWT38	N	16	1722	1737
390	FEWT39	FINAL INTV REPPLICATE WEIGHT, FEWT39	N	16	1738	1753
391	FEWT40	FINAL INTV REPPLICATE WEIGHT, FEWT40	N	16	1754	1769
392	FEWT41	FINAL INTV REPPLICATE WEIGHT, FEWT41	N	16	1770	1785
393	FEWT42	FINAL INTV REPPLICATE WEIGHT, FEWT42	N	16	1786	1801
394	FEWT43	FINAL INTV REPPLICATE WEIGHT, FEWT43	N	16	1802	1817
395	FEWT44	FINAL INTV REPPLICATE WEIGHT, FEWT44	N	16	1818	1833
396	FEWT45	FINAL INTV REPPLICATE WEIGHT, FEWT45	N	16	1834	1849
397	FEWT46	FINAL INTV REPPLICATE WEIGHT, FEWT46	N	16	1850	1865
398	FEWT47	FINAL INTV REPPLICATE WEIGHT, FEWT47	N	16	1866	1881
399	FEWT48	FINAL INTV REPPLICATE WEIGHT, FEWT48	N	16	1882	1897
400	FEWT49	FINAL INTV REPPLICATE WEIGHT, FEWT49	N	16	1898	1913
401	FEWT50	FINAL INTV REPPLICATE WEIGHT, FEWT50	N	16	1914	1929
402	FEWT51	FINAL INTV REPPLICATE WEIGHT, FEWT51	N	16	1930	1945
403	FEWT52	FINAL INTV REPPLICATE WEIGHT, FEWT52	N	16	1946	1961
404	FEWT53	FINAL INTV REPPLICATE WEIGHT, FEWT53	N	16	1962	1977
405	FEWT54	FINAL INTV REPPLICATE WEIGHT, FEWT54	N	16	1978	1993
406	FEWT55	FINAL INTV REPPLICATE WEIGHT, FEWT55	N	16	1994	2009
407	FEWT56	FINAL INTV REPPLICATE WEIGHT, FEWT56	N	16	2010	2025
408	FEWT57	FINAL INTV REPPLICATE WEIGHT, FEWT57	N	16	2026	2041

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
409	FEWT58	FINAL INTV REPLICATE WEIGHT, FEWT58	N	16	2042	2057
410	FEWT59	FINAL INTV REPLICATE WEIGHT, FEWT59	N	16	2058	2073
411	FEWT60	FINAL INTV REPLICATE WEIGHT, FEWT60	N	16	2074	2089
412	FEWT61	FINAL INTV REPLICATE WEIGHT, FEWT61	N	16	2090	2105
413	FEWT62	FINAL INTV REPLICATE WEIGHT, FEWT62	N	16	2106	2121
414	FEWT63	FINAL INTV REPLICATE WEIGHT, FEWT63	N	16	2122	2137
415	FEWT64	FINAL INTV REPLICATE WEIGHT, FEWT64	N	16	2138	2153
416	FEWT65	FINAL INTV REPLICATE WEIGHT, FEWT65	N	16	2154	2169
417	FEWT66	FINAL INTV REPLICATE WEIGHT, FEWT66	N	16	2170	2185
418	FEWT67	FINAL INTV REPLICATE WEIGHT, FEWT67	N	16	2186	2201
419	FEWT68	FINAL INTV REPLICATE WEIGHT, FEWT68	N	16	2202	2217
420	FEWT69	FINAL INTV REPLICATE WEIGHT, FEWT69	N	16	2218	2233
421	FEWT70	FINAL INTV REPLICATE WEIGHT, FEWT70	N	16	2234	2249
422	FEWT71	FINAL INTV REPLICATE WEIGHT, FEWT71	N	16	2250	2265
423	FEWT72	FINAL INTV REPLICATE WEIGHT, FEWT72	N	16	2266	2281
424	FEWT73	FINAL INTV REPLICATE WEIGHT, FEWT73	N	16	2282	2297
425	FEWT74	FINAL INTV REPLICATE WEIGHT, FEWT74	N	16	2298	2313
426	FEWT75	FINAL INTV REPLICATE WEIGHT, FEWT75	N	16	2314	2329
427	FEWT76	FINAL INTV REPLICATE WEIGHT, FEWT76	N	16	2330	2345
428	FEWT77	FINAL INTV REPLICATE WEIGHT, FEWT77	N	16	2346	2361
429	FEWT78	FINAL INTV REPLICATE WEIGHT, FEWT78	N	16	2362	2377
430	FEWT79	FINAL INTV REPLICATE WEIGHT, FEWT79	N	16	2378	2393
431	FEWT80	FINAL INTV REPLICATE WEIGHT, FEWT80	N	16	2394	2409
432	F_RCNOW	IMPUTATION FLAG FOR RCNOW	N	1	2410	2410
433	F_RCWEEK	IMPUTATION FLAG FOR RCWEEK	N	2	2411	2412
434	F_RCTYPE	IMPUTATION FLAG FOR RCTYPE	N	2	2413	2414
435	F_RCAGE	IMPUTATION FLAG FOR RCAGE	N	2	2415	2416
436	F_RCPLACE	IMPUTATION FLAG FOR RCPLACE	N	2	2417	2418
437	F_RC_DAYS	IMPUTATION FLAG FOR RC_DAYS	N	2	2419	2420
438	F_RCHRS	IMPUTATION FLAG FOR RCHRS	N	2	2421	2422
439	F_RCSTRTM	IMPUTATION FLAG FOR RCSTRTM	N	2	2423	2424
440	F_RCSTRTY	IMPUTATION FLAG FOR RCSTRTY	N	2	2425	2426
441	F_RCSPEAK	IMPUTATION FLAG FOR RCSPEAK	N	2	2427	2428
442	F_RCSKNFV	IMPUTATION FLAG FOR RCSKNFV	N	2	2429	2430
443	F_RCSKFV	IMPUTATION FLAG FOR RCSKFV	N	2	2431	2432
444	F_RCFEE	IMPUTATION FLAG FOR RCFEE	N	2	2433	2434
445	F_RCREL	IMPUTATION FLAG FOR RCREL	N	2	2435	2436
446	F_RCTANF	IMPUTATION FLAG FOR RCTANF	N	2	2437	2438
447	F_RCSSAC	IMPUTATION FLAG FOR RCSSAC	N	2	2439	2440
448	F_RCEMPL	IMPUTATION FLAG FOR RCEMPL	N	2	2441	2442
449	F_RCOOTHER	IMPUTATION FLAG FOR RCOOTHER	N	2	2443	2444
450	F_RCCOST	IMPUTATION FLAG FOR RCCOST	N	2	2445	2446
451	F_RCUNIT	IMPUTATION FLAG FOR RCUNIT	N	2	2447	2448
452	F_RCCSTHNX	IMPUTATION FLAG FOR RCCSTHNX	N	2	2449	2450
453	F_RCOOTHC	IMPUTATION FLAG FOR RCOOTHC	N	2	2451	2452
454	F_RCTLHR	IMPUTATION FLAG FOR RCTLHR	N	2	2453	2454
455	F_NCNOW	IMPUTATION FLAG FOR NCNOW	N	1	2455	2455
456	F_NCWEEK	IMPUTATION FLAG FOR NCWEEK	N	2	2456	2457
457	F_NCPLACE	IMPUTATION FLAG FOR NCPLACE	N	2	2458	2459
458	F_NCINHH	IMPUTATION FLAG FOR NCINHH	N	2	2460	2461
459	F_NCDAYS	IMPUTATION FLAG FOR NCDAYS	N	2	2462	2463
460	F_NCHRS	IMPUTATION FLAG FOR NCHRS	N	2	2464	2465
461	F_NCSTRTM	IMPUTATION FLAG FOR NCSTRTM	N	2	2466	2467
462	F_NCSTRTY	IMPUTATION FLAG FOR NCSTRTY	N	2	2468	2469
463	F_NCALKNE	IMPUTATION FLAG FOR NCALKNE	N	2	2470	2471
464	F_NCAGE	IMPUTATION FLAG FOR NCAGE	N	2	2472	2473
465	F_NCSPEAK	IMPUTATION FLAG FOR NCSPEAK	N	2	2474	2475
466	F_NCSKNFV	IMPUTATION FLAG FOR NCSKNFV	N	2	2476	2477
467	F_NCSKFV	IMPUTATION FLAG FOR NCSKFV	N	2	2478	2479
468	F_NCRCMDPT	IMPUTATION FLAG FOR NCRCMDPT	N	2	2480	2481
469	F_NCFEE	IMPUTATION FLAG FOR NCFEE	N	2	2482	2483
470	F_NCREL	IMPUTATION FLAG FOR NCREL	N	2	2484	2485
471	F_NCTANF	IMPUTATION FLAG FOR NCTANF	N	2	2486	2487
472	F_NCSSAC	IMPUTATION FLAG FOR NCSSAC	N	2	2488	2489
473	F_NCEMPL	IMPUTATION FLAG FOR NCEMPL	N	2	2490	2491
474	F_NCOOTHER	IMPUTATION FLAG FOR NCOOTHER	N	2	2492	2493
475	F_NCCOST	IMPUTATION FLAG FOR NCCOST	N	2	2494	2495
476	F_NCUNIT	IMPUTATION FLAG FOR NCUNIT	N	2	2496	2497

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
477	F_NCCSTHNX	IMPUTATION FLAG FOR NCCSTHNX	N	2	2498	2499
478	F_NCOTHC	IMPUTATION FLAG FOR NCOTHC	N	2	2500	2501
479	F_NCTLHR	IMPUTATION FLAG FOR NCTLHR	N	2	2502	2503
480	F_CPNNOWX	IMPUTATION FLAG FOR CPNNOWX	N	1	2504	2504
481	F_CWEEKX	IMPUTATION FLAG FOR CPWEEKX	N	2	2505	2506
482	F_CPTYPE	IMPUTATION FLAG FOR CPTYPE	N	2	2507	2508
483	F_CPHADST	IMPUTATION FLAG FOR CPHEADST	N	2	2509	2510
484	F_CPLACEX	IMPUTATION FLAG FOR CPPLACEX	N	2	2511	2512
485	F_CPSRLG	IMPUTATION FLAG FOR CPSRLG	N	2	2513	2514
486	F_CWORK	IMPUTATION FLAG FOR CPWORK	N	2	2515	2516
487	F_CPDAYS	IMPUTATION FLAG FOR CPDAYS	N	2	2517	2518
488	F_CPHRS	IMPUTATION FLAG FOR CPHRS	N	2	2519	2520
489	F_CPSRTM	IMPUTATION FLAG FOR CPSTRTM	N	2	2521	2522
490	F_CPSRTY	IMPUTATION FLAG FOR CPSTRTY	N	2	2523	2524
491	F_CPSPEAK	IMPUTATION FLAG FOR CPSPEAK	N	2	2525	2526
492	F_CPRCMDPT	IMPUTATION FLAG FOR CPRCMDPT	N	2	2527	2528
493	F_CPTEST	IMPUTATION FLAG FOR CPTEST	N	2	2529	2530
494	F_CPHYSE	IMPUTATION FLAG FOR CPHYSE	N	2	2531	2532
495	F_CPDENTA	IMPUTATION FLAG FOR CPDENTA	N	2	2533	2534
496	F_CPDISAB	IMPUTATION FLAG FOR CPDISAB	N	2	2535	2536
497	F_CPSKNFV	IMPUTATION FLAG FOR CPSKNFV	N	2	2537	2538
498	F_CPSKFV	IMPUTATION FLAG FOR CPSKFV	N	2	2539	2540
499	F_CPFEE	IMPUTATION FLAG FOR CPFEE	N	2	2541	2542
500	F_CPREL	IMPUTATION FLAG FOR CPREL	N	2	2543	2544
501	F_CPTANF	IMPUTATION FLAG FOR CPTANF	N	2	2545	2546
502	F_CPSAC	IMPUTATION FLAG FOR CPSSAC	N	2	2547	2548
503	F_CPEMPL	IMPUTATION FLAG FOR CPEMPL	N	2	2549	2550
504	F_CPOOTHER	IMPUTATION FLAG FOR CPOOTHER	N	2	2551	2552
505	F_CPCOST	IMPUTATION FLAG FOR CPCOST	N	2	2553	2554
506	F_CPUNIT	IMPUTATION FLAG FOR CPUNIT	N	2	2555	2556
507	F_CPCSTHNX	IMPUTATION FLAG FOR CPCSTHNX	N	2	2557	2558
508	F_CPOTHC	IMPUTATION FLAG FOR CPOTHC	N	2	2559	2560
509	F_CPTLHR	IMPUTATION FLAG FOR CPTLHR	N	2	2561	2562
510	F_PCEVRHDX	IMPUTATION FLAG FOR PCEVRHDX	N	1	2563	2563
511	F_MAINRESN	IMPUTATION FLAG FOR MAINRESN	N	1	2564	2564
512	F_PPCHOIC	IMPUTATION FLAG FOR PPCHOIC	N	1	2565	2565
513	F_PPDIFFCLT	IMPUTATION FLAG FOR PPDIFFCLT	N	1	2566	2566
514	F_WHYDIFCLT	IMPUTATION FLAG FOR WHYDIFCLT	N	2	2567	2568
515	F_DCLOA	IMPUTATION FLAG FOR DCLOA	N	2	2569	2570
516	F_DCOST	IMPUTATION FLAG FOR DCOST	N	2	2571	2572
517	F_DRELY	IMPUTATION FLAG FOR DRELY	N	2	2573	2574
518	F_DLERN	IMPUTATION FLAG FOR DLERN	N	2	2575	2576
519	F_DCHIL	IMPUTATION FLAG FOR DCHIL	N	2	2577	2578
520	F_DHROP	IMPUTATION FLAG FOR DHROP	N	2	2579	2580
521	F_DNBGRP	IMPUTATION FLAG FOR DNBGRP	N	2	2581	2582
522	F_DRTWEB	IMPUTATION FLAG FOR DRTWEB	N	2	2583	2584
523	F_DRECFAM	IMPUTATION FLAG FOR DRECFAM	N	2	2585	2586
524	F_DRELOR	IMPUTATION FLAG FOR DRELOR	N	2	2587	2588
525	F_HABOOKS	IMPUTATION FLAG FOR HABOOKS	N	1	2589	2589
526	F_FOREADTOX	IMPUTATION FLAG FOR FOREADTOX	N	1	2590	2590
527	F_FORDDAYX	IMPUTATION FLAG FOR FORDDAYX	N	2	2591	2592
528	F_FOSTORYX	IMPUTATION FLAG FOR FOSTORYX	N	1	2593	2593
529	F_FOWORDSX	IMPUTATION FLAG FOR FOWORDSX	N	1	2594	2594
530	F_FOSANG	IMPUTATION FLAG FOR FOSANG	N	1	2595	2595
531	F_FOCRAFTSX	IMPUTATION FLAG FOR FOCRAFTSX	N	1	2596	2596
532	F_FODINNERX	IMPUTATION FLAG FOR FODINNERX	N	1	2597	2597
533	F_FOLIBRAY	IMPUTATION FLAG FOR FOLIBRAY	N	1	2598	2598
534	F_FOBOOKST	IMPUTATION FLAG FOR FOBOOKST	N	1	2599	2599
535	F_DPIAGE	IMPUTATION FLAG FOR DPIAGE	N	1	2600	2600
536	F_DPCOLOR	IMPUTATION FLAG FOR DPCOLOR	N	2	2601	2602
537	F_DPLETTER	IMPUTATION FLAG FOR DPLETTER	N	2	2603	2604
538	F_DPCOUNT	IMPUTATION FLAG FOR DPCOUNT	N	2	2605	2606
539	F_Dpname	IMPUTATION FLAG FOR DPNAME	N	2	2607	2608
540	F_HAPRETRD	IMPUTATION FLAG FOR HAPRETRD	N	2	2609	2610
541	F_HAWORDSX	IMPUTATION FLAG FOR HAWORDSX	N	2	2611	2612
542	F_HACONECTX	IMPUTATION FLAG FOR HACONECTX	N	2	2613	2614
543	F_HDHEALTH	IMPUTATION FLAG FOR HDHEALTH	N	1	2615	2615
544	F_HDADDX	IMPUTATION FLAG FOR HDADDX	N	1	2616	2616

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
545	F_HDINTDIS	IMPUTATION FLAG FOR HDINTDIS	N	1	2617	2617
546	F_HDSPEECHX	IMPUTATION FLAG FOR HDSPEECHX	N	1	2618	2618
547	F_HDDISTRBX	IMPUTATION FLAG FOR HDDISTRBX	N	1	2619	2619
548	F_HDDEAFIMX	IMPUTATION FLAG FOR HDDEAFIMX	N	1	2620	2620
549	F_HDBLINDX	IMPUTATION FLAG FOR HDBLINDX	N	1	2621	2621
550	F_HDORTHOX	IMPUTATION FLAG FOR HDORTHOX	N	1	2622	2622
551	F_HDAUTISMX	IMPUTATION FLAG FOR HDAUTISMX	N	1	2623	2623
552	F_HDPDDX	IMPUTATION FLAG FOR HDPDDX	N	1	2624	2624
553	F_HDLEARNX	IMPUTATION FLAG FOR HDLEARNX	N	1	2625	2625
554	F_HDDELAYX	IMPUTATION FLAG FOR HDDELAYX	N	1	2626	2626
555	F_HDTRBRAIN	IMPUTATION FLAG FOR HDTRBRAIN	N	1	2627	2627
556	F_HDOTHERX	IMPUTATION FLAG FOR HDOTHERX	N	1	2628	2628
557	F_HDDLYRSK	IMPUTATION FLAG FOR HDDLYRSK	N	1	2629	2629
558	F_HDRECSER	IMPUTATION FLAG FOR HDRECSER	N	2	2630	2631
559	F_HDSCHLX	IMPUTATION FLAG FOR HDSCHLX	N	2	2632	2633
560	F_HDGOVTX	IMPUTATION FLAG FOR HDGOVTX	N	2	2634	2635
561	F_HDDOCTORX	IMPUTATION FLAG FOR HDDOCTORX	N	2	2636	2637
562	F_HDPRISCH	IMPUTATION FLAG FOR HDPRISCH	N	2	2638	2639
563	F_HDIEPX	IMPUTATION FLAG FOR HDIEPX	N	2	2640	2641
564	F_HDDEVIEPX	IMPUTATION FLAG FOR HDDEVIEPX	N	2	2642	2643
565	F_HDCOMMUX	IMPUTATION FLAG FOR HDCOMMUX	N	2	2644	2645
566	F_HDTCHR	IMPUTATION FLAG FOR HDTCHR	N	2	2646	2647
567	F_HDACCOMX	IMPUTATION FLAG FOR HDACCOMX	N	2	2648	2649
568	F_HDCOMMITX	IMPUTATION FLAG FOR HDCOMMITX	N	2	2650	2651
569	F_HDSPCLED	IMPUTATION FLAG FOR HDSPCLED	N	2	2652	2653
570	F_HDLEARN	IMPUTATION FLAG FOR HDLEARN	N	2	2654	2655
571	F_HDISPLAY	IMPUTATION FLAG FOR HDPLAY	N	2	2656	2657
572	F_HDOUT	IMPUTATION FLAG FOR HDOUT	N	2	2658	2659
573	F_HDFRNDS	IMPUTATION FLAG FOR HDFRNDS	N	2	2660	2661
574	F_CDOBMM	IMPUTATION FLAG FOR CDOBMM	N	1	2662	2662
575	F_CDOBYYY	IMPUTATION FLAG FOR CDOBYYY	N	1	2663	2663
576	F_CPLCBRTH	IMPUTATION FLAG FOR CPLCBRTH	N	1	2664	2664
577	F_CMOVEAGE	IMPUTATION FLAG FOR CMOVEAGE	N	2	2665	2666
578	F_CHISPA	IMPUTATION FLAG FOR CHISPA	N	1	2667	2667
579	F_CAMIND	IMPUTATION FLAG FOR CAMIND	N	1	2668	2668
580	F_CASIAN	IMPUTATION FLAG FOR CASIAN	N	1	2669	2669
581	F_CBLACK	IMPUTATION FLAG FOR CBLACK	N	1	2670	2670
582	F_CPACI	IMPUTATION FLAG FOR CPACI	N	1	2671	2671
583	F_CHISPRM	IMPUTATION FLAG FOR CHISPRM	N	1	2672	2672
584	F_CWHITE	IMPUTATION FLAG FOR CWHITE	N	1	2673	2673
585	F_CSEX	IMPUTATION FLAG FOR CSEX	N	1	2674	2674
586	F_CLIVYN	IMPUTATION FLAG FOR CLIVYN	N	1	2675	2675
587	F_CLIVELSWX	IMPUTATION FLAG FOR CLIVELSWX	N	2	2676	2677
588	F_CSPEAKX	IMPUTATION FLAG FOR CSPEAKX	N	1	2678	2678
589	F_CENGLPRG	IMPUTATION FLAG FOR CENGLPRG	N	2	2679	2680
590	F_HHTOTALXX	IMPUTATION FLAG FOR HHTOTALXX	N	1	2681	2681
591	F_HHBROSX	IMPUTATION FLAG FOR HHBROSX	N	1	2682	2682
592	F_HHSISSX	IMPUTATION FLAG FOR HHSISSX	N	1	2683	2683
593	F_HHMOM	IMPUTATION FLAG FOR HHMOM	N	1	2684	2684
594	F_HHDAD	IMPUTATION FLAG FOR HHDAD	N	1	2685	2685
595	F_HHAUNTSX	IMPUTATION FLAG FOR HHAUNTSX	N	1	2686	2686
596	F_HHUNCLSX	IMPUTATION FLAG FOR HHUNCLSX	N	1	2687	2687
597	F_HHGMASX	IMPUTATION FLAG FOR HHGMASX	N	1	2688	2688
598	F_HHGPASX	IMPUTATION FLAG FOR HHGPASX	N	1	2689	2689
599	F_HHCSNSX	IMPUTATION FLAG FOR HHCSNSX	N	1	2690	2690
600	F_HHPRTNRSX	IMPUTATION FLAG FOR HHPRTNRSX	N	1	2691	2691
601	F_HHORELSX	IMPUTATION FLAG FOR HHORELSX	N	1	2692	2692
602	F_HHONRELX	IMPUTATION FLAG FOR HHONRELX	N	1	2693	2693
603	F_RELATION	IMPUTATION FLAG FOR RELATION	N	1	2694	2694
604	F_HHENGLISH	IMPUTATION FLAG FOR HHENGLISH	N	1	2695	2695
605	F_HHSPANISH	IMPUTATION FLAG FOR HHSPANISH	N	1	2696	2696
606	F_HHFRENCH	IMPUTATION FLAG FOR HHFRENCH	N	1	2697	2697
607	F_HHCHINESE	IMPUTATION FLAG FOR HHCHINESE	N	1	2698	2698
608	F_HHOTHLANG	IMPUTATION FLAG FOR HHOTHLANG	N	1	2699	2699
609	F_P1REL	IMPUTATION FLAG FOR P1REL	N	1	2700	2700
610	F_P1SEX	IMPUTATION FLAG FOR P1SEX	N	1	2701	2701
611	F_P1MRSTA	IMPUTATION FLAG FOR P1MRSTA	N	1	2702	2702
612	F_P1BFGF	IMPUTATION FLAG FOR P1BFGF	N	2	2703	2704

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
613	F_P1FRLNG	IMPUTATION FLAG FOR P1FRLNG	N	1	2705	2705
614	F_P1SPEAK	IMPUTATION FLAG FOR P1SPEAK	N	2	2706	2707
615	F_P1PLCBRTH	IMPUTATION FLAG FOR P1PLCBRTH	N	1	2708	2708
616	F_P1AGEMV	IMPUTATION FLAG FOR P1AGEMV	N	2	2709	2710
617	F_P1HISPAN	IMPUTATION FLAG FOR P1HISPAN	N	1	2711	2711
618	F_P1AMIND	IMPUTATION FLAG FOR P1AMIND	N	1	2712	2712
619	F_P1ASIAN	IMPUTATION FLAG FOR P1ASIAN	N	1	2713	2713
620	F_P1BLACK	IMPUTATION FLAG FOR P1BLACK	N	1	2714	2714
621	F_P1PACI	IMPUTATION FLAG FOR P1PACI	N	1	2715	2715
622	F_P1WHITE	IMPUTATION FLAG FOR P1WHITE	N	1	2716	2716
623	F_P1HISPRM	IMPUTATION FLAG FOR P1HISPRM	N	1	2717	2717
624	F_P1EDUC	IMPUTATION FLAG FOR P1EDUC	N	1	2718	2718
625	F_P1ENRL	IMPUTATION FLAG FOR P1ENRL	N	1	2719	2719
626	F_P1EMPL	IMPUTATION FLAG FOR P1EMPL	N	1	2720	2720
627	F_P1HRSWK	IMPUTATION FLAG FOR P1HRSWK	N	2	2721	2722
628	F_P1LKWRK	IMPUTATION FLAG FOR P1LKWRK	N	2	2723	2724
629	F_P1MTHSWRK	IMPUTATION FLAG FOR P1MTHSWRK	N	1	2725	2725
630	F_P1AGE	IMPUTATION FLAG FOR P1AGE	N	1	2726	2726
631	F_P1AGEPAR	IMPUTATION FLAG FOR P1AGEPAR	N	2	2727	2728
632	F_P1AGEPARDK	IMPUTATION FLAG FOR P1AGEPARDK	N	2	2729	2730
633	F_P2GUARD	IMPUTATION FLAG FOR P2GUARD	N	1	2731	2731
634	F_P2REL	IMPUTATION FLAG FOR P2REL	N	2	2732	2733
635	F_P2SEX	IMPUTATION FLAG FOR P2SEX	N	2	2734	2735
636	F_P2MRSTA	IMPUTATION FLAG FOR P2MRSTA	N	2	2736	2737
637	F_P2BFGF	IMPUTATION FLAG FOR P2BFGF	N	2	2738	2739
638	F_P2FRLNG	IMPUTATION FLAG FOR P2FRLNG	N	2	2740	2741
639	F_P2SPEAK	IMPUTATION FLAG FOR P2SPEAK	N	2	2742	2743
640	F_P2PLCBRTH	IMPUTATION FLAG FOR P2PLCBRTH	N	2	2744	2745
641	F_P2AGEMV	IMPUTATION FLAG FOR P2AGEMV	N	2	2746	2747
642	F_P2HISPAN	IMPUTATION FLAG FOR P2HISPAN	N	2	2748	2749
643	F_P2AMIND	IMPUTATION FLAG FOR P2AMIND	N	2	2750	2751
644	F_P2ASIAN	IMPUTATION FLAG FOR P2ASIAN	N	2	2752	2753
645	F_P2BLACK	IMPUTATION FLAG FOR P2BLACK	N	2	2754	2755
646	F_P2PACI	IMPUTATION FLAG FOR P2PACI	N	2	2756	2757
647	F_P2WHITE	IMPUTATION FLAG FOR P2WHITE	N	2	2758	2759
648	F_P2HISPRM	IMPUTATION FLAG FOR P2HISPRM	N	2	2760	2761
649	F_P2EDUC	IMPUTATION FLAG FOR P2EDUC	N	2	2762	2763
650	F_P2ENRL	IMPUTATION FLAG FOR P2ENRL	N	2	2764	2765
651	F_P2EMPL	IMPUTATION FLAG FOR P2EMPL	N	2	2766	2767
652	F_P2HRSWK	IMPUTATION FLAG FOR P2HRSWK	N	2	2768	2769
653	F_P2LKWRK	IMPUTATION FLAG FOR P2LKWRK	N	2	2770	2771
654	F_P2MTHSWRK	IMPUTATION FLAG FOR P2MTHSWRK	N	2	2772	2773
655	F_P2AGE	IMPUTATION FLAG FOR P2AGE	N	2	2774	2775
656	F_P2AGEPAR	IMPUTATION FLAG FOR P2AGEPAR	N	2	2776	2777
657	F_P2AGEPARDK	IMPUTATION FLAG FOR P2AGEPARDK	N	2	2778	2779
658	F_HWELFTAN	IMPUTATION FLAG FOR HWELFTAN	N	1	2780	2780
659	F_HWELFST	IMPUTATION FLAG FOR HWELFST	N	1	2781	2781
660	F_HWIC	IMPUTATION FLAG FOR HWIC	N	1	2782	2782
661	F_HFOODST	IMPUTATION FLAG FOR HFOODST	N	1	2783	2783
662	F_HMEDICAID	IMPUTATION FLAG FOR HMEDICAID	N	1	2784	2784
663	F_HCHIP	IMPUTATION FLAG FOR HCHIP	N	1	2785	2785
664	F_HSECN8	IMPUTATION FLAG FOR HSECN8	N	1	2786	2786
665	F_TTLHHINC	IMPUTATION FLAG FOR TTLHHINC	N	1	2787	2787
666	F_YRSADDR	IMPUTATION FLAG FOR YRSADDR	N	1	2788	2788
667	F_OWNRNTHB	IMPUTATION FLAG FOR OWNRNTHB	N	1	2789	2789
668	F_HVINTSPHO	IMPUTATION FLAG FOR HVINTSPHO	N	1	2790	2790
669	F_HVINTCOM	IMPUTATION FLAG FOR HVINTCOM	N	1	2791	2791
670	F_USEINTRNT	IMPUTATION FLAG FOR USEINTRNT	N	1	2792	2792
671	F_HHUNID	IMPUTATION FLAG FOR HHUNID	N	1	2793	2793
672	F_ZCTA	IMPUTATION FLAG FOR ZCTA	N	1	2794	2794

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation Survey of the 2016 National Household Education Surveys

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASMIN	Unique child identifier	C	11	1	11
2	RCVDATE	Survey Date	C	8	12	19
3	PATH	D-Questionnaire path	C	1	20	20
4	QTYPE	D-Survey Path	N	1	21	21
5	SID	NCES School ID	C	12	22	33
6	GRADE	E1. Grade attending	N	2	34	35
7	SCPUBPRI	E2. Type of school	N	2	36	37
8	DISTASSI	E3. District-assigned school	N	2	38	39
9	SCHRTSCHL	E4. Charter school	N	2	40	41
10	SNEIGHBRX	E5. Move to attend school	N	2	42	43
11	SPUBCHOIX	E6. Choice of public school	N	2	44	45
12	SCONSIDR	E7. Other schools considered	N	2	46	47
13	SPERFORM	E8. Seek information on school performance	N	2	48	49
14	S1STCHOI	E9. First choice school	N	2	50	51
15	SSAMSC	E10. Same school since beginning of school year	N	2	52	53
16	SMVMTH	E11. Month started current school	N	2	54	55
17	SEENJOY	E12. Child enjoyment of school	N	2	56	57
18	SEGRADES	E13. Child's grades	N	2	58	59
19	SEADPLCXX	E14. Advanced placement enrollment	N	2	60	61
20	SEBEHAVX	E15. Times contacted about behavior problems	N	2	62	63
21	SE SCHWRK	E15. Times contacted about problems with school work	N	2	64	65
22	SEGBEHAV	E15. Times contacted about very good behavior	N	2	66	67
23	SEGWORK	E15. Times contacted about very good school work	N	2	68	69
24	SEABSNT	E16. Days absent	N	3	70	72
25	SEREPEAT	E17. Grades repeated	N	2	73	74
26	SEREPTK	E18. Which grades repeated -K	N	2	75	76
27	SEREPT1	E18. Which grades repeated -1	N	2	77	78
28	SEREPT2	E18. Which grades repeated -2	N	2	79	80
29	SEREPT3	E18. Which grades repeated -3	N	2	81	82
30	SEREPT4	E18. Which grades repeated -4	N	2	83	84
31	SEREPT5	E18. Which grades repeated -5	N	2	85	86
32	SEREPT6	E18. Which grades repeated -6	N	2	87	88
33	SEREPT7	E18. Which grades repeated -7	N	2	89	90
34	SEREPT8	E18. Which grades repeated -8	N	2	91	92
35	SEREPT9	E18. Which grades repeated -9	N	2	93	94
36	SEREPT10	E18. Which grades repeated -10	N	2	95	96
37	SEREPT11	E18. Which grades repeated -11	N	2	97	98
38	SEREPT12	E18. Which grades repeated -12	N	2	99	100
39	SESUSOUT	E19. Out of school suspension	N	2	101	102
40	SESUSPIN	E19. In school suspension	N	2	103	104
41	SEEXPTEL	E19. Expelled	N	2	105	106
42	SEFUTUREX	E20. Expectations for child's future education	N	2	107	108
43	SEGRADEQ	E21. Description of school work	N	2	109	110
44	SNETCRSX	E22. Internet instruction	N	2	111	112
45	SPBSCH	E23. Internet instruction provided by - local public school	N	2	113	114
46	SSTATE	E23. Internet instruction provided by - state	N	2	115	116
47	SCHRTR	E23. Internet instruction provided by - charter school	N	2	117	118
48	SAPBSCH	E23. Internet instruction provided by - other public school	N	2	119	120
49	SPRIVSCH	E23. Internet instruction provided by - private school	N	2	121	122
50	SUNIVSCH	E23. Internet instruction provided by - college	N	2	123	124
51	SOTHSCHE	E23. Internet instruction provided by - other	N	2	125	126
52	SOTHSCOS	E23. Internet instruction, other specify	C	80	127	206
53	SINSTFEE	E24. Fee for instruction	N	2	207	208
54	HOMESCHLX	E25. Homeschooled for some classes or subjects	N	2	209	210
55	HMSCHARR	E26. How much homeschooling	N	2	211	212
56	FSSPORTX	E30. Attend a school event	N	2	213	214
57	FSVOL	E30. Serve as a volunteer	N	2	215	216
58	FSMTNG	E30. Attend a school meeting	N	2	217	218
59	FSPTMTNG	E30. Attend a parent-teacher organization meeting	N	2	219	220
60	FSATCNFN	E30. Attend parent-teacher conference	N	2	221	222
61	FSFUNDRS	E30. Participate in fundraising	N	2	223	224
62	FSCOMMTE	E30. Serve on school committee	N	2	225	226
63	FSCOUNSLR	E30. Meet with guidance counselor	N	2	227	228
64	FSFREQ	E31. Times participated in school meetings	N	2	229	230
65	FSNOTESX	E32. Receive notes or emails	N	2	231	232
66	FSMEMO	E32. Receive newsletters	N	2	233	234
67	FSPHONCHX	E32. Receive phone calls	N	2	235	236
68	FSSPPERF	E33. School provides child progress between report cards	N	2	237	238
69	FSSPHW	E33. School provides information on homework help	N	2	239	240
70	FSSPCOUR	E33. School provides information on class placement	N	2	241	242
71	FSSPROLE	E33. School provides information on your expected role	N	2	243	244
72	FSSPCOLL	E33. School provides information on college	N	2	245	246
73	FCSCHOOL	E34. Satisfaction with schools	N	2	247	248
74	FCTEACHR	E34. Satisfaction with teachers	N	2	249	250
75	FCSTDS	E34. Satisfaction with academic standards	N	2	251	252
76	FCORDER	E34. Satisfaction with discipline	N	2	253	254

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
77	FCSUPPRT	E34. Satisfaction with school staff/parent interaction	N	2	255	256
78	FHOME	E35. Time spent doing homework	N	2	257	258
79	FHWKHSRS	E36. Hours spent doing homework	N	2	259	260
80	FHAMOUNT	E37. Adult's feelings about amount of homework assigned	N	2	261	262
81	FHCAMT	E38. Child's feelings about amount of homework	N	2	263	264
82	FPLACE	E39. Place at home to do homework	N	2	265	266
83	FHCHECKX	E40. Check for homework completion	N	2	267	268
84	FHELP	E41. Days help with homework	N	2	269	270
85	HSHOX	H1. Person providing homeschool instruction	N	2	271	272
86	HSHOOSX	H1. Person providing homeschool instruction (other, specify)	C	31	273	303
87	HSTUTOR	H2. Homeschool instruction by tutor	N	2	304	305
88	HSCOOP	H3. Homeschool instruction by homeschool group	N	2	306	307
89	HSCOLL	H4. Homeschool instruction at public or private school or university	N	2	308	309
90	HSPUBLIC	H5. Homeschool type of school - Public	N	2	310	311
91	HSPRIVATE	H5. Homeschool type of school - Private	N	2	312	313
92	HSCOLLEGE	H5. Homeschool type of school - College	N	2	314	315
93	HSSCHR	E27/H6. Hours spent in public or private school	N	2	316	317
94	GRADEEQ	H7. Homeschool grade - equivalent K-12	N	2	318	319
95	HSDAYS	H8. Days a week homeschooled	N	2	320	321
96	HSHOURS	H8. Hours a week homeschooled	N	2	322	323
97	HSKACTIV	H9. Participated in activities while homeschooled	N	2	324	325
98	HSSTYLY	H10. Homeschool teaching style	N	2	326	327
99	HSCLIBRX	H11. Homeschool curriculum source - library	N	2	328	329
100	HSCHSPUBX	H11. Homeschool curriculum source - homeschool catalog	N	2	330	331
101	HSCEDPUBX	H11. Homeschool curriculum source - educational publisher	N	2	332	333
102	HSCORGX	H11. Homeschool curriculum source - homeschooling organization	N	2	334	335
103	HSCCHURX	H11. Homeschool curriculum source - church	N	2	336	337
104	HSCPUBLX	H11. Homeschool curriculum source - public school	N	2	338	339
105	HSCPRIVX	H11. Homeschool curriculum source - private school	N	2	340	341
106	HSCRELX	H11. Homeschool curriculum source - bookstore	N	2	342	343
107	HSCNETX	H11. Homeschool curriculum source - websites	N	2	344	345
108	HSCOTH	H11. Homeschool curriculum source - other source	N	2	346	347
109	HSCVTLCR	H11. Homeschool curriculum source - virtual school or curriculum	N	2	348	349
110	HSCOTHOS	H11. Homeschool curriculum source - other source, specify	C	57	350	406
111	HSCOURS	H12. Family member courses taken for homeschool instruction	N	2	407	408
112	HSINTNET	H13. Internet homeschool instruction	N	2	409	410
113	HSINTPUB	H14. Homeschool instruction provided by - local public school	N	2	411	412
114	HSINTST	H14. Homeschool instruction provided by - state	N	2	413	414
115	HSINTCH	H14. Homeschool instruction provided by - charter school	N	2	415	416
116	HSINTAPB	H14. Homeschool instruction provided by - another public school	N	2	417	418
117	HSINTPRI	H14. Homeschool instruction provided by - private school	N	2	419	420
118	HSINTCOL	H14. Homeschool instruction provided by - college	N	2	421	422
119	HSINTOH	H14. Homeschool instruction provided by - someplace else	N	2	423	424
120	HSINTOTHOS	H14. Homeschool instruction provided by - (other, specify)	C	73	425	497
121	HSFEE	H15. Fee charged for homeschool instruction	N	2	498	499
122	HOMEKX	H16. Homeschooled in Kindergarten	N	2	500	501
123	HOME1	H16. Homeschooled in first grade	N	2	502	503
124	HOME2	H16. Homeschooled in second grade	N	2	504	505
125	HOME3	H16. Homeschooled in third grade	N	2	506	507
126	HOME4	H16. Homeschooled in fourth grade	N	2	508	509
127	HOME5	H16. Homeschooled in fifth grade	N	2	510	511
128	HOME6	H16. Homeschooled in sixth grade	N	2	512	513
129	HOME7	H16. Homeschooled in seventh grade	N	2	514	515
130	HOME8	H16. Homeschooled in eighth grade	N	2	516	517
131	HOME9	H16. Homeschooled in ninth grade	N	2	518	519
132	HOME10	H16. Homeschooled in tenth grade	N	2	520	521
133	HOME11	H16. Homeschooled in eleventh grade	N	2	522	523
134	HOME12	H16. Homeschooled in twelfth grade	N	2	524	525
135	HSASAFETYX	E28/H17. Why homeschool - peer pressure	N	2	526	527
136	HSDISSATX	E28/H17. Why homeschool - dissatisfied with instruction	N	2	528	529
137	HSRELGON	E28/H17. Why homeschool - religious instruction	N	2	530	531
138	HSMORAL	E28/H17. Why homeschool - moral instruction	N	2	532	533
139	HSDISABLX	E28/H17. Why homeschool - health problem	N	2	534	535
140	HSILLX	E28/H17. Why homeschool - temporary illness	N	2	536	537
141	HSSPCLNDX	E28/H17. Why homeschool - special needs	N	2	538	539
142	HSALTX	E28/H17. Why homeschool - nontraditional education	N	2	540	541
143	HSOTHERX	E28/H17. Why homeschool - other	N	2	542	543
144	HSOTHERXOS	E28/H17. Why homeschool - specify	C	92	544	635
145	HSMOSTX	E29/H18. Why homeschool - Most important reason	C	2	636	637
146	HSFUTUREX	H19. Expectations for child's homeschool education	N	2	638	639
147	HSART	H20. Homeschool subject areas taught - Art	N	2	640	641
148	HSMUSIC	H20. Homeschool subject areas taught - Music	N	2	642	643
149	HSARITH	H20. Homeschool subject areas taught - Arithmetic	N	2	644	645
150	HSALG1	H20. Homeschool subject areas taught - Algebra	N	2	646	647
151	HSALG2	H20. Homeschool subject areas taught - Algebra II	N	2	648	649
152	HSGEOM	H20. Homeschool subject areas taught - Geometry	N	2	650	651

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
153	HSCALC	H20. Homeschool subject areas taught - Calculus	N	2	652	653
154	HSPROB	H20. Homeschool subject areas taught - Probability	N	2	654	655
155	HSSCIEN	H20. Homeschool subject areas taught - Scientific inquiry	N	2	656	657
156	HSGEOL	H20. Homeschool subject areas taught - Earth science	N	2	658	659
157	HSBIOL	H20. Homeschool subject areas taught - Biology	N	2	660	661
158	HSCHEM	H20. Homeschool subject areas taught - Chemistry	N	2	662	663
159	HSGEOG	H20. Homeschool subject areas taught - Geography	N	2	664	665
160	HSREAD	H20. Homeschool subject areas taught - Reading	N	2	666	667
161	HSSPELL	H20. Homeschool subject areas taught - Spelling	N	2	668	669
162	HSENGL	H20. Homeschool subject areas taught - English	N	2	670	671
163	HSCOMSCI	H20. Homeschool subject areas taught - Computer science	N	2	672	673
164	HSHIST	H20. Homeschool subject areas taught - Social studies	N	2	674	675
165	HSFOLANG	H20. Homeschool subject areas taught - Foreign language	N	2	676	677
166	HSPHYED	H20. Homeschool subject areas taught - Physical education	N	2	678	679
167	HSHEALTH	H20. Homeschool subject areas taught - Health	N	2	680	681
168	HSNART	H21. Subject areas taught now - Art	N	2	682	683
169	HSNMUSIC	H21. Subject areas taught now - Music	N	2	684	685
170	HSNARITH	H21. Subject areas taught now - Arithmetic	N	2	686	687
171	HSNALG1	H21. Subject areas taught now - Algebra	N	2	688	689
172	HSNALG2	H21. Subject areas taught now - Algebra II	N	2	690	691
173	HSNGEOM	H21. Subject areas taught now - Geometry	N	2	692	693
174	HSNCALC	H21. Subject areas taught now - Calculus	N	2	694	695
175	HSNPROB	H21. Subject areas taught now - Probability	N	2	696	697
176	HSNSCIEN	H21. Subject areas taught now - Scientific inquiry	N	2	698	699
177	HSNGEOL	H21. Subject areas taught now - Earth science	N	2	700	701
178	HSNBIOL	H21. Subject areas taught now - Biology	N	2	702	703
179	HSNCHEM	H21. Subject areas taught now - Chemistry	N	2	704	705
180	HSNGEOG	H21. Subject areas taught now - Geography	N	2	706	707
181	HSNREAD	H21. Subject areas taught now - Reading	N	2	708	709
182	HSNSPELL	H21. Subject areas taught now - Spelling	N	2	710	711
183	HSNENGL	H21. Subject areas taught now - English	N	2	712	713
184	HSNCOMSCI	H21. Subject areas taught now - Computer science	N	2	714	715
185	HSNHIIST	H21. Subject areas taught now - Social studies	N	2	716	717
186	HSNFOLANG	H21. Subject areas taught now - Foreign language	N	2	718	719
187	HSNPHYED	H21. Subject areas taught now - Physical education	N	2	720	721
188	HSNHEALTH	H21. Subject areas taught now - Health	N	2	722	723
189	HSASSNX	H25. Participate in homeschool group	N	2	724	725
190	HSFREQX	H26. Participate in homeschool group - times	N	2	726	727
191	HSNATL	H27. Member of homeschool organization	N	2	728	729
192	FOSTORY2X	E42/H22. In the past week, times child has been told a story	N	1	730	730
193	FOCRAFTS	E42/H22. In the past week, time spent on arts and crafts	N	1	731	731
194	FOGAMES	E42/H22. In the past week, played board games	N	1	732	732
195	FOBUILDX	E42/H22. In the past week, worked on a project	N	1	733	733
196	FOSPORT	E42/H22. In the past week, time spent playing sports	N	1	734	734
197	FORESPON	E42/H22. In the past week, discussed time management	N	1	735	735
198	FOHISTX	E42/H22. In the past week, discussed ethnic heritage	N	1	736	736
199	FODINNERX	E43/H23. Eaten the evening meal together in the past week	N	1	737	737
200	FOLIBRAYX	E44/H24. Visited a library in the past month	N	1	738	738
201	FOBOOKSTX	E44/H24. Visited a bookstore in the past month	N	1	739	739
202	FOCONCRTX	E44/H24. Gone to a play in the past month	N	1	740	740
203	FOMUSEUMX	E44/H24. Visited an art gallery in the past month	N	1	741	741
204	FOZOOX	E44/H24. Visited a zoo in the past month	N	1	742	742
205	FOGROUPX	E44/H24. Attended a religious event in the past month	N	1	743	743
206	FOSPRTEVX	E44/H24. Attended a sporting event in the past month	N	1	744	744
207	HDHEALTH	E45/H28. Health of child	N	1	745	745
208	HDINTDIS	E46/H29. Intellectual disability	N	1	746	746
209	HDSPEECHX	E46/H29. Speech or language impairment	N	1	747	747
210	HDDISTRBX	E46/H29. Serious emotional disturbance	N	1	748	748
211	HDDEAFIMX	E46/H29. Deafness or another hearing impairment	N	1	749	749
212	HDBLINDX	E46/H29. Blindness or another visual impairment	N	1	750	750
213	HDORTHOX	E46/H29. Orthopedic impairment	N	1	751	751
214	HDAUTISMX	E46/H29. Autism	N	1	752	752
215	HDPDDX	E46/H29. Pervasive Developmental Disorder	N	1	753	753
216	HDADDX	E46/H29. Attention Deficit Disorder	N	1	754	754
217	HDLEARNX	E46/H29. Learning disability	N	1	755	755
218	HDDELAYX	E46/H29. Developmental Delay	N	1	756	756
219	HDTRBRAIN	E46/H29. Traumatic Brain Injury	N	1	757	757
220	HDOTHERX	E46/H29. Another health impairment	N	1	758	758
221	HDRECSER	E48/H31. Receiving services for condition	N	2	759	760
222	HDSCHLX	E49/H32. Local school district provides services	N	2	761	762
223	HDGOVTX	E49/H32. Local health or service agency provides services	N	2	763	764
224	HDDOCTORX	E49/H32. Doctor, clinic, or other provider provides services	N	2	765	766
225	HDPRISCH	E49/H32. This child's private school provides services	N	2	767	768
226	HDIEPX	E50/H33. Services provided by IEP	N	2	769	770
227	HDDEVIEPX	E51/H34. Develop/change IEP	N	2	771	772
228	HDCOMMUX	E52/H35. Satisfied with service provider communication	N	2	773	774

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
229	HDTCHR	E52/H35. Satisfied with special needs teacher/therapist	N	2	775	776
230	HDACCOMX	E52/H35. Satisfied with ability to accommodate child's needs	N	2	777	778
231	HDCOMMITX	E52/H35. Satisfied with commitment to help child	N	2	779	780
232	HDSPCLED	E53/H36. Enrollment in special education classes	N	2	781	782
233	HDLEARN	E54/H37. Condition interferes with learning	N	2	783	784
234	HDPLAY	E54/H37. Condition interferes with participation in sports	N	2	785	786
235	HDOUT	E54/H37. Condition interferes with attending school regularly	N	2	787	788
236	HDFRNDS	E54/H37. Condition interferes with making friends	N	2	789	790
237	CDOBMM	E55/H38. Month born	N	2	791	792
238	CDOBYYY	E55/H38. Year born	N	4	793	796
239	CPLCBRTH	E56/H39. Country where child born	N	1	797	797
240	CMOVEAGE	E57/H40. Age of child when first moved to US	N	2	798	799
241	CHISPLAN	E58/H41. Child Spanish, Hispanic, or Latino	N	1	800	800
242	CAMIND	E59/H42. Child Race - American Indian or Alaska Native	N	1	801	801
243	CASIAN	E59/H42. Child Race - Asian	N	1	802	802
244	CBLACK	E59/H42. Child Race - Black or African American	N	1	803	803
245	CPACI	E59/H42. Child Race - Native Hawaiian or other Pacific Islander	N	1	804	804
246	CWHITE	E59/H42. Child Race - White	N	1	805	805
247	CHISPRM	E59/H42. Child Hispanic - race not reported	N	1	806	806
248	CSEX	E60/H43. Child sex	N	1	807	807
249	CLIVYN	E61/H44. Child lives at another address	N	1	808	808
250	CLIVELSWX	E62/H45. Child spends most time	N	2	809	810
251	CSPEAKX	E63/H46. Language spoken by child at home	N	1	811	811
252	CENGLPRG	E64/H47. Enrolled in language program	N	2	812	813
253	HHTOTALXX	E65/H48. Total people in household	N	2	814	815
254	HHBROSX	E66/H49. Brothers	N	1	816	816
255	HHSISXX	E66/H49. Sisters	N	1	817	817
256	HHMOM	E66/H49. Mother	N	1	818	818
257	HHDAD	E66/H49. Father	N	1	819	819
258	HHAUNTSX	E66/H49. Aunts	N	1	820	820
259	HHUNCLSX	E66/H49. Uncles	N	1	821	821
260	HHGMASX	E66/H49. Grandmothers	N	1	822	822
261	HHGPASX	E66/H49. Grandfathers	N	1	823	823
262	HHCSNSX	E66/H49. Cousins	N	1	824	824
263	HHPRTNRSX	E66/H49. Parent's girlfriend/boyfriend/partner	N	1	825	825
264	HHORELSX	E66/H49. Other relatives	N	1	826	826
265	HHONRELSX	E66/H49. Other non-relatives	N	1	827	827
266	RELATION	E67/H50. Respondent relation to child	N	1	828	828
267	RELATIONOS	E67/H50. Respondent relation to child (Other)	C	92	829	920
268	HHENGLISH	E68/H51. Language spoken at home - English	N	1	921	921
269	HHSPANISH	E68/H51. Language spoken at home - Spanish	N	1	922	922
270	HHFRENCH	E68/H51. Language spoken at home - French	N	1	923	923
271	HHCHINESE	E68/H51. Language spoken at home - Chinese	N	1	924	924
272	HHOTHLANG	E68/H51. Language spoken at home - Other	N	1	925	925
273	HHOTHLANGOS	E68/H51. Language spoken at home - Other (Specify)	C	63	926	988
274	P1REL	E69/H52. First parent/guardian relation to child	N	1	989	989
275	P1SEX	E70/H53. First parent/guardian sex	N	1	990	990
276	P1MRSTA	E71/H54. First parent/guardian marital status	N	1	991	991
277	P1BFGF	E72/H55. First parent/guardian living with boyfriend/girlfriend	N	2	992	993
278	P1FRLNG	E73/H56. First parent/guardian first language	N	1	994	994
279	P1SPEAK	E74/H57. First parent/guardian language spoken most often at home	N	2	995	996
280	P1DIFFI	E75. First parent/guardian difficulty participating in child's school due to language	N	2	997	998
281	P1SCINT	E76. First parent/guardian interpreters at school	N	2	999	1000
282	P1WRMTL	E77. First parent/guardian written materials at school in native language	N	2	1001	1002
283	P1PLCBRTH	E78/H58. First parent/guardian country where born	N	1	1003	1003
284	P1AGEMV	E79/H59. First parent/guardian age when first moved to US	N	2	1004	1005
285	P1HISPAN	E80/H60. First parent/guardian of Spanish, Hispanic, or Latino origin	N	1	1006	1006
286	P1AMIND	E81/H61. First parent/guardian Race - American Indian or Alaska Native	N	1	1007	1007
287	P1ASIAN	E81/H61. First parent/guardian Race - Asian	N	1	1008	1008
288	P1BLACK	E81/H61. First parent/guardian Race - Black or African American	N	1	1009	1009
289	P1PACI	E81/H61. First parent/guardian Race - Native Hawaiian or other Pacific Islander	N	1	1010	1010
290	P1WHITE	E81/H61. First parent/guardian Race - White	N	1	1011	1011
291	P1HISPRM	E81/H61. First parent/guardian Race - Hispanic, race not reported	N	1	1012	1012
292	P1EDUC	E82/H62. First parent/guardian highest grade level completed	N	2	1013	1014
293	P1ENRL	E83/H63. First parent/guardian attending school	N	1	1015	1015
294	P1EMPL	E84/H64. First parent/guardian employment status	N	1	1016	1016
295	P1HRSWK	E85/H65. First parent/guardian hours worked per week	N	2	1017	1018
296	P1LKWKR	E86/H66. First parent/guardian looking for work	N	2	1019	1020
297	P1MTHSWRK	E87/H67. First parent/guardian months worked	N	2	1021	1022
298	P1AGE	E88/H68. First parent/guardian age	N	2	1023	1024
299	P1AGEPAR	E89/H69. First parent/guardian age when became parent	N	2	1025	1026
300	P1AGEPARDK	E89/H69. First parent/guardian age when became parent (Don't Know)	N	2	1027	1028
301	P2GUARD	E90/H70. Second parent/guardian	N	1	1029	1029
302	P2REL	E91/H71. Second parent/guardian relation to child	N	2	1030	1031
303	P2SEX	E92/H72. Second parent/guardian sex	N	2	1032	1033
304	P2MRSTA	E93/H73. Second parent/guardian marital status	N	2	1034	1035

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
305	P2BFGF	E94/H74. Second parent/guardian living with boyfriend/girlfriend	N	2	1036	1037
306	P2FRLNG	E95/H75. Second parent/guardian first language	N	2	1038	1039
307	P2SPEAK	E96/H76. Second parent/guardian language spoken most often at home	N	2	1040	1041
308	P2DIFFI	E97. Second parent/guardian difficulty participating in child's school due to language	N	2	1042	1043
309	P2SCINT	E98. Second parent/guardian interpreters at school	N	2	1044	1045
310	P2WRMTL	E99. Second parent/guardian written materials at school in native language	N	2	1046	1047
311	P2PLCBRTH	E100/H77. Second parent/guardian country where born	N	2	1048	1049
312	P2AGEMV	E101/H78. Second parent/guardian age when first moved to US	N	2	1050	1051
313	P2HISPAN	E102/H79. Second parent/guardian of Spanish, Hispanic, or Latino origin	N	2	1052	1053
314	P2AMIND	E103/H80. Second parent/guardian Race - American Indian or Alaska Native	N	2	1054	1055
315	P2ASIAN	E103/H80. Second parent/guardian Race - Asian	N	2	1056	1057
316	P2BLACK	E103/H80. Second parent/guardian Race - Black or African American	N	2	1058	1059
317	P2PACI	E103/H80. Second parent/guardian Race - Native Hawaiian or other Pacific Islander	N	2	1060	1061
318	P2WHITE	E103/H80. Second parent/guardian Race - White	N	2	1062	1063
319	P2HISPRM	E103/H80. Second parent/guardian race - Hispanic, race not reported	N	2	1064	1065
320	P2EDUC	E104/H81. Second parent/guardian highest grade level completed	N	2	1066	1067
321	P2ENRLL	E105/H82. Second parent/Guardian attending school	N	2	1068	1069
322	P2EMPL	E106/H83. Second parent/guardian employment status	N	2	1070	1071
323	P2HRSWK	E107/H84. Second parent/guardian hours worked per week	N	2	1072	1073
324	P2LKWRK	E108/H85. Second parent/guardian looking for work	N	2	1074	1075
325	P2MTHSWRK	E109/H86. Second parent/guardian months worked	N	2	1076	1077
326	P2AGE	E110/H87. Second parent/guardian age	N	2	1078	1079
327	P2AGEPAR	E111/H88. Second parent/guardian age when became parent	N	2	1080	1081
328	P2AGEPARDK	E111/H88. Second parent/guardian age when became parent (Don't Know)	N	2	1082	1083
329	HWELFTAN	E112/H89. Received TANF in past 12 months	N	1	1084	1084
330	HWELFST	E112/H89. Received welfare or family assistance in past 12 months	N	1	1085	1085
331	HWIC	E112/H89. Received WIC in past 12 months	N	1	1086	1086
332	HFOODST	E112/H89. Received food stamps in past 12 months	N	1	1087	1087
333	HMEDICAID	E112/H89. Received Medicaid in past 12 months	N	1	1088	1088
334	HCHIP	E112/H89. Received CHIP in past 12 months	N	1	1089	1089
335	HSECN8	E112/H89. Received Section 8 in past 12 months	N	1	1090	1090
336	TTLHHINC	E113/H90. Total income	N	2	1091	1092
337	YRSADDR	E114/H91. Years at address	N	2	1093	1094
338	OWNRNTHB	E115/H92. Own/rent house	N	1	1095	1095
339	HVINTSPHO	E116/H93. Internet access on cell phone	N	1	1096	1096
340	HVINTCOM	E117/H94. Internet access on computer or tablet	N	1	1097	1097
341	USEINTRNT	E118/H95. How often use internet	N	1	1098	1098
342	DISABLTYX	D-Child currently has disability	N	1	1099	1099
343	DISBLTY2X	D-Child has disability including autism, ADD, and PDD	N	1	1100	1100
344	PAR1EDUC	D-Educational attainment of child's parent or guardian	N	1	1101	1101
345	PAR1EMPL	D-Work status of child's parent or guardian	N	1	1102	1102
346	PAR1FTFY	D-Parent 1 or Guardian 1 works full time	N	1	1103	1103
347	PAR1MARST	D-Parent 1 marital status	N	1	1104	1104
348	PAR1TYPE	D-Specific relationship of parent/guardian 1 to child	N	1	1105	1105
349	PAR2EDUC	D-Educational attainment of child's parent 2 or guardian 2	N	2	1106	1107
350	PAR2EMPL	D-Work status of child's parent 2 or guardian 2	N	2	1108	1109
351	PAR2FTFY	D-Parent 2 or Guardian 2 works full time	N	2	1110	1111
352	PAR2MARST	D-Parent 2 marital status	N	2	1112	1113
353	PAR2TYPE	D-Specific relationship of parent/guardian 2 to child	N	2	1114	1115
354	HHPARN16_X	D-Parents in household including same sex parents/partners	N	1	1116	1116
355	HHPARN16_BRD	D-Parents or guardians in household including same sex parents/partners	N	1	1117	1117
356	NUMSIBSX	D-Number of child's siblings	N	1	1118	1118
357	FAMILY16_X	D-Family type including same sex parents/partners	N	1	1119	1119
358	FAMILY16_BRD	D-Family type parent 2	N	1	1120	1120
359	HHUNDR6X	D-Number of household members younger than age 6	N	1	1121	1121
360	HHUNDR10X	D-Number of household members younger than age 10	N	1	1122	1122
361	HHUNDR16X	D-Number of household members younger than age 16	N	1	1123	1123
362	HHUNDR18X	D-Number of household members younger than age 18	N	1	1124	1124
363	HHUNID	D-Other household member, not identified	N	1	1125	1125
364	LANGUAGEX	D-English spoken most by parents including same sex partners	N	1	1126	1126
365	PARGRADEX	D-Parent/guardian highest education	N	1	1127	1127
366	RACEETHN	D-Race and ethnicity of child	N	1	1128	1128
367	RACEETH2	D-Detailed race and ethnicity of child	N	1	1129	1129
368	INTACC	D-Internet access	N	1	1130	1130
369	ALLGRADEX	D-Child's enrollment and grade equivalent	C	2	1131	1132
370	HMSCHLX	D-Child is homeschooled part or full time	N	1	1133	1133
371	CENREG	D-Census region where child lives	N	1	1134	1134
372	ZIP18PO2	D-Percent of families in zipcode with children under 18 below the poverty line	N	1	1135	1135
373	ZIPBLHII2	D-Percent of persons in zipcode who were Black or Hispanic	N	1	1136	1136
374	ZIPLOCL	D-Zip code classification by community type	C	2	1137	1138
375	BLHISCNT	D-Number of persons in zipcode who were Black or Hispanic	N	6	1139	1144
376	FAM18POV	D-Number of families in zipcode w/related children <18 below the poverty line	N	4	1145	1148
377	PCT18POV	D-Percent of families in zipcode w/related children under 18 below the poverty line	N	2	1149	1150
378	PCTBLHIS	D-Percent of persons in zipcode who were Black or Hispanic alone	N	3	1151	1153
379	REGION	D-Department of Education Region	N	1	1154	1154
380	RSTATE	D-Respondent's state	C	2	1155	1156

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
381	ZCTA	D-Respondent ZCTA (Zip Code Tabulation Area)	C	5	1157	1161
382	P005003	D-Inside urbanized areas, population count	N	6	1162	1167
383	P005004	D-Inside urban clusters, population count	N	5	1168	1172
384	P005005	D-Rural population count	N	5	1173	1177
385	P007001	D-Total population count	N	6	1178	1183
386	P007004	D-Black/African American alone population count	N	5	1184	1188
387	P007010	D-Hispanic or Latino population count	N	5	1189	1193
388	P090001	D-Total families in Zip Code	N	5	1194	1198
389	P090004	D-In poverty and married couples with children under 18	N	4	1199	1202
390	P090011	D-In poverty and headed by male, no wife, with children under 18	N	4	1203	1206
391	P090017	D-In poverty and headed by female, no husband, with children under 18	N	4	1207	1210
392	S16CHART	D-School charter, magnet/regular public, other on CCD	N	2	1211	1212
393	S16NUMST	D-Total school enrollment of students on CCD/PSS	N	2	1213	1214
394	S16PBPV	D-School is public or private on CCD/PSS	N	2	1215	1216
395	S16SAMSX	D-Coeducational status of school on PSS	N	2	1217	1218
396	S16TITL1	D-Schoolwide title 1 on CCD	N	2	1219	1220
397	S16TYPE	D-Type of school on CCD/PSS	N	2	1221	1222
398	SCHLGRAD	D-Classification of child's school	N	2	1223	1224
399	NEW_SCHL	D-New school on CCD frame	N	2	1225	1226
400	S16CENRG	D-School's Census Region on CCD/PSS	N	2	1227	1228
401	S16FRRDL	D-Percent of students eligible for free or reduced lunches on CCD	N	2	1229	1230
402	S16FTET	D-Number of full-time teachers in school on CCD/PSS	N	2	1231	1232
403	S16HASG4	D-School has grade 4 on CCD/PSS	N	2	1233	1234
404	S16HASG8	D-School has grade 8 on CCD/PSS	N	2	1235	1236
405	S16HASG12	D-School has grade 12 on CCD/PSS	N	2	1237	1238
406	S16HASGK	D-School has a Kindergarten on CCD/PSS	N	2	1239	1240
407	S16LOCL	D-Locale code for school on CCD/PSS	C	2	1241	1242
408	S16MAGN	D-School is identified as a Magnet school on CCD	N	2	1243	1244
409	S16PBVTYP	D-Type of public school child attends on CCD	N	2	1245	1246
410	S16PCTB	D-Percent of blacks in school on CCD/PSS	N	2	1247	1248
411	S16PCTH	D-Percent of Hispanics in school on CCD/PSS	N	2	1249	1250
412	S16PVVTYP	D-Type of private school child attends on PSS	N	2	1251	1252
413	S16S_TRT	D-Student to teacher ratio for school on CCD/PSS	N	2	1253	1254
414	ENGLSPANX	D-Questionnaire in English or Spanish	N	1	1255	1255
415	AGE2015	D-Age of child as of Dec 31, 2015	N	2	1256	1257
416	MODECOMP	D-Completed on Web or Paper	N	1	1258	1258
417	HHMAGE1	D-HH Member 1 Age	N	2	1259	1260
418	HHMAGE2	D-HH Member 2 Age	N	2	1261	1262
419	HHMAGE3	D-HH Member 3 Age	N	2	1263	1264
420	HHMAGE4	D-HH Member 4 Age	N	2	1265	1266
421	HHMAGE5	D-HH Member 5 Age	N	2	1267	1268
422	HHMAGE6	D-HH Member 6 Age	N	2	1269	1270
423	HHMAGE7	D-HH Member 7 Age	N	2	1271	1272
424	HHMAGE8	D-HH Member 8 Age	N	2	1273	1274
425	HHMAGE9	D-HH Member 9 Age	N	2	1275	1276
426	HHMSEX1	D-HH Member 1 Sex	N	2	1277	1278
427	HHMSEX2	D-HH Member 2 Sex	N	2	1279	1280
428	HHMSEX3	D-HH Member 3 Sex	N	2	1281	1282
429	HHMSEX4	D-HH Member 4 Sex	N	2	1283	1284
430	HHMSEX5	D-HH Member 5 Sex	N	2	1285	1286
431	HHMSEX6	D-HH Member 6 Sex	N	2	1287	1288
432	HHMSEX7	D-HH Member 7 Sex	N	2	1289	1290
433	HHMSEX8	D-HH Member 8 Sex	N	2	1291	1292
434	HHMSEX9	D-HH Member 9 Sex	N	2	1293	1294
435	HHMENRL1	D-HH Member 1 Enrollment Status	N	2	1295	1296
436	HHMENRL2	D-HH Member 2 Enrollment Status	N	2	1297	1298
437	HHMENRL3	D-HH Member 3 Enrollment Status	N	2	1299	1300
438	HHMENRL4	D-HH Member 4 Enrollment Status	N	2	1301	1302
439	HHMENRL5	D-HH Member 5 Enrollment Status	N	2	1303	1304
440	HHMENRL6	D-HH Member 6 Enrollment Status	N	2	1305	1306
441	HHMENRL7	D-HH Member 7 Enrollment Status	N	2	1307	1308
442	HHMENRL8	D-HH Member 8 Enrollment Status	N	2	1309	1310
443	HHMENRL9	D-HH Member 9 Enrollment Status	N	2	1311	1312
444	HHMGRD1	D-HH Member 1 Grade Level	N	2	1313	1314
445	HHMGRD2	D-HH Member 2 Grade Level	N	2	1315	1316
446	HHMGRD3	D-HH Member 3 Grade Level	N	2	1317	1318
447	HHMGRD4	D-HH Member 4 Grade Level	N	2	1319	1320
448	HHMGRD5	D-HH Member 5 Grade Level	N	2	1321	1322
449	HHMGRD6	D-HH Member 6 Grade Level	N	2	1323	1324
450	HHMGRD7	D-HH Member 7 Grade Level	N	2	1325	1326
451	HHMGRD8	D-HH Member 8 Grade Level	N	2	1327	1328
452	HHMGRD9	D-HH Member 9 Grade Level	N	2	1329	1330
453	PPSU	PSU FOR TAYLOR SERIES VAR EST	N	5	1331	1335
454	PSTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	1336	1336
455	UPW	PERSON - LEVEL BASE WEIGHT	N	16	1337	1352
456	HBW	HOUSEHOLD-LEVEL BASE WEIGHT	N	16	1353	1368

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
457	SNIAF	SCREENER NON-INTERVIEW ADJUSTMENT FACTOR	N	16	1369	1384
458	HHW	FINAL HOUSEHOLD-LEVEL BASE WEIGHT	N	16	1385	1400
459	FPWT	FINAL INTV WEIGHT	N	16	1401	1416
460	FPWT1	FINAL INTV REPLICATE WEIGHT, FPWT1	N	16	1417	1432
461	FPWT2	FINAL INTV REPLICATE WEIGHT, FPWT2	N	16	1433	1448
462	FPWT3	FINAL INTV REPLICATE WEIGHT, FPWT3	N	16	1449	1464
463	FPWT4	FINAL INTV REPLICATE WEIGHT, FPWT4	N	16	1465	1480
464	FPWT5	FINAL INTV REPLICATE WEIGHT, FPWT5	N	16	1481	1496
465	FPWT6	FINAL INTV REPLICATE WEIGHT, FPWT6	N	16	1497	1512
466	FPWT7	FINAL INTV REPLICATE WEIGHT, FPWT7	N	16	1513	1528
467	FPWT8	FINAL INTV REPLICATE WEIGHT, FPWT8	N	16	1529	1544
468	FPWT9	FINAL INTV REPLICATE WEIGHT, FPWT9	N	16	1545	1560
469	FPWT10	FINAL INTV REPLICATE WEIGHT, FPWT10	N	16	1561	1576
470	FPWT11	FINAL INTV REPLICATE WEIGHT, FPWT11	N	16	1577	1592
471	FPWT12	FINAL INTV REPLICATE WEIGHT, FPWT12	N	16	1593	1608
472	FPWT13	FINAL INTV REPLICATE WEIGHT, FPWT13	N	16	1609	1624
473	FPWT14	FINAL INTV REPLICATE WEIGHT, FPWT14	N	16	1625	1640
474	FPWT15	FINAL INTV REPLICATE WEIGHT, FPWT15	N	16	1641	1656
475	FPWT16	FINAL INTV REPLICATE WEIGHT, FPWT16	N	16	1657	1672
476	FPWT17	FINAL INTV REPLICATE WEIGHT, FPWT17	N	16	1673	1688
477	FPWT18	FINAL INTV REPLICATE WEIGHT, FPWT18	N	16	1689	1704
478	FPWT19	FINAL INTV REPLICATE WEIGHT, FPWT19	N	16	1705	1720
479	FPWT20	FINAL INTV REPLICATE WEIGHT, FPWT20	N	16	1721	1736
480	FPWT21	FINAL INTV REPLICATE WEIGHT, FPWT21	N	16	1737	1752
481	FPWT22	FINAL INTV REPLICATE WEIGHT, FPWT22	N	16	1753	1768
482	FPWT23	FINAL INTV REPLICATE WEIGHT, FPWT23	N	16	1769	1784
483	FPWT24	FINAL INTV REPLICATE WEIGHT, FPWT24	N	16	1785	1800
484	FPWT25	FINAL INTV REPLICATE WEIGHT, FPWT25	N	16	1801	1816
485	FPWT26	FINAL INTV REPLICATE WEIGHT, FPWT26	N	16	1817	1832
486	FPWT27	FINAL INTV REPLICATE WEIGHT, FPWT27	N	16	1833	1848
487	FPWT28	FINAL INTV REPLICATE WEIGHT, FPWT28	N	16	1849	1864
488	FPWT29	FINAL INTV REPLICATE WEIGHT, FPWT29	N	16	1865	1880
489	FPWT30	FINAL INTV REPLICATE WEIGHT, FPWT30	N	16	1881	1896
490	FPWT31	FINAL INTV REPLICATE WEIGHT, FPWT31	N	16	1897	1912
491	FPWT32	FINAL INTV REPLICATE WEIGHT, FPWT32	N	16	1913	1928
492	FPWT33	FINAL INTV REPLICATE WEIGHT, FPWT33	N	16	1929	1944
493	FPWT34	FINAL INTV REPLICATE WEIGHT, FPWT34	N	16	1945	1960
494	FPWT35	FINAL INTV REPLICATE WEIGHT, FPWT35	N	16	1961	1976
495	FPWT36	FINAL INTV REPLICATE WEIGHT, FPWT36	N	16	1977	1992
496	FPWT37	FINAL INTV REPLICATE WEIGHT, FPWT37	N	16	1993	2008
497	FPWT38	FINAL INTV REPLICATE WEIGHT, FPWT38	N	16	2009	2024
498	FPWT39	FINAL INTV REPLICATE WEIGHT, FPWT39	N	16	2025	2040
499	FPWT40	FINAL INTV REPLICATE WEIGHT, FPWT40	N	16	2041	2056
500	FPWT41	FINAL INTV REPLICATE WEIGHT, FPWT41	N	16	2057	2072
501	FPWT42	FINAL INTV REPLICATE WEIGHT, FPWT42	N	16	2073	2088
502	FPWT43	FINAL INTV REPLICATE WEIGHT, FPWT43	N	16	2089	2104
503	FPWT44	FINAL INTV REPLICATE WEIGHT, FPWT44	N	16	2105	2120
504	FPWT45	FINAL INTV REPLICATE WEIGHT, FPWT45	N	16	2121	2136
505	FPWT46	FINAL INTV REPLICATE WEIGHT, FPWT46	N	16	2137	2152
506	FPWT47	FINAL INTV REPLICATE WEIGHT, FPWT47	N	16	2153	2168
507	FPWT48	FINAL INTV REPLICATE WEIGHT, FPWT48	N	16	2169	2184
508	FPWT49	FINAL INTV REPLICATE WEIGHT, FPWT49	N	16	2185	2200
509	FPWT50	FINAL INTV REPLICATE WEIGHT, FPWT50	N	16	2201	2216
510	FPWT51	FINAL INTV REPLICATE WEIGHT, FPWT51	N	16	2217	2232
511	FPWT52	FINAL INTV REPLICATE WEIGHT, FPWT52	N	16	2233	2248
512	FPWT53	FINAL INTV REPLICATE WEIGHT, FPWT53	N	16	2249	2264
513	FPWT54	FINAL INTV REPLICATE WEIGHT, FPWT54	N	16	2265	2280
514	FPWT55	FINAL INTV REPLICATE WEIGHT, FPWT55	N	16	2281	2296
515	FPWT56	FINAL INTV REPLICATE WEIGHT, FPWT56	N	16	2297	2312
516	FPWT57	FINAL INTV REPLICATE WEIGHT, FPWT57	N	16	2313	2328
517	FPWT58	FINAL INTV REPLICATE WEIGHT, FPWT58	N	16	2329	2344
518	FPWT59	FINAL INTV REPLICATE WEIGHT, FPWT59	N	16	2345	2360
519	FPWT60	FINAL INTV REPLICATE WEIGHT, FPWT60	N	16	2361	2376
520	FPWT61	FINAL INTV REPLICATE WEIGHT, FPWT61	N	16	2377	2392
521	FPWT62	FINAL INTV REPLICATE WEIGHT, FPWT62	N	16	2393	2408
522	FPWT63	FINAL INTV REPLICATE WEIGHT, FPWT63	N	16	2409	2424
523	FPWT64	FINAL INTV REPLICATE WEIGHT, FPWT64	N	16	2425	2440
524	FPWT65	FINAL INTV REPLICATE WEIGHT, FPWT65	N	16	2441	2456
525	FPWT66	FINAL INTV REPLICATE WEIGHT, FPWT66	N	16	2457	2472
526	FPWT67	FINAL INTV REPLICATE WEIGHT, FPWT67	N	16	2473	2488
527	FPWT68	FINAL INTV REPLICATE WEIGHT, FPWT68	N	16	2489	2504
528	FPWT69	FINAL INTV REPLICATE WEIGHT, FPWT69	N	16	2505	2520
529	FPWT70	FINAL INTV REPLICATE WEIGHT, FPWT70	N	16	2521	2536
530	FPWT71	FINAL INTV REPLICATE WEIGHT, FPWT71	N	16	2537	2552
531	FPWT72	FINAL INTV REPLICATE WEIGHT, FPWT72	N	16	2553	2568
532	FPWT73	FINAL INTV REPLICATE WEIGHT, FPWT73	N	16	2569	2584

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
533	FPWT74	FINAL INTV REPLICATE WEIGHT, FPWT74	N	16	2585	2600
534	FPWT75	FINAL INTV REPLICATE WEIGHT, FPWT75	N	16	2601	2616
535	FPWT76	FINAL INTV REPLICATE WEIGHT, FPWT76	N	16	2617	2632
536	FPWT77	FINAL INTV REPLICATE WEIGHT, FPWT77	N	16	2633	2648
537	FPWT78	FINAL INTV REPLICATE WEIGHT, FPWT78	N	16	2649	2664
538	FPWT79	FINAL INTV REPLICATE WEIGHT, FPWT79	N	16	2665	2680
539	FPWT80	FINAL INTV REPLICATE WEIGHT, FPWT80	N	16	2681	2696
540	F_SID	IMPUTATION FLAG FOR SID	N	2	2697	2698
541	F_GRADE	IMPUTATION FLAG FOR GRADE	N	2	2699	2700
542	F_SCUPUBPRI	IMPUTATION FLAG FOR SCUPUBPRI	N	2	2701	2702
543	F_DISTASSI	IMPUTATION FLAG FOR DISTASSI	N	2	2703	2704
544	F_SCHRTSCHL	IMPUTATION FLAG FOR SCHRTSCHL	N	2	2705	2706
545	F_SNEIGHBRX	IMPUTATION FLAG FOR SNEIGHBRX	N	2	2707	2708
546	F_SPUBCHOIX	IMPUTATION FLAG FOR SPUBCHOIX	N	2	2709	2710
547	F_SCONSIDR	IMPUTATION FLAG FOR SCONSIDR	N	2	2711	2712
548	F_SPERFORM	IMPUTATION FLAG FOR SPERFORM	N	2	2713	2714
549	F_S1STCHOI	IMPUTATION FLAG FOR S1STCHOI	N	2	2715	2716
550	F_SSAMSC	IMPUTATION FLAG FOR SSAMSC	N	2	2717	2718
551	F_SMVMTH	IMPUTATION FLAG FOR SMVMTH	N	2	2719	2720
552	F_SEENJOY	IMPUTATION FLAG FOR SEENJOY	N	2	2721	2722
553	F_SEGRADES	IMPUTATION FLAG FOR SEGRADES	N	2	2723	2724
554	F_SEADPLCXX	IMPUTATION FLAG FOR SEADPLCXX	N	2	2725	2726
555	F_SEBEHAVX	IMPUTATION FLAG FOR SEBEHAVX	N	2	2727	2728
556	F_SESCHWRK	IMPUTATION FLAG FOR SESCHWRK	N	2	2729	2730
557	F_SEGBEHAV	IMPUTATION FLAG FOR SEGBEHAV	N	2	2731	2732
558	F_SEGWORK	IMPUTATION FLAG FOR SEGWORK	N	2	2733	2734
559	F_SEABSNT	IMPUTATION FLAG FOR SEABSNT	N	2	2735	2736
560	F_SEREPEAT	IMPUTATION FLAG FOR SEREPEAT	N	2	2737	2738
561	F_SEREPTK	IMPUTATION FLAG FOR SEREPTK	N	2	2739	2740
562	F_SEREPT1	IMPUTATION FLAG FOR SEREPT1	N	2	2741	2742
563	F_SEREPT2	IMPUTATION FLAG FOR SEREPT2	N	2	2743	2744
564	F_SEREPT3	IMPUTATION FLAG FOR SEREPT3	N	2	2745	2746
565	F_SEREPT4	IMPUTATION FLAG FOR SEREPT4	N	2	2747	2748
566	F_SEREPT5	IMPUTATION FLAG FOR SEREPT5	N	2	2749	2750
567	F_SEREPT6	IMPUTATION FLAG FOR SEREPT6	N	2	2751	2752
568	F_SEREPT7	IMPUTATION FLAG FOR SEREPT7	N	2	2753	2754
569	F_SEREPT8	IMPUTATION FLAG FOR SEREPT8	N	2	2755	2756
570	F_SEREPT9	IMPUTATION FLAG FOR SEREPT9	N	2	2757	2758
571	F_SEREPT10	IMPUTATION FLAG FOR SEREPT10	N	2	2759	2760
572	F_SEREPT11	IMPUTATION FLAG FOR SEREPT11	N	2	2761	2762
573	F_SEREPT12	IMPUTATION FLAG FOR SEREPT12	N	2	2763	2764
574	F_SESUSOUT	IMPUTATION FLAG FOR SESUSOUT	N	2	2765	2766
575	F_SESUSPIN	IMPUTATION FLAG FOR SESUSPIN	N	2	2767	2768
576	F_SEEXPTEL	IMPUTATION FLAG FOR SEEXPTEL	N	2	2769	2770
577	F_SEFUTUREX	IMPUTATION FLAG FOR SEFUTUREX	N	2	2771	2772
578	F_SEGRADEQ	IMPUTATION FLAG FOR SEGRADEQ	N	2	2773	2774
579	F_SNETCRSX	IMPUTATION FLAG FOR SNETCRSX	N	2	2775	2776
580	F_SPBSCH	IMPUTATION FLAG FOR SPBSCH	N	2	2777	2778
581	F_SSSTATE	IMPUTATION FLAG FOR SSSTATE	N	2	2779	2780
582	F_SCHRTR	IMPUTATION FLAG FOR SCHRTR	N	2	2781	2782
583	F_SAPBSCH	IMPUTATION FLAG FOR SAPBSCH	N	2	2783	2784
584	F_SPRIVSCH	IMPUTATION FLAG FOR SPRIVSCH	N	2	2785	2786
585	F_SUNIVSCH	IMPUTATION FLAG FOR SUNIVSCH	N	2	2787	2788
586	F_SOTHSCH	IMPUTATION FLAG FOR SOTHSCH	N	2	2789	2790
587	F_SINSTFEE	IMPUTATION FLAG FOR SINSTFEE	N	2	2791	2792
588	F_HOMESCHLX	IMPUTATION FLAG FOR HOMESCHLX	N	2	2793	2794
589	F_HMSCHARR	IMPUTATION FLAG FOR HMSCHARR	N	2	2795	2796
590	F_FSSPORTX	IMPUTATION FLAG FOR FSSPORTX	N	2	2797	2798
591	F_FSVOL	IMPUTATION FLAG FOR FSVOL	N	2	2799	2800
592	F_FSMTNG	IMPUTATION FLAG FOR FSMTNG	N	2	2801	2802
593	F_FSPTMTNG	IMPUTATION FLAG FOR FSPTMTNG	N	2	2803	2804
594	F_FSATCNFN	IMPUTATION FLAG FOR FSATCNFN	N	2	2805	2806
595	F_FSFUNDRS	IMPUTATION FLAG FOR FSFUNDRS	N	2	2807	2808
596	F_FSCOMMTE	IMPUTATION FLAG FOR FSCOMMTE	N	2	2809	2810
597	F_FSCOUNSLR	IMPUTATION FLAG FOR FSCOUNSLR	N	2	2811	2812
598	F_FSFREQ	IMPUTATION FLAG FOR FSFREQ	N	2	2813	2814
599	F_FSNOTESX	IMPUTATION FLAG FOR FSNOTESX	N	2	2815	2816
600	F_FSMEMO	IMPUTATION FLAG FOR FSMEMO	N	2	2817	2818
601	F_FSPHONCHX	IMPUTATION FLAG FOR FSPHONCHX	N	2	2819	2820
602	F_FSSPPERF	IMPUTATION FLAG FOR FSSPPERF	N	2	2821	2822
603	F_FSSPHW	IMPUTATION FLAG FOR FSSPHW	N	2	2823	2824
604	F_FSSPCOUR	IMPUTATION FLAG FOR FSSPCOUR	N	2	2825	2826
605	F_FSSPROLE	IMPUTATION FLAG FOR FSSPROLE	N	2	2827	2828
606	F_FSSPCOLL	IMPUTATION FLAG FOR FSSPCOLL	N	2	2829	2830
607	F_FCSCHOOL	IMPUTATION FLAG FOR FCSCHOOL	N	2	2831	2832
608	F_FCTEACHR	IMPUTATION FLAG FOR FCTEACHR	N	2	2833	2834

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
609	F_FCSTD\$	IMPUTATION FLAG FOR FCSTD\$	N	2	2835	2836
610	F_FCORDER	IMPUTATION FLAG FOR FCORDER	N	2	2837	2838
611	F_FCSUPPRT	IMPUTATION FLAG FOR FCSUPPRT	N	2	2839	2840
612	F_FHHOME	IMPUTATION FLAG FOR FHHOME	N	2	2841	2842
613	F_FHWKHRS	IMPUTATION FLAG FOR FHWKHRS	N	2	2843	2844
614	F_FHAMOUNT	IMPUTATION FLAG FOR FHAMOUNT	N	2	2845	2846
615	F_FHCAMT	IMPUTATION FLAG FOR FHCAMT	N	2	2847	2848
616	F_FHPLACE	IMPUTATION FLAG FOR FHPLACE	N	2	2849	2850
617	F_FHCHECKX	IMPUTATION FLAG FOR FHCHECKX	N	2	2851	2852
618	F_FHHELP	IMPUTATION FLAG FOR FHHELP	N	2	2853	2854
619	F_HSWHOX	IMPUTATION FLAG FOR HSWHOX	N	2	2855	2856
620	F_HSTUTOR	IMPUTATION FLAG FOR HSTUTOR	N	2	2857	2858
621	F_HSCOOP	IMPUTATION FLAG FOR HSCOOP	N	2	2859	2860
622	F_HSCOLL	IMPUTATION FLAG FOR HSCOLL	N	2	2861	2862
623	F_HSPUBLIC	IMPUTATION FLAG FOR HSPUBLIC	N	2	2863	2864
624	F_HSPRIVATE	IMPUTATION FLAG FOR HSPRIVATE	N	2	2865	2866
625	F_HSCOLLEGE	IMPUTATION FLAG FOR HSCOLLEGE	N	2	2867	2868
626	F_HSSCHR	IMPUTATION FLAG FOR HSSCHR	N	2	2869	2870
627	F_GRADEEQ	IMPUTATION FLAG FOR GRADEEQ	N	2	2871	2872
628	F_HSDAYS	IMPUTATION FLAG FOR HSDAYS	N	2	2873	2874
629	F_HSHOURS	IMPUTATION FLAG FOR HSHOURS	N	2	2875	2876
630	F_HSKACTIV	IMPUTATION FLAG FOR HSKACTIV	N	2	2877	2878
631	F_HSSTYL	IMPUTATION FLAG FOR HSSTYL	N	2	2879	2880
632	F_HSCLIBRX	IMPUTATION FLAG FOR HSCLIBRX	N	2	2881	2882
633	F_HSCHSPUBX	IMPUTATION FLAG FOR HSCHSPUBX	N	2	2883	2884
634	F_HSCEDPUBX	IMPUTATION FLAG FOR HSCEDPUBX	N	2	2885	2886
635	F_HSCORGX	IMPUTATION FLAG FOR HSCORGX	N	2	2887	2888
636	F_HSCCHURX	IMPUTATION FLAG FOR HSCCHURX	N	2	2889	2890
637	F_HSCPUBLX	IMPUTATION FLAG FOR HSCPUBLX	N	2	2891	2892
638	F_HSCPRIX	IMPUTATION FLAG FOR HSCPRIX	N	2	2893	2894
639	F_HSCRELX	IMPUTATION FLAG FOR HSCRELX	N	2	2895	2896
640	F_HSCNETX	IMPUTATION FLAG FOR HSCNETX	N	2	2897	2898
641	F_HSCOTH	IMPUTATION FLAG FOR HSCOTH	N	2	2899	2900
642	F_HSCVTLCR	IMPUTATION FLAG FOR HSCVTLCR	N	2	2901	2902
643	F_HSCOURS	IMPUTATION FLAG FOR HSCOURS	N	2	2903	2904
644	F_HSINTNET	IMPUTATION FLAG FOR HSINTNET	N	2	2905	2906
645	F_HSINTPUB	IMPUTATION FLAG FOR HSINTPUB	N	2	2907	2908
646	F_HSINTCH	IMPUTATION FLAG FOR HSINTCH	N	2	2909	2910
647	F_HSINTAPB	IMPUTATION FLAG FOR HSINTAPB	N	2	2911	2912
648	F_HSINTPRI	IMPUTATION FLAG FOR HSINTPRI	N	2	2913	2914
649	F_HSINTCOL	IMPUTATION FLAG FOR HSINTCOL	N	2	2915	2916
650	F_HSINTST	IMPUTATION FLAG FOR HSINTST	N	2	2917	2918
651	F_HSINTOH	IMPUTATION FLAG FOR HSINTOH	N	2	2919	2920
652	F_HSFEET	IMPUTATION FLAG FOR HSFEET	N	2	2921	2922
653	F_HOMEKX	IMPUTATION FLAG FOR HOMEKX	N	2	2923	2924
654	F_HOME1	IMPUTATION FLAG FOR HOME1	N	2	2925	2926
655	F_HOME2	IMPUTATION FLAG FOR HOME2	N	2	2927	2928
656	F_HOME3	IMPUTATION FLAG FOR HOME3	N	2	2929	2930
657	F_HOME4	IMPUTATION FLAG FOR HOME4	N	2	2931	2932
658	F_HOME5	IMPUTATION FLAG FOR HOME5	N	2	2933	2934
659	F_HOME6	IMPUTATION FLAG FOR HOME6	N	2	2935	2936
660	F_HOME7	IMPUTATION FLAG FOR HOME7	N	2	2937	2938
661	F_HOME8	IMPUTATION FLAG FOR HOME8	N	2	2939	2940
662	F_HOME9	IMPUTATION FLAG FOR HOME9	N	2	2941	2942
663	F_HOME10	IMPUTATION FLAG FOR HOME10	N	2	2943	2944
664	F_HOME11	IMPUTATION FLAG FOR HOME11	N	2	2945	2946
665	F_HOME12	IMPUTATION FLAG FOR HOME12	N	2	2947	2948
666	F_HSSAFETYX	IMPUTATION FLAG FOR HSSAFETYX	N	2	2949	2950
667	F_HSDISSATX	IMPUTATION FLAG FOR HSDISSATX	N	2	2951	2952
668	F_HSRELGON	IMPUTATION FLAG FOR HSRELGON	N	2	2953	2954
669	F_HSMORAL	IMPUTATION FLAG FOR HSMORAL	N	2	2955	2956
670	F_HSDISABLX	IMPUTATION FLAG FOR HSDISABLX	N	2	2957	2958
671	F_HSILLX	IMPUTATION FLAG FOR HSILLX	N	2	2959	2960
672	F_HSSPCLNDX	IMPUTATION FLAG FOR HSSPCLNDX	N	2	2961	2962
673	F_HSALTX	IMPUTATION FLAG FOR HSALTX	N	2	2963	2964
674	F_HSOOTHERX	IMPUTATION FLAG FOR HSOOTHERX	N	2	2965	2966
675	F_HSMOSTX	IMPUTATION FLAG FOR HSMOSTX	N	2	2967	2968
676	F_HSFUTUREX	IMPUTATION FLAG FOR HSFUTUREX	N	2	2969	2970
677	F_HSART	IMPUTATION FLAG FOR HSART	N	2	2971	2972
678	F_HSMUSIC	IMPUTATION FLAG FOR HSMUSIC	N	2	2973	2974
679	F_HSARITH	IMPUTATION FLAG FOR HSARITH	N	2	2975	2976
680	F_HSALG1	IMPUTATION FLAG FOR HSALG1	N	2	2977	2978
681	F_HSALG2	IMPUTATION FLAG FOR HSALG2	N	2	2979	2980
682	F_HSGEOM	IMPUTATION FLAG FOR HSGEOM	N	2	2981	2982
683	F_HSCALC	IMPUTATION FLAG FOR HSCALC	N	2	2983	2984
684	F_HSPROB	IMPUTATION FLAG FOR HSPROB	N	2	2985	2986

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
685	F_HSSCIEN	IMPUTATION FLAG FOR HSSCIEN	N	2	2987	2988
686	F_HSGEOL	IMPUTATION FLAG FOR HSGEOL	N	2	2989	2990
687	F_HSBIOL	IMPUTATION FLAG FOR HSBIOL	N	2	2991	2992
688	F_HSCHEM	IMPUTATION FLAG FOR HSCHEM	N	2	2993	2994
689	F_HSGEOG	IMPUTATION FLAG FOR HSGEOG	N	2	2995	2996
690	F_HSREAD	IMPUTATION FLAG FOR HSREAD	N	2	2997	2998
691	F_HSSPELL	IMPUTATION FLAG FOR HSSPELL	N	2	2999	3000
692	F_HSENGL	IMPUTATION FLAG FOR HSENGL	N	2	3001	3002
693	F_HSCOMSCI	IMPUTATION FLAG FOR HSCOMSCI	N	2	3003	3004
694	F_HSHIST	IMPUTATION FLAG FOR HSHIST	N	2	3005	3006
695	F_HSOLANG	IMPUTATION FLAG FOR HSOLANG	N	2	3007	3008
696	F_HSPHYED	IMPUTATION FLAG FOR HSPHYED	N	2	3009	3010
697	F_HSHEALTH	IMPUTATION FLAG FOR HSHEALTH	N	2	3011	3012
698	F_HSNART	IMPUTATION FLAG FOR HSNART	N	2	3013	3014
699	F_HSNMUSIC	IMPUTATION FLAG FOR HSNMUSIC	N	2	3015	3016
700	F_HSNARITH	IMPUTATION FLAG FOR HSNARITH	N	2	3017	3018
701	F_HSNALG1	IMPUTATION FLAG FOR HSNALG1	N	2	3019	3020
702	F_HSNALG2	IMPUTATION FLAG FOR HSNALG2	N	2	3021	3022
703	F_HSNGEOM	IMPUTATION FLAG FOR HSNGEOM	N	2	3023	3024
704	F_HSNCALC	IMPUTATION FLAG FOR HSNCALC	N	2	3025	3026
705	F_HSNPROB	IMPUTATION FLAG FOR HSNPROB	N	2	3027	3028
706	F_HSNSCIEN	IMPUTATION FLAG FOR HSNSCIEN	N	2	3029	3030
707	F_HSNGEOL	IMPUTATION FLAG FOR HSNGEOL	N	2	3031	3032
708	F_HSNBIOL	IMPUTATION FLAG FOR HSNBIOL	N	2	3033	3034
709	F_HSNCHEM	IMPUTATION FLAG FOR HSNCHEM	N	2	3035	3036
710	F_HSNGEOG	IMPUTATION FLAG FOR HSNGEOG	N	2	3037	3038
711	F_HSNREAD	IMPUTATION FLAG FOR HSNREAD	N	2	3039	3040
712	F_HSNSPELL	IMPUTATION FLAG FOR HSNSPELL	N	2	3041	3042
713	F_HSNENGL	IMPUTATION FLAG FOR HSNENGL	N	2	3043	3044
714	F_HSNCOMSCI	IMPUTATION FLAG FOR HSNCOMSCI	N	2	3045	3046
715	F_HSNHIST	IMPUTATION FLAG FOR HSNHIST	N	2	3047	3048
716	F_HSOLANG	IMPUTATION FLAG FOR HSOLANG	N	2	3049	3050
717	F_HSPHYED	IMPUTATION FLAG FOR HSPHYED	N	2	3051	3052
718	F_HSHEALTH	IMPUTATION FLAG FOR HSHEALTH	N	2	3053	3054
719	F_HSASSNX	IMPUTATION FLAG FOR HSASSNX	N	2	3055	3056
720	F_HSFREQX	IMPUTATION FLAG FOR HSFREQX	N	2	3057	3058
721	F_HSNATL	IMPUTATION FLAG FOR HSNATL	N	2	3059	3060
722	F_FOSTORY2X	IMPUTATION FLAG FOR FOSTORY2X	N	1	3061	3061
723	F_FOCRAFTS	IMPUTATION FLAG FOR FOCRAFTS	N	1	3062	3062
724	F_FOGAMES	IMPUTATION FLAG FOR FOGAMES	N	1	3063	3063
725	F_FOBUILDX	IMPUTATION FLAG FOR FOBUILDX	N	1	3064	3064
726	F_FOSPORT	IMPUTATION FLAG FOR FOSPORT	N	1	3065	3065
727	F_FORESPON	IMPUTATION FLAG FOR FORESPON	N	1	3066	3066
728	F_FOHISTX	IMPUTATION FLAG FOR FOHISTX	N	1	3067	3067
729	F_FODINNERX	IMPUTATION FLAG FOR FODINNERX	N	1	3068	3068
730	F_FOLIBRAYX	IMPUTATION FLAG FOR FOLIBRAYX	N	1	3069	3069
731	F_FOBOOKSTX	IMPUTATION FLAG FOR FOBOOKSTX	N	1	3070	3070
732	F_FOCONCRTX	IMPUTATION FLAG FOR FOCONCRTX	N	1	3071	3071
733	F_FOMUSEUMX	IMPUTATION FLAG FOR FOMUSEUMX	N	1	3072	3072
734	F_FOZOOX	IMPUTATION FLAG FOR FOZOOX	N	1	3073	3073
735	F_FOGROUPX	IMPUTATION FLAG FOR FOGROUPX	N	1	3074	3074
736	F_FOSPRTEVX	IMPUTATION FLAG FOR FOSPRTEVX	N	1	3075	3075
737	F_HDHEALTH	IMPUTATION FLAG FOR HDHEALTH	N	1	3076	3076
738	F_HDLEARNX	IMPUTATION FLAG FOR HDLEARNX	N	1	3077	3077
739	F_HDINTDIS	IMPUTATION FLAG FOR HDINTDIS	N	1	3078	3078
740	F_HDSPEECHX	IMPUTATION FLAG FOR HDSPEECHX	N	1	3079	3079
741	F_HDDISTRBX	IMPUTATION FLAG FOR HDDISTRBX	N	1	3080	3080
742	F_HDDEAFIMX	IMPUTATION FLAG FOR HDDEAFIMX	N	1	3081	3081
743	F_HDBLINDX	IMPUTATION FLAG FOR HDBLINDX	N	1	3082	3082
744	F_HDORTHOX	IMPUTATION FLAG FOR HDORTHOX	N	1	3083	3083
745	F_HDAUTISMX	IMPUTATION FLAG FOR HDAUTISMX	N	1	3084	3084
746	F_HDPDDX	IMPUTATION FLAG FOR HDPDDX	N	1	3085	3085
747	F_HDADDX	IMPUTATION FLAG FOR HDADDX	N	1	3086	3086
748	F_HDDELAYX	IMPUTATION FLAG FOR HDDELAYX	N	1	3087	3087
749	F_HDTRBRAIN	IMPUTATION FLAG FOR HDTRBRAIN	N	1	3088	3088
750	F_HDOTHERX	IMPUTATION FLAG FOR HDOTHERX	N	1	3089	3089
751	F_HDRECSER	IMPUTATION FLAG FOR HDRECSER	N	2	3090	3091
752	F_HDSCHLX	IMPUTATION FLAG FOR HDSCHLX	N	2	3092	3093
753	F_HDGOVTX	IMPUTATION FLAG FOR HDGOVTX	N	2	3094	3095
754	F_HDDOCTORX	IMPUTATION FLAG FOR HDDOCTORX	N	2	3096	3097
755	F_HDPRISCH	IMPUTATION FLAG FOR HDPRISCH	N	2	3098	3099
756	F_HDIEPX	IMPUTATION FLAG FOR HDIEPX	N	2	3100	3101
757	F_HDDEVIEPX	IMPUTATION FLAG FOR HDDEVIEPX	N	2	3102	3103
758	F_HDCOMMUX	IMPUTATION FLAG FOR HDCOMMUX	N	2	3104	3105
759	F_HDTCHR	IMPUTATION FLAG FOR HDTCHR	N	2	3106	3107
760	F_HDACCOMX	IMPUTATION FLAG FOR HDACCOMX	N	2	3108	3109

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
761	F_HDCOMMITX	IMPUTATION FLAG FOR HDCOMMITX	N	2	3110	3111
762	F_HDSPCLED	IMPUTATION FLAG FOR HDSPCLED	N	2	3112	3113
763	F_HDLEARN	IMPUTATION FLAG FOR HDLEARN	N	2	3114	3115
764	F_HDPLAY	IMPUTATION FLAG FOR HDPLAY	N	2	3116	3117
765	F_HDOUT	IMPUTATION FLAG FOR HDOUT	N	2	3118	3119
766	F_HDFRNDS	IMPUTATION FLAG FOR HDFRNDS	N	2	3120	3121
767	F_CDOBMM	IMPUTATION FLAG FOR CDOBMM	N	1	3122	3122
768	F_CDOBYY	IMPUTATION FLAG FOR CDOBYY	N	1	3123	3123
769	F_CPLCBRTH	IMPUTATION FLAG FOR CPLCBRTH	N	1	3124	3124
770	F_CMOVEAGE	IMPUTATION FLAG FOR CMOVEAGE	N	2	3125	3126
771	F_CHISPA	IMPUTATION FLAG FOR CHISPA	N	1	3127	3127
772	F_CAMIND	IMPUTATION FLAG FOR CAMIND	N	1	3128	3128
773	F_CASIAN	IMPUTATION FLAG FOR CASIAN	N	1	3129	3129
774	F_CBLACK	IMPUTATION FLAG FOR CBLACK	N	1	3130	3130
775	F_CPACI	IMPUTATION FLAG FOR CPACI	N	1	3131	3131
776	F_CWHITE	IMPUTATION FLAG FOR CWHITE	N	1	3132	3132
777	F_CHISPRM	IMPUTATION FLAG FOR CHISPRM	N	1	3133	3133
778	F_CSEX	IMPUTATION FLAG FOR CSEX	N	1	3134	3134
779	F_CLIVYN	IMPUTATION FLAG FOR CLIVYN	N	1	3135	3135
780	F_CLIVELSWX	IMPUTATION FLAG FOR CLIVELSWX	N	2	3136	3137
781	F_CSPEAKX	IMPUTATION FLAG FOR CSPEAKX	N	1	3138	3138
782	F_CENGLPRG	IMPUTATION FLAG FOR CENGLPRG	N	2	3139	3140
783	F_HHTOTALXX	IMPUTATION FLAG FOR HHTOTALXX	N	1	3141	3141
784	F_HHBROSX	IMPUTATION FLAG FOR HHBROSX	N	1	3142	3142
785	F_HHSISSX	IMPUTATION FLAG FOR HHSISSX	N	1	3143	3143
786	F_HHMOM	IMPUTATION FLAG FOR HHMOM	N	1	3144	3144
787	F_HHDAD	IMPUTATION FLAG FOR HHDAD	N	1	3145	3145
788	F_HHAUNTSX	IMPUTATION FLAG FOR HHAUNTSX	N	1	3146	3146
789	F_HHUNCLSX	IMPUTATION FLAG FOR HHUNCLSX	N	1	3147	3147
790	F_HHGMASX	IMPUTATION FLAG FOR HHGMASX	N	1	3148	3148
791	F_HHGPASX	IMPUTATION FLAG FOR HHGPASX	N	1	3149	3149
792	F_HHCSNSX	IMPUTATION FLAG FOR HHCSNSX	N	1	3150	3150
793	F_HHPRTNRSX	IMPUTATION FLAG FOR HHPRTNRSX	N	1	3151	3151
794	F_HHORELSX	IMPUTATION FLAG FOR HHORELSX	N	1	3152	3152
795	F_HHONRELSX	IMPUTATION FLAG FOR HHONRELSX	N	1	3153	3153
796	F_RELATION	IMPUTATION FLAG FOR RELATION	N	1	3154	3154
797	F_HHENGGLISH	IMPUTATION FLAG FOR HHENGGLISH	N	1	3155	3155
798	F_HHSPANISH	IMPUTATION FLAG FOR HHSPANISH	N	1	3156	3156
799	F_HHFRENCH	IMPUTATION FLAG FOR HHFRENCH	N	1	3157	3157
800	F_HHCHINESE	IMPUTATION FLAG FOR HHCHINESE	N	1	3158	3158
801	F_HHOTHLANG	IMPUTATION FLAG FOR HHOTHLANG	N	1	3159	3159
802	F_PIREL	IMPUTATION FLAG FOR PIREL	N	1	3160	3160
803	F_P1SEX	IMPUTATION FLAG FOR P1SEX	N	1	3161	3161
804	F_P1MRSTA	IMPUTATION FLAG FOR P1MRSTA	N	1	3162	3162
805	F_P1BFGF	IMPUTATION FLAG FOR P1BFGF	N	2	3163	3164
806	F_P1FRLNG	IMPUTATION FLAG FOR P1FRLNG	N	1	3165	3165
807	F_P1SPEAK	IMPUTATION FLAG FOR P1SPEAK	N	2	3166	3167
808	F_P1DIFI	IMPUTATION FLAG FOR P1DIFI	N	2	3168	3169
809	F_P1SCINT	IMPUTATION FLAG FOR P1SCINT	N	2	3170	3171
810	F_P1WRMTL	IMPUTATION FLAG FOR P1WRMTL	N	2	3172	3173
811	F_P1PLCBRTH	IMPUTATION FLAG FOR P1PLCBRTH	N	1	3174	3174
812	F_P1AGEMV	IMPUTATION FLAG FOR P1AGEMV	N	2	3175	3176
813	F_P1HISPAN	IMPUTATION FLAG FOR P1HISPAN	N	1	3177	3177
814	F_P1AMIND	IMPUTATION FLAG FOR P1AMIND	N	1	3178	3178
815	F_P1ASIAN	IMPUTATION FLAG FOR P1ASIAN	N	1	3179	3179
816	F_P1BLACK	IMPUTATION FLAG FOR P1BLACK	N	1	3180	3180
817	F_P1PACI	IMPUTATION FLAG FOR P1PACI	N	1	3181	3181
818	F_P1WHITE	IMPUTATION FLAG FOR P1WHITE	N	1	3182	3182
819	F_P1HISPRM	IMPUTATION FLAG FOR P1HISPRM	N	1	3183	3183
820	F_PIEDUC	IMPUTATION FLAG FOR PIEDUC	N	1	3184	3184
821	F_P1ENRL	IMPUTATION FLAG FOR P1ENRL	N	1	3185	3185
822	F_P1EMPL	IMPUTATION FLAG FOR P1EMPL	N	1	3186	3186
823	F_P1HRSWK	IMPUTATION FLAG FOR P1HRSWK	N	2	3187	3188
824	F_P1LKWRK	IMPUTATION FLAG FOR P1LKWRK	N	2	3189	3190
825	F_P1MTHSWRK	IMPUTATION FLAG FOR P1MTHSWRK	N	1	3191	3191
826	F_P1AGE	IMPUTATION FLAG FOR P1AGE	N	1	3192	3192
827	F_P1AGEPAR	IMPUTATION FLAG FOR P1AGEPAR	N	2	3193	3194
828	F_P1AGEPARDK	IMPUTATION FLAG FOR P1AGEPARDK	N	2	3195	3196
829	F_P2GUARD	IMPUTATION FLAG FOR P2GUARD	N	1	3197	3197
830	F_P2REL	IMPUTATION FLAG FOR P2REL	N	2	3198	3199
831	F_P2SEX	IMPUTATION FLAG FOR P2SEX	N	2	3200	3201
832	F_P2MRSTA	IMPUTATION FLAG FOR P2MRSTA	N	2	3202	3203
833	F_P2BFGF	IMPUTATION FLAG FOR P2BFGF	N	2	3204	3205
834	F_P2FRLNG	IMPUTATION FLAG FOR P2FRLNG	N	2	3206	3207
835	F_P2SPEAK	IMPUTATION FLAG FOR P2SPEAK	N	2	3208	3209
836	F_P2DIFI	IMPUTATION FLAG FOR P2DIFI	N	2	3210	3211

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
837	F_P2SCINT	IMPUTATION FLAG FOR P2SCINT	N	2	3212	3213
838	F_P2WRMTL	IMPUTATION FLAG FOR P2WRMTL	N	2	3214	3215
839	F_P2PLCBRTH	IMPUTATION FLAG FOR P2PLCBRTH	N	2	3216	3217
840	F_P2AGEMV	IMPUTATION FLAG FOR P2AGEMV	N	2	3218	3219
841	F_P2HISPAN	IMPUTATION FLAG FOR P2HISPAN	N	2	3220	3221
842	F_P2AMIND	IMPUTATION FLAG FOR P2AMIND	N	2	3222	3223
843	F_P2ASIAN	IMPUTATION FLAG FOR P2ASIAN	N	2	3224	3225
844	F_P2BLACK	IMPUTATION FLAG FOR P2BLACK	N	2	3226	3227
845	F_P2PACI	IMPUTATION FLAG FOR P2PACI	N	2	3228	3229
846	F_P2WHITE	IMPUTATION FLAG FOR P2WHITE	N	2	3230	3231
847	F_P2HISPRM	IMPUTATION FLAG FOR P2HISPRM	N	2	3232	3233
848	F_P2EDUC	IMPUTATION FLAG FOR P2EDUC	N	2	3234	3235
849	F_P2ENRL	IMPUTATION FLAG FOR P2ENRL	N	2	3236	3237
850	F_P2EMPL	IMPUTATION FLAG FOR P2EMPL	N	2	3238	3239
851	F_P2HRSWK	IMPUTATION FLAG FOR P2HRSWK	N	2	3240	3241
852	F_P2LKWRK	IMPUTATION FLAG FOR P2LKWRK	N	2	3242	3243
853	F_P2MTHSWRK	IMPUTATION FLAG FOR P2MTHSWRK	N	2	3244	3245
854	F_P2AGE	IMPUTATION FLAG FOR P2AGE	N	2	3246	3247
855	F_P2AGEPAR	IMPUTATION FLAG FOR P2AGEPAR	N	2	3248	3249
856	F_P2AGEPARDK	IMPUTATION FLAG FOR P2AGEPARDK	N	2	3250	3251
857	F_HWELFTAN	IMPUTATION FLAG FOR HWELFTAN	N	1	3252	3252
858	F_HWELFST	IMPUTATION FLAG FOR HWELFST	N	1	3253	3253
859	F_HWIC	IMPUTATION FLAG FOR HWIC	N	1	3254	3254
860	F_HFOODST	IMPUTATION FLAG FOR HFOODST	N	1	3255	3255
861	F_HMEDICAID	IMPUTATION FLAG FOR HMEDICAID	N	1	3256	3256
862	F_HCHIP	IMPUTATION FLAG FOR HCHIP	N	1	3257	3257
863	F_HSECN8	IMPUTATION FLAG FOR HSECN8	N	1	3258	3258
864	F_TTLHHINC	IMPUTATION FLAG FOR TTLHHINC	N	1	3259	3259
865	F_YRSADDR	IMPUTATION FLAG FOR YRSADDR	N	1	3260	3260
866	F_OWNRNTHB	IMPUTATION FLAG FOR OWNRNTHB	N	1	3261	3261
867	F_HVINTSPHO	IMPUTATION FLAG FOR HVINTSPHO	N	1	3262	3262
868	F_HVINTCOM	IMPUTATION FLAG FOR HVINTCOM	N	1	3263	3263
869	F_USEINTRNT	IMPUTATION FLAG FOR USEINTRNT	N	1	3264	3264
870	F_HHUNID	IMPUTATION FLAG FOR HHUNID	N	1	3265	3265
871	F_ZCTA	IMPUTATION FLAG FOR ZCTA	N	1	3266	3266

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2016 National Household Education Surveys

Table B-3. Restricted-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASMIN	Unique respondent identifier	C	11	1	11
2	RCVDATE	Survey Date	C	8	12	19
3	PATH	D-Questionnaire path	C	1	20	20
4	QTYPE	D-Survey Path	N	1	21	21
5	EDUATTN	1. Highest degree or level of school completed	N	2	22	23
6	EDUFOS	2. Field of study for highest level of school completed	N	2	24	25
7	EDUFOSOS	2. Field of study for highest level of school completed (Other)	C	80	26	105
8	ENROLL	3. Currently enrolled at a college, tech/trade, or other school	N	1	106	106
9	ESLCLA	4. Taken English as a second language	N	1	107	107
10	READCLA	5. Taken literacy classes to improve reading	N	1	108	108
11	CNMAIN	6. Currently active certification or license	N	1	109	109
12	CNNUM	7. Number of certifications and licenses	N	2	110	111
13	CNNAME1W	8. Name of most important certification or license	C	143	112	254
14	CNSUBJ1	9. Kind of work for certification or license	C	319	255	573
15	CNFIELD1	9. Certification 1 field	N	2	574	575
16	CNFIELDCAT1	9. Certification 1 field category	N	2	576	577
17	CNINVALID1	9. Certification 1 invalid flag	N	2	578	579
18	CNPROV1	10. Certification or license required by government	N	2	580	581
19	CNREVOKE1	11. Certification or license can be revoked	N	2	582	583
20	CNYEAR1	12. Year received certification or license	N	4	584	587
21	CNPRP_COLLG1	13. Prepared for certification or license - classes at school	N	2	588	589
22	CNPRP_TRAIN1	13. Prepared for certification or license - private instruction	N	2	590	591
23	CNPRP_ONOWN1	13. Prepared for certification or license - studying on own	N	2	592	593
24	CNCURRJOB1	14. Certification or license is for current job	N	2	594	595
25	CNUSE_GET1	15. Certification or license useful for - getting a job	N	2	596	597
26	CNUSE_KEEP1	15. Certification or license useful for - keeping a job	N	2	598	599
27	CNUSE_MRKT1	15. Certification or license useful for - staying marketable	N	2	600	601
28	CNUSE_SKLS1	15. Certification or license useful for - improving skills	N	2	602	603
29	CNMAIN2	16. Second currently active certification or license	N	2	604	605
30	CNNAME2W	17. Name of second most important certification or license	C	96	606	701
31	CNSUBJ2	18. Kind of work for second certification or license	C	141	702	842
32	CNFIELD2	18. Certification 2 field	N	2	843	844
33	CNFIELDCAT2	18. Certification 2 field category	N	2	845	846
34	CNINVALID2	18. Certification 2 invalid flag	N	2	847	848
35	CNPROV2	19. Second certification or license required by government	N	2	849	850
36	CNREVOKE2	20. Second certification or license can be revoked	N	2	851	852
37	CNYEAR2	21. Year received second certification or license	N	4	853	856
38	CNPRP_COLLG2	22. Prepared for second certification or license - classes at school	N	2	857	858
39	CNPRP_TRAIN2	22. Prepared for second certification or license - private instruction	N	2	859	860
40	CNPRP_ONOWN2	22. Prepared for second certification or license - studying on own	N	2	861	862
41	CNCURRJOB2	23. Second certification or license is for current job	N	2	863	864
42	CNUSE_GET2	24. Second certification or license useful for - getting a job	N	2	865	866
43	CNUSE_KEEP2	24. Second certification or license useful for - keeping a job	N	2	867	868
44	CNUSE_MRKT2	24. Second certification or license useful for - staying marketable	N	2	869	870
45	CNUSE_SKLS2	24. Second certification or license useful for - improving skills	N	2	871	872
46	CNMAIN3	25. Third currently active certification or license	N	2	873	874
47	CNNAME3W	26. Name of third most important certification or license	C	151	875	1025
48	CNSUBJ3	27. Kind of work for third certification or license	C	137	1026	1162
49	CNFIELD3	27. Certification 3 field	N	2	1163	1164
50	CNFIELDCAT3	27. Certification 3 field category	N	2	1165	1166
51	CNINVALID3	27. Certification 3 invalid flag	N	2	1167	1168
52	CNPROV3	28. Third certification or license required by government	N	2	1169	1170
53	CNREVOKE3	29. Third certification or license can be revoked	N	2	1171	1172
54	CERTTRAIN	30. Earned a certificate from employer training program	N	1	1173	1173
55	CERTVOC	30. Earned a certificate from high school vocational program	N	1	1174	1174
56	CERTHS	30. Earned high school equivalency certificate	N	1	1175	1175
57	CERTPROG	30. Earned a certificate from college, technical, or other school	N	1	1176	1176
58	PSFOS	31. Field of study for post-secondary certificate	N	2	1177	1178
59	PSFOSOS	31. Field of study for post-secondary certificate (Other)	C	80	1179	1258
60	LASTPSCER	32. Source of post-secondary certificate	N	2	1259	1260
61	LASTPSCEROS	32. Source of post-secondary certificate (Someplace else)	C	80	1261	1340
62	LCHOURS	33. Hours to complete post-secondary certificate	N	2	1341	1342
63	LCENROLL	34. Requirement for enrolling in post-secondary program	N	2	1343	1344
64	LCRED	35. Minimum credits required for post-secondary program	N	2	1345	1346
65	LCINHRS	35. Minimum hours required for post-secondary program	N	2	1347	1348
66	LCTRAIN	36. Post-secondary certificate part of professional training	N	2	1349	1350
67	LCCURRJOB	37. Post-secondary certificate related to current job	N	2	1351	1352
68	LCUSE_GET	38. Post-secondary certificate useful - getting a job	N	2	1353	1354
69	LCUSE_PAY	38. Post-secondary certificate useful - increasing pay	N	2	1355	1356
70	LCUSE_SKLS	38. Post-secondary certificate useful - improving work skills	N	2	1357	1358
71	WEPROG	39. Completed work experience program	N	1	1359	1359
72	WEFOLP	40. Type of last work experience program	N	2	1360	1361
73	WEFOLPOS	40. Type of last work experience program (Other)	C	72	1362	1433
74	WELONG	41. Duration of work experience program	N	2	1434	1435
75	WEWAGE	42. Wage for work experience program	N	2	1436	1437
76	WEPRP_INSTR	43. Work experience program - instruction from co-worker	N	2	1438	1439

See note at end of table.

Table B-3. Restricted-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
77	WEPRP_COLLG	43. Work experience program - take classes from college	N	2	1440	1441
78	WEPRP_TRAIN	43. Work experience program - take classes from company	N	2	1442	1443
79	WEEVAL	44. Evaluated by co-worker in work experience program	N	2	1444	1445
80	WECRED	44. College credit from work experience program	N	2	1446	1447
81	WEJOURN	44. Journeyman status from work experience program	N	2	1448	1449
82	WEAPPRE	44. Apprentice number from work experience program	N	2	1450	1451
83	WEDEGR	45. Work experience program degree type	N	2	1452	1453
84	WECERT	46. Work experience program help earn certification	N	2	1454	1455
85	WECURJO	47. Current job related to work experience program	N	2	1456	1457
86	WESKILL	48. Use skills from work experience program in current job	N	2	1458	1459
87	WEUSE_GET	49. Work experience program useful - getting a job	N	2	1460	1461
88	WEUSE_PAY	49. Work experience program useful - increasing pay	N	2	1462	1463
89	WEUSE_SKLS	49. Work experience program useful - improving work skills	N	2	1464	1465
90	EEMAIN	50. Employed for pay last week	N	1	1466	1466
91	EEUNION	51. Member of a labor union	N	2	1467	1468
92	EEJOB	52. How many jobs last week	N	2	1469	1470
93	EEFTJOB	53. Full-time job last week	N	2	1471	1472
94	EEPTJOB	54. Part-time job last week	N	2	1473	1474
95	EEPREFFT	55. Preferred part-time job to be full-time job	N	2	1475	1476
96	EELAYOFF	56. Layoff from job last week	N	2	1477	1478
97	EEL4WKS	57. Actively looking for work last 4 weeks	N	2	1479	1480
98	EEL5YRS	58. Looking for work next 5 years	N	2	1481	1482
99	EELWRK	59. Last worked	N	2	1483	1484
100	EEWKS	60. Weeks worked in past 12 months	N	2	1485	1486
101	EEHRS	61. Hours worked each week	N	2	1487	1488
102	EEEARN	62. Earnings past 12 months	N	2	1489	1490
103	EEWHOA	63. Now on active duty in Armed Forces	N	2	1491	1492
104	EMPIND	64. Industry code	C	4	1493	1496
105	EEEMPLO	65. Type of employee	N	2	1497	1498
106	EMPOCC	66. Occupation code	C	4	1499	1502
107	EELICES	68. License required for job	N	2	1503	1504
108	EEPOSIT	69. Type of position held	N	2	1505	1506
109	EEPERM	70. Preferred permanent position	N	2	1507	1508
110	XXMIL	71. Served on active duty in U.S. Armed Forces	N	1	1509	1509
111	XXACTV	72. Served on active duty since September 2001	N	2	1510	1511
112	XXSEX	73. Sex	N	1	1512	1512
113	XXMARIT	74. Marital status	N	1	1513	1513
114	XXBFGF	75. Living with boyfriend/girlfriend	N	2	1514	1515
115	XXLANG	76. Speak language other than English at home	N	1	1516	1516
116	XXENG	77. How well speak English	N	2	1517	1518
117	XXAGE	78. Age	N	2	1519	1520
118	XXRACE_HISP	79. Hispanic origin	N	1	1521	1521
119	XXRACE_AMIND	80. Race - American Indian or Alaska Native	N	1	1522	1522
120	XXRACE_ASIAN	80. Race - Asian	N	1	1523	1523
121	XXRACE_BLACK	80. Race - Black or African American	N	1	1524	1524
122	XXRACE_PACI	80. Race - Native Hawaiian or other Pacific Islander	N	1	1525	1525
123	XXRACE_WHITE	80. Race - White	N	1	1526	1526
124	XXRACE_HISPRM	80. Race - Hispanic, race not reported	N	1	1527	1527
125	XXINTCELL	81. Internet access on cell phone	N	1	1528	1528
126	XXINTHOME	82. Internet access at home on computer or tablet	N	1	1529	1529
127	XXINTFREQ	83. Frequency of internet use	N	1	1530	1530
128	EDUC	D-Educational attainment	N	1	1531	1531
129	EDUC2	D-Educational attainment (3 category)	N	1	1532	1532
130	WKSTATUS	D-Work status	N	1	1533	1533
131	FTFY	D-Works full-time and full year	N	1	1534	1534
132	RACEETHN	D-Race-ethnicity	N	1	1535	1535
133	RACEETH2	D-Detailed race-ethnicity	N	1	1536	1536
134	AGECAT	D-Age category	N	1	1537	1537
135	INTACC	D-Internet access	N	1	1538	1538
136	MARRIED	D-Marital status	N	1	1539	1539
137	CTLEVEL	D-Level of postsecondary certificate	N	1	1540	1540
138	APPRENT	D-Apprenticeship program	N	1	1541	1541
139	UNDEREMP	D-Under-employment	N	1	1542	1542
140	CENREG	D-Census region	N	1	1543	1543
141	ZCTA	D-Respondent ZCTA (Zip Code Tabulation Area)	C	5	1544	1548
142	ZIPPO2	D-Percent of families below poverty line	N	1	1549	1549
143	ZIPBLHI2	D-Percent of persons in zip code who were Black or Hispanic	N	1	1550	1550
144	ZIPLOCL	D-Zip code classification by community type	C	2	1551	1552
145	BLHISCNT	D-Number of persons in zip code who were Black or Hispanic	N	6	1553	1558
146	FAMPOV	D-Number of families in zip code below poverty line	N	4	1559	1562
147	PCTPOV	D-Percent of families in zip code who have children & below poverty line	N	2	1563	1564
148	PCTBLHIS	D-Percent of persons in zip code who were Black or Hispanic alone	N	3	1565	1567
149	REGION	D-Department of Education Region	N	1	1568	1568
150	RSTATE	D-Respondent's state	C	2	1569	1570
151	P005003	D-Inside urbanized areas, population count	N	6	1571	1576
152	P005004	D-Inside urban clusters, population count	N	5	1577	1581

See note at end of table.

Table B-3. Restricted-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
153	P005005	D-Rural population count	N	5	1582	1586
154	P007001	D-Total population count	N	6	1587	1592
155	P007004	D-Black/African American alone population count	N	5	1593	1597
156	P007010	D-Hispanic or Latino population count	N	5	1598	1602
157	P090001	D-Total families in Zip Code	N	5	1603	1607
158	P090003	D-In poverty and married couples with children under 18	N	4	1608	1611
159	P090010	D-In poverty and headed by male, no wife, with children under 18	N	4	1612	1615
160	P090016	D-In poverty and headed by female, no husband, with children under 18	N	4	1616	1619
161	ENGLSPANX	D-Questionnaire in English or Spanish	N	1	1620	1620
162	MODECOMP	D-Completed on Web or Paper	N	1	1621	1621
163	HHMAGE1	D-HH Member 1 Age	N	2	1622	1623
164	HHMAGE2	D-HH Member 2 Age	N	2	1624	1625
165	HHMAGE3	D-HH Member 3 Age	N	2	1626	1627
166	HHMAGE4	D-HH Member 4 Age	N	2	1628	1629
167	HHMAGE5	D-HH Member 5 Age	N	2	1630	1631
168	HHMAGE6	D-HH Member 6 Age	N	2	1632	1633
169	HHMAGE7	D-HH Member 7 Age	N	2	1634	1635
170	HHMAGE8	D-HH Member 8 Age	N	2	1636	1637
171	HHMAGE9	D-HH Member 9 Age	N	2	1638	1639
172	HHMSEX1	D-HH Member 1 Sex	N	2	1640	1641
173	HHMSEX2	D-HH Member 2 Sex	N	2	1642	1643
174	HHMSEX3	D-HH Member 3 Sex	N	2	1644	1645
175	HHMSEX4	D-HH Member 4 Sex	N	2	1646	1647
176	HHMSEX5	D-HH Member 5 Sex	N	2	1648	1649
177	HHMSEX6	D-HH Member 6 Sex	N	2	1650	1651
178	HHMSEX7	D-HH Member 7 Sex	N	2	1652	1653
179	HHMSEX8	D-HH Member 8 Sex	N	2	1654	1655
180	HHMSEX9	D-HH Member 9 Sex	N	2	1656	1657
181	HHMENRL1	D-HH Member 1 Enrollment Status	N	2	1658	1659
182	HHMENRL2	D-HH Member 2 Enrollment Status	N	2	1660	1661
183	HHMENRL3	D-HH Member 3 Enrollment Status	N	2	1662	1663
184	HHMENRL4	D-HH Member 4 Enrollment Status	N	2	1664	1665
185	HHMENRL5	D-HH Member 5 Enrollment Status	N	2	1666	1667
186	HHMENRL6	D-HH Member 6 Enrollment Status	N	2	1668	1669
187	HHMENRL7	D-HH Member 7 Enrollment Status	N	2	1670	1671
188	HHMENRL8	D-HH Member 8 Enrollment Status	N	2	1672	1673
189	HHMENRL9	D-HH Member 9 Enrollment Status	N	2	1674	1675
190	HHMGRD1	D-HH Member 1 Grade Level	N	2	1676	1677
191	HHMGRD2	D-HH Member 2 Grade Level	N	2	1678	1679
192	HHMGRD3	D-HH Member 3 Grade Level	N	2	1680	1681
193	HHMGRD4	D-HH Member 4 Grade Level	N	2	1682	1683
194	HHMGRD5	D-HH Member 5 Grade Level	N	2	1684	1685
195	HHMGRD6	D-HH Member 6 Grade Level	N	2	1686	1687
196	HHMGRD7	D-HH Member 7 Grade Level	N	2	1688	1689
197	HHMGRD8	D-HH Member 8 Grade Level	N	2	1690	1691
198	HHMGRD9	D-HH Member 9 Grade Level	N	2	1692	1693
199	APSU	PSU FOR TAYLOR SERIES VAR EST	N	5	1694	1698
200	ASTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	1699	1699
201	UPW	PERSON - LEVEL BASE WEIGHT	N	16	1700	1715
202	HBW	HOUSEHOLD-LEVEL BASE WEIGHT	N	16	1716	1731
203	SNIAF	SCREENER NON-INTERVIEW ADJUSTMENT FACTOR	N	16	1732	1747
204	HHW	FINAL HOUSEHOLD-LEVEL BASE WEIGHT	N	16	1748	1763
205	FAWT	FINAL INTV WEIGHT	N	16	1764	1779
206	FAWT1	FINAL INTV REPLICATE WEIGHT, FAWT1	N	16	1780	1795
207	FAWT2	FINAL INTV REPLICATE WEIGHT, FAWT2	N	16	1796	1811
208	FAWT3	FINAL INTV REPLICATE WEIGHT, FAWT3	N	16	1812	1827
209	FAWT4	FINAL INTV REPLICATE WEIGHT, FAWT4	N	16	1828	1843
210	FAWT5	FINAL INTV REPLICATE WEIGHT, FAWT5	N	16	1844	1859
211	FAWT6	FINAL INTV REPLICATE WEIGHT, FAWT6	N	16	1860	1875
212	FAWT7	FINAL INTV REPLICATE WEIGHT, FAWT7	N	16	1876	1891
213	FAWT8	FINAL INTV REPLICATE WEIGHT, FAWT8	N	16	1892	1907
214	FAWT9	FINAL INTV REPLICATE WEIGHT, FAWT9	N	16	1908	1923
215	FAWT10	FINAL INTV REPLICATE WEIGHT, FAWT10	N	16	1924	1939
216	FAWT11	FINAL INTV REPLICATE WEIGHT, FAWT11	N	16	1940	1955
217	FAWT12	FINAL INTV REPLICATE WEIGHT, FAWT12	N	16	1956	1971
218	FAWT13	FINAL INTV REPLICATE WEIGHT, FAWT13	N	16	1972	1987
219	FAWT14	FINAL INTV REPLICATE WEIGHT, FAWT14	N	16	1988	2003
220	FAWT15	FINAL INTV REPLICATE WEIGHT, FAWT15	N	16	2004	2019
221	FAWT16	FINAL INTV REPLICATE WEIGHT, FAWT16	N	16	2020	2035
222	FAWT17	FINAL INTV REPLICATE WEIGHT, FAWT17	N	16	2036	2051
223	FAWT18	FINAL INTV REPLICATE WEIGHT, FAWT18	N	16	2052	2067
224	FAWT19	FINAL INTV REPLICATE WEIGHT, FAWT19	N	16	2068	2083
225	FAWT20	FINAL INTV REPLICATE WEIGHT, FAWT20	N	16	2084	2099
226	FAWT21	FINAL INTV REPLICATE WEIGHT, FAWT21	N	16	2100	2115
227	FAWT22	FINAL INTV REPLICATE WEIGHT, FAWT22	N	16	2116	2131
228	FAWT23	FINAL INTV REPLICATE WEIGHT, FAWT23	N	16	2132	2147

See note at end of table.

Table B-3. Restricted-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
229	FAWT24	FINAL INTV REPLICATE WEIGHT, FAWT24	N	16	2148	2163
230	FAWT25	FINAL INTV REPLICATE WEIGHT, FAWT25	N	16	2164	2179
231	FAWT26	FINAL INTV REPLICATE WEIGHT, FAWT26	N	16	2180	2195
232	FAWT27	FINAL INTV REPLICATE WEIGHT, FAWT27	N	16	2196	2211
233	FAWT28	FINAL INTV REPLICATE WEIGHT, FAWT28	N	16	2212	2227
234	FAWT29	FINAL INTV REPLICATE WEIGHT, FAWT29	N	16	2228	2243
235	FAWT30	FINAL INTV REPLICATE WEIGHT, FAWT30	N	16	2244	2259
236	FAWT31	FINAL INTV REPLICATE WEIGHT, FAWT31	N	16	2260	2275
237	FAWT32	FINAL INTV REPLICATE WEIGHT, FAWT32	N	16	2276	2291
238	FAWT33	FINAL INTV REPLICATE WEIGHT, FAWT33	N	16	2292	2307
239	FAWT34	FINAL INTV REPLICATE WEIGHT, FAWT34	N	16	2308	2323
240	FAWT35	FINAL INTV REPLICATE WEIGHT, FAWT35	N	16	2324	2339
241	FAWT36	FINAL INTV REPLICATE WEIGHT, FAWT36	N	16	2340	2355
242	FAWT37	FINAL INTV REPLICATE WEIGHT, FAWT37	N	16	2356	2371
243	FAWT38	FINAL INTV REPLICATE WEIGHT, FAWT38	N	16	2372	2387
244	FAWT39	FINAL INTV REPLICATE WEIGHT, FAWT39	N	16	2388	2403
245	FAWT40	FINAL INTV REPLICATE WEIGHT, FAWT40	N	16	2404	2419
246	FAWT41	FINAL INTV REPLICATE WEIGHT, FAWT41	N	16	2420	2435
247	FAWT42	FINAL INTV REPLICATE WEIGHT, FAWT42	N	16	2436	2451
248	FAWT43	FINAL INTV REPLICATE WEIGHT, FAWT43	N	16	2452	2467
249	FAWT44	FINAL INTV REPLICATE WEIGHT, FAWT44	N	16	2468	2483
250	FAWT45	FINAL INTV REPLICATE WEIGHT, FAWT45	N	16	2484	2499
251	FAWT46	FINAL INTV REPLICATE WEIGHT, FAWT46	N	16	2500	2515
252	FAWT47	FINAL INTV REPLICATE WEIGHT, FAWT47	N	16	2516	2531
253	FAWT48	FINAL INTV REPLICATE WEIGHT, FAWT48	N	16	2532	2547
254	FAWT49	FINAL INTV REPLICATE WEIGHT, FAWT49	N	16	2548	2563
255	FAWT50	FINAL INTV REPLICATE WEIGHT, FAWT50	N	16	2564	2579
256	FAWT51	FINAL INTV REPLICATE WEIGHT, FAWT51	N	16	2580	2595
257	FAWT52	FINAL INTV REPLICATE WEIGHT, FAWT52	N	16	2596	2611
258	FAWT53	FINAL INTV REPLICATE WEIGHT, FAWT53	N	16	2612	2627
259	FAWT54	FINAL INTV REPLICATE WEIGHT, FAWT54	N	16	2628	2643
260	FAWT55	FINAL INTV REPLICATE WEIGHT, FAWT55	N	16	2644	2659
261	FAWT56	FINAL INTV REPLICATE WEIGHT, FAWT56	N	16	2660	2675
262	FAWT57	FINAL INTV REPLICATE WEIGHT, FAWT57	N	16	2676	2691
263	FAWT58	FINAL INTV REPLICATE WEIGHT, FAWT58	N	16	2692	2707
264	FAWT59	FINAL INTV REPLICATE WEIGHT, FAWT59	N	16	2708	2723
265	FAWT60	FINAL INTV REPLICATE WEIGHT, FAWT60	N	16	2724	2739
266	FAWT61	FINAL INTV REPLICATE WEIGHT, FAWT61	N	16	2740	2755
267	FAWT62	FINAL INTV REPLICATE WEIGHT, FAWT62	N	16	2756	2771
268	FAWT63	FINAL INTV REPLICATE WEIGHT, FAWT63	N	16	2772	2787
269	FAWT64	FINAL INTV REPLICATE WEIGHT, FAWT64	N	16	2788	2803
270	FAWT65	FINAL INTV REPLICATE WEIGHT, FAWT65	N	16	2804	2819
271	FAWT66	FINAL INTV REPLICATE WEIGHT, FAWT66	N	16	2820	2835
272	FAWT67	FINAL INTV REPLICATE WEIGHT, FAWT67	N	16	2836	2851
273	FAWT68	FINAL INTV REPLICATE WEIGHT, FAWT68	N	16	2852	2867
274	FAWT69	FINAL INTV REPLICATE WEIGHT, FAWT69	N	16	2868	2883
275	FAWT70	FINAL INTV REPLICATE WEIGHT, FAWT70	N	16	2884	2899
276	FAWT71	FINAL INTV REPLICATE WEIGHT, FAWT71	N	16	2900	2915
277	FAWT72	FINAL INTV REPLICATE WEIGHT, FAWT72	N	16	2916	2931
278	FAWT73	FINAL INTV REPLICATE WEIGHT, FAWT73	N	16	2932	2947
279	FAWT74	FINAL INTV REPLICATE WEIGHT, FAWT74	N	16	2948	2963
280	FAWT75	FINAL INTV REPLICATE WEIGHT, FAWT75	N	16	2964	2979
281	FAWT76	FINAL INTV REPLICATE WEIGHT, FAWT76	N	16	2980	2995
282	FAWT77	FINAL INTV REPLICATE WEIGHT, FAWT77	N	16	2996	3011
283	FAWT78	FINAL INTV REPLICATE WEIGHT, FAWT78	N	16	3012	3027
284	FAWT79	FINAL INTV REPLICATE WEIGHT, FAWT79	N	16	3028	3043
285	FAWT80	FINAL INTV REPLICATE WEIGHT, FAWT80	N	16	3044	3059
286	F_EDUATTN	IMPUTATION FLAG FOR EDUATTN	N	1	3060	3060
287	F_EDUFOS	IMPUTATION FLAG FOR EDUFOS	N	2	3061	3062
288	F_ENROLL	IMPUTATION FLAG FOR ENROLL	N	1	3063	3063
289	F_ESLCLA	IMPUTATION FLAG FOR ESLCLA	N	1	3064	3064
290	F_READCLA	IMPUTATION FLAG FOR READCLA	N	1	3065	3065
291	F_CNMAIN	IMPUTATION FLAG FOR CNMAIN	N	1	3066	3066
292	F_CNNUM	IMPUTATION FLAG FOR CNNUM	N	2	3067	3068
293	F_CNPROV1	IMPUTATION FLAG FOR CNPROV1	N	2	3069	3070
294	F_CNREVOKE1	IMPUTATION FLAG FOR CNREVOKE1	N	2	3071	3072
295	F_CNYEAR1	IMPUTATION FLAG FOR CNYEAR1	N	2	3073	3074
296	F_CNPRP_COLLG1	IMPUTATION FLAG FOR CNPRP_COLLG1	N	2	3075	3076
297	F_CNPRP_TRAIN1	IMPUTATION FLAG FOR CNPRP_TRAIN1	N	2	3077	3078
298	F_CNPRP_ONOWN1	IMPUTATION FLAG FOR CNPRP_ONOWN1	N	2	3079	3080
299	F_CNCURRJOB1	IMPUTATION FLAG FOR CNCURRJOB1	N	2	3081	3082
300	F_CNUSE_GET1	IMPUTATION FLAG FOR CNUSE_GET1	N	2	3083	3084
301	F_CNUSE_KEEP1	IMPUTATION FLAG FOR CNUSE_KEEP1	N	2	3085	3086
302	F_CNUSE_MRKT1	IMPUTATION FLAG FOR CNUSE_MRKT1	N	2	3087	3088
303	F_CNUSE_SKLS1	IMPUTATION FLAG FOR CNUSE_SKLS1	N	2	3089	3090
304	F_CNMAIN2	IMPUTATION FLAG FOR CNMAIN2	N	2	3091	3092

See note at end of table.

Table B-3. Restricted-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
305	F_CNPROV2	IMPUTATION FLAG FOR CNPROV2	N	2	3093	3094
306	F_CNREVOKE2	IMPUTATION FLAG FOR CNREVOKE2	N	2	3095	3096
307	F_CNYEAR2	IMPUTATION FLAG FOR CNYEAR2	N	2	3097	3098
308	F_CNPRP_COLLG2	IMPUTATION FLAG FOR CNPRP_COLLG2	N	2	3099	3100
309	F_CNPRP_TRAIN2	IMPUTATION FLAG FOR CNPRP_TRAIN2	N	2	3101	3102
310	F_CNPRP_ONOWN2	IMPUTATION FLAG FOR CNPRP_ONOWN2	N	2	3103	3104
311	F_CNCURRJOB2	IMPUTATION FLAG FOR CNCURRJOB2	N	2	3105	3106
312	F_CNUSE_GET2	IMPUTATION FLAG FOR CNUSE_GET2	N	2	3107	3108
313	F_CNUSE_KEEP2	IMPUTATION FLAG FOR CNUSE_KEEP2	N	2	3109	3110
314	F_CNUSE_MRKT2	IMPUTATION FLAG FOR CNUSE_MRKT2	N	2	3111	3112
315	F_CNUSE_SKLS2	IMPUTATION FLAG FOR CNUSE_SKLS2	N	2	3113	3114
316	F_CNMAIN3	IMPUTATION FLAG FOR CNMAIN3	N	2	3115	3116
317	F_CNPROV3	IMPUTATION FLAG FOR CNPROV3	N	2	3117	3118
318	F_CNREVOKE3	IMPUTATION FLAG FOR CNREVOKE3	N	2	3119	3120
319	F_CERTHS	IMPUTATION FLAG FOR CERTHS	N	1	3121	3121
320	F_CERTPROG	IMPUTATION FLAG FOR CERTPROG	N	1	3122	3122
321	F_CERTTRAIN	IMPUTATION FLAG FOR CERTTRAIN	N	1	3123	3123
322	F_CERTVOC	IMPUTATION FLAG FOR CERTVOC	N	1	3124	3124
323	F_PSFOS	IMPUTATION FLAG FOR PSFOS	N	2	3125	3126
324	F_LASTPSCR	IMPUTATION FLAG FOR LASTPSCR	N	2	3127	3128
325	F_LCHOURS	IMPUTATION FLAG FOR LCHOURS	N	2	3129	3130
326	F_LCENROLL	IMPUTATION FLAG FOR LCENROLL	N	2	3131	3132
327	F_LCINHRS	IMPUTATION FLAG FOR LCINHRS	N	2	3133	3134
328	F_LCRED	IMPUTATION FLAG FOR LCRED	N	2	3135	3136
329	F_LCTRAIN	IMPUTATION FLAG FOR LCTRAIN	N	2	3137	3138
330	F_LCCURRJOB	IMPUTATION FLAG FOR LCCURRJOB	N	2	3139	3140
331	F_LCUSE_GET	IMPUTATION FLAG FOR LCUSE_GET	N	2	3141	3142
332	F_LCUSE_SKLS	IMPUTATION FLAG FOR LCUSE_SKLS	N	2	3143	3144
333	F_LCUSE_PAY	IMPUTATION FLAG FOR LCUSE_PAY	N	2	3145	3146
334	F_WEPROG	IMPUTATION FLAG FOR WEPROG	N	1	3147	3147
335	F_WEFOLP	IMPUTATION FLAG FOR WEFOLP	N	2	3148	3149
336	F_WELONG	IMPUTATION FLAG FOR WELONG	N	2	3150	3151
337	F_WEWAGE	IMPUTATION FLAG FOR WEWAGE	N	2	3152	3153
338	F_WEPRP_COLLG	IMPUTATION FLAG FOR WEPRP_COLLG	N	2	3154	3155
339	F_WEPRP_TRAIN	IMPUTATION FLAG FOR WEPRP_TRAIN	N	2	3156	3157
340	F_WEPRP_INSTR	IMPUTATION FLAG FOR WEPRP_INSTR	N	2	3158	3159
341	F_WEAPPRE	IMPUTATION FLAG FOR WEAPPRE	N	2	3160	3161
342	F_WECRED	IMPUTATION FLAG FOR WECRED	N	2	3162	3163
343	F_WEEVAL	IMPUTATION FLAG FOR WEEVAL	N	2	3164	3165
344	F_WEJOURN	IMPUTATION FLAG FOR WEJOURN	N	2	3166	3167
345	F_WEDEGR	IMPUTATION FLAG FOR WEDEGR	N	2	3168	3169
346	F_WECERT	IMPUTATION FLAG FOR WECERT	N	2	3170	3171
347	F_WECURJO	IMPUTATION FLAG FOR WECURJO	N	2	3172	3173
348	F_WESKILL	IMPUTATION FLAG FOR WESKILL	N	2	3174	3175
349	F_WEUSE_GET	IMPUTATION FLAG FOR WEUSE_GET	N	2	3176	3177
350	F_WEUSE_SKLS	IMPUTATION FLAG FOR WEUSE_SKLS	N	2	3178	3179
351	F_WEUSE_PAY	IMPUTATION FLAG FOR WEUSE_PAY	N	2	3180	3181
352	F_EEMAIN	IMPUTATION FLAG FOR EEMAIN	N	1	3182	3182
353	F_EEUNION	IMPUTATION FLAG FOR EEUNION	N	2	3183	3184
354	F_EEJOB	IMPUTATION FLAG FOR EEEJOB	N	2	3185	3186
355	F_EEFTJOB	IMPUTATION FLAG FOR EEFTJOB	N	2	3187	3188
356	F_EEPTJOB	IMPUTATION FLAG FOR EEPTJOB	N	2	3189	3190
357	F_EEPREFFT	IMPUTATION FLAG FOR EEPREFFT	N	2	3191	3192
358	F_EELAYOFF	IMPUTATION FLAG FOR EELAYOFF	N	2	3193	3194
359	F_EEL4WKS	IMPUTATION FLAG FOR EEL4WKS	N	2	3195	3196
360	F_EEL5YRS	IMPUTATION FLAG FOR EEL5YRS	N	2	3197	3198
361	F_EELWRK	IMPUTATION FLAG FOR EELWRK	N	2	3199	3200
362	F_EEWKS	IMPUTATION FLAG FOR EEWKS	N	2	3201	3202
363	F_EEHRS	IMPUTATION FLAG FOR EEHRS	N	2	3203	3204
364	F_EEEARN	IMPUTATION FLAG FOR EEEARN	N	2	3205	3206
365	F_EEEMPLO	IMPUTATION FLAG FOR EEEMPLO	N	2	3207	3208
366	F_EELICES	IMPUTATION FLAG FOR EELICES	N	2	3209	3210
367	F_EEPOSIT	IMPUTATION FLAG FOR EEPPOSIT	N	2	3211	3212
368	F_EEPERM	IMPUTATION FLAG FOR EEPERM	N	2	3213	3214
369	F_XXMIL	IMPUTATION FLAG FOR XXMIL	N	1	3215	3215
370	F_XXACTV	IMPUTATION FLAG FOR XXACTV	N	2	3216	3217
371	F_XXSEX	IMPUTATION FLAG FOR XXSEX	N	1	3218	3218
372	F_XXMARIT	IMPUTATION FLAG FOR XXMARIT	N	1	3219	3219
373	F_XXBFGF	IMPUTATION FLAG FOR XXBFGF	N	2	3220	3221
374	F_XXLANG	IMPUTATION FLAG FOR XXLANG	N	1	3222	3222
375	F_XXENG	IMPUTATION FLAG FOR XXENG	N	2	3223	3224
376	F_XXAGE	IMPUTATION FLAG FOR XXAGE	N	1	3225	3225
377	F_XXRACE_HISP	IMPUTATION FLAG FOR XXRACE_HISP	N	1	3226	3226
378	F_XXRACE_AMIND	IMPUTATION FLAG FOR XXRACE_AMIND	N	1	3227	3227
379	F_XXRACE_ASIAN	IMPUTATION FLAG FOR XXRACE_ASIAN	N	1	3228	3228
380	F_XXRACE_BLACK	IMPUTATION FLAG FOR XXRACE_BLACK	N	1	3229	3229

See note at end of table.

Table B-3. Restricted-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
381	F_XXRACE_PACI	IMPUTATION FLAG FOR XXRACE_PACI	N	1	3230	3230
382	F_XXRACE_WHITE	IMPUTATION FLAG FOR XXRACE_WHITE	N	1	3231	3231
383	F_XXRACE_HISPRM	IMPUTATION FLAG FOR XXRACE_HISPRM	N	1	3232	3232
384	F_XXINTCELL	IMPUTATION FLAG FOR XXINTCELL	N	1	3233	3233
385	F_XXINTHOME	IMPUTATION FLAG FOR XXINTHOME	N	1	3234	3234
386	F_XXINTFREQ	IMPUTATION FLAG FOR XXINTFREQ	N	1	3235	3235
387	F_ZCTA	IMPUTATION FLAG FOR ZCTA	N	1	3236	3236

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey of the 2016 National Household Education Surveys

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASMIN	Unique child identifier	C	11	1	11
2	PATH	D-Questionnaire path	C	1	12	12
3	QTYPE	D-Survey Path	N	1	13	13
4	RCNOW	1. Regular care from relative	N	1	14	14
5	RCWEEK	2. Care from relative regularly scheduled	N	2	15	16
6	RCTYPE	3. Relative related to child	N	2	17	18
7	RCAGE	4. Age of relative care provider	N	2	19	20
8	RCPLACE	5. Care in home or another home	N	2	21	22
9	RCDAYS	6. Days a week child receives care from relative	N	2	23	24
10	RCHRS	7. Hours a week child receives care from relative	N	2	25	26
11	RCSTRY	8. Child's age when care began from relative (Years)	N	2	27	28
12	RCSTRM	8. Child's age when care began from relative (Months)	N	2	29	30
13	RCSPEAK	9. Language spoken by relative when caring for child	N	2	31	32
14	RCSKNFV	10. Relative care for child sick without a fever	N	2	33	34
15	RCSKFV	10. Relative care for child sick with a fever	N	2	35	36
16	RCFEE	11. Charge for care by relative	N	2	37	38
17	RCREL	12. Outside relative pays for care by relative	N	2	39	40
18	RCTANF	12. TANF pays for care by relative	N	2	41	42
19	RCSSAC	12. Other social service pays for care by relative	N	2	43	44
20	RCEMPL	12. Employer pays for care by relative	N	2	45	46
21	RCOTHER	12. Someone else pays for care by relative	N	2	47	48
22	RCCOST	13. Amount household pays for care by relative	N	5	49	53
23	RCUNIT	13. Unit of time for cost of relative care	N	2	54	55
24	RCCSTHNX	14. Number of children in household amount covers for relative care	N	2	56	57
25	RCOTHC	15. Other regular care arrangements	N	2	58	59
26	RCTLHR	16. Hours each week spent in other care	N	2	60	61
27	NCNOW	17. Care from non-relative	N	1	62	62
28	NCWEEK	18. Care from non-relative regularly scheduled	N	2	63	64
29	NCPLACE	19. Care in own home	N	2	65	66
30	NCINHH	20. Care provider live in household	N	2	67	68
31	NCDDAYS	21. Days a week child receives non-relative care	N	2	69	70
32	NCHRS	22. Hours each week child receives non-relative care	N	2	71	72
33	NCSTRY	23. Child's age when care began from non-relative (Years)	N	2	73	74
34	NCSTRM	23. Child's age when care began from non-relative (Months)	N	2	75	76
35	NCALKNE	24. Care provider already known	N	2	77	78
36	NCAGE	25. Care provider 18 or older	N	2	79	80
37	NCSPEAK	26. Language spoken by non-relative when caring for child	N	2	81	82
38	NCSKNFV	27. Non-relative care for child sick without a fever	N	2	83	84
39	NCSKFV	27. Non-relative care for child sick with a fever	N	2	85	86
40	NCRCMDPT	28. Recommend care provider to another	N	2	87	88
41	NCFEE	29. Charge for care by non-relative	N	2	89	90
42	NCREL	30. Relative pays for care by non-relative	N	2	91	92
43	NCTANF	30. TANF pays for care by non-relative	N	2	93	94
44	NCSSAC	30. Other social service pays for care by non-relative	N	2	95	96
45	NCEMPL	30. Employer pays for care by non-relative	N	2	97	98
46	NCOTHER	30. Someone else pays for care by non-relative	N	2	99	100
47	NCCOST	31. Amount household pays for care by non-relative	N	5	101	105
48	NCUNIT	31. Unit of time for cost of non-relative care	N	2	106	107
49	NCCSTHNX	32. Number of children in household amount covers for non-relative care	N	2	108	109
50	NCOTHC	33. Other home-based care	N	2	110	111
51	NCTLHR	34. Total hours per week in care with non-relatives	N	2	112	113
52	CPNNOWX	35. Attending program not in private home	N	1	114	114
53	CPWEEKX	36. Attend program at least once a week	N	2	115	116
54	CPTYPE	37. Kind of program	N	2	117	118
55	CPHEADST	38. Kind of program, HS or EHS	N	2	119	120
56	CPPLACEX	39. Program location	N	2	121	122
57	CPSPLRLG	40. Program run by religious group	N	2	123	124
58	CPWORK	41. Program location at workplace	N	2	125	126
59	CPDAYS	42. Days each week child attends program	N	2	127	128
60	CPHRS	43. Hours each week child attends program	N	2	129	130
61	CPSTRY	44. Age of child when starting program (Years)	N	2	131	132
62	CPSTRM	44. Age of child when starting program (Months)	N	2	133	134
63	CPSPEAK	45. Language spoken by program provider when caring for child	N	2	135	136
64	CPRCMDPT	46. Recommend program to another	N	2	137	138
65	CPTEST	47. Provide hearing, speech, vision testing	N	2	139	140
66	CPPHYSE	47. Provide physical examinations	N	2	141	142
67	CPDENTA	47. Provide dental examinations	N	2	143	144
68	CPDISAB	47. Provide testing for learning problems	N	2	145	146
69	CPSKNFV	47. Provide care when child is sick without fever	N	2	147	148

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
70	CPSKFV	47. Provide care when child is sick with fever	N	2	149	150
71	CPFEE	48. Charge for program	N	2	151	152
72	CPREL	49. Relative pays for program care	N	2	153	154
73	CPTANF	49. TANF pays for program care	N	2	155	156
74	CPSSAC	49. Other social service pays for program care	N	2	157	158
75	CPEMPL	49. Employer pays for program care	N	2	159	160
76	CPOTHER	49. Someone else pays for program care	N	2	161	162
77	CPCOST	50. Amount household pays for program care	N	5	163	167
78	CPUNIT	50. Unit of time for cost of program care	N	2	168	169
79	CPCSTHNX	51. Number of children in household amount covers for program	N	2	170	171
80	CPOTHC	52. Other care arrangements	N	2	172	173
81	CPTLHR	53. Total hours per week at daycare/preschool	N	2	174	175
82	PCEVRHDX	54. Ever attended HS or EHS	N	1	176	176
83	MAINRESN	55. Reason for wanting program	N	1	177	177
84	PPCHOIC	56. Good choice of program	N	1	178	178
85	PPDIFCLT	57. Difficulty finding program	N	1	179	179
86	WHYDIFCLT	58. Reason finding care was difficult	N	2	180	181
87	DCLOA	59. Importance of location	N	2	182	183
88	DCOST	59. Importance of cost	N	2	184	185
89	DRELY	59. Importance of reliability	N	2	186	187
90	DLERN	59. Importance of learning activities	N	2	188	189
91	DCHIL	59. Importance of child interaction with other kids	N	2	190	191
92	DHROP	59. Importance of caregiver availability	N	2	192	193
93	DNBGRP	59. Importance of number of children in group	N	2	194	195
94	DRTWEB	59. Importance of website ratings	N	2	196	197
95	DRECFAM	59. Importance of number of family recommendations	N	2	198	199
96	DRELOR	59. Importance of religious orientation	N	2	200	201
97	HABOOKS	60. Books child owns	N	3	202	204
98	FOREADTOX	61. Time spent reading to child	N	2	205	206
99	FORDDAYX	62. Minutes spent each time reading to child	N	2	207	208
100	FOSTORYX	63. In the past week, times child has been told a story	N	1	209	209
101	FOWORDSX	63. In the past week, times child has been taught letters, words, or numbers	N	1	210	210
102	FOSANG	63. In the past week, times sang with child	N	1	211	211
103	FOCRAFTSX	63. In the past week, time spent on arts and crafts	N	1	212	212
104	FODINNERX	64. Eaten the evening meal together in past week	N	1	213	213
105	FOLIBRAY	65. Visited a library in the past month	N	1	214	214
106	FOBOOKST	66. Visited a bookstore in the past month	N	1	215	215
107	DPIAGE	67. Child older or younger than 2 years	N	1	216	216
108	DPCOLOR	68. Identify colors by name	N	2	217	218
109	DPLETTER	69. Recognize letters of alphabet	N	2	219	220
110	DPCOUNT	70. Counting skills	N	2	221	222
111	DPNAME	71. Ability to write first name	N	2	223	224
112	HAPRETRD	72. Read by him/herself	N	2	225	226
113	HAWORDSX	73. Read the words or pretend to read	N	2	227	228
114	HACONECTX	74. Connected story when pretending to read	N	2	229	230
115	HDHEALTH	75. Health of child	N	1	231	231
116	HDINTDIS	76. Intellectual disability	N	1	232	232
117	HDSPEECHX	76. Speech or language impairment	N	1	233	233
118	HDDISTRBX	76. Serious emotional disturbance	N	1	234	234
119	HDDEAFIMX	76. Deafness or other hearing impairment	N	1	235	235
120	HDBLINDX	76. Blindness or other visual impairment	N	1	236	236
121	HDORTHOX	76. Orthopedic impairment	N	1	237	237
122	HDAUTISMX	76. Autism	N	1	238	238
123	HDPDDX	76. Pervasive Developmental Disorder	N	1	239	239
124	HDADDX	76. Attention Deficit Disorder	N	1	240	240
125	HDLEARNX	76. Learning disability	N	1	241	241
126	HDDELAYX	76. Developmental Delay	N	1	242	242
127	HDTRBRAIN	76. Traumatic Brain Injury	N	1	243	243
128	HDOOTHERX	76. Another health impairment	N	1	244	244
129	HDDLYRSK	77. At-risk for delay	N	1	245	245
130	HDRECSER	79. Receiving services for condition	N	2	246	247
131	HDSCHLX	80. Local school district provides services	N	2	248	249
132	HDGOVTX	80. Local health or service agency provides services	N	2	250	251
133	HDDOCTORX	80. Doctor, clinic, or other provider provides services	N	2	252	253
134	HDPRISCH	80. Private school provides services	N	2	254	255
135	HDIEXPX	81. Services provided by IEP or IFSP	N	2	256	257
136	HDDEVIEPX	82. Develop/change IEP	N	2	258	259
137	HDCOMMUX	83. Satisfied with service provider communication	N	2	260	261
138	HDTCHR	83. Satisfied with special needs teacher/therapist	N	2	262	263

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
139	HDACCOMX	83. Satisfied with ability to accommodate child's needs	N	2	264	265
140	HDCOMMITX	83. Satisfied with commitment to help child	N	2	266	267
141	HDSPCLED	84. Enrollment in special education classes	N	2	268	269
142	HDLEARN	85. Condition interferes with learning	N	2	270	271
143	HDPLAY	85. Condition interferes with participation in play	N	2	272	273
144	HDOUT	85. Condition interferes with going on outings	N	2	274	275
145	HDFRNDS	85. Condition interferes with making friends	N	2	276	277
146	CDOBMM	86. Month born	N	2	278	279
147	CDOBYY	86. Year born	N	4	280	283
148	CPLCBRTH	87. Country where child born	N	1	284	284
149	CMOVEAGE	88. Age of child when first moved to US	N	2	285	286
150	CHISPAN	89. Child Spanish, Hispanic, or Latino	N	1	287	287
151	CAMIND	90. Child Race - American Indian or Alaska Native	N	1	288	288
152	CASIAN	90. Child Race - Asian	N	1	289	289
153	CBLACK	90. Child Race - Black or African American	N	1	290	290
154	CPACI	90. Child Race - Native Hawaiian or other Pacific Islander	N	1	291	291
155	CWHITE	90. Child Race, White	N	1	292	292
156	CHISPRM	90. Child Hispanic - race not reported	N	1	293	293
157	CSEX	91. Child Sex	N	1	294	294
158	CLIVYN	92. Where child lived for school year	N	1	295	295
159	CLIVELSWX	93. Where child spends time	N	2	296	297
160	CSPEAKX	94. Language spoken by child at home	N	1	298	298
161	CENGLPRG	95. Enrolled in language program	N	2	299	300
162	HHTOTALXX	96. Total people in household	N	2	301	302
163	HHBROSX	97. Brothers	N	1	303	303
164	HHSISSX	97. Sisters	N	1	304	304
165	HHMOM	97. Mother	N	1	305	305
166	HHDAD	97. Father	N	1	306	306
167	HHAUNTSX	97. Aunts	N	1	307	307
168	HHUNCLSX	97. Uncles	N	1	308	308
169	HHGMASX	97. Grandmothers	N	1	309	309
170	HHGPASX	97. Grandfathers	N	1	310	310
171	HHCSNSX	97. Cousins	N	1	311	311
172	HHPRTNRSX	97. Parent's girlfriend/boyfriend/partner	N	1	312	312
173	HHORELSX	97. Other relatives	N	1	313	313
174	HHONRELSX	97. Other non-relatives	N	1	314	314
175	RELATION	98. Respondent relation to child	N	1	315	315
176	HHENGLISH	99. Language spoken at home - English	N	1	316	316
177	HHSPANISH	99. Language spoken at home - Spanish	N	1	317	317
178	HHFRENCH	99. Language spoken at home - French	N	1	318	318
179	HHCHINESE	99. Language spoken at home - Chinese	N	1	319	319
180	HHOTHLANG	99. Language spoken at home - Other	N	1	320	320
181	P1REL	100. First parent/guardian relation to child	N	1	321	321
182	P1SEX	101. First parent/guardian sex	N	1	322	322
183	P1MRSTA	102. First parent/guardian marital status	N	1	323	323
184	P1BFGF	103. First parent/guardian living with boyfriend/girlfriend	N	2	324	325
185	P1FRLNG	104. First parent/guardian first language	N	1	326	326
186	P1SPEAK	105. First parent/guardian language spoken most often at home	N	2	327	328
187	P1PLCBRTH	106. First parent/guardian country where born	N	1	329	329
188	P1AGEMV	107. First parent/guardian age when first moved to US	N	2	330	331
189	P1HISPAN	108. First parent/guardian of Spanish, Hispanic, or Latino origin	N	1	332	332
190	P1AMIND	109. First parent/guardian Race - American Indian or Alaska Native	N	1	333	333
191	P1ASIAN	109. First parent/guardian Race - Asian	N	1	334	334
192	P1BLACK	109. First parent/guardian Race - Black or African American	N	1	335	335
193	P1PACI	109. First parent/guardian Race - Native Hawaiian or other Pacific Islander	N	1	336	336
194	P1WHITE	109. First parent/guardian Race - White	N	1	337	337
195	P1HISPRM	109. First parent/guardian Race - Hispanic, race not reported	N	1	338	338
196	P1EDUC	110. First parent/guardian highest grade level completed	N	2	339	340
197	P1ENRL	111. First parent/guardian attending school	N	1	341	341
198	P1EMPL	112. First parent/guardian employment status	N	1	342	342
199	P1HRSWK	113. First parent/guardian hours worked per week	N	2	343	344
200	P1LKWRK	114. First parent/guardian looking for work	N	2	345	346
201	P1MTHSWRK	115. First parent/guardian months worked	N	2	347	348
202	P1AGE	116. First parent/guardian age	N	2	349	350
203	P1AGEPAR	117. First parent/guardian age when became parent	N	2	351	352
204	P1AGEPARDK	117. First parent/guardian age when became parent (Don't know)	N	2	353	354
205	P2GUARD	118. Second parent/guardian	N	1	355	355
206	P2REL	119. Second parent/guardian relation to child	N	2	356	357
207	P2SEX	120. Second parent/guardian sex	N	2	358	359

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
208	P2MRSTA	121. Second parent/guardian marital status	N	2	360	361
209	P2BFGF	122. Second parent/guardian living with boyfriend/girlfriend	N	2	362	363
210	P2FRLNG	123. Second parent/guardian first language	N	2	364	365
211	P2SPEAK	124. Second parent/guardian language spoken most often at home	N	2	366	367
212	P2PLCBRTH	125. Second parent/guardian country where born	N	2	368	369
213	P2AGEMV	126. Second parent/guardian age when first moved to US	N	2	370	371
214	P2HISPAN	127. Second parent/guardian of Spanish, Hispanic, or Latino origin	N	2	372	373
215	P2AMIND	128. Second parent/guardian Race - American Indian or Alaska Native	N	2	374	375
216	P2ASIAN	128. Second parent/guardian Race - Asian	N	2	376	377
217	P2BLACK	128. Second parent/guardian Race - Black or African American	N	2	378	379
218	P2PACI	128. Second parent/guardian Race - Native Hawaiian or other Pacific Islander	N	2	380	381
219	P2WHITE	128. Second parent/guardian Race - White	N	2	382	383
220	P2HISPRM	128. Second parent/guardian race - Hispanic, race not reported	N	2	384	385
221	P2EDUC	129. Second parent/guardian highest grade level completed	N	2	386	387
222	P2ENRL	130. Second parent/Guardian attending school	N	2	388	389
223	P2EMPL	131. Second parent/guardian employment status	N	2	390	391
224	P2HRSWK	132. Second parent/guardian hours worked per week	N	2	392	393
225	P2LKWRK	133. Second parent/guardian looking for work	N	2	394	395
226	P2MTHSWRK	134. Second parent/guardian months worked	N	2	396	397
227	P2AGE	135. Second parent/guardian age	N	2	398	399
228	P2AGEPAR	136. Second parent/guardian age when became parent	N	2	400	401
229	P2AGEPARDK	136. Second parent/guardian age when became parent (Don't Know)	N	2	402	403
230	HWELFTAN	137. Received TANF in past 12 months	N	1	404	404
231	HWELFST	137. Received welfare or family assistance in past 12 months	N	1	405	405
232	HWIC	137. Received WIC in past 12 months	N	1	406	406
233	HFOODST	137. Received food stamps in past 12 months	N	1	407	407
234	HMEDICAID	137. Received Medicaid in past 12 months	N	1	408	408
235	HCHIP	137. Received CHIP in past 12 months	N	1	409	409
236	HSECN8	137. Received Section 8 in past 12 months	N	1	410	410
237	TTLHHINC	138. Total income	N	2	411	412
238	YRSADDR	139. Years at address	N	2	413	414
239	OWNRNTHB	140. Own/rent house	N	1	415	415
240	HVINTSPHO	141. Internet access on a cell phone	N	1	416	416
241	HVINTCOM	142. Internet access on a computer or tablet	N	1	417	417
242	USEINTRNT	143. How often use Internet	N	1	418	418
243	DISABLTYX	D-Child currently has disability	N	1	419	419
244	DISBLTY2X	D-Child has disability including autism, ADD and PDD	N	1	420	420
245	PAR1EDUC	D-Educational attainment of child's parent or guardian	N	1	421	421
246	PAR1EMPL	D-Work status of child's parent or guardian	N	1	422	422
247	PAR1FTFY	D-Parent 1 or Guardian 1 works full time	N	1	423	423
248	PAR1MARST	D-Parent 1 marital status	N	1	424	424
249	PAR1TYPE	D-Specific relationship of parent/guardian 1 to child	N	1	425	425
250	PAR2EDUC	D-Educational attainment of child's parent 2 or guardian 2	N	2	426	427
251	PAR2EMPL	D-Work status of child's parent 2 or guardian 2	N	2	428	429
252	PAR2FTFY	D-Parent 2 or Guardian 2 works full time	N	2	430	431
253	PAR2MARST	D-Parent 2 marital status	N	2	432	433
254	PAR2TYPE	D-Specific relationship of parent/guardian 2 to child	N	2	434	435
255	HHPARN16X	D-Parents in household including same sex parents/partners	N	1	436	436
256	HHPARN16_BRD	D-Parents or guardians in household including same sex parents/partners	N	1	437	437
257	NUMSIBSX	D-Number of child's siblings	N	1	438	438
258	FAMILY16X	D-Family type including same sex parents/partners	N	1	439	439
259	FAMILY16_BRD	D-Family type parent 2	N	1	440	440
260	HHUNDR6X	D-Number of household members younger than age 6	N	1	441	441
261	HHUNDR10X	D-Number of household members younger than age 10	N	1	442	442
262	HHUNDR16X	D-Number of household members younger than age 16	N	1	443	443
263	HHUNDR18X	D-Number of household members younger than age 18	N	1	444	444
264	HHUNID	D-Other household member, not identified	N	1	445	445
265	LANGUAGEEX	D-English spoken most by parents including same sex partners	N	1	446	446
266	PARGRADEX	D-Parent/guardian highest education including same sex partners	N	1	447	447
267	RACEETHN	D-Race and ethnicity of child	N	1	448	448
268	RACEETH2	D-Detailed race and ethnicity of child	N	1	449	449
269	INTACC	D-Internet access	N	1	450	450
270	ANYCAREX	D-Child participates in any nonparental care or program arrangements	N	1	451	451
271	ANYCARE2X	D-Child has nonparental care at least once a week	N	1	452	452
272	CAREHOURX	D-Total hours a week child is in nonparental care	N	3	453	455
273	CPARRNEWX	D-Number of center-based programs at least once a week	N	1	456	456
274	MOSTHRSX	D-Care arrangement in which the child spends the most hours per week	N	2	457	458
275	NCARRNEWX	D-Number of nonrelative arrangements at least once a week	N	1	459	459
276	RCARRNEWX	D-Number of relative care arrangements at least once a week	N	1	460	460

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
277	CENREG	D-Census region where child lives	N	1	461	461
278	ZIP18PO2	D-Percent of families in zipcode with children <18 below the poverty line	N	1	462	462
279	ZIPBLHI2	D-Percent of persons in zipcode who were Black or Hispanic	N	1	463	463
280	ZIPLOCL	D-Zip code classification by community type	C	2	464	465
281	ENGLSPANX	D-Questionnaire in English or Spanish	N	1	466	466
282	AGE2015	D-Child's Age as of Dec 31, 2015	N	1	467	467
283	MODECOMP	D-Completed on Web or Paper	N	1	468	468
284	HHIMAGE1	D-HH Member 1 Age	N	2	469	470
285	HHIMAGE2	D-HH Member 2 Age	N	2	471	472
286	HHIMAGE3	D-HH Member 3 Age	N	2	473	474
287	HHIMAGE4	D-HH Member 4 Age	N	2	475	476
288	HHIMAGE5	D-HH Member 5 Age	N	2	477	478
289	HHIMAGE6	D-HH Member 6 Age	N	2	479	480
290	HHIMAGE7	D-HH Member 7 Age	N	2	481	482
291	HHIMAGE8	D-HH Member 8 Age	N	2	483	484
292	HHIMAGE9	D-HH Member 9 Age	N	2	485	486
293	HHMSEX1	D-HH Member 1 Sex	N	2	487	488
294	HHMSEX2	D-HH Member 2 Sex	N	2	489	490
295	HHMSEX3	D-HH Member 3 Sex	N	2	491	492
296	HHMSEX4	D-HH Member 4 Sex	N	2	493	494
297	HHMSEX5	D-HH Member 5 Sex	N	2	495	496
298	HHMSEX6	D-HH Member 6 Sex	N	2	497	498
299	HHMSEX7	D-HH Member 7 Sex	N	2	499	500
300	HHMSEX8	D-HH Member 8 Sex	N	2	501	502
301	HHMSEX9	D-HH Member 9 Sex	N	2	503	504
302	HHMENRL1	D-HH Member 1 Enrollment Status	N	2	505	506
303	HHMENRL2	D-HH Member 2 Enrollment Status	N	2	507	508
304	HHMENRL3	D-HH Member 3 Enrollment Status	N	2	509	510
305	HHMENRL4	D-HH Member 4 Enrollment Status	N	2	511	512
306	HHMENRL5	D-HH Member 5 Enrollment Status	N	2	513	514
307	HHMENRL6	D-HH Member 6 Enrollment Status	N	2	515	516
308	HHMENRL7	D-HH Member 7 Enrollment Status	N	2	517	518
309	HHMENRL8	D-HH Member 8 Enrollment Status	N	2	519	520
310	HHMENRL9	D-HH Member 9 Enrollment Status	N	2	521	522
311	HHMGRD1	D-HH Member 1 Grade Level	N	2	523	524
312	HHMGRD2	D-HH Member 2 Grade Level	N	2	525	526
313	HHMGRD3	D-HH Member 3 Grade Level	N	2	527	528
314	HHMGRD4	D-HH Member 4 Grade Level	N	2	529	530
315	HHMGRD5	D-HH Member 5 Grade Level	N	2	531	532
316	HHMGRD6	D-HH Member 6 Grade Level	N	2	533	534
317	HHMGRD7	D-HH Member 7 Grade Level	N	2	535	536
318	HHMGRD8	D-HH Member 8 Grade Level	N	2	537	538
319	HHMGRD9	D-HH Member 9 Grade Level	N	2	539	540
320	EPSU	PSU FOR TAYLOR SERIES VAR EST	N	4	541	544
321	ESTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	545	545
322	FEWT	FINAL INTV WEIGHT	N	16	546	561
323	FEWT1	FINAL INTV REPLICATE WEIGHT, FEWT1	N	16	562	577
324	FEWT2	FINAL INTV REPLICATE WEIGHT, FEWT2	N	16	578	593
325	FEWT3	FINAL INTV REPLICATE WEIGHT, FEWT3	N	16	594	609
326	FEWT4	FINAL INTV REPLICATE WEIGHT, FEWT4	N	16	610	625
327	FEWT5	FINAL INTV REPLICATE WEIGHT, FEWT5	N	16	626	641
328	FEWT6	FINAL INTV REPLICATE WEIGHT, FEWT6	N	16	642	657
329	FEWT7	FINAL INTV REPLICATE WEIGHT, FEWT7	N	16	658	673
330	FEWT8	FINAL INTV REPLICATE WEIGHT, FEWT8	N	16	674	689
331	FEWT9	FINAL INTV REPLICATE WEIGHT, FEWT9	N	16	690	705
332	FEWT10	FINAL INTV REPLICATE WEIGHT, FEWT10	N	16	706	721
333	FEWT11	FINAL INTV REPLICATE WEIGHT, FEWT11	N	16	722	737
334	FEWT12	FINAL INTV REPLICATE WEIGHT, FEWT12	N	16	738	753
335	FEWT13	FINAL INTV REPLICATE WEIGHT, FEWT13	N	16	754	769
336	FEWT14	FINAL INTV REPLICATE WEIGHT, FEWT14	N	16	770	785
337	FEWT15	FINAL INTV REPLICATE WEIGHT, FEWT15	N	16	786	801
338	FEWT16	FINAL INTV REPLICATE WEIGHT, FEWT16	N	16	802	817
339	FEWT17	FINAL INTV REPLICATE WEIGHT, FEWT17	N	16	818	833
340	FEWT18	FINAL INTV REPLICATE WEIGHT, FEWT18	N	16	834	849
341	FEWT19	FINAL INTV REPLICATE WEIGHT, FEWT19	N	16	850	865
342	FEWT20	FINAL INTV REPLICATE WEIGHT, FEWT20	N	16	866	881
343	FEWT21	FINAL INTV REPLICATE WEIGHT, FEWT21	N	16	882	897
344	FEWT22	FINAL INTV REPLICATE WEIGHT, FEWT22	N	16	898	913
345	FEWT23	FINAL INTV REPLICATE WEIGHT, FEWT23	N	16	914	929

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
346	FEWT24	FINAL INTV REPLICATE WEIGHT, FEWT24	N	16	930	945
347	FEWT25	FINAL INTV REPLICATE WEIGHT, FEWT25	N	16	946	961
348	FEWT26	FINAL INTV REPLICATE WEIGHT, FEWT26	N	16	962	977
349	FEWT27	FINAL INTV REPLICATE WEIGHT, FEWT27	N	16	978	993
350	FEWT28	FINAL INTV REPLICATE WEIGHT, FEWT28	N	16	994	1009
351	FEWT29	FINAL INTV REPLICATE WEIGHT, FEWT29	N	16	1010	1025
352	FEWT30	FINAL INTV REPLICATE WEIGHT, FEWT30	N	16	1026	1041
353	FEWT31	FINAL INTV REPLICATE WEIGHT, FEWT31	N	16	1042	1057
354	FEWT32	FINAL INTV REPLICATE WEIGHT, FEWT32	N	16	1058	1073
355	FEWT33	FINAL INTV REPLICATE WEIGHT, FEWT33	N	16	1074	1089
356	FEWT34	FINAL INTV REPLICATE WEIGHT, FEWT34	N	16	1090	1105
357	FEWT35	FINAL INTV REPLICATE WEIGHT, FEWT35	N	16	1106	1121
358	FEWT36	FINAL INTV REPLICATE WEIGHT, FEWT36	N	16	1122	1137
359	FEWT37	FINAL INTV REPLICATE WEIGHT, FEWT37	N	16	1138	1153
360	FEWT38	FINAL INTV REPLICATE WEIGHT, FEWT38	N	16	1154	1169
361	FEWT39	FINAL INTV REPLICATE WEIGHT, FEWT39	N	16	1170	1185
362	FEWT40	FINAL INTV REPLICATE WEIGHT, FEWT40	N	16	1186	1201
363	FEWT41	FINAL INTV REPLICATE WEIGHT, FEWT41	N	16	1202	1217
364	FEWT42	FINAL INTV REPLICATE WEIGHT, FEWT42	N	16	1218	1233
365	FEWT43	FINAL INTV REPLICATE WEIGHT, FEWT43	N	16	1234	1249
366	FEWT44	FINAL INTV REPLICATE WEIGHT, FEWT44	N	16	1250	1265
367	FEWT45	FINAL INTV REPLICATE WEIGHT, FEWT45	N	16	1266	1281
368	FEWT46	FINAL INTV REPLICATE WEIGHT, FEWT46	N	16	1282	1297
369	FEWT47	FINAL INTV REPLICATE WEIGHT, FEWT47	N	16	1298	1313
370	FEWT48	FINAL INTV REPLICATE WEIGHT, FEWT48	N	16	1314	1329
371	FEWT49	FINAL INTV REPLICATE WEIGHT, FEWT49	N	16	1330	1345
372	FEWT50	FINAL INTV REPLICATE WEIGHT, FEWT50	N	16	1346	1361
373	FEWT51	FINAL INTV REPLICATE WEIGHT, FEWT51	N	16	1362	1377
374	FEWT52	FINAL INTV REPLICATE WEIGHT, FEWT52	N	16	1378	1393
375	FEWT53	FINAL INTV REPLICATE WEIGHT, FEWT53	N	16	1394	1409
376	FEWT54	FINAL INTV REPLICATE WEIGHT, FEWT54	N	16	1410	1425
377	FEWT55	FINAL INTV REPLICATE WEIGHT, FEWT55	N	16	1426	1441
378	FEWT56	FINAL INTV REPLICATE WEIGHT, FEWT56	N	16	1442	1457
379	FEWT57	FINAL INTV REPLICATE WEIGHT, FEWT57	N	16	1458	1473
380	FEWT58	FINAL INTV REPLICATE WEIGHT, FEWT58	N	16	1474	1489
381	FEWT59	FINAL INTV REPLICATE WEIGHT, FEWT59	N	16	1490	1505
382	FEWT60	FINAL INTV REPLICATE WEIGHT, FEWT60	N	16	1506	1521
383	FEWT61	FINAL INTV REPLICATE WEIGHT, FEWT61	N	16	1522	1537
384	FEWT62	FINAL INTV REPLICATE WEIGHT, FEWT62	N	16	1538	1553
385	FEWT63	FINAL INTV REPLICATE WEIGHT, FEWT63	N	16	1554	1569
386	FEWT64	FINAL INTV REPLICATE WEIGHT, FEWT64	N	16	1570	1585
387	FEWT65	FINAL INTV REPLICATE WEIGHT, FEWT65	N	16	1586	1601
388	FEWT66	FINAL INTV REPLICATE WEIGHT, FEWT66	N	16	1602	1617
389	FEWT67	FINAL INTV REPLICATE WEIGHT, FEWT67	N	16	1618	1633
390	FEWT68	FINAL INTV REPLICATE WEIGHT, FEWT68	N	16	1634	1649
391	FEWT69	FINAL INTV REPLICATE WEIGHT, FEWT69	N	16	1650	1665
392	FEWT70	FINAL INTV REPLICATE WEIGHT, FEWT70	N	16	1666	1681
393	FEWT71	FINAL INTV REPLICATE WEIGHT, FEWT71	N	16	1682	1697
394	FEWT72	FINAL INTV REPLICATE WEIGHT, FEWT72	N	16	1698	1713
395	FEWT73	FINAL INTV REPLICATE WEIGHT, FEWT73	N	16	1714	1729
396	FEWT74	FINAL INTV REPLICATE WEIGHT, FEWT74	N	16	1730	1745
397	FEWT75	FINAL INTV REPLICATE WEIGHT, FEWT75	N	16	1746	1761
398	FEWT76	FINAL INTV REPLICATE WEIGHT, FEWT76	N	16	1762	1777
399	FEWT77	FINAL INTV REPLICATE WEIGHT, FEWT77	N	16	1778	1793
400	FEWT78	FINAL INTV REPLICATE WEIGHT, FEWT78	N	16	1794	1809
401	FEWT79	FINAL INTV REPLICATE WEIGHT, FEWT79	N	16	1810	1825
402	FEWT80	FINAL INTV REPLICATE WEIGHT, FEWT80	N	16	1826	1841
403	F_RCNOW	IMPUTATION FLAG FOR RCNOW	N	1	1842	1842
404	F_RCWEEK	IMPUTATION FLAG FOR RCWEEK	N	2	1843	1844
405	F_RCTYPE	IMPUTATION FLAG FOR RCTYPE	N	2	1845	1846
406	F_RCAGE	IMPUTATION FLAG FOR RCAGE	N	2	1847	1848
407	F_RCPLACE	IMPUTATION FLAG FOR RCPLACE	N	2	1849	1850
408	F_RCDAYS	IMPUTATION FLAG FOR RCDAYS	N	2	1851	1852
409	F_RCHRS	IMPUTATION FLAG FOR RCHRS	N	2	1853	1854
410	F_RCSTRTM	IMPUTATION FLAG FOR RCSTRTM	N	2	1855	1856
411	F_RCSTRTY	IMPUTATION FLAG FOR RCSTRTY	N	2	1857	1858
412	F_RCSPEAK	IMPUTATION FLAG FOR RCSPEAK	N	2	1859	1860
413	F_RCSKNFV	IMPUTATION FLAG FOR RCSKNFV	N	2	1861	1862
414	F_RCSKfv	IMPUTATION FLAG FOR RCSKfv	N	2	1863	1864

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
415	F_RCFEE	IMPUTATION FLAG FOR RCFEE	N	2	1865	1866
416	F_RCREL	IMPUTATION FLAG FOR RCREL	N	2	1867	1868
417	F_RCTANF	IMPUTATION FLAG FOR RCTANF	N	2	1869	1870
418	F_RCSSAC	IMPUTATION FLAG FOR RCSSAC	N	2	1871	1872
419	F_RCEMPL	IMPUTATION FLAG FOR RCEMPL	N	2	1873	1874
420	F_RCOOTHER	IMPUTATION FLAG FOR RCOOTHER	N	2	1875	1876
421	F_RCCOST	IMPUTATION FLAG FOR RCCOST	N	2	1877	1878
422	F_RCUNIT	IMPUTATION FLAG FOR RCUNIT	N	2	1879	1880
423	F_RCCSTHNX	IMPUTATION FLAG FOR RCCSTHNX	N	2	1881	1882
424	F_RCOTHC	IMPUTATION FLAG FOR RCOTHC	N	2	1883	1884
425	F_RCTLHR	IMPUTATION FLAG FOR RCTLHR	N	2	1885	1886
426	F_NCNOW	IMPUTATION FLAG FOR NCNOW	N	1	1887	1887
427	F_NCWEEK	IMPUTATION FLAG FOR NCWEEK	N	2	1888	1889
428	F_NCPLACE	IMPUTATION FLAG FOR NCPLACE	N	2	1890	1891
429	F_NCINHH	IMPUTATION FLAG FOR NCINHH	N	2	1892	1893
430	F_NCDAYS	IMPUTATION FLAG FOR NCDAYS	N	2	1894	1895
431	F_NCHRS	IMPUTATION FLAG FOR NCHRS	N	2	1896	1897
432	F_NCSTRTM	IMPUTATION FLAG FOR NCSTRTM	N	2	1898	1899
433	F_NCSTRTY	IMPUTATION FLAG FOR NCSTRTY	N	2	1900	1901
434	F_NCALKNE	IMPUTATION FLAG FOR NCALKNE	N	2	1902	1903
435	F_NCAGE	IMPUTATION FLAG FOR NCAGE	N	2	1904	1905
436	F_NCSPEAK	IMPUTATION FLAG FOR NCSPEAK	N	2	1906	1907
437	F_NCSKNFV	IMPUTATION FLAG FOR NCSKNFV	N	2	1908	1909
438	F_NCSKfv	IMPUTATION FLAG FOR NCSKfv	N	2	1910	1911
439	F_NCRCMDPT	IMPUTATION FLAG FOR NCRCMDPT	N	2	1912	1913
440	F_NCfee	IMPUTATION FLAG FOR NCfee	N	2	1914	1915
441	F_NCREL	IMPUTATION FLAG FOR NCREL	N	2	1916	1917
442	F_NCTANF	IMPUTATION FLAG FOR NCTANF	N	2	1918	1919
443	F_NCSSAC	IMPUTATION FLAG FOR NCSSAC	N	2	1920	1921
444	F_NCEMPL	IMPUTATION FLAG FOR NCEMPL	N	2	1922	1923
445	F_NCOOTHER	IMPUTATION FLAG FOR NCOOTHER	N	2	1924	1925
446	F_NCCOST	IMPUTATION FLAG FOR NCCOST	N	2	1926	1927
447	F_NCUNIT	IMPUTATION FLAG FOR NCUNIT	N	2	1928	1929
448	F_NCCSTHNX	IMPUTATION FLAG FOR NCCSTHNX	N	2	1930	1931
449	F_NCOTHC	IMPUTATION FLAG FOR NCOTHC	N	2	1932	1933
450	F_NCTLHR	IMPUTATION FLAG FOR NCTLHR	N	2	1934	1935
451	F_CPNNOWX	IMPUTATION FLAG FOR CPNOWX	N	1	1936	1936
452	F_CpwEEKX	IMPUTATION FLAG FOR CPWEEKX	N	2	1937	1938
453	F_CPTYPE	IMPUTATION FLAG FOR CPTYPE	N	2	1939	1940
454	F_CPHADST	IMPUTATION FLAG FOR CPHEADST	N	2	1941	1942
455	F_CPLACEX	IMPUTATION FLAG FOR CPPLACEX	N	2	1943	1944
456	F_CPSPLRG	IMPUTATION FLAG FOR CPSPLRG	N	2	1945	1946
457	F_CpWORK	IMPUTATION FLAG FOR CPWORK	N	2	1947	1948
458	F_CPDAYS	IMPUTATION FLAG FOR CPDAYS	N	2	1949	1950
459	F_CPHRS	IMPUTATION FLAG FOR CPHRS	N	2	1951	1952
460	F_CPSRTM	IMPUTATION FLAG FOR CPSTRTM	N	2	1953	1954
461	F_CPSRTY	IMPUTATION FLAG FOR CPSTRY	N	2	1955	1956
462	F_CPSPEAK	IMPUTATION FLAG FOR CPSPEAK	N	2	1957	1958
463	F_CPRCMDPT	IMPUTATION FLAG FOR CPRCMDPT	N	2	1959	1960
464	F_CPTEST	IMPUTATION FLAG FOR CPTEST	N	2	1961	1962
465	F_CPPHYSE	IMPUTATION FLAG FOR CPPHYSE	N	2	1963	1964
466	F_CPDENTA	IMPUTATION FLAG FOR CPDENTA	N	2	1965	1966
467	F_CPDISAB	IMPUTATION FLAG FOR CPDISAB	N	2	1967	1968
468	F_CPSKNFV	IMPUTATION FLAG FOR CPSKNFV	N	2	1969	1970
469	F_CPSKfv	IMPUTATION FLAG FOR CPSKfv	N	2	1971	1972
470	F_CPFEE	IMPUTATION FLAG FOR CPFEE	N	2	1973	1974
471	F_CPREL	IMPUTATION FLAG FOR CPREL	N	2	1975	1976
472	F_CPTANF	IMPUTATION FLAG FOR CPTANF	N	2	1977	1978
473	F_CPSAAC	IMPUTATION FLAG FOR CPSAAC	N	2	1979	1980
474	F_CPEMPL	IMPUTATION FLAG FOR CPEMPL	N	2	1981	1982
475	F_CPOOTHER	IMPUTATION FLAG FOR CPOOTHER	N	2	1983	1984
476	F_CPCOST	IMPUTATION FLAG FOR CPCOST	N	2	1985	1986
477	F_CPUNIT	IMPUTATION FLAG FOR CPUNIT	N	2	1987	1988
478	F_CPCSTHNX	IMPUTATION FLAG FOR CPCSTHNX	N	2	1989	1990
479	F_CPOTHC	IMPUTATION FLAG FOR CPOTHC	N	2	1991	1992
480	F_CPTLHR	IMPUTATION FLAG FOR CPTLHR	N	2	1993	1994
481	F_PCEVRHDX	IMPUTATION FLAG FOR PCEVRHDX	N	1	1995	1995
482	F_MAINRESN	IMPUTATION FLAG FOR MAINRESN	N	1	1996	1996
483	F_PPCHOIC	IMPUTATION FLAG FOR PPCHOIC	N	1	1997	1997

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
484	F_PPDIIFCLT	IMPUTATION FLAG FOR PPDIIFCLT	N	1	1998	1998
485	F_WHYDIFCLT	IMPUTATION FLAG FOR WHYDIFCLT	N	2	1999	2000
486	F_DCLOA	IMPUTATION FLAG FOR DCLOA	N	2	2001	2002
487	F_DCOST	IMPUTATION FLAG FOR DCOST	N	2	2003	2004
488	F_DRELY	IMPUTATION FLAG FOR DRELY	N	2	2005	2006
489	F_DLERN	IMPUTATION FLAG FOR DLERN	N	2	2007	2008
490	F_DCHIL	IMPUTATION FLAG FOR DCHIL	N	2	2009	2010
491	F_DHROP	IMPUTATION FLAG FOR DHROP	N	2	2011	2012
492	F_DNBGRP	IMPUTATION FLAG FOR DNBGRP	N	2	2013	2014
493	F_DRTWEB	IMPUTATION FLAG FOR DRTWEB	N	2	2015	2016
494	F_DRECFAM	IMPUTATION FLAG FOR DRECFAM	N	2	2017	2018
495	F_DRELOR	IMPUTATION FLAG FOR DRELOR	N	2	2019	2020
496	F_HABOOKS	IMPUTATION FLAG FOR HABOOKS	N	1	2021	2021
497	F_FOREADTOX	IMPUTATION FLAG FOR FOREADTOX	N	1	2022	2022
498	F_FORDDAYX	IMPUTATION FLAG FOR FORDDAYX	N	2	2023	2024
499	F_FOSTORYX	IMPUTATION FLAG FOR FOSTORYX	N	1	2025	2025
500	F_FOWORDSX	IMPUTATION FLAG FOR FOWORDSX	N	1	2026	2026
501	F_FOSANG	IMPUTATION FLAG FOR FOSANG	N	1	2027	2027
502	F_FOCRAFTSX	IMPUTATION FLAG FOR FOCRAFTSX	N	1	2028	2028
503	F_FODINNERX	IMPUTATION FLAG FOR FODINNERX	N	1	2029	2029
504	F_FOLIBRAY	IMPUTATION FLAG FOR FOLIBRAY	N	1	2030	2030
505	F_FOBOOKST	IMPUTATION FLAG FOR FOBOOKST	N	1	2031	2031
506	F_DPIAGE	IMPUTATION FLAG FOR DPIAGE	N	1	2032	2032
507	F_DPCOLOR	IMPUTATION FLAG FOR DPCOLOR	N	2	2033	2034
508	F_DPLETTER	IMPUTATION FLAG FOR DPLETTER	N	2	2035	2036
509	F_DPCOUNT	IMPUTATION FLAG FOR DPCOUNT	N	2	2037	2038
510	F_DPNAME	IMPUTATION FLAG FOR DPNAME	N	2	2039	2040
511	F_HAPRETRD	IMPUTATION FLAG FOR HAPRETRD	N	2	2041	2042
512	F_HAWORDSX	IMPUTATION FLAG FOR HAWORDSX	N	2	2043	2044
513	F_HACONECTX	IMPUTATION FLAG FOR HACONECTX	N	2	2045	2046
514	F_HDHEALTH	IMPUTATION FLAG FOR HDHEALTH	N	1	2047	2047
515	F_HDADDX	IMPUTATION FLAG FOR HDADDX	N	1	2048	2048
516	F_HDINTDIS	IMPUTATION FLAG FOR HDINTDIS	N	1	2049	2049
517	F_HDSPEECHX	IMPUTATION FLAG FOR HDSPEECHX	N	1	2050	2050
518	F_HDDISTRBX	IMPUTATION FLAG FOR HDDISTRBX	N	1	2051	2051
519	F_HDDEAFIMX	IMPUTATION FLAG FOR HDDEAFIMX	N	1	2052	2052
520	F_HDBLINDX	IMPUTATION FLAG FOR HDBLINDX	N	1	2053	2053
521	F_HDORTHOX	IMPUTATION FLAG FOR HDORTHOX	N	1	2054	2054
522	F_HDAUTISMX	IMPUTATION FLAG FOR HDAUTISMX	N	1	2055	2055
523	F_HDPDDX	IMPUTATION FLAG FOR HDPDDX	N	1	2056	2056
524	F_HDLEARNX	IMPUTATION FLAG FOR HDLEARNX	N	1	2057	2057
525	F_HDDELAYX	IMPUTATION FLAG FOR HDDELAYX	N	1	2058	2058
526	F_HDTRBRAIN	IMPUTATION FLAG FOR HDTRBRAIN	N	1	2059	2059
527	F_HDOTHERX	IMPUTATION FLAG FOR HDOTHERX	N	1	2060	2060
528	F_HDDLYRSK	IMPUTATION FLAG FOR HDDLYRSK	N	1	2061	2061
529	F_HDRECSER	IMPUTATION FLAG FOR HDRECSER	N	2	2062	2063
530	F_HDSCHLX	IMPUTATION FLAG FOR HDSCHLX	N	2	2064	2065
531	F_HDGOVTX	IMPUTATION FLAG FOR HDGOVTX	N	2	2066	2067
532	F_HDDOCTORX	IMPUTATION FLAG FOR HDDOCTORX	N	2	2068	2069
533	F_HDPRISCH	IMPUTATION FLAG FOR HDPRISCH	N	2	2070	2071
534	F_HDIEPX	IMPUTATION FLAG FOR HDIEPX	N	2	2072	2073
535	F_HDDEVIEPX	IMPUTATION FLAG FOR HDDEVIEPX	N	2	2074	2075
536	F_HDCOMMUX	IMPUTATION FLAG FOR HDCOMMUX	N	2	2076	2077
537	F_HDTCHR	IMPUTATION FLAG FOR HDTCHR	N	2	2078	2079
538	F_HDACCOMX	IMPUTATION FLAG FOR HDACCOMX	N	2	2080	2081
539	F_HDCOMMITX	IMPUTATION FLAG FOR HDCOMMITX	N	2	2082	2083
540	F_HDSCLED	IMPUTATION FLAG FOR HDSCLED	N	2	2084	2085
541	F_HDLEARN	IMPUTATION FLAG FOR HDLEARN	N	2	2086	2087
542	F_HDPLAY	IMPUTATION FLAG FOR HDPLAY	N	2	2088	2089
543	F_HDOUT	IMPUTATION FLAG FOR HDOUT	N	2	2090	2091
544	F_HDFRNDS	IMPUTATION FLAG FOR HDFRNDS	N	2	2092	2093
545	F_CDOBMM	IMPUTATION FLAG FOR CDOBMM	N	1	2094	2094
546	F_CDOBYYY	IMPUTATION FLAG FOR CDOBYYY	N	1	2095	2095
547	F_CPLCBRTH	IMPUTATION FLAG FOR CPLCBRTH	N	1	2096	2096
548	F_CMOVEAGE	IMPUTATION FLAG FOR CMOVEAGE	N	2	2097	2098
549	F_CHISPAN	IMPUTATION FLAG FOR CHISPAN	N	1	2099	2099
550	F_CAMIND	IMPUTATION FLAG FOR CAMIND	N	1	2100	2100
551	F_CASIAN	IMPUTATION FLAG FOR CASIAN	N	1	2101	2101
552	F_CBLACK	IMPUTATION FLAG FOR CBLACK	N	1	2102	2102

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
553	F_CPACI	IMPUTATION FLAG FOR CPACI	N	1	2103	2103
554	F_CHISPRM	IMPUTATION FLAG FOR CHISPRM	N	1	2104	2104
555	F_CWHITE	IMPUTATION FLAG FOR CWHITE	N	1	2105	2105
556	F_CSEX	IMPUTATION FLAG FOR CSEX	N	1	2106	2106
557	F_CLIVYN	IMPUTATION FLAG FOR CLIVYN	N	1	2107	2107
558	F_CLIVELSWX	IMPUTATION FLAG FOR CLIVELSWX	N	2	2108	2109
559	F_CSPEAKX	IMPUTATION FLAG FOR CSPEAKX	N	1	2110	2110
560	F_CENGLPRG	IMPUTATION FLAG FOR CENGLPRG	N	2	2111	2112
561	F_HHTOTALXX	IMPUTATION FLAG FOR HHTOTALXX	N	1	2113	2113
562	F_HHBROSX	IMPUTATION FLAG FOR HHBROSX	N	1	2114	2114
563	F_HHSISSSX	IMPUTATION FLAG FOR HHSISSSX	N	1	2115	2115
564	F_HHMOM	IMPUTATION FLAG FOR HHMOM	N	1	2116	2116
565	F_HHDAD	IMPUTATION FLAG FOR HHDAD	N	1	2117	2117
566	F_HHAUNTSX	IMPUTATION FLAG FOR HHAUNTSX	N	1	2118	2118
567	F_HHUNCLSX	IMPUTATION FLAG FOR HHUNCLSX	N	1	2119	2119
568	F_HHGMASX	IMPUTATION FLAG FOR HHGMASX	N	1	2120	2120
569	F_HHGPASX	IMPUTATION FLAG FOR HHGPASX	N	1	2121	2121
570	F_HHCSNSX	IMPUTATION FLAG FOR HHCSNSX	N	1	2122	2122
571	F_HHPRTNRSX	IMPUTATION FLAG FOR HHPRTNRSX	N	1	2123	2123
572	F_HHORELSX	IMPUTATION FLAG FOR HHORELSX	N	1	2124	2124
573	F_HHONRELSX	IMPUTATION FLAG FOR HHONRELSX	N	1	2125	2125
574	F_RELATION	IMPUTATION FLAG FOR RELATION	N	1	2126	2126
575	F_HHENGGLISH	IMPUTATION FLAG FOR HHENGGLISH	N	1	2127	2127
576	F_HHSPANISH	IMPUTATION FLAG FOR HHSPANISH	N	1	2128	2128
577	F_HHFrench	IMPUTATION FLAG FOR HHFrench	N	1	2129	2129
578	F_HHCHINESE	IMPUTATION FLAG FOR HHCHINESE	N	1	2130	2130
579	F_HHOTHLANG	IMPUTATION FLAG FOR HHOTHLANG	N	1	2131	2131
580	F_PIREL	IMPUTATION FLAG FOR P1REL	N	1	2132	2132
581	F_P1SEX	IMPUTATION FLAG FOR P1SEX	N	1	2133	2133
582	F_P1MRSTA	IMPUTATION FLAG FOR P1MRSTA	N	1	2134	2134
583	F_P1BFGF	IMPUTATION FLAG FOR P1BFGF	N	2	2135	2136
584	F_P1FRLNG	IMPUTATION FLAG FOR P1FRLNG	N	1	2137	2137
585	F_P1SPEAK	IMPUTATION FLAG FOR P1SPEAK	N	2	2138	2139
586	F_P1PLCBRTH	IMPUTATION FLAG FOR P1PLCBRTH	N	1	2140	2140
587	F_P1AGEMV	IMPUTATION FLAG FOR P1AGEMV	N	2	2141	2142
588	F_P1HISPAN	IMPUTATION FLAG FOR P1HISPAN	N	1	2143	2143
589	F_P1AMIND	IMPUTATION FLAG FOR P1AMIND	N	1	2144	2144
590	F_P1ASIAN	IMPUTATION FLAG FOR P1ASIAN	N	1	2145	2145
591	F_P1BLACK	IMPUTATION FLAG FOR P1BLACK	N	1	2146	2146
592	F_P1PACI	IMPUTATION FLAG FOR P1PACI	N	1	2147	2147
593	F_P1WHITE	IMPUTATION FLAG FOR P1WHITE	N	1	2148	2148
594	F_P1HISPRM	IMPUTATION FLAG FOR P1HISPRM	N	1	2149	2149
595	F_P1EDUC	IMPUTATION FLAG FOR P1EDUC	N	1	2150	2150
596	F_P1ENRL	IMPUTATION FLAG FOR P1ENRL	N	1	2151	2151
597	F_P1EMPL	IMPUTATION FLAG FOR P1EMPL	N	1	2152	2152
598	F_P1HRSWK	IMPUTATION FLAG FOR P1HRSWK	N	2	2153	2154
599	F_P1LKWRK	IMPUTATION FLAG FOR P1LKWRK	N	2	2155	2156
600	F_P1MTHSWRK	IMPUTATION FLAG FOR P1MTHSWRK	N	1	2157	2157
601	F_P1AGE	IMPUTATION FLAG FOR P1AGE	N	1	2158	2158
602	F_P1AGEPAR	IMPUTATION FLAG FOR P1AGEPAR	N	2	2159	2160
603	F_P1AGEPARDK	IMPUTATION FLAG FOR P1AGEPARDK	N	2	2161	2162
604	F_P2GUARD	IMPUTATION FLAG FOR P2GUARD	N	1	2163	2163
605	F_P2REL	IMPUTATION FLAG FOR P2REL	N	2	2164	2165
606	F_P2SEX	IMPUTATION FLAG FOR P2SEX	N	2	2166	2167
607	F_P2MRSTA	IMPUTATION FLAG FOR P2MRSTA	N	2	2168	2169
608	F_P2BFGF	IMPUTATION FLAG FOR P2BFGF	N	2	2170	2171
609	F_P2FRLNG	IMPUTATION FLAG FOR P2FRLNG	N	2	2172	2173
610	F_P2SPEAK	IMPUTATION FLAG FOR P2SPEAK	N	2	2174	2175
611	F_P2PLCBRTH	IMPUTATION FLAG FOR P2PLCBRTH	N	2	2176	2177
612	F_P2AGEMV	IMPUTATION FLAG FOR P2AGEMV	N	2	2178	2179
613	F_P2HISPAN	IMPUTATION FLAG FOR P2HISPAN	N	2	2180	2181
614	F_P2AMIND	IMPUTATION FLAG FOR P2AMIND	N	2	2182	2183
615	F_P2ASIAN	IMPUTATION FLAG FOR P2ASIAN	N	2	2184	2185
616	F_P2BLACK	IMPUTATION FLAG FOR P2BLACK	N	2	2186	2187
617	F_P2PACI	IMPUTATION FLAG FOR P2PACI	N	2	2188	2189
618	F_P2WHITE	IMPUTATION FLAG FOR P2WHITE	N	2	2190	2191
619	F_P2HISPRM	IMPUTATION FLAG FOR P2HISPRM	N	2	2192	2193
620	F_P2EDUC	IMPUTATION FLAG FOR P2EDUC	N	2	2194	2195
621	F_P2ENRL	IMPUTATION FLAG FOR P2ENRL	N	2	2196	2197

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, ECPP:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
622	F_P2EMPL	IMPUTATION FLAG FOR P2EMPL	N	2	2198	2199
623	F_P2HRSWK	IMPUTATION FLAG FOR P2HRSWK	N	2	2200	2201
624	F_P2LKWRK	IMPUTATION FLAG FOR P2LKWRK	N	2	2202	2203
625	F_P2MTHSWRK	IMPUTATION FLAG FOR P2MTHSWRK	N	2	2204	2205
626	F_P2AGE	IMPUTATION FLAG FOR P2AGE	N	2	2206	2207
627	F_P2AGEPAR	IMPUTATION FLAG FOR P2AGEPAR	N	2	2208	2209
628	F_P2AGEPARDK	IMPUTATION FLAG FOR P2AGEPARDK	N	2	2210	2211
629	F_HWELFTAN	IMPUTATION FLAG FOR HWELFTAN	N	1	2212	2212
630	F_HWELFST	IMPUTATION FLAG FOR HWELFST	N	1	2213	2213
631	F_HWIC	IMPUTATION FLAG FOR HWIC	N	1	2214	2214
632	F_HFOODST	IMPUTATION FLAG FOR HFOODST	N	1	2215	2215
633	F_HMEDICAID	IMPUTATION FLAG FOR HMEDICAID	N	1	2216	2216
634	F_HCHIP	IMPUTATION FLAG FOR HCHIP	N	1	2217	2217
635	F_HSECN8	IMPUTATION FLAG FOR HSECN8	N	1	2218	2218
636	F_TTLHHINC	IMPUTATION FLAG FOR TTLHHINC	N	1	2219	2219
637	F_YRSADDR	IMPUTATION FLAG FOR YRSADDR	N	1	2220	2220
638	F_OWNRNTHB	IMPUTATION FLAG FOR OWNRNTHB	N	1	2221	2221
639	F_HVINTSPHO	IMPUTATION FLAG FOR HVINTSPHO	N	1	2222	2222
640	F_HVINTCOM	IMPUTATION FLAG FOR HVINTCOM	N	1	2223	2223
641	F_USEINTRNT	IMPUTATION FLAG FOR USEINTRNT	N	1	2224	2224
642	F_HHUNID	IMPUTATION FLAG FOR HHUNID	N	1	2225	2225

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation Survey of the 2016 National Household Education Surveys Program (ECPP-NHES:2016)

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASMIN	Unique child identifier	C	11	1	11
2	PATH	D-Questionnaire path	C	1	12	12
3	QTYPE	D-Survey Path	N	1	13	13
4	GRADE	E1. Grade attending	N	2	14	15
5	SCPUBPRI	E2. Type of school	N	2	16	17
6	DISTASSI	E3. District-assigned school	N	2	18	19
7	SCHRTSCHL	E4. Charter school	N	2	20	21
8	SNEIGHBRX	E5. Move to attend school	N	2	22	23
9	SPUBCHOIX	E6. Choice of public school	N	2	24	25
10	SCONSIDR	E7. Other schools considered	N	2	26	27
11	SPERFORM	E8. Seek information on school performance	N	2	28	29
12	S1STCHOI	E9. First choice school	N	2	30	31
13	SSAMSC	E10. Same school since beginning of school year	N	2	32	33
14	SMVMTH	E11. Month started current school	N	2	34	35
15	SEENJOY	E12. Child enjoyment of school	N	2	36	37
16	SEGRADES	E13. Child's grades	N	2	38	39
17	SEADPLCXX	E14. Advanced placement enrollment	N	2	40	41
18	SEBEHAVX	E15. Times contacted about behavior problems	N	2	42	43
19	SESCHWRK	E15. Times contacted about problems with school work	N	2	44	45
20	SEGBEHAV	E15. Times contacted about very good behavior	N	2	46	47
21	SEGWORK	E15. Times contacted about very good school work	N	2	48	49
22	SEABSNT	E16. Days absent	N	3	50	52
23	SEREPEAT	E17. Grades repeated	N	2	53	54
24	SEREPTK	E18. Which grades repeated -K	N	2	55	56
25	SEREPT1	E18. Which grades repeated -1	N	2	57	58
26	SEREPT2	E18. Which grades repeated -2	N	2	59	60
27	SEREPT3	E18. Which grades repeated -3	N	2	61	62
28	SEREPT4	E18. Which grades repeated -4	N	2	63	64
29	SEREPT5	E18. Which grades repeated -5	N	2	65	66
30	SEREPT6	E18. Which grades repeated -6	N	2	67	68
31	SEREPT7	E18. Which grades repeated -7	N	2	69	70
32	SEREPT8	E18. Which grades repeated -8	N	2	71	72
33	SEREPT9	E18. Which grades repeated -9	N	2	73	74
34	SEREPT10	E18. Which grades repeated -10	N	2	75	76
35	SEREPT11	E18. Which grades repeated -11	N	2	77	78
36	SEREPT12	E18. Which grades repeated -12	N	2	79	80
37	SESUSOUT	E19. Out of school suspension	N	2	81	82
38	SESUSPIN	E19. In school suspension	N	2	83	84
39	SEEXPTEL	E19. Expelled	N	2	85	86
40	SEFUTUREX	E20. Expectations for child's future education	N	2	87	88
41	SEGRADEQ	E21. Description of school work	N	2	89	90
42	SNETCRSX	E22. Internet instruction	N	2	91	92
43	SPBSCH	E23. Internet instruction provided by - local public school	N	2	93	94
44	SSTATE	E23. Internet instruction provided by - state	N	2	95	96
45	SCHRTR	E23. Internet instruction provided by - charter school	N	2	97	98
46	SAPBSCH	E23. Internet instruction provided by - other public school	N	2	99	100
47	SPRIVSCH	E23. Internet instruction provided by - private school	N	2	101	102
48	SUNIVSCH	E23. Internet instruction provided by - college	N	2	103	104
49	SOTHSCCH	E23. Internet instruction provided by - other	N	2	105	106
50	SINSTFEE	E24. Fee for instruction	N	2	107	108
51	HOMESCHLX	E25. Homeschooled for some classes or subjects	N	2	109	110
52	HMSCHARR	E26. How much homeschooling	N	2	111	112
53	FSSPORTX	E30. Attend a school event	N	2	113	114
54	FSVOL	E30. Serve as a volunteer	N	2	115	116
55	FSMTNG	E30. Attend a school meeting	N	2	117	118
56	FSPTMTNG	E30. Attend a parent-teacher organization meeting	N	2	119	120
57	FSATCNF	E30. Attend parent-teacher conference	N	2	121	122
58	FSFUNDRS	E30. Participate in fundraising	N	2	123	124
59	FSCOMMTE	E30. Serve on school committee	N	2	125	126
60	FSCOUNSLR	E30. Meet with guidance counselor	N	2	127	128
61	FSFREQ	E31. Times participated in school meetings	N	2	129	130
62	FSNOTESX	E32. Receive notes or emails	N	2	131	132
63	FSMEMO	E32. Receive newsletters	N	2	133	134
64	FSPHONCHX	E32. Receive phone calls	N	2	135	136
65	FSSPPERF	E33. School provides child progress between report cards	N	2	137	138
66	FSSPHW	E33. School provides information on homework help	N	2	139	140
67	FSSPCOUR	E33. School provides information on class placement	N	2	141	142
68	FSSPROLE	E33. School provides information on your expected role	N	2	143	144
69	FSSPCOLL	E33. School provides information on college	N	2	145	146
70	FCSCHOOL	E34. Satisfaction with schools	N	2	147	148
71	FCTEACHR	E34. Satisfaction with teachers	N	2	149	150
72	FCSTDS	E34. Satisfaction with academic standards	N	2	151	152
73	FCORDER	E34. Satisfaction with discipline	N	2	153	154
74	FCSUPPRT	E34. Satisfaction with school staff/parent interaction	N	2	155	156
75	FHHOME	E35. Time spent doing homework	N	2	157	158
76	FHWKRS	E36. Hours spent doing homework	N	2	159	160

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
77	FHAMOUNT	E37. Adult's feelings about amount of homework assigned	N	2	161	162
78	FHCAMT	E38. Child's feelings about amount of homework	N	2	163	164
79	FHPLACE	E39. Place at home to do homework	N	2	165	166
80	FHCHECKX	E40. Check for homework completion	N	2	167	168
81	FHHELP	E41. Days help with homework	N	2	169	170
82	HSWHOX	H1. Person providing homeschool instruction	N	2	171	172
83	HSTUTOR	H2. Homeschool instruction by tutor	N	2	173	174
84	HSCOOP	H3. Homeschool instruction by homeschool group	N	2	175	176
85	HSCOLL	H4. Homeschool instruction at public or private school or university	N	2	177	178
86	HSPUBLIC	H5. Homeschool type of school - Public	N	2	179	180
87	HSPRIVATE	H5. Homeschool type of school - Private	N	2	181	182
88	HSCOLLEGE	H5. Homeschool type of school - College	N	2	183	184
89	HSSCHR	E27/H6. Hours spent in public or private school	N	2	185	186
90	GRADEEQ	H7. Homeschool grade - equivalent K-12	N	2	187	188
91	HSDAYS	H8. Days a week homeschooled	N	2	189	190
92	HSHOURS	H8. Hours a week homeschooled	N	2	191	192
93	HSKACTIV	H9. Participated in activities while homeschooled	N	2	193	194
94	HSSTYLR	H10. Homeschool teaching style	N	2	195	196
95	HSCLIBRX	H11. Homeschool curriculum source - library	N	2	197	198
96	HSCHSPUBX	H11. Homeschool curriculum source - homeschool catalog	N	2	199	200
97	HSCEDPUBX	H11. Homeschool curriculum source - educational publisher	N	2	201	202
98	HSCORGX	H11. Homeschool curriculum source - homeschooling organization	N	2	203	204
99	HSCCHURX	H11. Homeschool curriculum source - church	N	2	205	206
100	HSCPUBLX	H11. Homeschool curriculum source - public school	N	2	207	208
101	HSCPRIVX	H11. Homeschool curriculum source - private school	N	2	209	210
102	HSCRELX	H11. Homeschool curriculum source - bookstore	N	2	211	212
103	HSCNETX	H11. Homeschool curriculum source - websites	N	2	213	214
104	HSCOTH	H11. Homeschool curriculum source - other source	N	2	215	216
105	HSCVTLCR	H11. Homeschool curriculum source - virtual school or curriculum	N	2	217	218
106	HSCOURS	H12. Family member courses taken for homeschool instruction	N	2	219	220
107	HSINTNET	H13. Internet homeschool instruction	N	2	221	222
108	HSINTPUB	H14. Homeschool instruction provided by - local public school	N	2	223	224
109	HSINTST	H14. Homeschool instruction provided by - state	N	2	225	226
110	HSINTCH	H14. Homeschool instruction provided by - charter school	N	2	227	228
111	HSINTAPB	H14. Homeschool instruction provided by - another public school	N	2	229	230
112	HSINTPRI	H14. Homeschool instruction provided by - private school	N	2	231	232
113	HSINTCOL	H14. Homeschool instruction provided by - college	N	2	233	234
114	HSINTOH	H14. Homeschool instruction provided by - someplace else	N	2	235	236
115	HSFEE	H15. Fee charged for homeschool instruction	N	2	237	238
116	HOMEKX	H16. Homeschooled in Kindergarten	N	2	239	240
117	HOME1	H16. Homeschooled in first grade	N	2	241	242
118	HOME2	H16. Homeschooled in second grade	N	2	243	244
119	HOME3	H16. Homeschooled in third grade	N	2	245	246
120	HOME4	H16. Homeschooled in fourth grade	N	2	247	248
121	HOME5	H16. Homeschooled in fifth grade	N	2	249	250
122	HOME6	H16. Homeschooled in sixth grade	N	2	251	252
123	HOME7	H16. Homeschooled in seventh grade	N	2	253	254
124	HOME8	H16. Homeschooled in eighth grade	N	2	255	256
125	HOME9	H16. Homeschooled in ninth grade	N	2	257	258
126	HOME10	H16. Homeschooled in tenth grade	N	2	259	260
127	HOME11	H16. Homeschooled in eleventh grade	N	2	261	262
128	HOME12	H16. Homeschooled in twelfth grade	N	2	263	264
129	HSSAFETYX	E28/H17. Why homeschool - peer pressure	N	2	265	266
130	HSDISSATX	E28/H17. Why homeschool - dissatisfied with instruction	N	2	267	268
131	HSRELGON	E28/H17. Why homeschool - religious instruction	N	2	269	270
132	HSMORAL	E28/H17. Why homeschool - moral instruction	N	2	271	272
133	HSDISABLX	E28/H17. Why homeschool - health problem	N	2	273	274
134	HSILLX	E28/H17. Why homeschool - temporary illness	N	2	275	276
135	HSSPCLNDX	E28/H17. Why homeschool - special needs	N	2	277	278
136	HSALTX	E28/H17. Why homeschool - nontraditional education	N	2	279	280
137	HSOTHERX	E28/H17. Why homeschool - other	N	2	281	282
138	HSMOSTX	E29/H18. Why homeschool - Most important reason	C	2	283	284
139	HSFUTUREX	H19. Expectations for child's homeschool education	N	2	285	286
140	HSART	H20. Homeschool subject areas taught - Art	N	2	287	288
141	HSMUSIC	H20. Homeschool subject areas taught - Music	N	2	289	290
142	HSARITH	H20. Homeschool subject areas taught - Arithmetic	N	2	291	292
143	HSALG1	H20. Homeschool subject areas taught - Algebra	N	2	293	294
144	HSALG2	H20. Homeschool subject areas taught - Algebra II	N	2	295	296
145	HSGEOM	H20. Homeschool subject areas taught - Geometry	N	2	297	298
146	HSCALC	H20. Homeschool subject areas taught - Calculus	N	2	299	300
147	HSPROB	H20. Homeschool subject areas taught - Probability	N	2	301	302
148	HSSCIEN	H20. Homeschool subject areas taught - Scientific inquiry	N	2	303	304
149	HSGEOL	H20. Homeschool subject areas taught - Earth science	N	2	305	306
150	HSBIOL	H20. Homeschool subject areas taught - Biology	N	2	307	308
151	HSCHEM	H20. Homeschool subject areas taught - Chemistry	N	2	309	310
152	HSGEOG	H20. Homeschool subject areas taught - Geography	N	2	311	312

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
153	HSREAD	H20. Homeschool subject areas taught - Reading	N	2	313	314
154	HSSPELL	H20. Homeschool subject areas taught - Spelling	N	2	315	316
155	HSENGL	H20. Homeschool subject areas taught - English	N	2	317	318
156	HSCOMSCI	H20. Homeschool subject areas taught - Computer science	N	2	319	320
157	HSHIST	H20. Homeschool subject areas taught - Social studies	N	2	321	322
158	HSFOLANG	H20. Homeschool subject areas taught - Foreign language	N	2	323	324
159	HSPHYED	H20. Homeschool subject areas taught - Physical education	N	2	325	326
160	HSHEALTH	H20. Homeschool subject area taught - Health	N	2	327	328
161	HSNART	H21. Subject areas taught now - Art	N	2	329	330
162	HSNMUSIC	H21. Subject areas taught now - Music	N	2	331	332
163	HSNARITH	H21. Subject areas taught now - Arithmetic	N	2	333	334
164	HSNALG1	H21. Subject areas taught now - Algebra	N	2	335	336
165	HSNALG2	H21. Subject areas taught now - Algebra II	N	2	337	338
166	HSNGEOM	H21. Subject areas taught now - Geometry	N	2	339	340
167	HSNCALC	H21. Subject areas taught now - Calculus	N	2	341	342
168	HSNPROMB	H21. Subject areas taught now - Probability	N	2	343	344
169	HSNSCIEN	H21. Subject areas taught now - Scientific inquiry	N	2	345	346
170	HSNGEOL	H21. Subject areas taught now - Earth science	N	2	347	348
171	HSNBIOL	H21. Subject areas taught now - Biology	N	2	349	350
172	HSNCHEM	H21. Subject areas taught now - Chemistry	N	2	351	352
173	HSNGEOG	H21. Subject areas taught now - Geography	N	2	353	354
174	HSNREAD	H21. Subject areas taught now - Reading	N	2	355	356
175	HSNSPELL	H21. Subject areas taught now - Spelling	N	2	357	358
176	HSNENGL	H21. Subject areas taught now - English	N	2	359	360
177	HSNCOMSCI	H21. Subject areas taught now - Computer science	N	2	361	362
178	HSNHIST	H21. Subject areas taught now - Social studies	N	2	363	364
179	HSNFOLANG	H21. Subject areas taught now - Foreign language	N	2	365	366
180	HSNPHYED	H21. Subject areas taught now - Physical education	N	2	367	368
181	HSNHEALTH	H21. Subject areas taught now - Health	N	2	369	370
182	HSASSNX	H25. Participate in homeschool group	N	2	371	372
183	HSFREQX	H26. Participate in homeschool group - times	N	2	373	374
184	HSNATL	H27. Member of homeschool organization	N	2	375	376
185	FOSTORY2X	E42/H22. In the past week, times child has been told a story	N	1	377	377
186	FOCRAFTS	E42/H22. In the past week, time spent on arts and crafts	N	1	378	378
187	FOGAMES	E42/H22. In the past week, played board games	N	1	379	379
188	FOBUILDX	E42/H22. In the past week, worked on a project	N	1	380	380
189	FOSPORT	E42/H22. In the past week, time spent playing sports	N	1	381	381
190	FORESPON	E42/H22. In the past week, discussed time management	N	1	382	382
191	FOHISTX	E42/H22. In the past week, discussed ethnic heritage	N	1	383	383
192	FODINNERX	E43/H23. Eaten the evening meal together in the past week	N	1	384	384
193	FOLIBRAYX	E44/H24. Visited a library in the past month	N	1	385	385
194	FOBOOKSTX	E44/H24. Visited a bookstore in the past month	N	1	386	386
195	FOCONCRTX	E44/H24. Gone to a play in the past month	N	1	387	387
196	FOMUSEUMX	E44/H24. Visited an art gallery in the past month	N	1	388	388
197	FOZOOX	E44/H24. Visited a zoo in the past month	N	1	389	389
198	FOGROUPX	E44/H24. Attended a religious event in the past month	N	1	390	390
199	FOSPRTEVX	E44/H24. Attended a sporting event in the past month	N	1	391	391
200	HDHEALTH	E45/H28. Health of child	N	1	392	392
201	HDINTDIS	E46/H29. Intellectual disability	N	1	393	393
202	HDSPEECHX	E46/H29. Speech or language impairment	N	1	394	394
203	HDDISTRBX	E46/H29. Serious emotional disturbance	N	1	395	395
204	HDDEAFIMX	E46/H29. Deafness or another hearing impairment	N	1	396	396
205	HDBLINDX	E46/H29. Blindness or another visual impairment	N	1	397	397
206	HDORTHOX	E46/H29. Orthopedic impairment	N	1	398	398
207	HDAUTISMX	E46/H29. Autism	N	1	399	399
208	HDPDDX	E46/H29. Pervasive Developmental Disorder	N	1	400	400
209	HDADDX	E46/H29. Attention Deficit Disorder	N	1	401	401
210	HDLEARNX	E46/H29. Learning disability	N	1	402	402
211	HDDELAYX	E46/H29. Developmental Delay	N	1	403	403
212	HDTRBRAIN	E46/H29. Traumatic Brain Injury	N	1	404	404
213	HDOOTHERX	E46/H29. Another health impairment	N	1	405	405
214	HDRECSER	E48/H31. Receiving services for condition	N	2	406	407
215	HDSCHLX	E49/H32. Local school district provides services	N	2	408	409
216	HDGOVTX	E49/H32. Local health or service agency provides services	N	2	410	411
217	HDDOCTORX	E49/H32. Doctor, clinic, or other provider provides services	N	2	412	413
218	HDPRISCH	E49/H32. This child's private school provides services	N	2	414	415
219	HDIEPX	E50/H33. Services provided by IEP	N	2	416	417
220	HDDEVIEPX	E51/H34. Develop/change IEP	N	2	418	419
221	HDCOMMUX	E52/H35. Satisfied with service provider communication	N	2	420	421
222	HDTCHR	E52/H35. Satisfied with special needs teacher/therapist	N	2	422	423
223	HDACCOMX	E52/H35. Satisfied with ability to accommodate child's needs	N	2	424	425
224	HDCOMMITX	E52/H35. Satisfied with commitment to help child	N	2	426	427
225	HDSPCLED	E53/H36. Enrollment in special education classes	N	2	428	429
226	HDLEARN	E54/H37. Condition interferes with learning	N	2	430	431
227	HDPLAY	E54/H37. Condition interferes with participation in sports	N	2	432	433
228	HDOOUT	E54/H37. Condition interferes with attending school regularly	N	2	434	435

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
229	HDFRNDS	E54/H37. Condition interferes with making friends	N	2	436	437
230	CDOBMM	E55/H38. Month born	N	2	438	439
231	CDOBYY	E55/H38. Year born	N	4	440	443
232	CPLCBRTH	E56/H39. Country where child born	N	1	444	444
233	CMOVEAGE	E57/H40. Age of child when first moved to US	N	2	445	446
234	CHISPA	E58/H41. Child Spanish, Hispanic, or Latino	N	1	447	447
235	CAMIND	E59/H42. Child Race - American Indian or Alaska Native	N	1	448	448
236	CASIAN	E59/H42. Child Race - Asian	N	1	449	449
237	CBLACK	E59/H42. Child Race - Black or African American	N	1	450	450
238	CPACI	E59/H42. Child Race - Native Hawaiian or other Pacific Islander	N	1	451	451
239	CWHITE	E59/H42. Child Race - White	N	1	452	452
240	CHISPRM	E59/H42. Child Hispanic - race not reported	N	1	453	453
241	CSEX	E60/H43. Child sex	N	1	454	454
242	CLIVYN	E61/H44. Child lives at another address	N	1	455	455
243	CLIVELSWX	E62/H45. Child spends most time	N	2	456	457
244	CSPEAKX	E63/H46. Language spoken by child at home	N	1	458	458
245	CENGLPRG	E64/H47. Enrolled in language program	N	2	459	460
246	HHTOTALXX	E65/H48. Total people in household	N	2	461	462
247	HHBROSX	E66/H49. Brothers	N	1	463	463
248	HHSISSX	E66/H49. Sisters	N	1	464	464
249	HHMOM	E66/H49. Mother	N	1	465	465
250	HHDAD	E66/H49. Father	N	1	466	466
251	HHAUNTSX	E66/H49. Aunts	N	1	467	467
252	HHUNCLSX	E66/H49. Uncles	N	1	468	468
253	HHGMASX	E66/H49. Grandmothers	N	1	469	469
254	HHGPASX	E66/H49. Grandfathers	N	1	470	470
255	HHCSNSX	E66/H49. Cousins	N	1	471	471
256	HHPTNRSX	E66/H49. Parent's girlfriend/boyfriend/partner	N	1	472	472
257	HHORELSX	E66/H49. Other relatives	N	1	473	473
258	HHONRELSX	E66/H49. Other non-relatives	N	1	474	474
259	RELATION	E67/H50. Respondent relation to child	N	1	475	475
260	HHENGLISH	E68/H51. Language spoken at home - English	N	1	476	476
261	HHSPANISH	E68/H51. Language spoken at home - Spanish	N	1	477	477
262	HHFRENCH	E68/H51. Language spoken at home - French	N	1	478	478
263	HHCHINESE	E68/H51. Language spoken at home - Chinese	N	1	479	479
264	HHOTHLANG	E68/H51. Language spoken at home - Other	N	1	480	480
265	P1REL	E69/H52. First parent/guardian relation to child	N	1	481	481
266	P1SEX	E70/H53. First parent/guardian sex	N	1	482	482
267	P1MRSTA	E71/H54. First parent/guardian marital status	N	1	483	483
268	P1BFGF	E72/H55. First parent/guardian living with boyfriend/girlfriend	N	2	484	485
269	P1FRLNG	E73/H56. First parent/guardian first language	N	1	486	486
270	P1SPEAK	E74/H57. First parent/guardian language spoken most often at home	N	2	487	488
271	P1DIFI	E75. First parent/guardian difficulty participating in child's school due to language	N	2	489	490
272	P1SCINT	E76. First parent/guardian interpreters at school	N	2	491	492
273	P1WRMTL	E77. First parent/guardian written materials at school in native language	N	2	493	494
274	P1PLCBRTH	E78/H58. First parent/guardian country where born	N	1	495	495
275	P1AGEMV	E79/H59. First parent/guardian age when first moved to US	N	2	496	497
276	P1HISPAN	E80/H60. First parent/guardian of Spanish, Hispanic, or Latino origin	N	1	498	498
277	P1AMIND	E81/H61. First parent/guardian Race - American Indian or Alaska Native	N	1	499	499
278	P1ASIAN	E81/H61. First parent/guardian Race - Asian	N	1	500	500
279	P1BLACK	E81/H61. First parent/guardian Race - Black or African American	N	1	501	501
280	P1PACI	E81/H61. First parent/guardian Race - Native Hawaiian or other Pacific Islander	N	1	502	502
281	P1WHITE	E81/H61. First parent/guardian Race - White	N	1	503	503
282	P1HISPRM	E81/H61. First parent/guardian Race - Hispanic, race not reported	N	1	504	504
283	P1EDUC	E82/H62. First parent/guardian highest grade level completed	N	2	505	506
284	P1ENRL	E83/H63. First parent/guardian attending school	N	1	507	507
285	P1EMPL	E84/H64. First parent/guardian employment status	N	1	508	508
286	P1HRSWK	E85/H65. First parent/guardian hours worked per week	N	2	509	510
287	P1LKWRK	E86/H66. First parent/guardian looking for work	N	2	511	512
288	P1MTHSWRK	E87/H67. First parent/guardian months worked	N	2	513	514
289	P1AGE	E88/H68. First parent/guardian age	N	2	515	516
290	P1AGEPAR	E89/H69. First parent/guardian age when became parent	N	2	517	518
291	P1AGEPARDK	E89/H69. First parent/guardian age when became parent (Don't Know)	N	2	519	520
292	P2GUARD	E90/H70. Second parent/guardian	N	1	521	521
293	P2REL	E91/H71. Second parent/guardian relation to child	N	2	522	523
294	P2SEX	E92/H72. Second parent/guardian sex	N	2	524	525
295	P2MRSTA	E93/H73. Second parent/guardian marital status	N	2	526	527
296	P2BFGF	E94/H74. Second parent/guardian living with boyfriend/girlfriend	N	2	528	529
297	P2FRLNG	E95/H75. Second parent/guardian first language	N	2	530	531
298	P2SPEAK	E96/H76. Second parent/guardian language spoken most often at home	N	2	532	533
299	P2DIFI	E97. Second parent/guardian difficulty participating in child's school due to language	N	2	534	535
300	P2SCINT	E98. Second parent/guardian interpreters at school	N	2	536	537
301	P2WRMTL	E99. Second parent/guardian written materials at school in native language	N	2	538	539
302	P2PLCBRTH	E100/H77. Second parent/guardian country where born	N	2	540	541
303	P2AGEMV	E101/H78. Second parent/guardian age when first moved to US	N	2	542	543
304	P2HISPAN	E102/H79. Second parent/guardian of Spanish, Hispanic, or Latino origin	N	2	544	545

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
305	P2AMIND	E103/H80. Second parent/guardian Race - American Indian or Alaska Native	N	2	546	547
306	P2ASIAN	E103/H80. Second parent/guardian Race - Asian	N	2	548	549
307	P2BLACK	E103/H80. Second parent/guardian Race - Black or African American	N	2	550	551
308	P2PACI	E103/H80. Second parent/guardian Race - Native Hawaiian or other Pacific Islander	N	2	552	553
309	P2WHITE	E103/H80. Second parent/guardian Race - White	N	2	554	555
310	P2HISPRM	E103/H80. Second parent/guardian race - Hispanic, race not reported	N	2	556	557
311	P2EDUC	E104/H81. Second parent/guardian highest grade level completed	N	2	558	559
312	P2ENRL	E105/H82. Second parent/Guardian attending school	N	2	560	561
313	P2EMPL	E106/H83. Second parent/guardian employment status	N	2	562	563
314	P2HRSWK	E107/H84. Second parent/guardian hours worked per week	N	2	564	565
315	P2LWRK	E108/H85. Second parent/guardian looking for work	N	2	566	567
316	P2MTHSWRK	E109/H86. Second parent/guardian months worked	N	2	568	569
317	P2AGE	E110/H87. Second parent/guardian age	N	2	570	571
318	P2AGEPAR	E111/H88. Second parent/guardian age when became parent	N	2	572	573
319	P2AGEPARDK	E111/H88. Second parent/guardian age when became parent (Don't Know)	N	2	574	575
320	HWELFTAN	E112/H89. Received TANF in past 12 months	N	1	576	576
321	HWELFST	E112/H89. Received welfare or family assistance in past 12 months	N	1	577	577
322	HWIC	E112/H89. Received WIC in past 12 months	N	1	578	578
323	HFOODST	E112/H89. Received food stamps in past 12 months	N	1	579	579
324	HMEDICAID	E112/H89. Received Medicaid in past 12 months	N	1	580	580
325	HCHIP	E112/H89. Received CHIP in past 12 months	N	1	581	581
326	HSECN8	E112/H89. Received Section 8 in past 12 months	N	1	582	582
327	TTLHHINC	E113/H90. Total income	N	2	583	584
328	YRSADDR	E114/H91. Years at address	N	2	585	586
329	OWNRNTHB	E115/H92. Own/rent house	N	1	587	587
330	HVINTSPHO	E116/H93. Internet access on cell phone	N	1	588	588
331	HVINTCOM	E117/H94. Internet access on computer or tablet	N	1	589	589
332	USEINTRNT	E118/H95. How often use internet	N	1	590	590
333	DISABLTYX	D-Child currently has disability	N	1	591	591
334	DISBLTY2X	D-Child has disability including autism, ADD, and PDD	N	1	592	592
335	PAR1EDUC	D-Educational attainment of child's parent or guardian	N	1	593	593
336	PAR1EMPL	D-Work status of child's parent or guardian	N	1	594	594
337	PAR1FTFY	D-Parent 1 or Guardian 1 works full time	N	1	595	595
338	PAR1MARST	D-Parent 1 marital status	N	1	596	596
339	PAR1TYPE	D-Specific relationship of parent/guardian 1 to child	N	1	597	597
340	PAR2EDUC	D-Educational attainment of child's parent 2 or guardian 2	N	2	598	599
341	PAR2EMPL	D-Work status of child's parent 2 or guardian 2	N	2	600	601
342	PAR2FTFY	D-Parent 2 or Guardian 2 works full time	N	2	602	603
343	PAR2MARST	D-Parent 2 marital status	N	2	604	605
344	PAR2TYPE	D-Specific relationship of parent/guardian 2 to child	N	2	606	607
345	HHPARN16X	D-Parents in household including same sex parents/partners	N	1	608	608
346	HHPARN16_BRD	D-Parents or guardians in household including same sex parents/partners	N	1	609	609
347	NUMSIBSX	D-Number of child's siblings	N	1	610	610
348	FAMILY16X	D-Family type including same sex parents/partners	N	1	611	611
349	FAMILY16_BRD	D-Family type parent 2	N	1	612	612
350	HHUNDR6X	D-Number of household members younger than age 6	N	1	613	613
351	HHUNDR10X	D-Number of household members younger than age 10	N	1	614	614
352	HHUNDR16X	D-Number of household members younger than age 16	N	1	615	615
353	HHUNDR18X	D-Number of household members younger than age 18	N	1	616	616
354	HHUNID	D-Other household member, not identified	N	1	617	617
355	LANGUAGEX	D-English spoken most by parents including same sex partners	N	1	618	618
356	PARGRADEX	D-Parent/guardian highest education	N	1	619	619
357	RACEETHN	D-Race and ethnicity of child	N	1	620	620
358	RACEETH2	D-Detailed race and ethnicity of child	N	1	621	621
359	INTACC	D-Internet access	N	1	622	622
360	ALLGRADEX	D-Child's enrollment and grade equivalent	C	2	623	624
361	HMSCHLX	D-Child is homeschooled part or full time	N	1	625	625
362	CENREG	D-Census region where child lives	N	1	626	626
363	ZIP18PO2	D-Percent of families in zipcode with children under 18 below the poverty line	N	1	627	627
364	ZIPBLHI2	D-Percent of persons in zipcode who were Black or Hispanic	N	1	628	628
365	ZIPLOCL	D-Zip code classification by community type	C	2	629	630
366	S16CHART	D-School charter, magnet/regular public, other on CCD	N	2	631	632
367	S16NUMST	D-Total school enrollment of students on CCD/PSS	N	2	633	634
368	S16PBPV	D-School is public or private on CCD/PSS	N	2	635	636
369	S16TYPE	D-Type of school on CCD/PSS	N	2	637	638
370	SCHLGRAD	D-Classification of child's school	N	2	639	640
371	ENGLSPANX	D-Questionnaire in English or Spanish	N	1	641	641
372	AGE2015	D-Age of child as of Dec 31, 2015	N	2	642	643
373	MODECOMP	D-Completed on Web or Paper	N	1	644	644
374	HHMAGE1	D-HH Member 1 Age	N	2	645	646
375	HHMAGE2	D-HH Member 2 Age	N	2	647	648
376	HHMAGE3	D-HH Member 3 Age	N	2	649	650
377	HHMAGE4	D-HH Member 4 Age	N	2	651	652
378	HHMAGE5	D-HH Member 5 Age	N	2	653	654
379	HHMAGE6	D-HH Member 6 Age	N	2	655	656
380	HHMAGE7	D-HH Member 7 Age	N	2	657	658

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
381	HHMAGE8	D-HH Member 8 Age	N	2	659	660
382	HHMAGE9	D-HH Member 9 Age	N	2	661	662
383	HHMSEX1	D-HH Member 1 Sex	N	2	663	664
384	HHMSEX2	D-HH Member 2 Sex	N	2	665	666
385	HHMSEX3	D-HH Member 3 Sex	N	2	667	668
386	HHMSEX4	D-HH Member 4 Sex	N	2	669	670
387	HHMSEX5	D-HH Member 5 Sex	N	2	671	672
388	HHMSEX6	D-HH Member 6 Sex	N	2	673	674
389	HHMSEX7	D-HH Member 7 Sex	N	2	675	676
390	HHMSEX8	D-HH Member 8 Sex	N	2	677	678
391	HHMSEX9	D-HH Member 9 Sex	N	2	679	680
392	HHMENRL1	D-HH Member 1 Enrollment Status	N	2	681	682
393	HHMENRL2	D-HH Member 2 Enrollment Status	N	2	683	684
394	HHMENRL3	D-HH Member 3 Enrollment Status	N	2	685	686
395	HHMENRL4	D-HH Member 4 Enrollment Status	N	2	687	688
396	HHMENRL5	D-HH Member 5 Enrollment Status	N	2	689	690
397	HHMENRL6	D-HH Member 6 Enrollment Status	N	2	691	692
398	HHMENRL7	D-HH Member 7 Enrollment Status	N	2	693	694
399	HHMENRL8	D-HH Member 8 Enrollment Status	N	2	695	696
400	HHMENRL9	D-HH Member 9 Enrollment Status	N	2	697	698
401	HHMGRD1	D-HH Member 1 Grade Level	N	2	699	700
402	HHMGRD2	D-HH Member 2 Grade Level	N	2	701	702
403	HHMGRD3	D-HH Member 3 Grade Level	N	2	703	704
404	HHMGRD4	D-HH Member 4 Grade Level	N	2	705	706
405	HHMGRD5	D-HH Member 5 Grade Level	N	2	707	708
406	HHMGRD6	D-HH Member 6 Grade Level	N	2	709	710
407	HHMGRD7	D-HH Member 7 Grade Level	N	2	711	712
408	HHMGRD8	D-HH Member 8 Grade Level	N	2	713	714
409	HHMGRD9	D-HH Member 9 Grade Level	N	2	715	716
410	PPSU	PSU FOR TAYLOR SERIES VAR EST	N	5	717	721
411	PSTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	722	722
412	FPWT	FINAL INTV WEIGHT	N	16	723	738
413	FPWT1	FINAL INTV REPLICATE WEIGHT, FPWT1	N	16	739	754
414	FPWT2	FINAL INTV REPLICATE WEIGHT, FPWT2	N	16	755	770
415	FPWT3	FINAL INTV REPLICATE WEIGHT, FPWT3	N	16	771	786
416	FPWT4	FINAL INTV REPLICATE WEIGHT, FPWT4	N	16	787	802
417	FPWT5	FINAL INTV REPLICATE WEIGHT, FPWT5	N	16	803	818
418	FPWT6	FINAL INTV REPLICATE WEIGHT, FPWT6	N	16	819	834
419	FPWT7	FINAL INTV REPLICATE WEIGHT, FPWT7	N	16	835	850
420	FPWT8	FINAL INTV REPLICATE WEIGHT, FPWT8	N	16	851	866
421	FPWT9	FINAL INTV REPLICATE WEIGHT, FPWT9	N	16	867	882
422	FPWT10	FINAL INTV REPLICATE WEIGHT, FPWT10	N	16	883	898
423	FPWT11	FINAL INTV REPLICATE WEIGHT, FPWT11	N	16	899	914
424	FPWT12	FINAL INTV REPLICATE WEIGHT, FPWT12	N	16	915	930
425	FPWT13	FINAL INTV REPLICATE WEIGHT, FPWT13	N	16	931	946
426	FPWT14	FINAL INTV REPLICATE WEIGHT, FPWT14	N	16	947	962
427	FPWT15	FINAL INTV REPLICATE WEIGHT, FPWT15	N	16	963	978
428	FPWT16	FINAL INTV REPLICATE WEIGHT, FPWT16	N	16	979	994
429	FPWT17	FINAL INTV REPLICATE WEIGHT, FPWT17	N	16	995	1010
430	FPWT18	FINAL INTV REPLICATE WEIGHT, FPWT18	N	16	1011	1026
431	FPWT19	FINAL INTV REPLICATE WEIGHT, FPWT19	N	16	1027	1042
432	FPWT20	FINAL INTV REPLICATE WEIGHT, FPWT20	N	16	1043	1058
433	FPWT21	FINAL INTV REPLICATE WEIGHT, FPWT21	N	16	1059	1074
434	FPWT22	FINAL INTV REPLICATE WEIGHT, FPWT22	N	16	1075	1090
435	FPWT23	FINAL INTV REPLICATE WEIGHT, FPWT23	N	16	1091	1106
436	FPWT24	FINAL INTV REPLICATE WEIGHT, FPWT24	N	16	1107	1122
437	FPWT25	FINAL INTV REPLICATE WEIGHT, FPWT25	N	16	1123	1138
438	FPWT26	FINAL INTV REPLICATE WEIGHT, FPWT26	N	16	1139	1154
439	FPWT27	FINAL INTV REPLICATE WEIGHT, FPWT27	N	16	1155	1170
440	FPWT28	FINAL INTV REPLICATE WEIGHT, FPWT28	N	16	1171	1186
441	FPWT29	FINAL INTV REPLICATE WEIGHT, FPWT29	N	16	1187	1202
442	FPWT30	FINAL INTV REPLICATE WEIGHT, FPWT30	N	16	1203	1218
443	FPWT31	FINAL INTV REPLICATE WEIGHT, FPWT31	N	16	1219	1234
444	FPWT32	FINAL INTV REPLICATE WEIGHT, FPWT32	N	16	1235	1250
445	FPWT33	FINAL INTV REPLICATE WEIGHT, FPWT33	N	16	1251	1266
446	FPWT34	FINAL INTV REPLICATE WEIGHT, FPWT34	N	16	1267	1282
447	FPWT35	FINAL INTV REPLICATE WEIGHT, FPWT35	N	16	1283	1298
448	FPWT36	FINAL INTV REPLICATE WEIGHT, FPWT36	N	16	1299	1314
449	FPWT37	FINAL INTV REPLICATE WEIGHT, FPWT37	N	16	1315	1330
450	FPWT38	FINAL INTV REPLICATE WEIGHT, FPWT38	N	16	1331	1346
451	FPWT39	FINAL INTV REPLICATE WEIGHT, FPWT39	N	16	1347	1362
452	FPWT40	FINAL INTV REPLICATE WEIGHT, FPWT40	N	16	1363	1378
453	FPWT41	FINAL INTV REPLICATE WEIGHT, FPWT41	N	16	1379	1394
454	FPWT42	FINAL INTV REPLICATE WEIGHT, FPWT42	N	16	1395	1410
455	FPWT43	FINAL INTV REPLICATE WEIGHT, FPWT43	N	16	1411	1426
456	FPWT44	FINAL INTV REPLICATE WEIGHT, FPWT44	N	16	1427	1442

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
457	FPWT45	FINAL INTV REPLICATE WEIGHT, FPWT45	N	16	1443	1458
458	FPWT46	FINAL INTV REPLICATE WEIGHT, FPWT46	N	16	1459	1474
459	FPWT47	FINAL INTV REPLICATE WEIGHT, FPWT47	N	16	1475	1490
460	FPWT48	FINAL INTV REPLICATE WEIGHT, FPWT48	N	16	1491	1506
461	FPWT49	FINAL INTV REPLICATE WEIGHT, FPWT49	N	16	1507	1522
462	FPWT50	FINAL INTV REPLICATE WEIGHT, FPWT50	N	16	1523	1538
463	FPWT51	FINAL INTV REPLICATE WEIGHT, FPWT51	N	16	1539	1554
464	FPWT52	FINAL INTV REPLICATE WEIGHT, FPWT52	N	16	1555	1570
465	FPWT53	FINAL INTV REPLICATE WEIGHT, FPWT53	N	16	1571	1586
466	FPWT54	FINAL INTV REPLICATE WEIGHT, FPWT54	N	16	1587	1602
467	FPWT55	FINAL INTV REPLICATE WEIGHT, FPWT55	N	16	1603	1618
468	FPWT56	FINAL INTV REPLICATE WEIGHT, FPWT56	N	16	1619	1634
469	FPWT57	FINAL INTV REPLICATE WEIGHT, FPWT57	N	16	1635	1650
470	FPWT58	FINAL INTV REPLICATE WEIGHT, FPWT58	N	16	1651	1666
471	FPWT59	FINAL INTV REPLICATE WEIGHT, FPWT59	N	16	1667	1682
472	FPWT60	FINAL INTV REPLICATE WEIGHT, FPWT60	N	16	1683	1698
473	FPWT61	FINAL INTV REPLICATE WEIGHT, FPWT61	N	16	1699	1714
474	FPWT62	FINAL INTV REPLICATE WEIGHT, FPWT62	N	16	1715	1730
475	FPWT63	FINAL INTV REPLICATE WEIGHT, FPWT63	N	16	1731	1746
476	FPWT64	FINAL INTV REPLICATE WEIGHT, FPWT64	N	16	1747	1762
477	FPWT65	FINAL INTV REPLICATE WEIGHT, FPWT65	N	16	1763	1778
478	FPWT66	FINAL INTV REPLICATE WEIGHT, FPWT66	N	16	1779	1794
479	FPWT67	FINAL INTV REPLICATE WEIGHT, FPWT67	N	16	1795	1810
480	FPWT68	FINAL INTV REPLICATE WEIGHT, FPWT68	N	16	1811	1826
481	FPWT69	FINAL INTV REPLICATE WEIGHT, FPWT69	N	16	1827	1842
482	FPWT70	FINAL INTV REPLICATE WEIGHT, FPWT70	N	16	1843	1858
483	FPWT71	FINAL INTV REPLICATE WEIGHT, FPWT71	N	16	1859	1874
484	FPWT72	FINAL INTV REPLICATE WEIGHT, FPWT72	N	16	1875	1890
485	FPWT73	FINAL INTV REPLICATE WEIGHT, FPWT73	N	16	1891	1906
486	FPWT74	FINAL INTV REPLICATE WEIGHT, FPWT74	N	16	1907	1922
487	FPWT75	FINAL INTV REPLICATE WEIGHT, FPWT75	N	16	1923	1938
488	FPWT76	FINAL INTV REPLICATE WEIGHT, FPWT76	N	16	1939	1954
489	FPWT77	FINAL INTV REPLICATE WEIGHT, FPWT77	N	16	1955	1970
490	FPWT78	FINAL INTV REPLICATE WEIGHT, FPWT78	N	16	1971	1986
491	FPWT79	FINAL INTV REPLICATE WEIGHT, FPWT79	N	16	1987	2002
492	FPWT80	FINAL INTV REPLICATE WEIGHT, FPWT80	N	16	2003	2018
493	F_GRADE	IMPUTATION FLAG FOR GRADE	N	2	2019	2020
494	F_SCUPBPRI	IMPUTATION FLAG FOR SCUPBPRI	N	2	2021	2022
495	F_DISTASSI	IMPUTATION FLAG FOR DISTASSI	N	2	2023	2024
496	F_SCHRTSCHL	IMPUTATION FLAG FOR SCHRTSCHL	N	2	2025	2026
497	F_SNEIGHBRX	IMPUTATION FLAG FOR SNEIGHBRX	N	2	2027	2028
498	F_SPUBCHOIX	IMPUTATION FLAG FOR SPUBCHOIX	N	2	2029	2030
499	F_SCONSIDR	IMPUTATION FLAG FOR SCONSIDR	N	2	2031	2032
500	F_SPERFORM	IMPUTATION FLAG FOR SPERFORM	N	2	2033	2034
501	F_S1STCHOI	IMPUTATION FLAG FOR S1STCHOI	N	2	2035	2036
502	F_SSAMSC	IMPUTATION FLAG FOR SSAMSC	N	2	2037	2038
503	F_SMVMTH	IMPUTATION FLAG FOR SMVMTH	N	2	2039	2040
504	F_SEENJOY	IMPUTATION FLAG FOR SEENJOY	N	2	2041	2042
505	F_SEGRADES	IMPUTATION FLAG FOR SEGRADES	N	2	2043	2044
506	F_SEADPLCXX	IMPUTATION FLAG FOR SEADPLCXX	N	2	2045	2046
507	F_SEBEHAVX	IMPUTATION FLAG FOR SEBEHAVX	N	2	2047	2048
508	F_SESCHWRK	IMPUTATION FLAG FOR SESCHWRK	N	2	2049	2050
509	F_SEGBEHAV	IMPUTATION FLAG FOR SEGBEHAV	N	2	2051	2052
510	F_SEGWORK	IMPUTATION FLAG FOR SEGWORK	N	2	2053	2054
511	F_SEABSNT	IMPUTATION FLAG FOR SEABSNT	N	2	2055	2056
512	F_SEREPEAT	IMPUTATION FLAG FOR SEREPEAT	N	2	2057	2058
513	F_SEREPTK	IMPUTATION FLAG FOR SEREPTK	N	2	2059	2060
514	F_SEREPT1	IMPUTATION FLAG FOR SEREPT1	N	2	2061	2062
515	F_SEREPT2	IMPUTATION FLAG FOR SEREPT2	N	2	2063	2064
516	F_SEREPT3	IMPUTATION FLAG FOR SEREPT3	N	2	2065	2066
517	F_SEREPT4	IMPUTATION FLAG FOR SEREPT4	N	2	2067	2068
518	F_SEREPT5	IMPUTATION FLAG FOR SEREPT5	N	2	2069	2070
519	F_SEREPT6	IMPUTATION FLAG FOR SEREPT6	N	2	2071	2072
520	F_SEREPT7	IMPUTATION FLAG FOR SEREPT7	N	2	2073	2074
521	F_SEREPT8	IMPUTATION FLAG FOR SEREPT8	N	2	2075	2076
522	F_SEREPT9	IMPUTATION FLAG FOR SEREPT9	N	2	2077	2078
523	F_SEREPT10	IMPUTATION FLAG FOR SEREPT10	N	2	2079	2080
524	F_SEREPT11	IMPUTATION FLAG FOR SEREPT11	N	2	2081	2082
525	F_SEREPT12	IMPUTATION FLAG FOR SEREPT12	N	2	2083	2084
526	F_SESUSOUT	IMPUTATION FLAG FOR SESUSOUT	N	2	2085	2086
527	F_SESUSPIN	IMPUTATION FLAG FOR SESUSPIN	N	2	2087	2088
528	F_SEEXPTEL	IMPUTATION FLAG FOR SEEXPTEL	N	2	2089	2090
529	F_SEFUTUREX	IMPUTATION FLAG FOR SEFUTUREX	N	2	2091	2092
530	F_SEGRADEQ	IMPUTATION FLAG FOR SEGRADEQ	N	2	2093	2094
531	F_SNCTCRSX	IMPUTATION FLAG FOR SNCTCRSX	N	2	2095	2096
532	F_SPBSCH	IMPUTATION FLAG FOR SPBSCH	N	2	2097	2098

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
533	F_SSTATE	IMPUTATION FLAG FOR SSTATE	N	2	2099	2100
534	F_SCHRTR	IMPUTATION FLAG FOR SCHRTTR	N	2	2101	2102
535	F_SAPBSCH	IMPUTATION FLAG FOR SAPBSCH	N	2	2103	2104
536	F_SPRIVSCH	IMPUTATION FLAG FOR SPRIVSCH	N	2	2105	2106
537	F_SUNIVSCH	IMPUTATION FLAG FOR SUNIVSCH	N	2	2107	2108
538	F_SOTHSCHE	IMPUTATION FLAG FOR SOTHSCHE	N	2	2109	2110
539	F_SINSTFEE	IMPUTATION FLAG FOR SINSTFEE	N	2	2111	2112
540	F_HOMESCHLX	IMPUTATION FLAG FOR HOMESCHLX	N	2	2113	2114
541	F_HMSCHARR	IMPUTATION FLAG FOR HMSCHARR	N	2	2115	2116
542	F_FSSPORTX	IMPUTATION FLAG FOR FSSPORTX	N	2	2117	2118
543	F_FSVOL	IMPUTATION FLAG FOR FSVOL	N	2	2119	2120
544	F_FSMTNG	IMPUTATION FLAG FOR FSMTNG	N	2	2121	2122
545	F_FSPTMTNG	IMPUTATION FLAG FOR FSPTMTNG	N	2	2123	2124
546	F_FSATCNFN	IMPUTATION FLAG FOR FSATCNFN	N	2	2125	2126
547	F_FSFUNDRS	IMPUTATION FLAG FOR FSFUNDRS	N	2	2127	2128
548	F_FSCOMMTE	IMPUTATION FLAG FOR FSCOMMTE	N	2	2129	2130
549	F_FSCOUNSLR	IMPUTATION FLAG FOR FSCOUNSLR	N	2	2131	2132
550	F_FSFREQ	IMPUTATION FLAG FOR FSFREQ	N	2	2133	2134
551	F_FSNOTESX	IMPUTATION FLAG FOR FSNOTESX	N	2	2135	2136
552	F_FSMEMO	IMPUTATION FLAG FOR FSMEMO	N	2	2137	2138
553	F_FSPHONCHX	IMPUTATION FLAG FOR FSPHONCHX	N	2	2139	2140
554	F_FSSPPERF	IMPUTATION FLAG FOR FSSPPERF	N	2	2141	2142
555	F_FSSPHW	IMPUTATION FLAG FOR FSSPHW	N	2	2143	2144
556	F_FSSPCOUR	IMPUTATION FLAG FOR FSSPCOUR	N	2	2145	2146
557	F_FSSPROLE	IMPUTATION FLAG FOR FSSPROLE	N	2	2147	2148
558	F_FSSPCOLL	IMPUTATION FLAG FOR FSSPCOLL	N	2	2149	2150
559	F_FCSCHOOL	IMPUTATION FLAG FOR FCSCHOOL	N	2	2151	2152
560	F_FCTEACHR	IMPUTATION FLAG FOR FCTEACHR	N	2	2153	2154
561	F_FCSTDTS	IMPUTATION FLAG FOR FCSTDTS	N	2	2155	2156
562	F_FCORDER	IMPUTATION FLAG FOR FCORDER	N	2	2157	2158
563	F_FCSUPPRT	IMPUTATION FLAG FOR FCSUPPRT	N	2	2159	2160
564	F_FHHOME	IMPUTATION FLAG FOR FHHOME	N	2	2161	2162
565	F_FHWKHR	IMPUTATION FLAG FOR FHWKHR	N	2	2163	2164
566	F_FHAMOUNT	IMPUTATION FLAG FOR FHAMOUNT	N	2	2165	2166
567	F_FHCAMT	IMPUTATION FLAG FOR FHCAMT	N	2	2167	2168
568	F_FHPLACE	IMPUTATION FLAG FOR FHPLACE	N	2	2169	2170
569	F_FHCHECKX	IMPUTATION FLAG FOR FHCHECKX	N	2	2171	2172
570	F_FHHELP	IMPUTATION FLAG FOR FHHELP	N	2	2173	2174
571	F_HSWHOX	IMPUTATION FLAG FOR HSWHOX	N	2	2175	2176
572	F_HSTUTOR	IMPUTATION FLAG FOR HSTUTOR	N	2	2177	2178
573	F_HSCOOP	IMPUTATION FLAG FOR HSCOOP	N	2	2179	2180
574	F_HSCOLL	IMPUTATION FLAG FOR HSCOLL	N	2	2181	2182
575	F_HSPUBLIC	IMPUTATION FLAG FOR HSPUBLIC	N	2	2183	2184
576	F_HSPRIVATE	IMPUTATION FLAG FOR HSPRIVATE	N	2	2185	2186
577	F_HSCOLLEGE	IMPUTATION FLAG FOR HSCOLLEGE	N	2	2187	2188
578	F_HSSCHR	IMPUTATION FLAG FOR HSSCHR	N	2	2189	2190
579	F_GRADEEQ	IMPUTATION FLAG FOR GRADEEQ	N	2	2191	2192
580	F_HSDAYS	IMPUTATION FLAG FOR HSDAYS	N	2	2193	2194
581	F_HSHOURS	IMPUTATION FLAG FOR HSHOURS	N	2	2195	2196
582	F_HSKACTIV	IMPUTATION FLAG FOR HSKACTIV	N	2	2197	2198
583	F_HSSTYL	IMPUTATION FLAG FOR HSSTYL	N	2	2199	2200
584	F_HSCLIBRX	IMPUTATION FLAG FOR HSCLIBRX	N	2	2201	2202
585	F_HSCHSPUBX	IMPUTATION FLAG FOR HSCHSPUBX	N	2	2203	2204
586	F_HSCEDPUBX	IMPUTATION FLAG FOR HSCEDPUBX	N	2	2205	2206
587	F_HSCORGX	IMPUTATION FLAG FOR HSCORGX	N	2	2207	2208
588	F_HSCCHURX	IMPUTATION FLAG FOR HSCCHURX	N	2	2209	2210
589	F_HSCPUBLX	IMPUTATION FLAG FOR HSCPUBLX	N	2	2211	2212
590	F_HSCPRIVX	IMPUTATION FLAG FOR HSCPRIVX	N	2	2213	2214
591	F_HSCRELX	IMPUTATION FLAG FOR HSCRELX	N	2	2215	2216
592	F_HSCNETX	IMPUTATION FLAG FOR HSCNETX	N	2	2217	2218
593	F_HSCOTH	IMPUTATION FLAG FOR HSCOTH	N	2	2219	2220
594	F_HSCVTLCR	IMPUTATION FLAG FOR HSCVTLCR	N	2	2221	2222
595	F_HSCOURX	IMPUTATION FLAG FOR HSCOURX	N	2	2223	2224
596	F_HSINTNET	IMPUTATION FLAG FOR HSINTNET	N	2	2225	2226
597	F_HSINTPUB	IMPUTATION FLAG FOR HSINTPUB	N	2	2227	2228
598	F_HSINTCH	IMPUTATION FLAG FOR HSINTCH	N	2	2229	2230
599	F_HSINTAPB	IMPUTATION FLAG FOR HSINTAPB	N	2	2231	2232
600	F_HSINTPRI	IMPUTATION FLAG FOR HSINTPRI	N	2	2233	2234
601	F_HSINTCOL	IMPUTATION FLAG FOR HSINTCOL	N	2	2235	2236
602	F_HSINTST	IMPUTATION FLAG FOR HSINTST	N	2	2237	2238
603	F_HSINTOH	IMPUTATION FLAG FOR HSINTOH	N	2	2239	2240
604	F_HSSEE	IMPUTATION FLAG FOR HSSEE	N	2	2241	2242
605	F_HOMEKX	IMPUTATION FLAG FOR HOMEKX	N	2	2243	2244
606	F_HOME1	IMPUTATION FLAG FOR HOME1	N	2	2245	2246
607	F_HOME2	IMPUTATION FLAG FOR HOME2	N	2	2247	2248
608	F_HOME3	IMPUTATION FLAG FOR HOME3	N	2	2249	2250

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
609	F_HOME4	IMPUTATION FLAG FOR HOME4	N	2	2251	2252
610	F_HOME5	IMPUTATION FLAG FOR HOME5	N	2	2253	2254
611	F_HOME6	IMPUTATION FLAG FOR HOME6	N	2	2255	2256
612	F_HOME7	IMPUTATION FLAG FOR HOME7	N	2	2257	2258
613	F_HOME8	IMPUTATION FLAG FOR HOME8	N	2	2259	2260
614	F_HOME9	IMPUTATION FLAG FOR HOME9	N	2	2261	2262
615	F_HOME10	IMPUTATION FLAG FOR HOME10	N	2	2263	2264
616	F_HOME11	IMPUTATION FLAG FOR HOME11	N	2	2265	2266
617	F_HOME12	IMPUTATION FLAG FOR HOME12	N	2	2267	2268
618	F_HSSAFETYX	IMPUTATION FLAG FOR HSSAFETYX	N	2	2269	2270
619	F_HSDISATTX	IMPUTATION FLAG FOR HSDISATTX	N	2	2271	2272
620	F_HSRELGON	IMPUTATION FLAG FOR HSRELGON	N	2	2273	2274
621	F_HSMORAL	IMPUTATION FLAG FOR HSMORAL	N	2	2275	2276
622	F_HSDISABLX	IMPUTATION FLAG FOR HSDISABLX	N	2	2277	2278
623	F_HSILLX	IMPUTATION FLAG FOR HSILLX	N	2	2279	2280
624	F_HSSPCLNDX	IMPUTATION FLAG FOR HSSPCLNDX	N	2	2281	2282
625	F_HSALTX	IMPUTATION FLAG FOR HSALTX	N	2	2283	2284
626	F_HSOOTHERX	IMPUTATION FLAG FOR HSOOTHERX	N	2	2285	2286
627	F_HSMOSTX	IMPUTATION FLAG FOR HSMOSTX	N	2	2287	2288
628	F_HSFUTUREX	IMPUTATION FLAG FOR HSFUTUREX	N	2	2289	2290
629	F_HSART	IMPUTATION FLAG FOR HSART	N	2	2291	2292
630	F_HSMUSIC	IMPUTATION FLAG FOR HSMUSIC	N	2	2293	2294
631	F_HSARITH	IMPUTATION FLAG FOR HSARITH	N	2	2295	2296
632	F_HSALG1	IMPUTATION FLAG FOR HSALG1	N	2	2297	2298
633	F_HSALG2	IMPUTATION FLAG FOR HSALG2	N	2	2299	2300
634	F_HSGEOM	IMPUTATION FLAG FOR HSGEOM	N	2	2301	2302
635	F_HSCALC	IMPUTATION FLAG FOR HSCALC	N	2	2303	2304
636	F_HSPROB	IMPUTATION FLAG FOR HSPROB	N	2	2305	2306
637	F_HSSCIEN	IMPUTATION FLAG FOR HSSCIEN	N	2	2307	2308
638	F_HSGEOL	IMPUTATION FLAG FOR HSGEOL	N	2	2309	2310
639	F_HSBIOL	IMPUTATION FLAG FOR HSBIOL	N	2	2311	2312
640	F_HSCHEM	IMPUTATION FLAG FOR HSCHEM	N	2	2313	2314
641	F_HSGEOG	IMPUTATION FLAG FOR HSGEOG	N	2	2315	2316
642	F_HSREAD	IMPUTATION FLAG FOR HSREAD	N	2	2317	2318
643	F_HSSPELL	IMPUTATION FLAG FOR HSSPELL	N	2	2319	2320
644	F_HSENGL	IMPUTATION FLAG FOR HSENGL	N	2	2321	2322
645	F_HSCOMSCI	IMPUTATION FLAG FOR HSCOMSCI	N	2	2323	2324
646	F_HSIST	IMPUTATION FLAG FOR HSIST	N	2	2325	2326
647	F_HSOLANG	IMPUTATION FLAG FOR HSOLANG	N	2	2327	2328
648	F_HSPHYED	IMPUTATION FLAG FOR HSPHYED	N	2	2329	2330
649	F_HSHEALTH	IMPUTATION FLAG FOR HSHEALTH	N	2	2331	2332
650	F_HSNART	IMPUTATION FLAG FOR HSNART	N	2	2333	2334
651	F_HSNMUSIC	IMPUTATION FLAG FOR HSNMUSIC	N	2	2335	2336
652	F_HSNARITH	IMPUTATION FLAG FOR HSNARITH	N	2	2337	2338
653	F_HSNALG1	IMPUTATION FLAG FOR HSNALG1	N	2	2339	2340
654	F_HSNALG2	IMPUTATION FLAG FOR HSNALG2	N	2	2341	2342
655	F_HSNGEOM	IMPUTATION FLAG FOR HSNGEOM	N	2	2343	2344
656	F_HSNCALC	IMPUTATION FLAG FOR HSNCALC	N	2	2345	2346
657	F_HSNPROB	IMPUTATION FLAG FOR HSNPROB	N	2	2347	2348
658	F_HNSCIEN	IMPUTATION FLAG FOR HNSCIEN	N	2	2349	2350
659	F_HSNGEOL	IMPUTATION FLAG FOR HSNGEOL	N	2	2351	2352
660	F_HSNBIOL	IMPUTATION FLAG FOR HSNBIOL	N	2	2353	2354
661	F_HSNCHEM	IMPUTATION FLAG FOR HSNCHEM	N	2	2355	2356
662	F_HSNGEOG	IMPUTATION FLAG FOR HSNGEOG	N	2	2357	2358
663	F_HSNREAD	IMPUTATION FLAG FOR HSNREAD	N	2	2359	2360
664	F_HSNSPELL	IMPUTATION FLAG FOR HSNSPELL	N	2	2361	2362
665	F_HSNENGL	IMPUTATION FLAG FOR HSNENGL	N	2	2363	2364
666	F_HSNCOMSCI	IMPUTATION FLAG FOR HSNCOMSCI	N	2	2365	2366
667	F_HSNNHIST	IMPUTATION FLAG FOR HSNNHIST	N	2	2367	2368
668	F_HSNNOLANG	IMPUTATION FLAG FOR HSNNOLANG	N	2	2369	2370
669	F_HSNNPHYED	IMPUTATION FLAG FOR HSNNPHYED	N	2	2371	2372
670	F_HSNHEALTH	IMPUTATION FLAG FOR HSNHEALTH	N	2	2373	2374
671	F_HSASSNX	IMPUTATION FLAG FOR HSASSNX	N	2	2375	2376
672	F_HSFREQX	IMPUTATION FLAG FOR HSFREQX	N	2	2377	2378
673	F_HSNTATL	IMPUTATION FLAG FOR HSNTATL	N	2	2379	2380
674	F_FOSTORY2X	IMPUTATION FLAG FOR FOSTORY2X	N	1	2381	2381
675	F_FOCRAFTS	IMPUTATION FLAG FOR FOCRAFTS	N	1	2382	2382
676	F_FOGAMES	IMPUTATION FLAG FOR FOGAMES	N	1	2383	2383
677	F_FOBUILDX	IMPUTATION FLAG FOR FOBUILDX	N	1	2384	2384
678	F_FOSPORT	IMPUTATION FLAG FOR FOSPORT	N	1	2385	2385
679	F_FORESPON	IMPUTATION FLAG FOR FORESPON	N	1	2386	2386
680	F_FOHISTX	IMPUTATION FLAG FOR FOHISTX	N	1	2387	2387
681	F_FODINNERX	IMPUTATION FLAG FOR FODINNERX	N	1	2388	2388
682	F_FOLIBRAYX	IMPUTATION FLAG FOR FOLIBRAYX	N	1	2389	2389
683	F_FOBOOKSTX	IMPUTATION FLAG FOR FOBOOKSTX	N	1	2390	2390
684	F_FOCONCRTX	IMPUTATION FLAG FOR FOCONCRTX	N	1	2391	2391

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
685	F_FOMUSEUMX	IMPUTATION FLAG FOR FOMUSEUMX	N	1	2392	2392
686	F_FOZOOX	IMPUTATION FLAG FOR FOZOOX	N	1	2393	2393
687	F_FOGROUPX	IMPUTATION FLAG FOR FOGROUPX	N	1	2394	2394
688	F_FOSPRTEVX	IMPUTATION FLAG FOR FOSPRTEVX	N	1	2395	2395
689	F_HDHEALTH	IMPUTATION FLAG FOR HDHEALTH	N	1	2396	2396
690	F_HDLEARNX	IMPUTATION FLAG FOR HDLEARNX	N	1	2397	2397
691	F_HDINTDIS	IMPUTATION FLAG FOR HDINTDIS	N	1	2398	2398
692	F_HDSPEECHX	IMPUTATION FLAG FOR HDSPEECHX	N	1	2399	2399
693	F_HDDISTRBX	IMPUTATION FLAG FOR HDDISTRBX	N	1	2400	2400
694	F_HDDEAFIMX	IMPUTATION FLAG FOR HDDEAFIMX	N	1	2401	2401
695	F_HDBLINDX	IMPUTATION FLAG FOR HDBLINDX	N	1	2402	2402
696	F_HDORTHOX	IMPUTATION FLAG FOR HDORTHOX	N	1	2403	2403
697	F_HDAUTISMX	IMPUTATION FLAG FOR HDAUTISMX	N	1	2404	2404
698	F_HDPDDX	IMPUTATION FLAG FOR HDPDDX	N	1	2405	2405
699	F_HDADDX	IMPUTATION FLAG FOR HDADDX	N	1	2406	2406
700	F_HDDELAYX	IMPUTATION FLAG FOR HDDELAYX	N	1	2407	2407
701	F_HDTRBRAIN	IMPUTATION FLAG FOR HDTRBRAIN	N	1	2408	2408
702	F_HDOOTHERX	IMPUTATION FLAG FOR HDOOTHERX	N	1	2409	2409
703	F_HDRECSER	IMPUTATION FLAG FOR HDRECSER	N	2	2410	2411
704	F_HDSCHLX	IMPUTATION FLAG FOR HDSCHLX	N	2	2412	2413
705	F_HDGVTX	IMPUTATION FLAG FOR HDGVTX	N	2	2414	2415
706	F_HDDOCTORX	IMPUTATION FLAG FOR HDDOCTORX	N	2	2416	2417
707	F_HDPRISCH	IMPUTATION FLAG FOR HDPRISCH	N	2	2418	2419
708	F_HDIEPX	IMPUTATION FLAG FOR HDIEPX	N	2	2420	2421
709	F_HDDEVIEPX	IMPUTATION FLAG FOR HDDEVIEPX	N	2	2422	2423
710	F_HDCOMMUX	IMPUTATION FLAG FOR HDCOMMUX	N	2	2424	2425
711	F_HDTCHR	IMPUTATION FLAG FOR HDTCHR	N	2	2426	2427
712	F_HDACCOMX	IMPUTATION FLAG FOR HDACCOMX	N	2	2428	2429
713	F_HDCOMMITX	IMPUTATION FLAG FOR HDCOMMITX	N	2	2430	2431
714	F_HDSPCLED	IMPUTATION FLAG FOR HDSPCLED	N	2	2432	2433
715	F_HDLEARN	IMPUTATION FLAG FOR HDLEARN	N	2	2434	2435
716	F_HDPLAY	IMPUTATION FLAG FOR HDPLAY	N	2	2436	2437
717	F_HDOUT	IMPUTATION FLAG FOR HDOUT	N	2	2438	2439
718	F_HDFRNDS	IMPUTATION FLAG FOR HDFRNDS	N	2	2440	2441
719	F_CDOBMM	IMPUTATION FLAG FOR CDOBMM	N	1	2442	2442
720	F_CDOBYY	IMPUTATION FLAG FOR CDOBYY	N	1	2443	2443
721	F_CPLCBRTH	IMPUTATION FLAG FOR CPLCBRTH	N	1	2444	2444
722	F_CMOVEAGE	IMPUTATION FLAG FOR CMOVEAGE	N	2	2445	2446
723	F_CHISPAN	IMPUTATION FLAG FOR CHISPAN	N	1	2447	2447
724	F_CAMIND	IMPUTATION FLAG FOR CAMIND	N	1	2448	2448
725	F_CASIAN	IMPUTATION FLAG FOR CASIAN	N	1	2449	2449
726	F_CBLACK	IMPUTATION FLAG FOR CBLACK	N	1	2450	2450
727	F_CPACI	IMPUTATION FLAG FOR CPACI	N	1	2451	2451
728	F_CWHITE	IMPUTATION FLAG FOR CWHITE	N	1	2452	2452
729	F_CHISPRM	IMPUTATION FLAG FOR CHISPRM	N	1	2453	2453
730	F_CSEX	IMPUTATION FLAG FOR CSEX	N	1	2454	2454
731	F_CLIVYN	IMPUTATION FLAG FOR CLIVYN	N	1	2455	2455
732	F_CLIVELSWX	IMPUTATION FLAG FOR CLIVELSWX	N	2	2456	2457
733	F_CSPEAKX	IMPUTATION FLAG FOR CSPEAKX	N	1	2458	2458
734	F_CENGLPRG	IMPUTATION FLAG FOR CENGLPRG	N	2	2459	2460
735	F_HHTOTALXX	IMPUTATION FLAG FOR HHTOTALXX	N	1	2461	2461
736	F_HHBROSX	IMPUTATION FLAG FOR HHBROSX	N	1	2462	2462
737	F_HHSISSX	IMPUTATION FLAG FOR HHSISSX	N	1	2463	2463
738	F_HHMOM	IMPUTATION FLAG FOR HHMOM	N	1	2464	2464
739	F_HHDAD	IMPUTATION FLAG FOR HHDAD	N	1	2465	2465
740	F_HHAUNTSX	IMPUTATION FLAG FOR HHAUNTSX	N	1	2466	2466
741	F_HHUNCLSX	IMPUTATION FLAG FOR HHUNCLSX	N	1	2467	2467
742	F_HHORELWX	IMPUTATION FLAG FOR HHORELWX	N	1	2468	2468
743	F_HHGPASX	IMPUTATION FLAG FOR HHGPASX	N	1	2469	2469
744	F_HHCSNSX	IMPUTATION FLAG FOR HHCSNSX	N	1	2470	2470
745	F_HHPRTNRSX	IMPUTATION FLAG FOR HHPRTNRSX	N	1	2471	2471
746	F_HHORELSX	IMPUTATION FLAG FOR HHORELSX	N	1	2472	2472
747	F_HHONRELSX	IMPUTATION FLAG FOR HHONRELSX	N	1	2473	2473
748	F_RELATION	IMPUTATION FLAG FOR RELATION	N	1	2474	2474
749	F_HHENGGLISH	IMPUTATION FLAG FOR HHENGGLISH	N	1	2475	2475
750	F_HHSPANISH	IMPUTATION FLAG FOR HHSPANISH	N	1	2476	2476
751	F_HHFRENCH	IMPUTATION FLAG FOR HHFRENCH	N	1	2477	2477
752	F_HHCHINESE	IMPUTATION FLAG FOR HHCHINESE	N	1	2478	2478
753	F_HHOTHLANG	IMPUTATION FLAG FOR HHOTHLANG	N	1	2479	2479
754	F_PIREL	IMPUTATION FLAG FOR PIREL	N	1	2480	2480
755	F_P1SEX	IMPUTATION FLAG FOR P1SEX	N	1	2481	2481
756	F_P1MRSTA	IMPUTATION FLAG FOR P1MRSTA	N	1	2482	2482
757	F_P1BFGF	IMPUTATION FLAG FOR P1BFGF	N	2	2483	2484
758	F_P1FRLNG	IMPUTATION FLAG FOR P1FRLNG	N	1	2485	2485
759	F_P1SPEAK	IMPUTATION FLAG FOR P1SPEAK	N	2	2486	2487
760	F_P1DIFI	IMPUTATION FLAG FOR P1DIFI	N	2	2488	2489

See note at end of table.

Table B-5. Public-Use Data file Layout in Position Order, PFI:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
761	F_P1SCINT	IMPUTATION FLAG FOR P1SCINT	N	2	2490	2491
762	F_P1WRMTL	IMPUTATION FLAG FOR P1WRMTL	N	2	2492	2493
763	F_P1PLCBRTH	IMPUTATION FLAG FOR P1PLCBRTH	N	1	2494	2494
764	F_P1AGEMV	IMPUTATION FLAG FOR P1AGEMV	N	2	2495	2496
765	F_P1HISPAN	IMPUTATION FLAG FOR P1HISPAN	N	1	2497	2497
766	F_P1AMIND	IMPUTATION FLAG FOR P1AMIND	N	1	2498	2498
767	F_P1ASIAN	IMPUTATION FLAG FOR P1ASIAN	N	1	2499	2499
768	F_P1BLACK	IMPUTATION FLAG FOR P1BLACK	N	1	2500	2500
769	F_P1PACI	IMPUTATION FLAG FOR P1PACI	N	1	2501	2501
770	F_P1WHITE	IMPUTATION FLAG FOR P1WHITE	N	1	2502	2502
771	F_P1HISPRM	IMPUTATION FLAG FOR P1HISPRM	N	1	2503	2503
772	F_P1EDUC	IMPUTATION FLAG FOR P1EDUC	N	1	2504	2504
773	F_P1ENRL	IMPUTATION FLAG FOR P1ENRL	N	1	2505	2505
774	F_P1EMPL	IMPUTATION FLAG FOR P1EMPL	N	1	2506	2506
775	F_P1HRSWK	IMPUTATION FLAG FOR P1HRSWK	N	2	2507	2508
776	F_P1LKWRK	IMPUTATION FLAG FOR P1LKWRK	N	2	2509	2510
777	F_P1MTHSWRK	IMPUTATION FLAG FOR P1MTHSWRK	N	1	2511	2511
778	F_P1AGE	IMPUTATION FLAG FOR P1AGE	N	1	2512	2512
779	F_P1AGEPAR	IMPUTATION FLAG FOR P1AGEPAR	N	2	2513	2514
780	F_P1AGEPARDK	IMPUTATION FLAG FOR P1AGEPARDK	N	2	2515	2516
781	F_P2GUARD	IMPUTATION FLAG FOR P2GUARD	N	1	2517	2517
782	F_P2REL	IMPUTATION FLAG FOR P2REL	N	2	2518	2519
783	F_P2SEX	IMPUTATION FLAG FOR P2SEX	N	2	2520	2521
784	F_P2MRSTA	IMPUTATION FLAG FOR P2MRSTA	N	2	2522	2523
785	F_P2BFGF	IMPUTATION FLAG FOR P2BFGF	N	2	2524	2525
786	F_P2FRLNG	IMPUTATION FLAG FOR P2FRLNG	N	2	2526	2527
787	F_P2SPEAK	IMPUTATION FLAG FOR P2SPEAK	N	2	2528	2529
788	F_P2DIFI	IMPUTATION FLAG FOR P2DIFI	N	2	2530	2531
789	F_P2SCINT	IMPUTATION FLAG FOR P2SCINT	N	2	2532	2533
790	F_P2WRMTL	IMPUTATION FLAG FOR P2WRMTL	N	2	2534	2535
791	F_P2PLCBRTH	IMPUTATION FLAG FOR P2PLCBRTH	N	2	2536	2537
792	F_P2AGEMV	IMPUTATION FLAG FOR P2AGEMV	N	2	2538	2539
793	F_P2HISPAN	IMPUTATION FLAG FOR P2HISPAN	N	2	2540	2541
794	F_P2AMIND	IMPUTATION FLAG FOR P2AMIND	N	2	2542	2543
795	F_P2ASIAN	IMPUTATION FLAG FOR P2ASIAN	N	2	2544	2545
796	F_P2BLACK	IMPUTATION FLAG FOR P2BLACK	N	2	2546	2547
797	F_P2PACI	IMPUTATION FLAG FOR P2PACI	N	2	2548	2549
798	F_P2WHITE	IMPUTATION FLAG FOR P2WHITE	N	2	2550	2551
799	F_P2HISPRM	IMPUTATION FLAG FOR P2HISPRM	N	2	2552	2553
800	F_P2EDUC	IMPUTATION FLAG FOR P2EDUC	N	2	2554	2555
801	F_P2ENRL	IMPUTATION FLAG FOR P2ENRL	N	2	2556	2557
802	F_P2EMPL	IMPUTATION FLAG FOR P2EMPL	N	2	2558	2559
803	F_P2HRSWK	IMPUTATION FLAG FOR P2HRSWK	N	2	2560	2561
804	F_P2LKWRK	IMPUTATION FLAG FOR P2LKWRK	N	2	2562	2563
805	F_P2MTHSWRK	IMPUTATION FLAG FOR P2MTHSWRK	N	2	2564	2565
806	F_P2AGE	IMPUTATION FLAG FOR P2AGE	N	2	2566	2567
807	F_P2AGEPAR	IMPUTATION FLAG FOR P2AGEPAR	N	2	2568	2569
808	F_P2AGEPARDK	IMPUTATION FLAG FOR P2AGEPARDK	N	2	2570	2571
809	F_HWELFTAN	IMPUTATION FLAG FOR HWELFTAN	N	1	2572	2572
810	F_HWELFST	IMPUTATION FLAG FOR HWELFST	N	1	2573	2573
811	F_HWIC	IMPUTATION FLAG FOR HWIC	N	1	2574	2574
812	F_HFOODST	IMPUTATION FLAG FOR HFOODST	N	1	2575	2575
813	F_HMEDICAID	IMPUTATION FLAG FOR HMEDICAID	N	1	2576	2576
814	F_HCHIP	IMPUTATION FLAG FOR HCHIP	N	1	2577	2577
815	F_HSECN8	IMPUTATION FLAG FOR HSECN8	N	1	2578	2578
816	F_TTLHHINC	IMPUTATION FLAG FOR TTLHHINC	N	1	2579	2579
817	F_YRSADDR	IMPUTATION FLAG FOR YRSADDR	N	1	2580	2580
818	F_OWNRNTHB	IMPUTATION FLAG FOR OWNRNTHB	N	1	2581	2581
819	F_HVINTSPHO	IMPUTATION FLAG FOR HVINTSPHO	N	1	2582	2582
820	F_HVINTCOM	IMPUTATION FLAG FOR HVINTCOM	N	1	2583	2583
821	F_USEINTRNT	IMPUTATION FLAG FOR USEINTRNT	N	1	2584	2584
822	F_HHUNID	IMPUTATION FLAG FOR HHUNID	N	1	2585	2585

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2016 National Household Education Surveys

Table B-6. Public-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASMIN	Unique respondent identifier	C	11	1	11
2	PATH	D-Questionnaire path	C	1	12	12
3	QTYPE	D-Survey Path	N	1	13	13
4	EDUATTN	1. Highest degree or level of school completed	N	2	14	15
5	EDUFOS	2. Field of study for highest level of school completed	N	2	16	17
6	ENROLL	3. Currently enrolled at a college, tech/trade, or other school	N	1	18	18
7	ESLCLA	4. Taken English as a second language	N	1	19	19
8	READCLA	5. Taken literacy classes to improve reading	N	1	20	20
9	CNMAIN	6. Currently active certification or license	N	1	21	21
10	CNNUM	7. Number of certifications and licences	N	2	22	23
11	CNFIELD1	9. Certification 1 field	N	2	24	25
12	CNFIELDCAT1	9. Certification 1 field category	N	2	26	27
13	CNINVALID1	9. Certification 1 invalid flag	N	2	28	29
14	CNPROV1	10. Certification or license required by government	N	2	30	31
15	CNREVOKE1	11. Certification or license can be revoked	N	2	32	33
16	CNYEAR1	12. Year received certification or license	N	4	34	37
17	CNPRP_COLLG1	13. Prepared for certification or license - classes at school	N	2	38	39
18	CNPRP_TRAIN1	13. Prepared for certification or license - private instruction	N	2	40	41
19	CNPRP_ONOWN1	13. Prepared for certification or license - studying on own	N	2	42	43
20	CNCURRJOB1	14. Certification or license is for current job	N	2	44	45
21	CNUSE_GET1	15. Certification or license useful for - getting a job	N	2	46	47
22	CNUSE_KEEP1	15. Certification or license useful for - keeping a job	N	2	48	49
23	CNUSE_MRKT1	15. Certification or license useful for - staying marketable	N	2	50	51
24	CNUSE_SKLS1	15. Certification or license useful for - improving skills	N	2	52	53
25	CNMAIN2	16. Second currently active certification or license	N	2	54	55
26	CNFIELD2	18. Certification 2 field	N	2	56	57
27	CNFIELDCAT2	18. Certification 2 field category	N	2	58	59
28	CNINVALID2	18. Certification 2 invalid flag	N	2	60	61
29	CNPROV2	19. Second certification or license required by government	N	2	62	63
30	CNREVOKE2	20. Second certification or license can be revoked	N	2	64	65
31	CNYEAR2	21. Year received second certification or license	N	4	66	69
32	CNPRP_COLLG2	22. Prepared for second certification or license - classes at school	N	2	70	71
33	CNPRP_TRAIN2	22. Prepared for second certification or license - private instruction	N	2	72	73
34	CNPRP_ONOWN2	22. Prepared for second certification or license - studying on own	N	2	74	75
35	CNCURRJOB2	23. Second certification or license is for current job	N	2	76	77
36	CNUSE_GET2	24. Second certification or license useful for - getting a job	N	2	78	79
37	CNUSE_KEEP2	24. Second certification or license useful for - keeping a job	N	2	80	81
38	CNUSE_MRKT2	24. Second certification or license useful for - staying marketable	N	2	82	83
39	CNUSE_SKLS2	24. Second certification or license useful for - improving skills	N	2	84	85
40	CNMAIN3	25. Third currently active certification or license	N	2	86	87
41	CNFIELD3	27. Certification 3 field	N	2	88	89
42	CNFIELDCAT3	27. Certification 3 field category	N	2	90	91
43	CNINVALID3	27. Certification 3 invalid flag	N	2	92	93
44	CNPROV3	28. Third certification or license required by government	N	2	94	95
45	CNREVOKE3	29. Third certification or license can be revoked	N	2	96	97
46	CERTTRAIN	30. Earned a certificate from employer training program	N	1	98	98
47	CERTVOC	30. Earned a certificate from high school vocational program	N	1	99	99
48	CERTHS	30. Earned high school equivalency certificate	N	1	100	100
49	CERTPROG	30. Earned a certificate from college, technical, or other school	N	1	101	101
50	PSFOS	31. Field of study for post-secondary certificate	N	2	102	103
51	LASTPSCR	32. Source of post-secondary certificate	N	2	104	105
52	LCHOURS	33. Hours to complete post-secondary certificate	N	2	106	107
53	LCENROLL	34. Requirement for enrolling in post-secondary program	N	2	108	109
54	LCRED	35. Minimum credits required for post-secondary program	N	2	110	111
55	LCINHRS	35. Minimum hours required for post-secondary program	N	2	112	113
56	LCTRAIN	36. Post-secondary certificate part of professional training	N	2	114	115
57	LCCURRJOB	37. Post-secondary certificate related to current job	N	2	116	117
58	LCUSE_GET	38. Post-secondary certificate useful - getting a job	N	2	118	119
59	LCUSE_PAY	38. Post-secondary certificate useful - increasing pay	N	2	120	121
60	LCUSE_SKLS	38. Post-secondary certificate useful - improving work skills	N	2	122	123
61	WEPROG	39. Completed work experience program	N	1	124	124
62	WEFOLP	40. Type of last work experience program	N	2	125	126
63	WELONG	41. Duration of work experience program	N	2	127	128
64	WEWAGE	42. Wage for work experience program	N	2	129	130
65	WEPRP_INSTR	43. Work experience program - instruction from co-worker	N	2	131	132
66	WEPRP_COLLG	43. Work experience program - take classes from college	N	2	133	134
67	WEPRP_TRAIN	43. Work experience program - take classes from company	N	2	135	136
68	WEEVAL	44. Evaluated by co-worker in work experience program	N	2	137	138
69	WECRED	44. College credit from work experience program	N	2	139	140
70	WEJOURN	44. Journeyman status from work experience program	N	2	141	142
71	WEAPPRE	44. Apprentice number from work experience program	N	2	143	144
72	WEDEGR	45. Work experience program degree type	N	2	145	146
73	WECERT	46. Work experience program help earn certification	N	2	147	148
74	WECURJO	47. Current job related to work experience program	N	2	149	150
75	WESKILL	48. Use skills from work experience program in current job	N	2	151	152
76	WEUSE_GET	49. Work experience program useful - getting a job	N	2	153	154

See note at end of table.

Table B-6. Public-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
77	WEUSE_PAY	49. Work experience program useful - increasing pay	N	2	155	156
78	WEUSE_SKLS	49. Work experience program useful - improving work skills	N	2	157	158
79	EEMAIN	50. Employed for pay last week	N	1	159	159
80	EEUNION	51. Member of a labor union	N	2	160	161
81	EEJOB	52. How many jobs last week	N	2	162	163
82	EEFTJOB	53. Full-time job last week	N	2	164	165
83	EEPTJOB	54. Part-time job last week	N	2	166	167
84	EEPREFFT	55. Preferred part-time job to be full-time job	N	2	168	169
85	EELAYOFF	56. Layoff from job last week	N	2	170	171
86	EEL4WKS	57. Actively looking for work last 4 weeks	N	2	172	173
87	EEL5YRS	58. Looking for work next 5 years	N	2	174	175
88	EELWRK	59. Last worked	N	2	176	177
89	EEWKS	60. Weeks worked in past 12 months	N	2	178	179
90	EEHRS	61. Hours worked each week	N	2	180	181
91	EEEARN	62. Earnings past 12 months	N	2	182	183
92	EEWHOA	63. Now on active duty in Armed Forces	N	2	184	185
93	EMPIND	64. Industry code	C	4	186	189
94	EEEMPLO	65. Type of employee	N	2	190	191
95	EMPOCC	66. Occupation code	C	4	192	195
96	EELICES	68. License required for job	N	2	196	197
97	EEPOSIT	69. Type of position held	N	2	198	199
98	EEPERM	70. Preferred permanent position	N	2	200	201
99	XXMIL	71. Served on active duty in U.S. Armed Forces	N	1	202	202
100	XXACTV	72. Served on active duty since September 2001	N	2	203	204
101	XXSEX	73. Sex	N	1	205	205
102	XXMARIT	74. Marital status	N	1	206	206
103	XXBFGF	75. Living with boyfriend/girlfriend	N	2	207	208
104	XXLANG	76. Speak language other than English at home	N	1	209	209
105	XXENG	77. How well speak English	N	2	210	211
106	XXAGE	78. Age	N	2	212	213
107	XXRACE_HISP	79. Hispanic origin	N	1	214	214
108	XXRACE_AMIND	80. Race - American Indian or Alaska Native	N	1	215	215
109	XXRACE_ASIAN	80. Race - Asian	N	1	216	216
110	XXRACE_BLACK	80. Race - Black or African American	N	1	217	217
111	XXRACE_PACI	80. Race - Native Hawaiian or other Pacific Islander	N	1	218	218
112	XXRACE_WHITE	80. Race - White	N	1	219	219
113	XXRACE_HISPRM	80. Race - Hispanic, race not reported	N	1	220	220
114	XXINTCELL	81. Internet access on cell phone	N	1	221	221
115	XXINTHOME	82. Internet access at home on computer or tablet	N	1	222	222
116	XXINTFREQ	83. Frequency of internet use	N	1	223	223
117	EDUC	D-Educational attainment	N	1	224	224
118	EDUC2	D-Educational attainment (3 category)	N	1	225	225
119	WKSTATUS	D-Work status	N	1	226	226
120	FTFY	D-Works full-time and full year	N	1	227	227
121	RACEETHN	D-Race-ethnicity	N	1	228	228
122	RACEETH2	D-Detailed race-ethnicity	N	1	229	229
123	AGECAT	D-Age category	N	1	230	230
124	INTACC	D-Internet access	N	1	231	231
125	MARRIED	D-Marital status	N	1	232	232
126	CTLEVEL	D-Level of postsecondary certificate	N	1	233	233
127	APPRENT	D-Apprenticeship program	N	1	234	234
128	UNDEREMP	D-Under-employment	N	1	235	235
129	CENREG	D-Census region	N	1	236	236
130	ZIPPO2	D-Percent of families below poverty line	N	1	237	237
131	ZIPBLHI2	D-Percent of persons in zip code who were Black or Hispanic	N	1	238	238
132	ZIPLOCL	D-Zip code classification by community type	C	2	239	240
133	ENGLSPANX	D-Questionnaire in English or Spanish	N	1	241	241
134	MODECOMP	D-Completed on Web or Paper	N	1	242	242
135	HHMAGE1	D-HH Member 1 Age	N	2	243	244
136	HHMAGE2	D-HH Member 2 Age	N	2	245	246
137	HHMAGE3	D-HH Member 3 Age	N	2	247	248
138	HHMAGE4	D-HH Member 4 Age	N	2	249	250
139	HHMAGE5	D-HH Member 5 Age	N	2	251	252
140	HHMAGE6	D-HH Member 6 Age	N	2	253	254
141	HHMAGE7	D-HH Member 7 Age	N	2	255	256
142	HHMAGE8	D-HH Member 8 Age	N	2	257	258
143	HHMAGE9	D-HH Member 9 Age	N	2	259	260
144	HHMSEX1	D-HH Member 1 Sex	N	2	261	262
145	HHMSEX2	D-HH Member 2 Sex	N	2	263	264
146	HHMSEX3	D-HH Member 3 Sex	N	2	265	266
147	HHMSEX4	D-HH Member 4 Sex	N	2	267	268
148	HHMSEX5	D-HH Member 5 Sex	N	2	269	270
149	HHMSEX6	D-HH Member 6 Sex	N	2	271	272
150	HHMSEX7	D-HH Member 7 Sex	N	2	273	274
151	HHMSEX8	D-HH Member 8 Sex	N	2	275	276
152	HHMSEX9	D-HH Member 9 Sex	N	2	277	278

See note at end of table.

Table B-6. Public-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
153	HHMENRL1	D-HH Member 1 Enrollment Status	N	2	279	280
154	HHMENRL2	D-HH Member 2 Enrollment Status	N	2	281	282
155	HHMENRL3	D-HH Member 3 Enrollment Status	N	2	283	284
156	HHMENRL4	D-HH Member 4 Enrollment Status	N	2	285	286
157	HHMENRL5	D-HH Member 5 Enrollment Status	N	2	287	288
158	HHMENRL6	D-HH Member 6 Enrollment Status	N	2	289	290
159	HHMENRL7	D-HH Member 7 Enrollment Status	N	2	291	292
160	HHMENRL8	D-HH Member 8 Enrollment Status	N	2	293	294
161	HHMENRL9	D-HH Member 9 Enrollment Status	N	2	295	296
162	HHMGRD1	D-HH Member 1 Grade Level	N	2	297	298
163	HHMGRD2	D-HH Member 2 Grade Level	N	2	299	300
164	HHMGRD3	D-HH Member 3 Grade Level	N	2	301	302
165	HHMGRD4	D-HH Member 4 Grade Level	N	2	303	304
166	HHMGRD5	D-HH Member 5 Grade Level	N	2	305	306
167	HHMGRD6	D-HH Member 6 Grade Level	N	2	307	308
168	HHMGRD7	D-HH Member 7 Grade Level	N	2	309	310
169	HHMGRD8	D-HH Member 8 Grade Level	N	2	311	312
170	HHMGRD9	D-HH Member 9 Grade Level	N	2	313	314
171	APSU	PSU FOR TAYLOR SERIES VAR EST	N	5	315	319
172	ASTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	320	320
173	FAWT	FINAL INTV WEIGHT	N	16	321	336
174	FAWT1	FINAL INTV REPLICATE WEIGHT, FAWT1	N	16	337	352
175	FAWT2	FINAL INTV REPLICATE WEIGHT, FAWT2	N	16	353	368
176	FAWT3	FINAL INTV REPLICATE WEIGHT, FAWT3	N	16	369	384
177	FAWT4	FINAL INTV REPLICATE WEIGHT, FAWT4	N	16	385	400
178	FAWT5	FINAL INTV REPLICATE WEIGHT, FAWT5	N	16	401	416
179	FAWT6	FINAL INTV REPLICATE WEIGHT, FAWT6	N	16	417	432
180	FAWT7	FINAL INTV REPLICATE WEIGHT, FAWT7	N	16	433	448
181	FAWT8	FINAL INTV REPLICATE WEIGHT, FAWT8	N	16	449	464
182	FAWT9	FINAL INTV REPLICATE WEIGHT, FAWT9	N	16	465	480
183	FAWT10	FINAL INTV REPLICATE WEIGHT, FAWT10	N	16	481	496
184	FAWT11	FINAL INTV REPLICATE WEIGHT, FAWT11	N	16	497	512
185	FAWT12	FINAL INTV REPLICATE WEIGHT, FAWT12	N	16	513	528
186	FAWT13	FINAL INTV REPLICATE WEIGHT, FAWT13	N	16	529	544
187	FAWT14	FINAL INTV REPLICATE WEIGHT, FAWT14	N	16	545	560
188	FAWT15	FINAL INTV REPLICATE WEIGHT, FAWT15	N	16	561	576
189	FAWT16	FINAL INTV REPLICATE WEIGHT, FAWT16	N	16	577	592
190	FAWT17	FINAL INTV REPLICATE WEIGHT, FAWT17	N	16	593	608
191	FAWT18	FINAL INTV REPLICATE WEIGHT, FAWT18	N	16	609	624
192	FAWT19	FINAL INTV REPLICATE WEIGHT, FAWT19	N	16	625	640
193	FAWT20	FINAL INTV REPLICATE WEIGHT, FAWT20	N	16	641	656
194	FAWT21	FINAL INTV REPLICATE WEIGHT, FAWT21	N	16	657	672
195	FAWT22	FINAL INTV REPLICATE WEIGHT, FAWT22	N	16	673	688
196	FAWT23	FINAL INTV REPLICATE WEIGHT, FAWT23	N	16	689	704
197	FAWT24	FINAL INTV REPLICATE WEIGHT, FAWT24	N	16	705	720
198	FAWT25	FINAL INTV REPLICATE WEIGHT, FAWT25	N	16	721	736
199	FAWT26	FINAL INTV REPLICATE WEIGHT, FAWT26	N	16	737	752
200	FAWT27	FINAL INTV REPLICATE WEIGHT, FAWT27	N	16	753	768
201	FAWT28	FINAL INTV REPLICATE WEIGHT, FAWT28	N	16	769	784
202	FAWT29	FINAL INTV REPLICATE WEIGHT, FAWT29	N	16	785	800
203	FAWT30	FINAL INTV REPLICATE WEIGHT, FAWT30	N	16	801	816
204	FAWT31	FINAL INTV REPLICATE WEIGHT, FAWT31	N	16	817	832
205	FAWT32	FINAL INTV REPLICATE WEIGHT, FAWT32	N	16	833	848
206	FAWT33	FINAL INTV REPLICATE WEIGHT, FAWT33	N	16	849	864
207	FAWT34	FINAL INTV REPLICATE WEIGHT, FAWT34	N	16	865	880
208	FAWT35	FINAL INTV REPLICATE WEIGHT, FAWT35	N	16	881	896
209	FAWT36	FINAL INTV REPLICATE WEIGHT, FAWT36	N	16	897	912
210	FAWT37	FINAL INTV REPLICATE WEIGHT, FAWT37	N	16	913	928
211	FAWT38	FINAL INTV REPLICATE WEIGHT, FAWT38	N	16	929	944
212	FAWT39	FINAL INTV REPLICATE WEIGHT, FAWT39	N	16	945	960
213	FAWT40	FINAL INTV REPLICATE WEIGHT, FAWT40	N	16	961	976
214	FAWT41	FINAL INTV REPLICATE WEIGHT, FAWT41	N	16	977	992
215	FAWT42	FINAL INTV REPLICATE WEIGHT, FAWT42	N	16	993	1008
216	FAWT43	FINAL INTV REPLICATE WEIGHT, FAWT43	N	16	1009	1024
217	FAWT44	FINAL INTV REPLICATE WEIGHT, FAWT44	N	16	1025	1040
218	FAWT45	FINAL INTV REPLICATE WEIGHT, FAWT45	N	16	1041	1056
219	FAWT46	FINAL INTV REPLICATE WEIGHT, FAWT46	N	16	1057	1072
220	FAWT47	FINAL INTV REPLICATE WEIGHT, FAWT47	N	16	1073	1088
221	FAWT48	FINAL INTV REPLICATE WEIGHT, FAWT48	N	16	1089	1104
222	FAWT49	FINAL INTV REPLICATE WEIGHT, FAWT49	N	16	1105	1120
223	FAWT50	FINAL INTV REPLICATE WEIGHT, FAWT50	N	16	1121	1136
224	FAWT51	FINAL INTV REPLICATE WEIGHT, FAWT51	N	16	1137	1152
225	FAWT52	FINAL INTV REPLICATE WEIGHT, FAWT52	N	16	1153	1168
226	FAWT53	FINAL INTV REPLICATE WEIGHT, FAWT53	N	16	1169	1184
227	FAWT54	FINAL INTV REPLICATE WEIGHT, FAWT54	N	16	1185	1200
228	FAWT55	FINAL INTV REPLICATE WEIGHT, FAWT55	N	16	1201	1216

See note at end of table.

Table B-6. Public-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
229	FAWT56	FINAL INTV REPLICATE WEIGHT, FAWT56	N	16	1217	1232
230	FAWT57	FINAL INTV REPLICATE WEIGHT, FAWT57	N	16	1233	1248
231	FAWT58	FINAL INTV REPLICATE WEIGHT, FAWT58	N	16	1249	1264
232	FAWT59	FINAL INTV REPLICATE WEIGHT, FAWT59	N	16	1265	1280
233	FAWT60	FINAL INTV REPLICATE WEIGHT, FAWT60	N	16	1281	1296
234	FAWT61	FINAL INTV REPLICATE WEIGHT, FAWT61	N	16	1297	1312
235	FAWT62	FINAL INTV REPLICATE WEIGHT, FAWT62	N	16	1313	1328
236	FAWT63	FINAL INTV REPLICATE WEIGHT, FAWT63	N	16	1329	1344
237	FAWT64	FINAL INTV REPLICATE WEIGHT, FAWT64	N	16	1345	1360
238	FAWT65	FINAL INTV REPLICATE WEIGHT, FAWT65	N	16	1361	1376
239	FAWT66	FINAL INTV REPLICATE WEIGHT, FAWT66	N	16	1377	1392
240	FAWT67	FINAL INTV REPLICATE WEIGHT, FAWT67	N	16	1393	1408
241	FAWT68	FINAL INTV REPLICATE WEIGHT, FAWT68	N	16	1409	1424
242	FAWT69	FINAL INTV REPLICATE WEIGHT, FAWT69	N	16	1425	1440
243	FAWT70	FINAL INTV REPLICATE WEIGHT, FAWT70	N	16	1441	1456
244	FAWT71	FINAL INTV REPLICATE WEIGHT, FAWT71	N	16	1457	1472
245	FAWT72	FINAL INTV REPLICATE WEIGHT, FAWT72	N	16	1473	1488
246	FAWT73	FINAL INTV REPLICATE WEIGHT, FAWT73	N	16	1489	1504
247	FAWT74	FINAL INTV REPLICATE WEIGHT, FAWT74	N	16	1505	1520
248	FAWT75	FINAL INTV REPLICATE WEIGHT, FAWT75	N	16	1521	1536
249	FAWT76	FINAL INTV REPLICATE WEIGHT, FAWT76	N	16	1537	1552
250	FAWT77	FINAL INTV REPLICATE WEIGHT, FAWT77	N	16	1553	1568
251	FAWT78	FINAL INTV REPLICATE WEIGHT, FAWT78	N	16	1569	1584
252	FAWT79	FINAL INTV REPLICATE WEIGHT, FAWT79	N	16	1585	1600
253	FAWT80	FINAL INTV REPLICATE WEIGHT, FAWT80	N	16	1601	1616
254	F_EDUATTN	IMPUTATION FLAG FOR EDUATTN	N	1	1617	1617
255	F_EDUFOS	IMPUTATION FLAG FOR EDUFOS	N	2	1618	1619
256	F_ENROLL	IMPUTATION FLAG FOR ENROLL	N	1	1620	1620
257	F_ESLCLA	IMPUTATION FLAG FOR ESLCLA	N	1	1621	1621
258	F_READCLA	IMPUTATION FLAG FOR READCLA	N	1	1622	1622
259	F_CNMAIN	IMPUTATION FLAG FOR CNMAIN	N	1	1623	1623
260	F_CNNUM	IMPUTATION FLAG FOR CNNUM	N	2	1624	1625
261	F_CNPROV1	IMPUTATION FLAG FOR CNPROV1	N	2	1626	1627
262	F_CNREVOKE1	IMPUTATION FLAG FOR CNREVOKE1	N	2	1628	1629
263	F_CNYEAR1	IMPUTATION FLAG FOR CNYEAR1	N	2	1630	1631
264	F_CNPRP_COLLG1	IMPUTATION FLAG FOR CNPRP_COLLG1	N	2	1632	1633
265	F_CNPRP_TRAIN1	IMPUTATION FLAG FOR CNPRP_TRAIN1	N	2	1634	1635
266	F_CNPRP_ONOWN1	IMPUTATION FLAG FOR CNPRP_ONOWN1	N	2	1636	1637
267	F_CNCURRJOB1	IMPUTATION FLAG FOR CNCURRJOB1	N	2	1638	1639
268	F_CNUSE_GET1	IMPUTATION FLAG FOR CNUSE_GET1	N	2	1640	1641
269	F_CNUSE_KEEP1	IMPUTATION FLAG FOR CNUSE_KEEP1	N	2	1642	1643
270	F_CNUSE_MRKT1	IMPUTATION FLAG FOR CNUSE_MRKT1	N	2	1644	1645
271	F_CNUSE_SKLS1	IMPUTATION FLAG FOR CNUSE_SKLS1	N	2	1646	1647
272	F_CNMAIN2	IMPUTATION FLAG FOR CNMAIN2	N	2	1648	1649
273	F_CNPROV2	IMPUTATION FLAG FOR CNPROV2	N	2	1650	1651
274	F_CNREVOKE2	IMPUTATION FLAG FOR CNREVOKE2	N	2	1652	1653
275	F_CNYEAR2	IMPUTATION FLAG FOR CNYEAR2	N	2	1654	1655
276	F_CNPRP_COLLG2	IMPUTATION FLAG FOR CNPRP_COLLG2	N	2	1656	1657
277	F_CNPRP_TRAIN2	IMPUTATION FLAG FOR CNPRP_TRAIN2	N	2	1658	1659
278	F_CNPRP_ONOWN2	IMPUTATION FLAG FOR CNPRP_ONOWN2	N	2	1660	1661
279	F_CNCURRJOB2	IMPUTATION FLAG FOR CNCURRJOB2	N	2	1662	1663
280	F_CNUSE_GET2	IMPUTATION FLAG FOR CNUSE_GET2	N	2	1664	1665
281	F_CNUSE_KEEP2	IMPUTATION FLAG FOR CNUSE_KEEP2	N	2	1666	1667
282	F_CNUSE_MRKT2	IMPUTATION FLAG FOR CNUSE_MRKT2	N	2	1668	1669
283	F_CNUSE_SKLS2	IMPUTATION FLAG FOR CNUSE_SKLS2	N	2	1670	1671
284	F_CNMAIN3	IMPUTATION FLAG FOR CNMAIN3	N	2	1672	1673
285	F_CNPROV3	IMPUTATION FLAG FOR CNPROV3	N	2	1674	1675
286	F_CNREVOKE3	IMPUTATION FLAG FOR CNREVOKE3	N	2	1676	1677
287	F_CERTHS	IMPUTATION FLAG FOR CERTHS	N	1	1678	1678
288	F_CERTPROG	IMPUTATION FLAG FOR CERTPROG	N	1	1679	1679
289	F_CERTTRAIN	IMPUTATION FLAG FOR CERTTRAIN	N	1	1680	1680
290	F_CERTVOC	IMPUTATION FLAG FOR CERTVOC	N	1	1681	1681
291	F_PSFOS	IMPUTATION FLAG FOR PSFOS	N	2	1682	1683
292	F_LASTPSCR	IMPUTATION FLAG FOR LASTPSCR	N	2	1684	1685
293	F_LCHOURS	IMPUTATION FLAG FOR LCHOURS	N	2	1686	1687
294	F_LCENROLL	IMPUTATION FLAG FOR LCENROLL	N	2	1688	1689
295	F_LCINHRS	IMPUTATION FLAG FOR LCINHRS	N	2	1690	1691
296	F_LCRED	IMPUTATION FLAG FOR LCRED	N	2	1692	1693
297	F_LCTRAIN	IMPUTATION FLAG FOR LCTRAIN	N	2	1694	1695
298	F_LCCURRJOB	IMPUTATION FLAG FOR LCCURRJOB	N	2	1696	1697
299	F_LCUSE_GET	IMPUTATION FLAG FOR LCUSE_GET	N	2	1698	1699
300	F_LCUSE_SKLS	IMPUTATION FLAG FOR LCUSE_SKLS	N	2	1700	1701
301	F_LCUSE_PAY	IMPUTATION FLAG FOR LCUSE_PAY	N	2	1702	1703
302	F_WEPROG	IMPUTATION FLAG FOR WEPROG	N	1	1704	1704
303	F_WEFOLP	IMPUTATION FLAG FOR WEFOLP	N	2	1705	1706
304	F_WELONG	IMPUTATION FLAG FOR WELONG	N	2	1707	1708

See note at end of table.

Table B-6. Public-Use Data file Layout in Position Order, ATES:2016

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
305	F_WEWAGE	IMPUTATION FLAG FOR WEWAGE	N	2	1709	1710
306	F_WEPRP_COLLG	IMPUTATION FLAG FOR WEPRP_COLLG	N	2	1711	1712
307	F_WEPRP_TRAIN	IMPUTATION FLAG FOR WEPRP_TRAIN	N	2	1713	1714
308	F_WEPRP_INSTR	IMPUTATION FLAG FOR WEPRP_INSTR	N	2	1715	1716
309	F_WEAPPRE	IMPUTATION FLAG FOR WEAPPRE	N	2	1717	1718
310	F_WECRED	IMPUTATION FLAG FOR WECRED	N	2	1719	1720
311	F_WEEVAL	IMPUTATION FLAG FOR WEEVAL	N	2	1721	1722
312	F_WEJOURN	IMPUTATION FLAG FOR WEJOURN	N	2	1723	1724
313	F_WEDEGR	IMPUTATION FLAG FOR WEDEGR	N	2	1725	1726
314	F_WECERT	IMPUTATION FLAG FOR WECERT	N	2	1727	1728
315	F_WECURJO	IMPUTATION FLAG FOR WECURJO	N	2	1729	1730
316	F_WESKILL	IMPUTATION FLAG FOR WESKILL	N	2	1731	1732
317	F_WEUSE_GET	IMPUTATION FLAG FOR WEUSE_GET	N	2	1733	1734
318	F_WEUSE_SKLS	IMPUTATION FLAG FOR WEUSE_SKLS	N	2	1735	1736
319	F_WEUSE_PAY	IMPUTATION FLAG FOR WEUSE_PAY	N	2	1737	1738
320	F_EEMAIN	IMPUTATION FLAG FOR EEMAIN	N	1	1739	1739
321	F_EEUNION	IMPUTATION FLAG FOR EEUNION	N	2	1740	1741
322	F_EEJOB	IMPUTATION FLAG FOR EEJOB	N	2	1742	1743
323	F_EEFTJOB	IMPUTATION FLAG FOR EEFTJOB	N	2	1744	1745
324	F_EEPTJOB	IMPUTATION FLAG FOR EEPTJOB	N	2	1746	1747
325	F_EEPREFFT	IMPUTATION FLAG FOR EEPREFFT	N	2	1748	1749
326	F_EELAYOFF	IMPUTATION FLAG FOR EELAYOFF	N	2	1750	1751
327	F_EEL4WKS	IMPUTATION FLAG FOR EEL4WKS	N	2	1752	1753
328	F_EEL5YRS	IMPUTATION FLAG FOR EEL5YRS	N	2	1754	1755
329	F_EELWRK	IMPUTATION FLAG FOR EELWRK	N	2	1756	1757
330	F_EEWKS	IMPUTATION FLAG FOR EEWKS	N	2	1758	1759
331	F_EEHRS	IMPUTATION FLAG FOR EEHRS	N	2	1760	1761
332	F_EEEARN	IMPUTATION FLAG FOR EEEARN	N	2	1762	1763
333	F_EEEMPLO	IMPUTATION FLAG FOR EEEMPLO	N	2	1764	1765
334	F_EELICES	IMPUTATION FLAG FOR EELICES	N	2	1766	1767
335	F_EEPOSIT	IMPUTATION FLAG FOR EEPPOSIT	N	2	1768	1769
336	F_EEPERM	IMPUTATION FLAG FOR EEPERM	N	2	1770	1771
337	F_XXMIL	IMPUTATION FLAG FOR XXMIL	N	1	1772	1772
338	F_XXACTV	IMPUTATION FLAG FOR XXACTV	N	2	1773	1774
339	F_XXSEX	IMPUTATION FLAG FOR XXSEX	N	1	1775	1775
340	F_XXMARIT	IMPUTATION FLAG FOR XXMARIT	N	1	1776	1776
341	F_XXBFGF	IMPUTATION FLAG FOR XXBFGF	N	2	1777	1778
342	F_XXLANG	IMPUTATION FLAG FOR XXLANG	N	1	1779	1779
343	F_XXENG	IMPUTATION FLAG FOR XXENG	N	2	1780	1781
344	F_XXAGE	IMPUTATION FLAG FOR XXAGE	N	1	1782	1782
345	F_XXRACE_HISP	IMPUTATION FLAG FOR XXRACE_HISP	N	1	1783	1783
346	F_XXRACE_AMIND	IMPUTATION FLAG FOR XXRACE_AMIND	N	1	1784	1784
347	F_XXRACE_ASIAN	IMPUTATION FLAG FOR XXRACE_ASIAN	N	1	1785	1785
348	F_XXRACE_BLACK	IMPUTATION FLAG FOR XXRACE_BLACK	N	1	1786	1786
349	F_XXRACE_PACI	IMPUTATION FLAG FOR XXRACE_PACI	N	1	1787	1787
350	F_XXRACE_WHITE	IMPUTATION FLAG FOR XXRACE_WHITE	N	1	1788	1788
351	F_XXRACE_HISPRM	IMPUTATION FLAG FOR XXRACE_HISPRM	N	1	1789	1789
352	F_XXINTCELL	IMPUTATION FLAG FOR XXINTCELL	N	1	1790	1790
353	F_XXINTHOME	IMPUTATION FLAG FOR XXINTHOME	N	1	1791	1791
354	F_XXINTFREQ	IMPUTATION FLAG FOR XXINTFREQ	N	1	1792	1792

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey of the 2016 National Household Education Surveys

Appendix C. Comparison of Estimates

Table C-1. Percentage distribution for household size, place of birth, age, and number of children in the household: ECPP-NHES:2016, PFI-NHES:2016, and CPS:2015

Characteristic	ECPP-NHES:2016 and PFI-NHES:2016		CPS:2015		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Household size						
1-2	4.6	0.02	4.2	0.14	0.4*	0.14
3-4	52.6	0.10	52.4	0.47	0.2	0.48
5+	42.8	0.11	43.3	0.48	-0.5	0.49
Child's place of birth						
US state or DC	95.0	0.22	95.8	0.16	-0.9*	0.27
US territory	0.6	0.10	0.3	0.05	0.3*	0.11
Another country	4.4	0.21	3.8	0.16	0.5*	0.26
Race/ethnicity of child						
White, non-Hispanic	50.2	0.33	51.3	0.10	-1.1*	0.35
Black, non-Hispanic	13.8	0.04	14.0	0.11	-0.2	0.12
Hispanic	24.4	0.10	24.7	0.07	-0.2	0.13
Asian/Pacific Islander, non-Hispanic	5.8	0.27	5.3	0.09	0.5	0.29
Other, non-Hispanic	5.8	0.23	4.7	0.08	1.1*	0.24
Age category						
0-2 years	18.2	0.12	16.2	0.08	2.1*	0.15
3-5 years	17.0	0.21	16.2	0.11	0.8*	0.23
6-9 years	21.5	0.20	21.9	0.11	-0.4	0.23
10-12 years	16.1	0.18	16.5	0.13	-0.4	0.22
13-15 years	16.4	0.18	16.5	0.12	-0.1	0.22
16-18 years	10.6	0.12	12.3	0.09	-1.8*	0.15
19-20 years	0.2	0.04	0.4	0.05	-0.2*	0.06
Number of children in household						
1	24.7	0.31	22.7	0.31	2.0*	0.44
2	39.5	0.43	38.7	0.50	0.8	0.66
3	22.4	0.52	23.9	0.46	-1.4*	0.69
4	9.0	0.43	9.5	0.37	-0.5	0.57
5+	4.4	0.40	5.3	0.30	-0.9	0.50

NOTE: Homeschoolers are excluded from the NHES estimates. Because of rounding, percentages may not add to 100. Blank cells in the table represent estimates that round to zero.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-2A. Percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: ECPP-NHES:2016 and PFI-NHES:2016

Child's age	Number of children (thousands)	Not Enrolled	Kindergarten	Child's current grade									
				1	2	3	4	5	6	7	8	9	10
3	3,462.6	98.3	‡	‡						‡	‡		
4	3,652.9	92.5	3.7	‡				‡		‡	‡		
5	5,253.0	24.8	72.4	2.3	‡	‡	‡				‡		
6	3,645.5	2.1	27.5	65.6	3.5		‡	1.1					‡
7	3,965.5		1.1	33.0	60.3	5.1			‡				
8	4,129.4		0.4	1.8	32.4	56.7	6.2	0.4	‡	‡	0.3		‡
9	3,894.0		0.3	‡	1.0	34.1	60.2	3.2	‡	‡	0.2	‡	‡
10	4,181.1		0.7		‡	2.4	29.1	62.9	4.6	‡		‡	‡
11	3,829.5			‡			1.6	31.1	61.3	5.4			‡
12	3,701.9		‡	‡		‡	0.7	1.6	31.1	58.8	6.4	0.3	
13	3,748.2	0.4					1.1	‡	1.3	33.9	58.9	3.8	0.5
14	4,278.5		‡	‡	‡	‡	0.5			1.4	35.2	58.0	4.1
15	3,907.6		‡	‡	‡		‡		0.2	0.2	1.9	28.4	63.2
16	3,650.6		‡	‡			‡			0.4	3.1	31.8	59.3
17	3,154.8			0.3	‡					0.3	2.9	31.6	64.1
18	889.1									‡	‡	5.9	93.0
19	103.5					‡	‡			‡		‡	92.7
20	77.5										4.1	95.9	

‡ Reporting standards not met. There were too few cases for a reliable estimate.

NOTE: Homeschoolers are excluded from the NHES estimates. Because of rounding, percentages may not add to 100. Blank cells in the table represent estimates that round to zero.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-2B. Standard errors of the percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: ECPP-NHES:2016 and PFI-NHES:2016

Child's age	Number of children (thousands)	Not Enrolled	Child's current grade										
			Kindergarten	1	2	3	4	5	6	7	8	9	10
3	123.93	0.82	†	†						†	†		
4	145.91	2.82	1.38	†				†		†	†	†	
5	196.53	1.36	1.60	0.82	†	†	†				†		
6	154.04	1.48	1.89	2.22	0.73		†	0.76					†
7	168.62		0.48	2.03	2.48	1.12			†				
8	153.89			0.27	0.77	1.97	2.19	1.37	0.23	†	†	0.27	†
9	151.32				0.20	†	0.32	2.44	2.65	0.80	†	†	0.17
10	125.49				0.39		†	0.94	1.92	2.08	1.07	†	†
11	122.75					†			0.69	1.87	2.06	0.98	†
12	126.83					†	†		†	0.39	0.49	2.37	2.35
13	117.34	0.35						0.68	†	0.43	1.94	2.09	0.82
14	130.91					†	†	†	†		0.35	2.23	2.14
15	116.40					†	†		†		0.15	0.09	0.82
16	108.54					†	†		†			0.27	1.10
17	73.24			0.20	†							0.17	0.94
18	42.60									†	†	†	1.26
19	17.50						†	†		†			† 4.02
20	26.93											3.10	3.10

† Not applicable.

NOTE: Homeschoolers are excluded from the NHES estimates. Blank cells in the table represent estimates that round to zero.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-2C. Percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: CPS:2015

Child's age	Number of children (thousands)	Not Enrolled	Child's current grade										
			Kindergarten	1	2	3	4	5	6	7	8	9	10
3	3932.2	97.9	2.1										
4	4033.6	93.5	6.5										
5	3986.8	24.6	71.7	3.4	0.3								
6	3982.8	4.1	20.5	69.5	4.6	1.3							
7	4035.4		1.2	22.2	70.9	4.8	0.9						
8	3901.7			1.3	24.7	69.0	4.0	1.0					
9	4200.9			0.2	2.1	24.3	68.1	4.6	0.7				
10	4048.5				0.4	3.9	26.7	64.2	4.4	0.4			
11	4037.0					0.3	3.5	27.7	63.8	3.9	0.7		
12	4061.8							2.9	25.9	66.1	4.4	0.6	
13	3954.7							0.8	3.6	26.4	65.4	3.3	0.4
14	4069.2							0.3	3.7	29.3	62.4	3.9	0.3
15	4102.2							0.1	0.9	2.4	25.9	62.0	7.3
16	4028.2							0.1	0.6	0.3	4.0	29.9	58.4
17	3687.1							0.4	0.3	0.7	5.1	27.5	66.1
18	1363.6							0.3		0.3	3.8	14.3	81.4
19	246.8							4.7		1.9	3.3	9.6	80.6
20	84.5							19.4		5.0	10.2	8.5	56.9

NOTE: Because of rounding, percentages may not add to 100. Blank cells in the table represent estimates that round to zero.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-2D. Standard errors of the percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: CPS:2015

Child's age	Number of children (thousands)	Not Enrolled	Kindergarten	Child's current grade								
				1	2	3	4	5	6	7	8	9
3	73.30	0.43	0.43									
4	73.01	0.71	0.71									
5	71.21	1.31	1.29	0.53	0.16							
6	67.22	0.63	1.19	1.40	0.56	0.34						
7	64.71		0.26	1.16	1.26	0.60	0.25					
8	65.50			0.32	1.24	1.31	0.57	0.28				
9	63.57			0.12	0.52	1.21	1.39	0.57	0.25			
10	83.67				0.15	0.53	1.28	1.31	0.65	0.19		
11	75.44					0.18	0.53	1.25	1.32	0.52	0.21	
12	81.31						0.45	1.29	1.40	0.63	0.22	
13	77.94						0.26	0.53	1.35	1.42	0.44	0.16
14	58.08							0.14	0.57	1.28	1.29	0.56
15	59.30							0.08	0.28	0.39	1.32	1.62
16	59.17							0.04	0.21	0.15	0.50	1.28
17	60.13								0.19	0.17	0.22	0.67
18	58.15								0.23		0.21	1.05
19	27.61									2.88		3.12
20	20.35										14.14	
												4.13
												5.87
												5.28
												12.63

NOTE: Blank cells in the table represent estimates that round to zero.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-2E. Difference in percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: CPS:2015 vs. NHES:2016

Child's age	Number of children (thousands)	Not Enrolled	Child's current grade										
			Kindergarten	1	2	3	4	5	6	7	8	9	10
3	-469.7*	0.5	‡	‡						‡	‡		
4	-380.7*	-1.0	-2.8	‡					‡		‡	‡	
5	1,266.2*	0.2	0.7	-1.1	‡	‡	‡				‡		
6	-337.3*	-2.0	7.0*	-3.9	-1.1	-1.3*	‡	1.1					‡
7	-69.9		-0.1	10.8*	-10.6*	0.3	-0.9*		‡				
8	227.7		0.4	0.5	7.7*	-12.3*	2.2	-0.6	‡	‡	0.3		‡
9	-306.9		0.3	‡	-1.1	9.7*	-8.0*	-1.4	‡	‡	0.2	‡	‡
10	132.6		0.7		†	-1.5	2.5	-1.4	0.2	‡		‡	‡
11	-207.5			‡	-0.2	-2.0*	3.4	-2.5	1.4	-0.7*			‡
12	-359.9*		‡	‡		‡	0.7	-1.3	5.2	-7.3*	1.9	-0.3	
13	-206.5	0.4					1.1	‡	-2.3*	7.5*	-6.5*	0.5	0.1
14	209.3		‡	‡	‡	‡	0.5		-0.3*	-2.3*	5.9*	-4.4	0.2
15	-194.6		‡	‡	‡		‡		0.2	-0.7*	-0.5	2.5	1.1
16	-377.6*		‡	‡			‡		-0.1*	-0.6*	0.1	-0.9	2.0
17	-532.3*		0.3	‡					-0.4*	-0.2	-0.4	-2.2	4.0
18	-474.5*								-0.3	‡	‡	-8.4*	11.6*
19	-143.4*				‡	‡			‡	0.9	-1.9	-3.3	‡
20	-7.0								-19.4	-5.0	-10.2	-4.4	39.0*

‡ Reporting standards not met. There were too few cases for a reliable estimate.

* Indicates a total or proportion that differs between the NHES and CPS with $p < .05$ (Student's t test).

NOTE: Homeschoolers are excluded from the NHES estimates. Because of rounding, percentages may not add to 100. Blank cells in the table represent estimates that round to zero.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-2F. Standard errors of difference in the percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: CPS:2015 vs. NHES:2016

Child's age	Number of children (thousands)	Not Enrolled	Child's current grade										
			Kindergarten	1	2	3	4	5	6	7	8	9	10
3	143.98	0.93	†	†						†	†	†	
4	163.15	2.91	1.55	†				†			†	†	
5	209.03	1.89	2.05	0.98	†	†	†				†		
6	168.07	1.61	2.24	2.63	0.92	0.34	†	0.76					†
7	180.61		0.55	2.34	2.78	1.27	0.25		†				
8	167.25		0.27	0.83	2.32	2.55	1.48	0.36	†	†	0.27		†
9	164.13		0.20	0.54	0.61	2.73	2.99	0.98	†	†	0.17	†	†
10	150.83		0.39		†	1.08	2.31	2.46	1.26	†		†	†
11	144.08			0.23		0.18	0.87	2.25	2.45	1.11	0.21		†
12	150.66		†	†		†	0.39	0.67	2.70	2.74	1.89	0.28	
13	140.87	0.35					0.68	†	0.69	2.37	2.52	0.93	0.36
14	143.22		†	†	†	†	0.32		0.14	0.67	2.57	2.50	1.00
15	130.64		†	†	†		†		0.18	0.29	0.73	2.32	2.39
16	123.62		†	†			†		0.04	0.21	0.31	1.21	2.09
17	94.76			0.20	†					0.19	0.17	0.27	1.15
18	72.09									0.23	†	†	2.21
19	32.68					†	†			2.88	†	1.23	2.07
20	33.76								14.14		4.13	5.87	6.12
													13.00

† Not applicable.

NOTE: Blank cells in the table represent estimates that round to zero.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-3. Number of children in kindergarten through grade 12, by school type and by student grade level: PFI-NHES:2016 and CPS:2015

School type and grade	PFI-NHES:2016		CPS:2015		Difference	
	Number (thousands)	s.e. (thousands)	Number (thousands)	s.e. (thousands)	Number (thousands)	s.e. (thousands)
Total	51,363.0	157.70	52,996.2	132.48	-1,633.2*	205.96
School type						
Public	46,498.3	217.80	48,808.3	199.79	-2,310.0*	295.56
Private	4,864.7	175.06	4,187.9	145.18	676.8*	227.43
Student grade level						
K	5,087.5	165.47	4,072.6	82.86	1,014.9*	185.05
1	4,103.0	189.01	3,857.3	82.95	245.7	206.41
2	3,940.5	151.20	4,126.0	91.35	-185.4	176.65
3	3,993.1	133.97	4,128.0	84.55	-134.9	158.42
4	3,998.5	152.50	4,278.0	80.03	-279.4	172.23
5	4,074.0	134.14	4,101.8	88.54	-27.8	160.72
6	3,824.5	144.64	3,994.3	98.48	-169.9	174.98
7	3,760.3	122.23	4,162.0	91.43	-401.7*	152.64
8	4,073.8	147.72	4,110.6	86.39	-36.8	171.13
9	3,916.8	126.99	3,957.1	81.99	-40.3	151.16
10	3,930.4	120.55	4,178.2	100.79	-247.8	157.14
11	3,438.3	103.81	3,907.0	90.46	-468.7*	137.69
12	3,222.3	90.87	4,123.2	89.78	-901.0*	127.74

* Indicates a total that differs between the NHES and CPS with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Because of rounding, details may not add to totals. NHES estimates exclude homeschoolers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-4. Number and percentage of children in kindergarten through grade 12 enrolled in public and private schools: PFI-NHES:2016 and CPS:2015

Child's current grade	School type					
	Public			Private		
	Number (thousands)	Percent	s.e.	Number (thousands)	Percent	s.e.
PFI-NHES:2016						
K	4,525.8	89.0	1.49	561.7	11.0	1.49
1	3,644.6	88.8	1.56	458.4	11.2	1.56
2	3,613.0	91.7	1.09	327.6	8.3	1.09
3	3,686.7	92.3	0.85	306.4	7.7	0.85
4	3,631.1	90.8	1.40	367.4	9.2	1.40
5	3,673.0	90.2	1.06	401.0	9.8	1.06
6	3,469.8	90.7	1.34	354.6	9.3	1.34
7	3,428.8	91.2	0.99	331.6	8.8	0.99
8	3,624.5	89.0	1.30	449.3	11.0	1.30
9	3,541.6	90.4	0.99	375.3	9.6	0.99
10	3,618.2	92.1	0.91	312.2	7.9	0.91
11	3,135.0	91.2	0.92	303.3	8.8	0.92
12	2,906.2	90.2	1.24	316.0	9.8	1.24
CPS:2015						
K	3,644.2	89.5	0.86	428.4	10.5	0.86
1	3,546.4	91.9	0.80	310.9	8.1	0.80
2	3,780.2	91.6	0.66	345.8	8.4	0.66
3	3,778.2	91.5	0.73	349.8	8.5	0.73
4	3,971.6	92.8	0.74	306.4	7.2	0.74
5	3,798.1	92.6	0.73	303.7	7.4	0.73
6	3,650.7	91.4	0.79	343.6	8.6	0.79
7	3,810.8	91.6	0.74	351.2	8.4	0.74
8	3,768.9	91.7	0.79	341.8	8.3	0.79
9	3,691.7	93.3	0.70	265.4	6.7	0.70
10	3,927.5	94.0	0.72	250.7	6.0	0.72
11	3,617.5	92.6	0.67	289.5	7.4	0.67
12	3,822.6	92.7	0.83	300.7	7.3	0.83

See notes at end of table.

Table C-4. Number and percentage of children in kindergarten through grade 12 enrolled in public and private schools: PFI-NHES:2016 and CPS:2015—Continued

Child's current grade	School type					
	Public			Private		
	Number (thousands)	Percent	s.e.	Number (thousands)	Percent	s.e.
Difference						
K	881.6	-0.5	1.72	133.3	0.5	1.72
1	98.3	-3.1	1.75	147.5	3.1	1.75
2	-167.2	0.1	1.28	-18.2	-0.1	1.28
3	-91.5	0.8	1.12	-43.5	-0.8	1.12
4	-340.4	-2.0	1.58	61.0	2.0	1.58
5	-125.1	-2.4	1.29	97.3	2.4	1.29
6	-180.9	-0.7	1.56	11.0	0.7	1.56
7	-382.0	-0.4	1.24	-19.7	0.4	1.24
8	-144.4	-2.7	1.52	107.5	2.7	1.52
9	-150.2	-2.9*	1.22	109.9	2.9*	1.22
10	-309.3	-1.9	1.16	61.5	1.9	1.16
11	-482.5	-1.4	1.14	13.8	1.4	1.14
12	-916.4	-2.5	1.49	15.4	2.5	1.49

* Indicates a proportion that differs between the NHES and CPS with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. NHES estimates exclude homeschooleders.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-5. Percentage of children enrolled in kindergarten through grade 12 enrolled in public and private schools, by race/ethnicity: PFI-NHES:2016 and CPS:2015

Race/ethnicity	PFI-NHES:2016					CPS:2015					Difference				
	Number of children (thousands)	Public		Private		Number of children (thousands)	Public		Private		Number of children (thousands)	Public		Private	
		Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.
White, non-Hispanic	25,763.7	88.6	0.49	11.4	0.49	27,658.1	89.7	0.39	10.3	0.39	-1,894.4	-1.0	0.62	1.0	0.62
Black, non-Hispanic	7,179.5	91.4	1.06	8.6	1.06	7,389.4	95.6	0.58	4.4	0.58	-209.8	-4.2*	1.21	4.2*	1.21
Hispanic	12,356.4	93.6	0.62	6.4	0.62	12,889.8	95.7	0.45	4.3	0.45	-533.4	-2.1*	0.77	2.1*	0.77
Asian/Pacific Islander, non-Hispanic	3,213.7	91.0	1.30	9.0	1.30	2,730.3	91.1	1.24	8.9	1.24	483.4	-0.1	1.79	0.1	1.79
Other, non-Hispanic	2,849.6	91.6	1.22	8.4	1.22	2,328.6	90.9	1.33	9.1	1.33	521.0	0.7	1.80	-0.7	1.80

* Indicates a proportion that differs between the NHES and CPS with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Percentages include only those students for whom public/private enrollment was reported, that is, children whose parents indicated they were enrolled in school. NHES estimates exclude homeschoolers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-6. Percentage of children in kindergarten through grade 12, by household income: PFI-NHES:2016 and ACS: 2015

Household income	PFI-NHES:2016		ACS:2015		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
\$10,000 or less	5.1	0.00	5.1	0.05	0.0	0.05
\$10,001 to \$20,000	7.3	0.00	7.3	0.07	0.0	0.07
\$20,001 to \$30,000	8.6	0.00	8.6	0.08	0.0	0.08
\$30,001 to \$40,000	8.5	0.00	8.5	0.07	0.0	0.07
\$40,001 to \$50,000	7.9	0.00	7.9	0.07	0.0	0.07
\$50,001 to \$60,000	7.4	0.00	7.4	0.07	0.0	0.07
\$60,001 to \$75,000	10.0	0.00	10.0	0.07	0.0	0.07
\$75,001 to \$100,000	13.5	0.00	13.5	0.09	0.0	0.09
\$100,001 to \$150,000	16.5	0.00	16.5	0.08	0.0	0.08
Over \$150,000	15.1	0.00	15.1	0.08	0.0	0.08

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100. NHES and ACS estimates include homeschooled.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2015.

Table C-7. Percentage of children in kindergarten through grade 12, by household income and race/ethnicity: PFI-NHES:2016 and ACS:2015

Race/ethnicity	Number of children (thousands)	Household income							
		Less than \$20,000		\$20,001- \$40,000		\$40,001- \$60,000		More than \$60,000	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
PFI-NHES:2016									
White, non-Hispanic	26,792.0	7.2	0.40	12.0	0.24	13.3	0.35	67.5	0.46
Black, non-Hispanic	7,300.6	26.3	0.00	24.2	0.00	15.9	0.00	33.6	0.00
Hispanic	12,943.8	16.1	0.00	25.8	0.00	19.5	0.00	38.5	0.00
Asian/Pacific Islander, non-Hispanic	3,267.5	9.6	3.30	13.6	1.79	10.7	1.49	66.1	3.34
Other, non-Hispanic	2,920.8	13.1	1.63	12.4	1.35	18.9	2.93	55.7	2.85
ACS:2015									
White, non-Hispanic	27,580.4	7.4	0.09	11.7	0.11	13.5	0.12	67.4	0.17
Black, non-Hispanic	7,300.6	26.3	0.29	24.2	0.31	15.9	0.29	33.6	0.35
Hispanic	12,943.8	16.1	0.22	25.8	0.23	19.5	0.19	38.5	0.28
Asian/Pacific Islander, non-Hispanic	2,607.1	7.1	0.29	13.0	0.32	12.3	0.33	67.5	0.47
Other, non-Hispanic	2,792.7	13.8	0.33	16.5	0.37	14.9	0.39	54.9	0.41
Difference									
White, non-Hispanic	-788.4	-0.2	0.41	0.3	0.27	-0.2	0.37	0.1	0.49
Black, non-Hispanic	0.0	0.0	0.29	0.0	0.31	0.0	0.29	0.0	0.35
Hispanic	0.0	0.0	0.22	0.0	0.23	0.0	0.19	0.0	0.28
Asian/Pacific Islander, non-Hispanic	660.3	2.4	3.31	0.6	1.82	-1.6	1.53	-1.4	3.37
Other, non-Hispanic	128.0	-0.7	1.67	-4.1*	1.40	4.0	2.96	0.8	2.88

* Indicates a proportion that differs between the NHES and ACS with $p < .05$ (Student's t test).

Note: s.e. is standard error. Because of rounding, percentages may not add to 100. NHES and ACS estimates include homeschoolers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2015.

Table C-8. Percentage of students in kindergarten through grade 12, by parents' highest level of education and race/ethnicity: PFI-NHES:2016, PFI-NHES:2012

Race/ethnicity	Number of children (thousands)	Parents' highest level of education									
		Less than high school		High school		Some college		College graduate		Graduate school	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
PFI-NHES:2016											
White, non-Hispanic	26,792.0	3.1	0.38	17.5	0.65	26.4	0.70	32.4	0.74	20.6	0.34
Black, non-Hispanic	7,300.6	12.9	1.51	21.8	1.87	32.4	1.49	21.1	1.53	11.9	0.77
Hispanic	12,943.8	28.0	0.98	24.4	1.15	22.5	0.85	17.1	0.81	8.0	0.45
Asian/Pacific Islander, non-Hispanic	3,267.5	12.8	3.43	9.7	1.25	13.0	1.94	34.4	2.53	30.1	2.23
Other, non-Hispanic	2,920.8	4.4	1.13	18.8	3.27	29.7	1.93	27.4	2.50	19.7	1.96
PFI-NHES:2012											
White, non-Hispanic	27,900.1	3.8	0.37	18.2	0.52	30.9	0.56	31.5	0.55	15.5	0.24
Black, non-Hispanic	7,534.0	16.1	1.40	20.5	1.36	37.5	1.47	17.9	1.15	7.9	0.67
Hispanic	12,204.9	28.9	0.93	26.9	1.02	25.5	0.99	13.5	0.68	5.2	0.34
Asian/Pacific Islander, non-Hispanic	2,904.5	13.8	1.73	11.9	1.54	20.1	1.98	33.4	2.02	20.8	1.50
Other, non-Hispanic	2,894.4	5.4	1.22	20.2	2.38	36.9	2.21	24.7	1.88	12.8	1.25
Difference											
White, non-Hispanic	-1,108.1	-0.7	0.53	-0.7	0.83	-4.5*	0.90	0.8	0.92	5.1*	0.42
Black, non-Hispanic	-233.4	-3.2	2.06	1.3	2.32	-5.2*	2.09	3.1	1.91	3.9*	1.02
Hispanic	738.9	-1.0	1.36	-2.5	1.53	-2.9*	1.31	3.6*	1.06	2.8*	0.56
Asian/Pacific Islander, non-Hispanic	363.0	-1.0	3.84	-2.2	1.98	-7.1*	2.78	1.1	3.24	9.3*	2.69
Other, non-Hispanic	26.3	-1.0	1.66	-1.5	4.04	-7.1*	2.94	2.7	3.13	6.9*	2.33

* Indicates a proportion that differs between the PFI-NHES:2016 and PFI-NHES:2012 with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-9. Percentage of children in kindergarten through grade 12 by family structure and parents' highest level of education, and mean number of siblings: PFI-NHES:2016, PFI-NHES:2012

Family and community characteristics	PFI-NHES:2016		PFI-NHES:2012		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Family structure						
Both mother/female guardian and father/male guardian	71.0	0.52	69.2	0.47	1.9*	0.69
Mother/female guardian only	20.3	0.56	21.0	0.43	-0.8	0.70
Father/male guardian only	4.9	0.23	6.0	0.29	-1.1*	0.37
Nonparent guardian(s)	3.8	0.23	3.9	0.21	0.0	0.31
Mean number of siblings	1.5	0.02	1.4	0.01	0.1*	0.02
Parents' highest education						
Less than high school	11.2	0.00	11.9	0.00	-0.8*	0.00
High school graduate	19.4	0.00	20.3	0.00	-0.9*	0.00
Some college	25.6	0.40	30.3	0.31	-4.7*	0.51
College graduate	27.0	0.40	25.2	0.34	1.7*	0.52
Graduate school	16.9	0.00	12.2	0.09	4.6*	0.09

* Indicates a proportion that differs between the PFI-NHES:2016 and PFI-NHES:2012 with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Mother and father refer to birth, adoptive, step, or foster parents. Because of rounding, percentages may not add to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-10. Percentage of students enrolled in kindergarten through grade 12, by selected characteristics: PFI-NHES:2016, PFI-NHES:2012

Selected characteristics	PFI-NHES:2016		PFI-NHES:2012		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
School effort to contact family						
School contacted parents about student's academic performance	51.3	0.62	46.5	0.57	4.8*	0.84
School contacted parents about student's behavior	49.3	0.69	43.7	0.54	5.6*	0.87
Participation in school activities by a parent or guardian						
Attended a general school meeting (open house), back-to-school night, meeting of parent-teacher organization	88.4	0.48	87.4	0.41	1.1	0.64
Went to a regularly scheduled parent-teacher conference with child's teacher	77.6	0.54	75.7	0.42	1.9*	0.68
Attended a school or class event (e.g., play, sports event, science fair) because of child	79.2	0.55	74.3	0.46	4.9*	0.72
Acted as a volunteer at the school or served on a committee	43.4	0.67	41.7	0.49	1.7*	0.84
Participated in fundraising for the school	59.3	0.63	58.5	0.48	0.8	0.79
Child has a disability						
Any disability	23.3	0.62	22.5	0.52	0.8	0.81
Learning disability	6.6	0.31	8.6	0.34	-2.0*	0.47
Speech impairment	7.0	0.37	6.2	0.31	0.8	0.49
Serious emotional disturbance	3.2	0.24	2.5	0.17	0.6*	0.29
Deafness or another hearing impairment	1.2	0.15	1.3	0.12	-0.1	0.20
Blindness or another visual impairment	1.3	0.12	1.3	0.14	0.0	0.18
An orthopedic impairment	1.7	0.10	1.8	0.13	-0.1	0.16
School type						
Public, assigned	73.5	0.55	79.4	0.46	-5.9*	0.72
Public, chosen	13.8	0.46	9.8	0.36	3.9*	0.58
Private, religious	6.7	0.27	6.6	0.24	0.1	0.36
Private, not religious	2.4	0.19	1.9	0.12	0.5*	0.22
Homeschooled ¹	3.6	0.30	2.3	0.17	1.3*	0.34

* Indicates a proportion that differs between the PFI-NHES:2016 and PFI-NHES:2012 with $p < .05$ (Student's t test).

¹For NHES:2016, this category includes all PFI-Homeschooled respondents (for which the school type question was not asked), as well as all PFI-Enrolled respondents reported as being homeschooled full-time. For NHES:2012, this category includes only PFI-Homeschooled respondents, because full-time homeschoolers could not be distinguished from part-time homeschoolers on the 2012 PFI-Enrolled questionnaire. Thus, the reported percentages differ from the official homeschooling rates reported in table C-11.

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-11. Homeschooling rate among students ages 5-17: PFI-NHES:2016, PFI-NHES:2012

Survey	Homeschooling rate	
	Percent	s.e.
PFI-NHES:2016	3.3	0.23
PFI-NHES:2012 (adjusted) ¹	3.4	0.23
Difference from adjusted 2012 estimate	-0.2	0.32
PFI-NHES:2012 (unadjusted) ¹	2.1	0.17
Difference from unadjusted 2012 estimate	1.2*	0.28

* Indicates a proportion that differs between the PFI-NHES:2016 and PFI-NHES:2012 with $p < .05$ (Student's t test).

¹In the PFI-NHES:2012, respondents to the PFI-Enrolled who stated that their child was homeschooled were not asked the items necessary to allow the identification of children who do not meet the official NCES definition of homeschoolers. The adjusted 2012 estimate includes PFI-Enrolled respondents who stated that their child was homeschooled, with weights adjusted downward to account for the expected proportion of such children who do not meet the official NCES definition of homeschoolers. The unadjusted 2012 estimate includes only PFI-Homeschooled respondents, which renders the adjustment unnecessary. In the PFI-NHES:2016, the PFI-Enrolled questionnaire was adjusted to allow the identification of children who do not meet the official NCES definition of homeschoolers, and therefore no statistical adjustment was required.

NOTE: s.e. is standard error. The homeschooling rate is the number of homeschooled students ages 5 through 17 divided by the number of enrolled and homeschooled students ages 5 through 17. The definition of homeschoolers excludes students who are homeschooled only due to a temporary illness and students who are in public or private school for more than 25 hours per week.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-12. Percentage of children from birth through age 6 and not enrolled in school, by household income: ECPP-NHES:2016 and ACS: 2015

Household income	ECPP-NHES:2016		ACS:2015		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
\$10,000 or less	6.5	0.00	6.5	0.11	0.0	0.11
\$10,001 to \$20,000	7.8	0.00	7.8	0.10	0.0	0.10
\$20,001 to \$30,000	9.5	0.00	9.5	0.10	0.0	0.10
\$30,001 to \$40,000	9.0	0.00	9.0	0.09	0.0	0.09
\$40,001 to \$50,000	8.4	0.00	8.4	0.10	0.0	0.10
\$50,001 to \$60,000	7.6	0.00	7.6	0.11	0.0	0.11
\$60,001 to \$75,000	10.2	0.00	10.2	0.10	0.0	0.10
\$75,001 to \$100,000	13.4	0.00	13.4	0.12	0.0	0.12
\$100,001 to \$150,000	15.2	0.00	15.2	0.13	0.0	0.13
Over \$150,000	12.4	0.00	12.4	0.12	0.0	0.12

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2015.

Table C-13. Percentage of children ages 0 through 6 and not enrolled in school, by household income and race/ethnicity: ECPP-NHES:2016 and ACS:2015

Race/ethnicity	Number of children (thousands)	Household income							
		Less than \$20,000		\$20,001-\$40,000		\$40,001-\$60,000		More than \$60,000	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
ECPP-NHES:2016									
White, non-Hispanic	10,803.7	8.2	0.44	12.2	0.50	15.5	0.37	64.1	0.57
Black, non-Hispanic	2,836.6	31.5	0.00	24.2	0.00	15.5	0.00	28.8	0.00
Hispanic	5,419.8	17.9	0.00	26.9	0.00	18.5	0.00	36.7	0.00
Asian/Pacific Islander, non-Hispanic	1,011.0	7.7	2.21	14.2	3.36	12.4	3.14	65.7	3.91
Other, non-Hispanic	1,366.9	17.6	2.86	26.2	2.82	13.6	1.88	42.6	2.75
ACS:2015									
White, non-Hispanic	10,820.6	8.5	0.16	13.6	0.15	15.5	0.15	62.4	0.25
Black, non-Hispanic	2,836.6	31.5	0.43	24.2	0.45	15.5	0.39	28.8	0.41
Hispanic	5,419.8	17.9	0.30	26.9	0.33	18.5	0.28	36.7	0.36
Asian/Pacific Islander, non-Hispanic	1,022.8	7.1	0.43	12.0	0.44	11.3	0.51	69.6	0.70
Other, non-Hispanic	1,338.1	15.8	0.48	16.9	0.43	14.4	0.45	52.8	0.61
Difference									
White, non-Hispanic	-16.9	-0.3	0.47	-1.4*	0.52	0.0	0.40	1.7*	0.62
Black, non-Hispanic	0.0	0.0	0.43	0.0	0.45	0.0	0.39	0.0	0.41
Hispanic	0.0	0.0	0.30	0.0	0.33	0.0	0.28	0.0	0.36
Asian/Pacific Islander, non-Hispanic	-11.8	0.5	2.25	2.2	3.39	1.2	3.18	-3.9	3.98
Other, non-Hispanic	28.7	1.8	2.90	9.3*	2.85	-0.9	1.94	-10.2*	2.82

* Indicates a proportion that differs between the NHES and ACS with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2015.

Table C-14. Percentage of children ages 0 through 6 not yet in kindergarten, by parents' highest level of education and race/ethnicity: ECPP-NHES:2016, ECPP-NHES:2012

Race/ethnicity	Number of children (thousands)	Parents' highest level of education									
		Less than high school		High school		Some college		College graduate		Graduate school	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
ECPP-NHES:2016											
White, non-Hispanic	10,803.7	5.2	0.80	15.6	0.64	23.4	0.82	32.7	0.91	23.1	0.48
Black, non-Hispanic	2,836.6	14.2	2.20	21.3	2.07	28.1	2.34	24.9	2.32	11.5	1.41
Hispanic	5,419.8	21.5	1.57	26.1	1.73	24.7	1.36	19.1	1.25	8.6	0.61
Asian/Pacific Islander, non-Hispanic	1,011.0	11.2	4.29	9.4	3.27	10.8	2.15	32.2	2.78	36.4	3.08
Other, non-Hispanic	1,366.9	3.9	2.01	21.8	3.01	29.0	2.69	29.3	2.83	16.0	1.60
ECPP-NHES:2012											
White, non-Hispanic	10,892.6	5.5	0.48	16.8	0.65	26.7	0.64	33.3	0.80	17.7	0.44
Black, non-Hispanic	2,889.5	15.6	1.88	24.7	2.17	36.7	2.32	16.9	1.68	6.2	0.72
Hispanic	5,469.5	26.3	1.10	26.6	1.33	26.2	1.20	15.5	0.97	5.4	0.47
Asian/Pacific Islander, non-Hispanic	1,108.6	6.7	2.30	8.4	1.68	15.4	2.34	41.0	3.32	28.6	2.00
Other, non-Hispanic	1,314.5	13.2	3.20	18.0	2.56	30.5	2.61	22.9	2.43	15.4	1.32
Difference											
White, non-Hispanic	-88.9	-0.3	0.94	-1.2	0.92	-3.3*	1.04	-0.6	1.21	5.4*	0.65
Black, non-Hispanic	-52.9	-1.3	2.90	-3.4	3.00	-8.6*	3.29	8.0*	2.86	5.3*	1.58
Hispanic	-49.7	-4.8*	1.92	-0.5	2.18	-1.5	1.81	3.6*	1.58	3.2*	0.77
Asian/Pacific Islander, non-Hispanic	-97.6	4.5	4.87	1.0	3.68	-4.5	3.18	-8.8*	4.33	7.8*	3.67
Other, non-Hispanic	52.4	-9.3*	3.78	3.8	3.95	-1.4	3.75	6.4	3.73	0.6	2.08

* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2012 with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-15. Percentage of children ages 0 through 6 not yet in kindergarten by family characteristics, and mean number of siblings: ECPP-NHES:2016, ECPP-NHES:2012

Family characteristics	ECPP-NHES:2016		ECPP-NHES:2012		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Family structure						
Both mother/female guardian and father/male guardian	77.0	0.69	74.3	0.58	2.7*	0.90
Mother/female guardian only	18.1	0.74	19.5	0.45	-1.4	0.87
Father/male guardian only	2.7	0.27	3.4	0.30	-0.7	0.41
Nonparent guardian(s)	2.3	0.28	2.8	0.27	-0.6	0.39
Mean number of siblings	1.2	0.03	1.1	0.02	0.1*	0.03
Parents' highest education						
Less than high school	10.7	0.00	12.6	0.00	-1.9*	0.00
High school graduate	19.1	0.00	19.9	0.00	-0.8*	0.00
Some college	24.1	0.58	27.6	0.50	-3.4*	0.77
College graduate	28.0	0.58	26.4	0.52	1.6*	0.78
Graduate school	18.1	0.00	13.5	0.15	4.6*	0.15

* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2012 with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Mother and father refer to birth, adoptive, step, or foster parents. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-16. Percentage of children ages 0 through 6 not yet in kindergarten participating in different care arrangements, by race/ethnicity: ECPP-NHES:2016, ECPP-NHES:2012

Child's race/ethnicity	Number of children (thousands)	Type of arrangement					
		Relative care		Nonrelative care		Center- or school-based program	
		Percent	s.e.	Percent	s.e.	Percent	s.e.
ECPP-NHES:2016							
White, non-Hispanic	10,803.7	25.6	1.04	16.3	0.73	38.3	0.89
Black, non-Hispanic	2,836.6	33.8	2.73	14.6	2.08	40.3	3.37
Hispanic	5,419.8	26.3	1.67	10.0	1.04	28.3	1.60
Asian/Pacific Islander, non-Hispanic	1,011.0	25.1	3.46	9.2	1.69	36.0	2.76
Other, non-Hispanic	1,366.9	25.7	2.71	13.8	2.58	36.2	3.39
ECPP-NHES:2012							
White, non-Hispanic	10,892.6	26.0	0.78	17.7	0.83	35.5	0.90
Black, non-Hispanic	2,889.5	34.4	2.30	12.5	1.70	42.1	2.28
Hispanic	5,469.5	31.4	1.74	12.5	1.17	27.7	1.15
Asian/Pacific Islander, non-Hispanic	1,108.6	25.2	2.32	9.4	1.31	36.4	2.74
Other, non-Hispanic	1,314.5	26.3	2.18	16.3	1.77	31.9	2.46
Difference							
White, non-Hispanic	-88.9	-0.3	1.30	-1.3	1.11	2.7*	1.27
Black, non-Hispanic	-52.9	-0.6	3.57	2.1	2.69	-1.9	4.07
Hispanic	-49.7	-5.2*	2.41	-2.4	1.57	0.6	1.98
Asian/Pacific Islander, non-Hispanic	-97.6	-0.1	4.16	-0.2	2.13	-0.4	3.89
Other, non-Hispanic	52.4	-0.5	3.48	-2.5	3.13	4.3	4.19

* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2012 with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Center-based programs include nursery schools, preschools, center-based Head Start programs, and prekindergarten.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-17. Percentage of children (ages 0 through 6 not yet in kindergarten) participating in relative, nonrelative, or center- or school-based care who participate in the care arrangement at least once each week, by race/ethnicity: ECPP-NHES:2016, ECPP-NHES:2012

Child's race/ethnicity	Number of children (thousands)	Type of arrangement							
		Relative care	Percent	s.e.	Nonrelative care	Percent	s.e.	Center- or school-based program	Percent
ECPP-NHES:2016									
White, non-Hispanic	10,803.7	88.5	1.24		95.4	1.29		99.0	0.39
Black, non-Hispanic	2,836.6	91.1	3.32		87.4	5.41		96.2	1.70
Hispanic	5,419.8	93.1	1.39		89.5	4.50		97.4	1.44
Asian/Pacific Islander, non-Hispanic	1,011.0	93.2	2.71		93.3	3.37		99.1	0.76
Other, non-Hispanic	1,366.9	87.1	4.92		92.8	5.30		100.0	0.00
ECPP-NHES:2012									
White, non-Hispanic	10,892.6	88.6	1.31		96.1	0.96		99.0	0.33
Black, non-Hispanic	2,889.5	93.7	1.62		90.9	3.85		99.4	0.35
Hispanic	5,469.5	91.0	1.76		92.8	1.89		97.2	1.28
Asian/Pacific Islander, non-Hispanic	1,108.6	78.5	5.52		86.4	4.99		98.0	1.28
Other, non-Hispanic	1,314.5	90.8	2.90		92.7	3.67		99.5	0.50
Difference									
White, non-Hispanic	-88.9	-0.1	1.80		-0.7	1.61		0.0	0.51
Black, non-Hispanic	-52.9	-2.6	3.69		-3.5	6.64		-3.2	1.73
Hispanic	-49.7	2.1	2.24		-3.3	4.88		0.2	1.93
Asian/Pacific Islander, non-Hispanic	-97.6	14.8*	6.15		6.9	6.02		1.1	1.49
Other, non-Hispanic	52.4	-3.6	5.71		0.1	6.45		0.5	0.50

* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2012 with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Center-based programs include nursery schools, preschools, center-based Head Start programs, and prekindergarten.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-18. Percentage of children ages 0 through 6 not yet in kindergarten participating in center-based programs, by high and low income: ECPP-NHES:2016, ECPP-NHES:2012

Income level	ECPP-NHES:2016		ECPP-NHES:2012		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
High income	36.7	0.93	36.4	0.73	0.3	1.18
Low income	30.4	2.28	24.6	1.40	5.8*	2.67

* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2012 with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Center-based programs include nursery schools, preschools, center-based Head Start programs, and prekindergarten. High income was defined as household income of over \$20,000. Low income was defined as household income of \$20,000 or less.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-19. Percentage of children ages 0 through 6 not yet in kindergarten, by frequency read to per week, disability status, and pretending to read: ECPP-NHES:2016 and ECPP-NHES:2012

Characteristic	ECPP-NHES:2016		ECPP-NHES:2012		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Frequency read to per week						
Not at all	10.4	0.67	10.9	0.48	-0.5	0.82
Once or twice	10.7	0.63	11.6	0.56	-0.9	0.84
Three or more times	78.9	0.76	77.5	0.71	1.4	1.04
Child pretends to read (ages 2 through 6)						
Yes	88.5	1.04	89.4	0.55	-0.9	1.18
No	11.5	1.04	10.6	0.55	0.9	1.18
Child has a disability						
Any disability	9.9	0.56	9.5	0.50	0.4	0.76
Learning disability	0.7	0.10	1.9	0.22	-1.3*	0.24
Speech impairment	6.3	0.44	5.7	0.37	0.7	0.58
Serious emotional disturbance	0.4	0.14	0.5	0.11	-0.1	0.18
Deafness or another hearing impairment	0.8	0.16	1.1	0.18	-0.3	0.24
Blindness or another visual impairment	0.6	0.16	0.8	0.16	-0.3	0.22
An orthopedic impairment	0.9	0.13	1.2	0.17	-0.3	0.21

* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2012 with $p < .05$ (Student's t test).

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100. Pretends to read includes cases where the respondent said the child both pretends to read and reads actual words.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2012 and 2016.

Table C-20. Percentage distribution of adults age 16 through 65, by age, race/ethnicity, and educational attainment: ATES-NHES:2016 and CPS:2015

Characteristic	ATES-NHES:2016		CPS:2015		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Age						
16-24	13.9	0.08	14.5	0.05	-0.6*	0.10
25-34	21.2	0.15	21.6	0.03	-0.4*	0.15
35-44	20.4	0.15	20.0	0.03	0.4*	0.15
45-54	21.3	0.14	21.5	0.03	-0.2	0.14
55-65	23.2	0.09	22.3	0.04	0.9*	0.10
Race/ethnicity						
White, non-Hispanic	61.5	0.18	61.8	0.05	-0.3	0.19
Black, non-Hispanic	12.2	0.00	12.5	0.05	-0.3*	0.05
Hispanic	17.1	0.00	17.3	0.03	-0.2*	0.03
Asian/Pacific Islander, non-Hispanic	6.2	0.15	6.3	0.06	-0.2	0.16
Other, non-Hispanic	3.0	0.12	2.1	0.04	1.0*	0.12
Educational attainment						
Less than high school diploma	10.8	0.00	9.6	0.14	1.3*	0.14
High school diploma or GED	26.8	0.00	28.9	0.26	-2.1*	0.26
Some college or Associate's degree	30.6	0.22	29.9	0.24	0.8*	0.33
Bachelor's degree	21.3	0.22	20.9	0.19	0.4	0.29
Graduate or professional degree	10.4	0.00	10.8	0.16	-0.3*	0.16

* Indicates a proportion that differs between the NHES and CPS with $p < .05$ (Student's t test).

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-21. Percentage distribution of adults age 16 through 65, by educational attainment and race/ethnicity: ATES-NHES:2016 and CPS:2015

Race/ethnicity	Educational attainment									
	Less than high school		High school		Some college/ Associate's		Bachelor's degree		Graduate/ professional degree	
	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
ATES- NHES:2016										
White, non-Hispanic	6.1	0.10	26.2	0.14	31.4	0.30	24.2	0.29	12.1	0.11
Black, non-Hispanic	11.0	0.00	31.9	0.00	35.8	0.64	14.6	0.64	6.7	0.00
Hispanic	28.5	0.00	29.2	0.00	26.0	0.53	12.2	0.53	4.0	0.00
Asian/Pacific Islander, non-Hispanic	9.9	0.95	15.5	0.96	20.8	1.18	33.5	1.21	20.2	1.04
Other, non-Hispanic	8.7	1.05	27.3	2.13	39.8	1.95	16.4	1.30	7.9	0.98
CPS:2015										
White, non-Hispanic	5.3	0.14	27.9	0.28	30.7	0.26	23.8	0.21	12.3	0.20
Black, non-Hispanic	9.4	0.35	34.7	0.68	33.6	0.59	15.1	0.44	7.2	0.34
Hispanic	26.1	0.60	32.1	0.58	26.5	0.58	10.8	0.39	4.4	0.23
Asian/Pacific Islander, non-Hispanic	6.9	0.51	18.2	0.80	21.2	0.72	32.5	0.94	21.2	0.86
Other, non-Hispanic	9.8	0.85	29.3	1.34	35.7	1.42	17.8	1.16	7.3	0.87
Difference										
White, non-Hispanic	0.8*	0.17	-1.7*	0.31	0.7	0.40	0.4	0.36	-0.2	0.23
Black, non-Hispanic	1.6*	0.35	-2.8*	0.68	2.2*	0.87	-0.5	0.78	-0.5	0.34
Hispanic	2.4*	0.60	-2.9*	0.58	-0.5	0.78	1.4*	0.66	-0.4	0.23
Asian/Pacific Islander, non-Hispanic	3.0*	1.08	-2.7*	1.25	-0.3	1.38	1.0	1.54	-1.0	1.35
Other, non-Hispanic	-1.1	1.35	-2.1	2.52	4.0	2.41	-1.4	1.74	0.6	1.31

* Indicates a proportion that differs between the NHES and CPS with $p < .05$ (Student's t test).

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Table C-22. Percentage of adults ages 16 through 65, by total annual earnings: ATES-NHES:2016 and ACS: 2015

Total annual earnings	ATES-NHES:2016		ACS:2015		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
\$10,000 or less ¹	36.6	0.00	36.6	0.05	0.0	0.05
\$10,001 to \$20,000	10.9	0.00	10.9	0.03	0.0	0.03
\$20,001 to \$30,000	10.9	0.00	10.9	0.03	0.0	0.03
\$30,001 to \$40,000	9.5	0.00	9.5	0.03	0.0	0.03
\$40,001 to \$50,000	7.5	0.00	7.5	0.02	0.0	0.02
\$50,001 to \$60,000	5.8	0.00	5.8	0.02	0.0	0.02
\$60,001 to \$75,000	6.3	0.00	6.3	0.02	0.0	0.02
\$75,000 to \$150,000	9.8	0.00	9.8	0.03	0.0	0.03
Over \$150,000	2.7	0.00	2.7	0.01	0.0	0.01

¹Category includes adults who have not worked in the last 12 months.

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2015.

**Table C-23. Percentage of adults ages 16-65, by total annual earnings and race/ethnicity:
ATES-NHES:2016 and ACS:2015**

Race/ethnicity	Total annual earnings							
	Less than \$20,000 ¹		\$20,001-\$40,000		\$40,001-\$60,000		More than \$60,000	
	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
ATES-NHES:2016								
White, non-Hispanic	43.6	0.31	19.1	0.25	14.9	0.19	22.4	0.19
Black, non-Hispanic	55.7	1.02	21.9	0.93	11.6	0.71	10.9	0.65
Hispanic	54.9	1.05	24.9	0.89	10.4	0.51	9.8	0.48
Asian/Pacific Islander, non-Hispanic	46.6	1.49	17.9	1.20	10.0	0.83	25.4	1.25
Other, non-Hispanic	56.0	2.26	21.3	1.66	10.8	1.25	11.9	1.11
ACS:2015								
White, non-Hispanic	44.0	0.07	19.0	0.05	14.6	0.04	22.3	0.04
Black, non-Hispanic	54.2	0.15	22.7	0.12	11.9	0.10	11.2	0.10
Hispanic	55.0	0.12	25.1	0.10	10.6	0.07	9.4	0.07
Asian/Pacific Islander, non-Hispanic	46.5	0.19	16.8	0.15	11.0	0.11	25.8	0.18
Other, non-Hispanic	54.7	0.30	19.6	0.21	11.3	0.19	14.4	0.20
Difference								
White, non-Hispanic	-0.4	0.32	0.0	0.25	0.3	0.20	0.1	0.20
Black, non-Hispanic	1.4	1.04	-0.8	0.94	-0.3	0.72	-0.3	0.66
Hispanic	-0.1	1.06	-0.2	0.89	-0.2	0.51	0.5	0.48
Asian/Pacific Islander, non-Hispanic	0.1	1.50	1.1	1.21	-0.9	0.83	-0.3	1.26
Other, non-Hispanic	1.4	2.28	1.6	1.67	-0.5	1.27	-2.5*	1.12

* Indicates a proportion that differs between the NHES and ACS with $p < .05$ (Student's t test).

¹Category includes adults who have not worked in the last 12 months.

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2015.

Table C-24. Percentage of adults ages 16-65 reporting a certification or license, by race/ethnicity: ATES-NHES:2016 and CPS:2015

Race/ethnicity	Reported certification or license	
	Percent	s.e.
ATES-NHES:2016		
White, non-Hispanic	24.0	0.34
Black, non-Hispanic	20.3	0.92
Hispanic	14.7	0.64
Asian/Pacific Islander, non-Hispanic	17.5	1.05
Other, non-Hispanic	17.8	1.59
CPS:2015		
White, non-Hispanic	24.0	0.25
Black, non-Hispanic	17.3	0.47
Hispanic	12.4	0.38
Asian/Pacific Islander, non-Hispanic	18.0	0.73
Other, non-Hispanic	21.3	1.16
Difference		
White, non-Hispanic	-0.1	0.42
Black, non-Hispanic	3.0*	1.04
Hispanic	2.3*	0.74
Asian/Pacific Islander, non-Hispanic	-0.5	1.28
Other, non-Hispanic	-3.6	1.97

* Indicates a proportion that differs between the NHES and CPS with $p < .05$ (Student's t test).

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2015.

Appendix D. Screener Nonresponse Interview Adjustment Cells

Exhibit D-1. Definitions of column headings for Screener interview adjustment cells table

Column heading	Definition	Response categories
Home tenure	Whether the address was owned or rented by the household	1=tenure missing on sampling frame; 2=owned; 3=rented
Low Response Score	Census Low Response Score (LRS)	0=LRS missing for block group; 1=1 st quartile; 2=2 nd quartile; 3=3 rd quartile; 4=4 th quartile
Age	Age of the head of household	0=age information missing on sampling frame; 1=0-17 years; 2=18-24 years; 3=25-34 years; 4=35-44 years; 5=45-54 years; 6=55-64 years; 6=65+ years
Marital status	Marital status of the head of household	1=marital status information missing on sampling frame; 2=married; 3=single
Web treatment flag	Assignment to standard screener mailing or the web screener protocol	0=standard mailing protocol; 1=web protocol
Incentive treatment flag	Assigned incentive protocol	0=\$5-only protocol; 1=\$2-only protocol; 2=modeled \$0; 3=modeled \$2; 4=modeled \$5; 5=modeled \$10
Number of adults	Number of adults in the household	0=information missing on sampling frame; 1=1 adult in the household; 2=2 adults in the household; ...
Educational attainment	Highest educational attainment of head of household	0=educational information missing on sampling frame; 1=High school credential; 2=Some college; 3=Bachelor degree; 4=Graduate degree; 5= Less than high school credential
Percent without high school diploma	ACS 2010-2014 percent of persons in block group without a high school diploma	0=missing for block group; 1=1 st quartile; 2=2 nd quartile; 3=3 rd quartile; 4=4 th quartile
Phone number	Existence of a telephone number on the sampling frame for the household	1=phone number exists; 2=no phone number exists on sampling frame
Income	Household income	1=income information missing from sampling frame; 2 = Under \$15,000; 3 = \$15,000-\$24,999; 4 = \$25,000-\$34,999; 5 = \$35,000-\$49,999; 6 = \$50,000-\$74,999; 7 = \$75,000-\$99,999; 8 = \$100,000-\$124,999; 9 = \$125,000-\$149,999; 10 = \$150,000-\$174,999; 11 = \$175,000-\$199,999; 12 = \$200,000-\$249,999; 13 = \$250,000 or higher
Gender	Gender of the head of household	1=gender information missing on sampling frame; 2=female; 3=male
Ethnicity	Race or ethnicity of the head of household	0=race information missing on sampling frame; 1=White; 2=Black; 3=Hispanic; 4=Asian or Pacific Islander; 5=Other
Percent speaking a non-English language	ACS 2010-2014 percent of persons in block group who speak a non-English language	0=missing for block group; 1=1 st quartile; 2=2 nd quartile; 3=3 rd quartile; 4=4 th quartile
Dwelling type	Whether the address is a single-family or multi-unit structure	1=dwelling type missing on sampling frame; 2=multi-unit; 3=single-family
Mailing address type	Whether the address is a street address, PO box address, high-rise building address, or rural-route address	1=high rise; 2 = PO box; 3=rural-route; 4=street

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2016.

Table D-1. Screener nonresponse adjustment cells, NHES:2016

CHAID cell ¹	Home tenure	Low Response Score	Age	Marital status	Web treatment flag	Incentive treatment flag	Number of adults	Educational attainment	Percent without high school diploma	Phone number	Percent speaking a non-English language			Dwelling type	Mailing address type	Estimated response rate ²	
											Income	Gender	Ethnicity				
1	1,3	1	0,3,4,5,6,7	1	†	0,1,2,3,4	0,1,2,3,4,5	†	1,2,3,4	1	1,2,3,4,5,6,7,8,9,11,12,13	†	0,1,2,3	1,2,3,4	†	†	73.3
2	1,3	1	†	2,3	†	0,1,2,3,4	1,2,3,4,5,6,7,8	†	1,2,3,4	1	2,3,4,5,6,7,8,9,10,11,12,13	†	†	1,2,3,4	†	1,2,4	66.8
3	1,3	1	†	†	†	0,1,3,4,5	0,1,2,3,4,5,6	†	1,2,3,4	2	†	†	†	1,2,3,4	3	3,4	65.7
4	1,3	1	†	†	†	0,1,3,4,5	0,1,2,3,4,5,6	†	†	2	†	†	0,1,2,3,4	†	1,2	1,2,4	70.3
5	1,3	2	0,2,3,4,5	†	†	0,1,3,4,5	0,2,3,4,5,7	†	1,2,3,4	1	†	†	†	1,2,3,4	†	†	64.4
6	1,3	2	0,2,3,4,5	†	†	0,1,4,5	0,2,3,4,5	†	†	2	†	†	0,1,2,3,4	†	1,2	1,2,4	65
7	1,3	2	0,2,3,4,5	†	†	0,1,4,5	0,2,3,4,5,7	†	1,2,3,4	2	†	†	0,1,2,3,4	1,2,3,4	3	3,4	64.1
8	1,3	2	0,2,3,4,5	†	†	0,1,4,5	1,6,8	†	0,3,4	†	†	†	†	†	†	1,2,4	53.2
9	1,3	2	0,2,3,4,5	†	†	0,1,4,5	1,6,8	†	1,2	†	†	†	†	1,2,3,4	†	1,2,4	57.5
10	1,3	2	6,7	†	†	0,1,2,3,4	1,2,3,4,5,6,7,8	†	1,2,3,4	†	†	†	†	1,2,3,4	†	1,2,4	71.2
11	1,3	3	0,2	†	†	0,1,4,5	0,1,2,3,4,5	†	2	†	†	†	†	1,2,3,4	†	†	57.8
12	1,3	3	0,2	†	†	0,1,4,5	0,1,2,3,4,5,6,7	†	1	†	†	†	0,1,2,3,4	1,2,3,4	†	†	59.1
13	1,3	3	0,2	†	†	0,1,4,5	0,2,3,4,6	†	3,4	†	1,2,3,4,5,6,7,8,9,10,13	†	0,1,2,3,4	1,2,3,4	1,2	1,2,4	58.4
14	1,3	3	0,2	†	†	0,1,4,5	0,2,3,4,6	†	3,4	†	1,2,3,4,5,6,7,8,9,10,12	†	0,1,2,3,4	1,2,3,4	3	3,4	62.8
15	1,3	3	0,2	†	†	0,1,4,5	1,5,8	†	3,4	†	†	†	†	1,2,3,4	†	1,2,4	50
16	1,3	3	3,4,5	†	†	0,1,4,5	1,2,3,4,5,6,7	1,2,3,4,5	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	2,3,5	1,2,3,4	†	1,2,4	51.1
17	1,3	3	3,4,5	†	†	0,1,4,5	1,2,3,4,5,6,7	†	1,2,3,4	†	2,3,8,10,13	†	0,1,4	1,2,3,4	†	1,2,4	54.4
18	1,3	3	3,4,5	†	†	0,1,4,5	1,2,3,4,5,6,7,8	†	1,2,3,4	†	4,5,6,7,9,11,12	†	0,1,4	1,2,3,4	†	1,2,4	60.3
19	1,3	3	6	†	†	0,1,3,4,5	1,2,3,4,5,6,7,8	†	1,2,3,4	†	†	†	†	1,2,3,4	†	1,2,4	62.8
20	1,3	3	7	†	†	0,1,2,3,4	1,2,3,4,5,6,7	†	†	†	†	†	†	1,2,3,4	†	1,2,4	70.7
21	1,3	4	3,4,5	†	†	0,1,4,5	1,2,3,4,5,6,7,8	†	†	†	2,3,4,5,6,7,8,9,10,11,12,13	†	0,2,3,5	†	2	1	51
22	1,3	0,4	0,2	†	†	0,1,4,5	0,1,2,3,4,5,6	†	1,2	†	†	†	†	1,2,3,4	†	1,2,4	53.7
23	1,3	0,4	0,2	†	†	0,1,4,5	0,1,2,3,4,5,7	†	0,3	†	†	†	†	†	†	†	53
24	1,3	0,4	0,2	†	†	0,1,4,5	†	†	4	†	†	†	†	1,2,3,4	†	†	49
25	1,3	0,4	3,4,5	†	†	0,1,4,5	1,2,3,4,5,6,7,8	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	0,2,3,5	1,2,3,4	†	2,4	46.8
26	1,3	0,4	3,4,5	†	†	0,1,4,5	1,2,3,4,5,6,7,8	1,2,3,4,5	†	†	2,3,4,5,6,7,8,9,10,11,12,13	†	1,4	†	†	1,2,4	54.9
27	1,3	0,4	6	†	†	0,1,3,4,5	1,2,3,4,5,6,7,8	†	1,2,3,4	†	†	†	†	1,2,3,4	†	1,2,4	57.7

See notes at end of table.

Table D-1. Screener nonresponse adjustment cells, NHES:2016—Continued

CHAID cell ¹	Low			Web				Incentive		Percent without high				Percent speaking a non-English language			Mailing Dwelling address type		Estimated response rate ²
	Home tenure	Response Score	Age	Marital status	treatment flag	treatment flag	Number of adults	Educational attainment	school diploma	Phone number	Income	Gender	Ethnicity	language	type	type			
28	1,3	0,4	7	†	†	0,1,3,4,5	1,2,3,4,5,6,7		†	†	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	†	†	1,2,4 62.2	
29	2	1	0	†	†	0,1,3,4	1,2,3,4,5,6,7		†	†	†		†	†	†	†	†	†	1,2,4 68.1
30	2	1	2,3,4	†	0	0,1,3,4	2,3,6,8		†	2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 70.3
31	2	1	2,3,4,5	2,3	0	0,1,3,4	2,3,6,8	3,4	1	†	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 78.4
32	2	1	2,3,4,5	†	0	0,1,3,4	2,3,6,8	0,1,2,5	1	†	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 74.7
33	2	1	2,3,4,5	†	1	0	2,3,6,8		†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 68.6
34	2	1	2,3,4,5	†	†	0,1,3,4		1	†	1,2,3,4	1	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 67.9
35	2	1	2,3,4,5	†	†	0,1,3,4	4,5,7	1,2	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	2,3	†	†	1,2,3,4	†	†	1,2,4 73.9	
36	2	1	2,3,4,5	†	†	0,1,3,4	4,5,7	0,3,4,5	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 80.6	
37	2	1	2,3,4,5	†	†	0,1,3,4,5		1	†	1,2,3,4	2	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 63.5
38	2	1	5	†	0	0,1,3,4	2,3,6,8		†	2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 73.9
39	2	1	6	†	†	0,1,2,3,4		1	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 74.7
40	2	1	6	†	†	0,1,2,3,4		2	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 79
41	2	1	6	†	†	0,1,2,3,4	3,4,5,6,7,8	1,2,5	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 78.8	
42	2	1	6	†	†	0,1,2,3,4	3,4,5,6,7,8	0,3,4	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 83.2	
43	2	1	7	1,3	†	0,1,2,3,4	1,2,3,4,5,6	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 79.7	
44	2	1	7	2	0	0	1,2,3,4,5,6,7,8		†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 86.7
45	2	1	7	2	0	1,2,3,4	1,2,3,4,5,6,7,8		†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 82.5
46	2	1	7	2	1	0	1,2,3,4,5,6,7		†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 81.1
47	2	2	0	†	†	0,1,3,4,5	1,2,3,4,5,6,7	0,3,4	†	†	2,3,4,5,6,7,8,9,10,11,12,13	†	0,1,2,3,4	†	†	†	†	1,2,4 65.6	
48	2	2	0	†	†	0,1,4,5	1,2,3,4,5,6	1,2,5	†	†	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	†	†	1,2,4 57.8	
49	2	2	2,3,4	†	†	0,1,3,4	2,3,4,5,6,7	0,1,2,4,5	1,2	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 67.9	
50	2	2	2,3,4	†	†	0,1,3,4	2,3,4,5,6,7	3	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 73	
51	2	2	2,3,4	†	†	0,1,3,4,5	2,3,4,5,6,7	0,1,2,4,5	3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 64	
52	2	2	2,3,4	†	†	0,1,4,5	1,8	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 58.7	
53	2	2	5	†	†	0,1,3,4	1,2,3,4,5,6,7,8	0,1,5	1,2	†	2,3,4,5,6,7,8,9,10,11,12,13	†	0,1,2,3,4	1,2,3,4	†	†	†	1,2,4 66.5	
54	2	2	5	†	†	0,1,3,4	1,2,3,4,5,6,7,8	2	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	1,2,3,4	†	†	1,2,4 68.2	

See notes at end of table.

Table D-1. Screener nonresponse adjustment cells, NHES:2016—Continued

CHAID cell ¹	Low		Web Incentive				Percent without high			Percent speaking a non-English language			Mailing address type	Estimated response rate ²			
	Home tenure	Response Score	Age	Marital status	treatment flag	treatment flag	Number of adults	Educational attainment	Phone diploma	Phone number	Income	Gender	Ethnicity				
55	2	2	5	†	†	0,1,3,4	1,2,3,4,5,6,7,8	3,4	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	1,2,3,4	†	1,2,4	74.4
56	2	2	5	†	†	0,1,3,4,5	1,2,3,4,5,6,7,8	0,1,5	3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	0,1,2,3,4	1,2,3,4	†	1,2,4	62.2
57	2	2	6	†	†	0,1,2,3,4	1,2,3,4,5,6,7,8	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	1,2	†	1,2,3,4	†	1,2,4	72.1
58	2	2	6	†	†	0,1,2,3,4	1,2,3,4,5,6,7,8	3,4	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	3	†	1,2,3,4	†	1,2,4	80.6
59	2	2	6	†	†	0,1,3,4	1,2,3,4,5,6,7,8	0,1,2,5	†	†	†	3	†	†	†	1,2,4	75.2
60	2	2	7	†	0	0,1,2,3,4	1,4	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	1,2,3,4	†	1,2,4	78.5
61	2	2	7	†	0	0,1,2,3,4	2,3,5,6,7,8	†	1,2,3,4	†	2,3,5,8,10,13	†	†	1,2,3,4	†	1,2,4	81.3
62	2	2	7	†	0	0,1,2,3,4	2,3,5,6,7,8	†	1,2,3,4	†	4,6,7,9,11,12	†	†	1,2,3,4	†	1,2,4	86.2
63	2	2	7	†	1	0	1,2,3,4,5,6,7,8	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	1,2,3,4	†	1,2,4	73.7
64	2	3	0	†	†	0,1,3,4,5	1,2,3,4,5,6	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	1,2,3,4	†	1,2,4	57.8
65	2	3	2,3,4,5	2,3	†	0,1,3,4	2,3,4,5,6,7	3,4,5	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	1	1,2,3,4	†	1,2,4	70.6
66	2	3	2,3,4,5	†	†	0,1,3,4	2,3,4,5,6,7	1,2	1,2,3,4	†	†	†	1	1,2,3,4	†	1,2,4	66.2
67	2	3	2,3,4,5	†	†	0,1,3,4,5	1,2,3,4,5,6,7	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	0,4	1,2,3,4	†	1,2,4	61.1
68	2	3	2,3,4,5	†	†	0,1,3,4,5	1,2,3,4,5,6,7,8	1,2,3,4,5	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	2,3,5	1,2,3,4	†	1,2,4	56.8
69	2	3	2,3,4,5	†	†	0,1,4,5	1,8	1,2,3,4,5	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	1	1,2,3,4	†	1,2,4	60.5
70	2	3	6	†	†	0,1,2,3,4	1,2,3,4,5,6,7,8	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	0,1,5	1,2,3,4	†	1,2,4	73.6
71	2	3	6	†	†	0,1,3,4	1,2,3,4,5,6,7,8	1,2,3,4,5	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	2,3,4	1,2,3,4	†	1,2,4	64
72	2	3	7	†	†	0,1,2,3,4	1,2,3,4,5,6,7	1,2,3,4,5	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	1	1,2,3,4	†	1,2,4	79
73	2	3	7	†	†	0,1,2,3,4	1,2,3,4,5,6,7,8	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	0,2,3,4,5	1,2,3,4	†	1,2,4	73.1
74	2	4	5	†	†	0,1,3,4,5	1,2,3,4,5,6,7,8	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	1,2,3,4	†	1,2,4	59.4
75	2	4	6,7	†	†	0,1,2,3,4	1,2,3,4,5,6,7,8	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	4	†	1,2,4	64.5
76	2	0,4	0,2,3,4	†	†	0,1,4,5	1	†	†	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	†	1,2,4	52.5
77	2	0,4	0,2,3,4	†	†	0,1,4,5	2,3,4,5,6,7,8	†	†	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	†	†	1,2,4	58.7
78	2	0,4	6,7	†	†	0,1,2,3,4	1,2,3,4,5,6,7,8	†	1,2,3,4	†	2,3,4,5,6,7,8,9,10,11,12,13	†	†	1,2,3	†	1,2,4	70.8

†Not applicable; in these cases, the cells included all values of a particular variable.

¹CHAID refers to Chi-Squared Automatic Interaction Detection.

²The estimated response rate is the number of completed interviews over the estimated number of eligible sampled cases, calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 3 and weighted by the inverse probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2016.

Appendix E. ECPP Nonresponse Interview Adjustment Cells

Exhibit E-1. Definitions of column headings for ECPP nonresponse adjustment cells table

Column heading	Definition	Response categories
Topical incentive	Incentive amount at first topical mailing	0 = \$0; 1 = \$5; 2 = \$10; 3 = \$15; 4 = no topical mailings received ¹
ATES adults	Number of ATES-eligible adults in the household	0 = no adults; 1 = 1 adult; ...; 6 = 6 or more adults
PFI children	Number of PFI-eligible children in the household	0 = no children; 1 = 1 child; ...; 6 = 6 or more children
Stratum	Race/ethnicity stratum	1 = Black stratum; 2 = Hispanic stratum; 3 = Other stratum
Grade	Reported grade of sampled person	1 = preschool; 99 = none of these or not reported
Enrollment	Reported enrollment of sampled person	1 = homeschooled; 2 = public/private school or preschool; 4 = not in school; 99 = not reported
ECPP children	Number of ECPP-eligible children in the household	0 = no children; 1 = 1 child; ...; 6 = 6 or more children
Age (ECPP)	Age of sampled child (as of December 31, 2015)	-1 = born in 2016; 0 = 0 years; 1 = 1 year; ...; 5 = 5 or 6 years; 99 = not reported
Topical mode	Mode of initial topical contact	1 = proceeded directly from web screener to web topical; 2 = completed web screener, received web topical mailing; 3 = sampled for web screener, completed paper screener, and received paper topical; 4 = not sampled for web screener

¹ The “No topical mailings received” category consists of 33 households that, due to an operational error, did not receive any topical mailings despite being sampled for a topical survey, and therefore did not receive a topical incentive.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2016.

Table E-1. ECPP nonresponse adjustment cells, NHES:2016

CHAID cell ¹	Topical incentive	ATES adults	PFI children	Stratum	Grade	Enrollment	ECPP children	Age (ECPP)	Topical mode	Estimated response rate ²
1	0	†	0,1,2,3,5	†	†	†	1,2,3,4	†	1	94.0
2	1,2	0,1,5,6	†	†	†	†	1,2,3,6	†	2,3,4	57.8
3	1,2	2	0,1,2	3	1	1,2	2,4	0,1,2,3,4,6	3,4	80.2
4	1,2	2	0,1,2	3	1	4,99	1,2,3	0,1,2,3,4,6	3,4	75.5
5	1,2	2	0,1,2,4	3	99	†	1,2,3,4	-1,4,6,99	3,4	67.1
6	1,2	2	0,1,2,4,6	1,2	†	†	1,2,3	†	2,3,4	72.9
7	1,2	2	0,1,2,4,6	3	1	1,2	1,3	0,1,2,3,4,6,99	2,3,4	86.6
8	1,2	2	0,1,2,4,6	3	99	†	1,2,3,4,6	0,1,2,3	2,3,4	80.7
9	1,2	2	3,5	†	†	†	1,2,3	0,1,2,3,4,6,99	3,4	61.1
10	1,2	3,4	0,1,2,3,4,5	†	1	†	1,2,3	†	2,3,4	74.5
11	1,2	3,4	0,1,2,3,4,5	†	99	†	1,2,3,4	-1,0,1,3	2,3,4	72.6
12	1,2	3,4	†	†	99	†	1,2,3	2,4,6,99	2,3,4	53.4
13	3	1,2,3,4,5,6	0,1,2,3,4	†	†	†	2,4	-1,1,4,6	4	72.6
14	3	†	0,1,2,3,4	†	†	†	†	†	3	66.8
15	3	†	0,1,2,3,4,6	†	†	†	2,4	0,2,3,99	4	59.5
16	3,4	†	†	†	†	†	1,3,5	†	4	55.2

†Not applicable; in these cases, the cells included all values of a particular variable.

¹ CHAID refers to Chi-Squared Automatic Interaction Detection.

² The estimated response rate is the number of completed interviews over the estimated number of eligible sampled cases, calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 1 and weighted by the inverse probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2016.

Appendix F. PFI Nonresponse Interview Adjustment Cells

Exhibit F-1. Definitions of column headings for PFI nonresponse adjustment cells table

Column heading	Definition	Response categories
Topical incentive	Incentive amount at first topical mailing	0 = \$0; 1 = \$5; 2 = \$10; 3 = \$15; 4 = no topical mailings received ¹
Stratum	Race/ethnicity stratum	1 = Black stratum; 2 = Hispanic stratum; 3 = Other stratum
ATES adults	Number of ATES-eligible adults in the household	0 = 0 adults; 1 = 1 adult; ...; 6 = 6 or more adults
Enrollment	Reported enrollment of sampled person	1 = homeschooled; 2 = public/private school or preschool; 99 = not reported
PFI children	Number of PFI-eligible children in the household	1 = 1 child; ...; 6 = 6 or more children
Age (PFI)	Age of sampled child (as of December 31, 2015)	1 = 0-4 years; 2 = 5-6 years; 3 = 7-8 years; 4 = 9-10 years; 5 = 11-12 years; 6 = 13-14 years; 7 = 15-16 years, 8 = 17-18 years; 9 = 19-20 years; 99 = not reported
Grade	Reported grade of sampled person	2 = K; 3 = 1-2; 4 = 3-4; 5 = 5-6; 6 = 7-8; 7 = 9-10; 8 = 11-12; 99 = none of these or not reported

¹The “No topical mailings received” category consists of 33 households that, due to an operational error, did not receive any topical mailings despite being sampled for a topical survey, and therefore did not receive a topical incentive.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2016.

Table F-1. PFI nonresponse adjustment cells, NHES:2016

CHAID cell ¹	Topical incentive	Stratum	ATES adults	Enrollment	PFI children	Age (PFI)	Grade	Estimated response rate ²
1	0	1,2	0,1,2,3,4,5	†	†	2,3,4,5,6,7,8,9,9	2,3,4,5,6,7, 9	91.9
2	0	3	†	†	†	†	†	95.6
3	1	1,2	0,1,6	†	†	†	†	63.1
4	1	1,2	2,3,4,5	†	3,4,5,6	2,3,4,5,6,7,8,9,9	†	66.5
5	1	1,2	2,5	†	1	†	†	73.0
6	1	1,2	2,5	†	2	†	†	78.4
7	1	1,2	3,4	†	1,2	2,3,4,5,6,7,8,9,9	†	67.1
8	1	3	0,1,6	†	1,2,3,4,5	1,3,4,9,99	†	60.7
9	1	3	0,1,6	†	†	2,5,6,7,8	†	73.6
10	1	3	2,3,4,5	2	1,2,3,6	†	†	80.7
11	1	3	2,3,4,5	2	4,5	2,3,4,5,6,7,8	†	75.6
12	1	3	2,3,4,5	1,99	†	†	†	71.7
13	2,3	†	†	2	1,2,3,4,5	1,2,3,4,5,6,7,8,9	2,99	56.0
14	2,3	†	†	2	1,2,3,4,6	2,3,4,5,6,9,99	4	69.9
15	2,3	†	†	2	1,5,6	†	3,5,6,7,8	65.5
16	2,3	†	†	2	2,3,4	†	3,5,6,7,8	59.3
17	2,3,4	†	†	1,99	†	†	†	48.6

†Not applicable; in these cases, the cells included all values of a particular variable.

¹CHAID refers to Chi-Squared Automatic Interaction Detection.

²The estimated response rate is the number of completed interviews over the estimated number of eligible sampled cases, calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 1 and weighted by the inverse probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2016.

Appendix G. ATES Nonresponse Interview Adjustment Cells

Exhibit G-1. Definitions of column headings for ATES nonresponse adjustment cells table

Column heading	Definition	Response categories
Topical incentive	Incentive amount at first topical mailing	0 = \$0; 1 = \$5; 2 = \$10; 3 = \$15; 4 = no topical mailings received ¹
Age (ATES)	Age of sampled adult (as of December 31, 2015)	1 = 16-24 years; 2 = 25-34 years; 3 = 35-44 years; 4 = 45-54 years; 5 = 55-65 years; 99 = not reported
Stratum	Race/ethnicity stratum	1 = Black stratum; 2 = Hispanic stratum; 3 = Other stratum
ATES adults	Number of ATES-eligible adults in the household	1 = 1 adult; ...; 6 = 6 or more adults
Sex	Sex of sampled person	1 = male; 2 = female; 99 = not reported
Grade	Reported grade of sampled person	9 = college; 99 = none of these or not reported

¹The “No topical mailings received” category consists of 33 households that, due to an operational error, did not receive any topical mailings despite being sampled for a topical survey, and therefore did not receive a topical incentive.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2016.

Table G-1. ATES nonresponse adjustment cells, NHES:2016

CHAID cell ¹	Topical incentive	Age (ATES)	Stratum	ATES adults	Sex	Grade	Estimated response rate ²
1	0	1,3,4,99	†	†	†	†	94.4
2	0	2,5	†	†	†	†	97.6
3	1	2	3	†	1,99	99	70.4
4	1	3	1,2	†	†	†	67.9
5	1	3	3	†	2	†	78.4
6	1	3	3	†	1,99	†	73.6
7	1	4	1,2	†	†	†	71.5
8	1	4	3	1	†	†	76.2
9	1	4	3	2	†	†	78.7
10	1	4	3	3,4,5,6	2	†	83.8
11	1	4	3	3,4,5,6	1,99	†	80.3
12	1	5	1,2	†	†	†	75.9
13	1	5	3	1,3,4,6	†	†	80.6
14	1	5	3	2,5	†	†	83.1
15	1	1,2,99	1	†	†	†	61.8
16	1	1,2,99	2	†	†	†	65.6
17	1	1,2,99	3	1,3,4,5,6	2	99	69.6
18	1	1,2,99	3	2	2	99	75.1
19	1	1,2,99	3	†	2	9	76.9
20	1	1,2,99	3	†	1,99	9	71.4
21	1	1,99	3	†	1,99	99	65.4
22	2,3	3	†	†	1	†	53.0
23	2,3	3	†	†	2,99	†	60.0
24	2,3	4	†	†	†	†	60.9
25	2,3	5	†	†	†	†	64.5
26	2,3	1,2,99	3	†	2	†	59.4
27	2,3,4	1,2,99	1,2	†	†	†	48.3
28	2,3,4	1,2,99	3	†	1,99	†	53.9

†Not applicable; in these cases, the cells included all values of a particular variable.

¹CHAID refers to Chi-Squared Automatic Interaction Detection.

²The estimated response rate is the number of completed interviews over the estimated number of eligible sampled cases, calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 1 and weighted by the inverse probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2016.

Appendix H. Summary of Weighting and Sample Variance Estimation Variables

Exhibit H-1. Summary of weighting and sample variance estimation variables: 1991–2016

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors	
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM ¹)			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) ²			
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables		
NHES:1991 <i>Early Childhood Education</i>								
Primary file	EWGT	PERSID	EWREPL1	JK1	WR	VSTRAT PSU	1.2	
Preprimary file	EWGT	PERSID	EWREPL50 EWREPL1	JK1	WR	VSTRAT PSU	1.2	
			EWREPL50					
NHES:1991 <i>Adult Education</i>								
Adult file	AEWT	PERSID	AEREPL1- AEREPL50	JK1	WR	VSTRAT PSU	Nonparticipants	
Course file ³	AEWT	CLASID	AEREPL1- AEREPL50	JK1	WR	VSTRAT PSU	2.0 Black (non- Hispanic) 1.8 Hispanic 1.7 White (non- Hispanic) 1.6 Other races	
NHES:1993 <i>School Readiness</i>	FWGT0	ENUMID	FWGT1 - FWGT60	JK2	WR	STRATUM PSU	1.3	

See notes at end of table.

Exhibit H-1. Summary of weighting and sample variance estimation variables: 1991–2016—Continued

NHES data file	Computing sampling errors						DEFT (Average Root Design Effect) for approximating sampling errors	
	Full sample weight	Replication method (SAS, R, Stata, WesVar, SUDAAN, AM ¹)			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) ²			
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables		
NHES:1993 <i>School Safety & Discipline</i> Parent interviews only	FWGT0	BASMID	FWGT1- FWGT60	JK2	WR	STRATUM PSU	1.4	
Parent & Emancipated Youth (EY) interviews	FWGT0 (for parents) & PFWGT0 (for EY)	BASMID	FWGT1- FWGT60, PFWGT1- PFWGT60	JK2	WR	STRATUM PSU	1.4	
Youth interviews (including Emancipated Youth)	FWGT0	ENUMID	FWGT1- FWGT60	JK2	WR	STRATUM PSU	1.5	
NHES:1995 <i>Early Childhood Program Participation</i>	EWEIGHT	ENUMID	ERPL1 - ERPL50	JK1	WR	STRATUM PSU	1.2	
NHES:1995 <i>Adult Education⁴</i>	AEWEIGHT	BASMID	ARPL1 - ARPL50	JK1	WR	STRATUM PSU	1.3	
NHES:1996 <i>Screener/ Household & Library</i>	FHWT	BASEID	FHWTR1- FHWTR80	JK1	WR	HSTRATUM HPSU	1.1	
NHES:1996 <i>Parent PFI/CI</i>	FPWT	BASMID	FPWTR1- FPWTR80	JK1	WR	PSTRATUM PPSU	1.3	
NHES:1996 Youth CI	FYWT	BASMID	FYWTR1- FYWTR80	JK1	WR	YSTRATUM YPSU	1.4	
NHES:1996 Adult CI	FAWT	BASMID	FAWTR1- FAWTR80	JK1	WR	ASTRATUM APSU	1.2	
NHES:1999 Parent Interview	FPWT	BASMID	FPWT1- FPWT80	JK1	WR	PSTRATUM PPSU	1.3	
NHES:1999 Youth Interview	FYWT	BASMID	FYWT1- FYWT80	JK1	WR	YSTRATUM YPSU	1.3	

See notes at end of table.

Exhibit H-1. Summary of weighting and sample variance estimation variables: 1991–2016—Continued

NHES data file	Computing sampling errors							DEFT (Average Root Design Effect) for approximating sampling errors	
	Full sample weight	Replication method (SAS, R, Stata, WesVar, SUDAAN, AM ¹)			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) ²				
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables			
NHES:1999 Adult Education Interview	FAWT	BASMID	FAWT1- FAWT80	JK1	WR	ASTRATUM APSU	1.3 Full sample 1.4 Participants 1.5 Black, non- Hispanic		
NHES:2001 Early Childhood Program Participation	FEWT	BASMID	FEWT1- FEWT80	JK1	WR	ESTRATUM EPSU	1.2 Full sample 1.3 Black, non- Hispanic		
NHES:2001 Before- and After-School Programs and Activities	FSWT	BASMID	FSWT1- FSWT80	JK1	WR	SSTRATUM SPSU	1.3 Full sample 1.4 Black, non- Hispanic		
NHES:2001 Adult Education	FAWT	BASMID	FAWT1- FAWT80	JK1	WR	ASTRATUM APSU	1.3		
NHES:2003 Parent and Family Involvement in Education	FPWT	BASMID	FPWT1- FPWT80	JK1	WR	PSTRATUM PPSU	1.3 Full sample 1.4 Race/ethnicity subgroups		
NHES:2003 Adult Education for Work- Related Reasons	FAWT	BASMID	FAWT1- FAWT80	JK1	WR	ASTRATUM APSU	1.3 Full sample 1.4 Hispanics 1.4 Work-related adult education participants		
NHES:2005 Early Childhood Program Participation	FEWT	BASMID	FEWT1- FEWT80	JK1	WR	ESTRATUM EPSU	1.4 Full sample 1.3 Preschoolers		
NHES:2005 After-School Programs and Activities	FSWT	BASMID	FSWT1- FSWT80	JK1	WR	SSTRATUM SPSU	1.4 Full sample 1.3 Home schoolers 1.3 White, non- Hispanic 1.5 Black, non- Hispanic		

See notes at end of table.

Exhibit H-1. Summary of weighting and sample variance estimation variables: 1991–2016—Continued

NHES data file	Computing sampling errors						DEFT (Average Root Design Effect) for approximating sampling errors	
	Full sample weight	Replication method (SAS, R, Stata, WesVar, SUDAAN, AM ¹)			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) ²			
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables		
NHES:2005 Adult Education	FAWT	BASMID	FAWT1- FAWT80	JK1	WR	ASTRATUM APSU	1.6 Full sample 1.5 White, non- Hispanic 1.5 Black, non- Hispanic 1.5 Nonparticipants 1.7 Less than high school 1.4 High school diploma/ equiv. 1.4 Bachelors or higher 1.5 Associates degree	
NHES:2007 School Readiness	FSWT	BASMID	FSWT1- FSWT80	JK1	WR	RSTRATUM RPSU	1.4 Full sample 1.5 Preschoolers 1.6 Black, non- Hispanic	
NHES:2007 Parent and Family Involvement in Education	FPWT	BASMID	FPWT1- FPWT80	JK1	WR	PSTRATUM PPSU	1.4 Full sample 1.5 Elementary schoolers 1.5 Middle schoolers 1.5 High schoolers 1.5 Black, non- Hispanic	

See notes at end of table.

Exhibit H-1. Summary of weighting and sample variance estimation variables: 1991–2016—Continued

NHES data file	Computing sampling errors						DEFT (Average Root Design Effect) for approximating sampling errors	
	Full sample weight	Replication method (SAS, R, Stata, WesVar, SUDAAN, AM ¹)			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) ²			
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables		
NHES:2012 Early Childhood Program Participation	FEWT	BASMID	FEWT1- FEWT80	JK1	WR	ESTRATUM EPSU	1.3 Full sample (1.30256) 1.4 White, non- Hispanic (1.43268) 1.4 Black, non- Hispanic (1.43268) 1.4 Hispanic (1.43268) 2.2 All other, multiple races, non-Hispanic (2.16520) 1.5 Infants (1.52149) 1.5. Preschoolers (1.52149)	

See notes at end of table.

Exhibit H-1. Summary of weighting and sample variance estimation variables: 1991–2016—Continued

NHES data file	Computing sampling errors						DEFT (Average Root Design Effect) for approximating sampling errors	
	Full sample weight	Replication method (SAS, R, Stata, WesVar, SUDAAN, AM ¹)			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) ²			
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables		
NHES:2012 Parent and Family Involvement in Education	FPWT	BASMID	FPWT1- FPWT80	JK1	WR	PSTRATUM PPSU	1.5 Full Sample (1.45932) 1.6 White, non- Hispanic (1.59891) 1.6 Black, non- Hispanic (1.59891) 1.6 Hispanic (1.59891) 2.1 All other, multiple races, non-Hispanic (2.05125) 1.6 Elementary schoolers (1.64958) 1.6 Middle schoolers (1.64958) 1.6 High schoolers (1.64958) 2.8 Homeschoolers (2.75817)	

See notes at end of table.

Exhibit H-1. Summary of weighting and sample variance estimation variables: 1991–2016—Continued

NHES data file	Computing sampling errors							DEFT (Average Root Design Effect) for approximating sampling errors	
	Full sample weight	Respondent ID	Replication method (SAS, R, Stata, WesVar, SUDAAN, AM ¹)		Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) ²				
			Replicate weights	Jackknife method	Sample design	Nesting variables			
NHES:2016 Early Childhood Program Participation	FEWT	BASMIN	FEWT1- FEWT80	JK1	WR	ESTRATUM EPSU	1.4 Full sample (1.375357) 1.4 Infants (1.433905) 1.2 Preschoolers (1.175756) 1.5 White, non- Hispanic (1.480576) 1.5 Black, non- Hispanic (1.480576) 1.5 Hispanic (1.480576) 1.4 All other, multiple races, non-Hispanic (1.402667)	1.4 Full sample (1.375357) 1.4 Infants (1.433905) 1.2 Preschoolers (1.175756) 1.5 White, non- Hispanic (1.480576) 1.5 Black, non- Hispanic (1.480576) 1.5 Hispanic (1.480576) 1.4 All other, multiple races, non-Hispanic (1.402667)	

See notes at end of table.

Exhibit H-1. Summary of weighting and sample variance estimation variables: 1991–2016—Continued

NHES data file	Computing sampling errors						DEFT (Average Root Design Effect) for approximating sampling errors	
	Full sample weight	Replication method (SAS, R, Stata, WesVar, SUDAAN, AM ¹)			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) ²			
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables		
NHES:2016 Parent and Family Involvement in Education	FPWT	BASMID	FPWT1- FPWT80	JK1	WR	PSTRATUM PPSU	1.6 Full sample (1.594158) 1.5 Elementary schoolers (1.497959) 1.5 Middle schoolers (1.497959) 1.5 High schoolers (1.497959) 1.8 Homeschoolers (1.779204) 1.6 White, non- Hispanic (1.645322) 1.6 Black, non- Hispanic (1.645322) 1.6 Hispanic (1.645322) 1.6 All other, multiple races, non-Hispanic (1.568250)	

See notes at end of table.

Exhibit H-1. Summary of weighting and sample variance estimation variables: 1991–2016—Continued

NHES data file	Computing sampling errors						DEFT (Average Root Design Effect) for approximating sampling errors	
	Replication method (SAS, R, Stata, WesVar, SUDAAN, AM ¹)			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) ²				
	Full sample weight	Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables		
NHES:2016 Adult Training and Education Survey	FAWT	BASMID	FAWT1- FAWT80	JK1	WR	ASTRATUM APSU	1.5 Full sample (1.464392) 1.6 White, non- Hispanic (1.542901) 1.6 Black, non- Hispanic (1.542901) 1.6 Hispanic (1.542901) 1.6 All other, multiple races, non-Hispanic (1.542901)	

¹ WesVar Complex Samples software, version 5.1, is available from Westat (www.westat.com). Information on SUDAAN can be obtained at www.rti.org. SUDAAN performs replication using the JK1 procedure but not the JK2 procedure. Information on Stata can be obtained at www.stata.com. Information on AM can be obtained at www.am.air.org. Information on SAS can be obtained at www.sas.com. Information on the R survey package can be obtained at <https://cran.r-project.org/web/packages/survey/survey.pdf>.

² Information on SUDAAN can be obtained at www.rti.org. Information on Stata can be obtained at www.stata.com. Information on SAS can be obtained at www.sas.com. Information on AM can be obtained at www.am.air.org. Information on SPSS Complex Samples can be obtained at <http://www-142.ibm.com/software/products/us/en/spss-complex-samples/>. Information on the R survey package can be obtained at <https://cran.r-project.org/web/packages/survey/survey.pdf>.

³ Unlike the NHES:1995 Adult Education data file, no course weights are provided in the NHES:1991 course file. The full sample weight and variables for computing sampling errors are provided in the course file for making adult-level estimates. Information as to the total number of courses that adults took is also available, and procedures similar to those described in the NHES:1995 *Adult Education Data File User's Manual* (Collins et al. 1996) could be used to create weights for making course-related estimates. However, it is important to note that the course information collected in the NHES:1991 pertains to the four most recent courses taken, rather than a random sample of courses as was the case in the NHES:1995.

⁴ This data file contains weights for making "person-course" estimates pertaining to work-related and other formal structured courses. A simple way of doing this is to create a new variable that is the product of the course weight and the variable of interest. The standard weight and variance estimation methods are then applied to the new variable. The weight variables are called WRWGT, for adjusting for the courses adults took in work-related classes, and SAWGT, for adjusting for personal development courses. Weights are required for these types of courses because course-related data were collected only for a random subsample of courses. See the NHES:1995 *Adult Education Data File User's Manual* (Collins et al. 1996) for more details.

Source: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 1991–2016.

Appendix I. SAS Code for Derived Variables

The SAS code for the ECPP, PFI, and ATES derived variables is below, with the exception of non-sampled household member variables; linked variables (e.g. ZIP18PO2, ZIPBLHI2, ZIPLOCL) that used the respondent's ZIP code to extract data from the 2010-2015 American Community Survey (ACS) and the 2010 Census of Population Summary File 1; and school characteristic variables that were derived using source variables from the Common Core of Data or the Private School Universe data files (e.g., S16TYPE, SCHART).

****Child Characteristic Variables (ECPP & PFI)****

**** AGE2015****

```
AGE2015 = 2015 - CDOBYY;  
IF CDOBYY = 2016 THEN AGE2015 = 0;
```

****RACEETHN****

```
IF CHISPA = 1 THEN RACEETHN = 3;  
ELSE IF (CWHITE = 1 & CBLACK = 2 & CAMIND = 2 & CASIAN = 2 & CPACI = 2) THEN  
RACEETHN = 1;  
ELSE IF (CBLACK = 1 & CWHITE = 2 & CAMIND = 2 & CASIAN = 2 & CPACI = 2) THEN  
RACEETHN = 2;  
ELSE RACEETHN = 4;
```

****RACEETH2****

```
IF CHISPA = 1 THEN RACEETH2 = 3;  
ELSE IF (CWHITE = 1 & CBLACK = 2 & CAMIND = 2 & CASIAN = 2 & CPACI = 2) THEN  
RACEETH2 = 1;  
ELSE IF (CBLACK= 1 & CWHITE = 2 & CAMIND = 2 & CASIAN = 2 & CPACI = 2) THEN  
RACEETH2 = 2;  
ELSE IF ((CASIAN = 1 OR CPACI = 1) & CWHITE = 2 & CBLACK = 2 & CAMIND = 2) THEN  
RACEETH2 = 4;  
ELSE RACEETH2 = 5;
```

****DISABLTYX****

```
IF HDLEARNX = 1 OR HDINTDIS = 1 OR HDSPEECHX = 1 OR HDDISTRBX = 1 OR  
HDDEAFIMX = 1 OR HDBLINDX = 1 OR HDORTHOX = 1 OR HDOTHERX = 1 THEN  
DISABLTYX = 1;  
ELSE DISABLTYX = 2;
```

****DISBLTY2X****

```
IF HDLEARNX = 1 OR HDINTDIS = 1 OR HDSPEECHX = 1 OR HDDISTRBX = 1 OR  
HDDEAFIMX = 1 OR HDBLINDX = 1 OR HDORTHOX = 1 OR HDDELAYX = 1 OR HDTRBRAIN  
= 1 OR HDOTHERX = 1 OR HDAUTISMX = 1 OR HDPDDX = 1 OR HDADDX = 1 THEN  
DISBLTY2X = 1;  
ELSE DISBLTY2X = 2;
```

****Household and Family Variables (ECPP & PFI)****

****PAR1EDUC****

```
IF P1EDUC >= 9 THEN PAR1EDUC = 5;
```

```
ELSE IF P1EDUC IN (7,8) THEN PAR1EDUC = 4;  
ELSE IF P1EDUC IN (4,5,6) THEN PAR1EDUC = 3;  
ELSE IF P1EDUC = 3 THEN PAR1EDUC = 2;  
ELSE IF P1EDUC IN (1,2) THEN PAR1EDUC = 1;
```

******PAR1EMPL******

```
IF P1EMPL IN (1,2) THEN DO;  
  IF P1HRSWK GE 35 THEN PAR1EMPL = 1;  
  ELSE IF 0 LT P1HRSWK LT 35 THEN PAR1EMPL = 2;  
END;  
ELSE IF P1EMPL = 3 THEN DO;  
  IF P1LKWRK = 1 THEN PAR1EMPL = 3;  
  ELSE IF P1LKWRK = 2 THEN PAR1EMPL = 4;  
END;  
ELSE IF P1EMPL IN (4,5,6,7) THEN PAR1EMPL = 4;
```

******PAR2EDUC******

```
IF P2GUARD = 2 THEN PAR2EDUC = -1;  
ELSE IF P2EDUC >= 9 THEN PAR2EDUC = 5;  
ELSE IF P2EDUC IN (7,8) THEN PAR2EDUC = 4;  
ELSE IF P2EDUC IN (4,5,6) THEN PAR2EDUC = 3;  
ELSE IF P2EDUC = 3 THEN PAR2EDUC = 2;  
ELSE IF P2EDUC IN (1,2) THEN PAR2EDUC = 1;
```

******PAR2EMPL******

```
IF P2GUARD = 2 THEN PAR2EMPL = -1;  
ELSE IF P2EMPL IN (1,2) THEN DO;  
  IF P2HRSWK GE 35 THEN PAR2EMPL = 1;  
  ELSE IF 0 LT P2HRSWK LT 35 THEN PAR2EMPL = 2;  
END;  
ELSE IF P2EMPL = 3 THEN DO;  
  IF P2LKWRK = 1 THEN PAR2EMPL = 3;  
  ELSE IF P2LKWRK = 2 THEN PAR2EMPL = 4;  
END;  
ELSE IF P2EMPL IN (4,5,6,7) THEN PAR2EMPL = 4;
```

******PAR1FTFY******

```
IF PAR1EMPL = 1 AND P1MTHSWRK = 12 THEN PAR1FTFY = 1;  
ELSE IF PAR1EMPL = 1 AND 0 LE P1MTHSWRK LE 11 THEN PAR1FTFY = 2;  
ELSE IF PAR1EMPL = 2 THEN PAR1FTFY = 2;  
ELSE IF PAR1EMPL IN (3,4) AND P1MTHSWRK GT 0 THEN PAR1FTFY = 2;  
ELSE IF PAR1EMPL IN (3,4) THEN PAR1FTFY = 3;
```

*****PAR2FTFY*****

```
IF PAR2EMPL = -1 THEN PAR2FTFY = -1;  
ELSE IF PAR2EMPL = 1 AND P2MTHSWRK = 12 THEN PAR2FTFY = 1;  
ELSE IF PAR2EMPL = 1 AND 0 LE P2MTHSWRK LE 11 THEN PAR2FTFY = 2;  
ELSE IF PAR2EMPL = 2 THEN PAR2FTFY = 2;  
ELSE IF PAR2EMPL IN (3,4) AND P2MTHSWRK GT 0 THEN PAR2FTFY = 2;  
ELSE IF PAR2EMPL IN (3,4) THEN PAR2FTFY = 3;
```

******PAR1TYPE******

```
IF P1REL IN (1,2) THEN DO;
  IF P1SEX = 2 THEN PAR1TYPE = 1;
  ELSE IF P1SEX = 1 THEN PAR1TYPE = 2;
END;
ELSE IF P1REL IN (3,4) THEN DO;
  IF P1SEX = 2 THEN PAR1TYPE = 3;
  ELSE IF P1SEX = 1 THEN PAR1TYPE = 4;
END;
ELSE IF P1REL IN (5,6) THEN DO;
  IF P1SEX = 2 THEN PAR1TYPE = 5;
  ELSE IF P1SEX = 1 THEN PAR1TYPE = 6;
END;
```

******PAR2TYPE******

```
IF P2GUARD = 2 THEN PAR2TYPE = -1;
ELSE IF P2REL IN (1,2) THEN DO;
  IF P2SEX = 2 THEN PAR2TYPE = 1;
  ELSE IF P2SEX = 1 THEN PAR2TYPE = 2;
END;
ELSE IF P2REL IN (3,4) THEN DO;
  IF P2SEX = 2 THEN PAR2TYPE = 3;
  ELSE IF P2SEX = 1 THEN PAR2TYPE = 4;
END;
ELSE IF P2REL IN (5,6) THEN DO;
  IF P2SEX = 2 THEN PAR2TYPE = 5;
  ELSE IF P2SEX = 1 THEN PAR2TYPE = 6;
END;
```

******HHPARN16X******

```
IF PAR1TYPE IN (1,2,3,4) AND PAR2TYPE IN (1,2,3,4) THEN HHPARN16X = 1;
ELSE IF PAR1TYPE IN (1,3) OR PAR2TYPE IN (1,3) THEN HHPARN16X = 2;
ELSE IF PAR1TYPE IN (2,4) OR PAR2TYPE IN (2,4) THEN HHPARN16X = 3;
ELSE HHPARN16X = 4;
```

Note: The derived variables PAR1TYPE and PAR2TYPE were used in the creation of HHPARN16X.

******HHPARN16_BRD******

```
IF P2GUARD = 1 THEN HHPARN16_BRD = 1;
ELSE HHPARN16_BRD = 2;
```

******NUMSIBSX******

```
NUMSIBSX = HHBROSX+HHSISSX;
```

******FAMILY16X******

```
IF (HHPARN16X = 1 AND NUMSIBSX > 0) THEN FAMILY16X = 1;
ELSE IF (HHPARN16X = 1 AND NUMSIBSX = 0) THEN FAMILY16X = 2;
ELSE IF (HHPARN16X IN (2,3) AND NUMSIBSX > 0) THEN FAMILY16X = 3;
ELSE IF (HHPARN16X IN (2,3) AND NUMSIBSX = 0) THEN FAMILY16X = 4;
ELSE FAMILY16X = 5;
```

******FAMILY16_BRD******

```
IF (P2GUARD = 1 AND NUMSIBSX > 0) THEN FAMILY16_BRD = 1;  
ELSE IF (P2GUARD = 1 AND NUMSIBSX = 0) THEN FAMILY16_BRD = 2;  
ELSE IF (P2GUARD NE 1 AND NUMSIBSX > 0) THEN FAMILY16_BRD = 3;  
ELSE IF (P2GUARD NE 1 AND NUMSIBSX = 0) THEN FAMILY16_BRD = 4;
```

******HHUNDR6X******

```
HHUNDR6X=0;  
IF 0 LE AGE2015 LT 6 THEN HHUNDR6X+1;  
IF 0 LE HHMAGE1 LT 6 THEN HHUNDR6X+1;  
IF 0 LE HHMAGE2 LT 6 THEN HHUNDR6X+1;  
IF 0 LE HHMAGE3 LT 6 THEN HHUNDR6X+1;  
IF 0 LE HHMAGE4 LT 6 THEN HHUNDR6X+1;  
IF 0 LE HHMAGE5 LT 6 THEN HHUNDR6X+1;  
IF 0 LE HHMAGE6 LT 6 THEN HHUNDR6X+1;  
IF 0 LE HHMAGE7 LT 6 THEN HHUNDR6X+1;  
IF 0 LE HHMAGE8 LT 6 THEN HHUNDR6X+1;  
IF 0 LE HHMAGE9 LT 6 THEN HHUNDR6X+1;
```

******HHUNDR10X******

```
HHUNDR10X=0;  
IF 0 LE AGE2015 LT 10 THEN HHUNDR10X+1;  
IF 0 LE HHMAGE1 LT 10 THEN HHUNDR10X+1;  
IF 0 LE HHMAGE2 LT 10 THEN HHUNDR10X+1;  
IF 0 LE HHMAGE3 LT 10 THEN HHUNDR10X+1;  
IF 0 LE HHMAGE4 LT 10 THEN HHUNDR10X+1;  
IF 0 LE HHMAGE5 LT 10 THEN HHUNDR10X+1;  
IF 0 LE HHMAGE6 LT 10 THEN HHUNDR10X+1;  
IF 0 LE HHMAGE7 LT 10 THEN HHUNDR10X+1;  
IF 0 LE HHMAGE8 LT 10 THEN HHUNDR10X+1;  
IF 0 LE HHMAGE9 LT 10 THEN HHUNDR10X+1;
```

******HHUNDR16X******

```
HHUNDR16X=0;  
IF 0 LE AGE2015 LT 16 THEN HHUNDR16X+1;  
IF 0 LE HHMAGE1 LT 16 THEN HHUNDR16X+1;  
IF 0 LE HHMAGE2 LT 16 THEN HHUNDR16X+1;  
IF 0 LE HHMAGE3 LT 16 THEN HHUNDR16X+1;  
IF 0 LE HHMAGE4 LT 16 THEN HHUNDR16X+1;  
IF 0 LE HHMAGE5 LT 16 THEN HHUNDR16X+1;  
IF 0 LE HHMAGE6 LT 16 THEN HHUNDR16X+1;  
IF 0 LE HHMAGE7 LT 16 THEN HHUNDR16X+1;  
IF 0 LE HHMAGE8 LT 16 THEN HHUNDR16X+1;  
IF 0 LE HHMAGE9 LT 16 THEN HHUNDR16X+1;
```

******HHUNDR18X******

```
HHUNDR18X=0;  
IF 0 LE AGE2015 LT 18 THEN HHUNDR18X+1;  
IF 0 LE HHMAGE1 LT 18 THEN HHUNDR18X+1;  
IF 0 LE HHMAGE2 LT 18 THEN HHUNDR18X+1;  
IF 0 LE HHMAGE3 LT 18 THEN HHUNDR18X+1;
```

```

IF 0 LE HHMAGE4 LT 18 THEN HHUNDR18X+1;
IF 0 LE HHMAGE5 LT 18 THEN HHUNDR18X+1;
IF 0 LE HHMAGE6 LT 18 THEN HHUNDR18X+1;
IF 0 LE HHMAGE7 LT 18 THEN HHUNDR18X+1;
IF 0 LE HHMAGE8 LT 18 THEN HHUNDR18X+1;
IF 0 LE HHMAGE9 LT 18 THEN HHUNDR18X+1;

```

Note: The derived variables AGE2015 and HHMAGE1--HHMAGE9 were used in the creation of HHUNDR6X, HHUNDR10X, HHUNDR16X, and HHUNDR18X.

******HHUNID******

```

IF HHTOTALXX GT (SUM (HHBROSX, HHSISSX, HHAUNTSX, HHUNCLSX, HHGMASX,
HHGPASX, HHMOM, HHDAD, HHONRELSX,1)) THEN HHUNID = HHTOTALXX-(SUM
(HHBROSX, HHSISSX, HHAUNTSX, HHUNCLSX, HHGMASX, HHGPASX, HHMOM, HHDAD,
HHORELSX, HHONRELSX,1));
ELSE HHUNID = 0;

```

******LANGUAGEX******

```

IF (P1FRLNG IN (1,4,5) OR P1SPEAK IN (1,4,5)) AND (P2GUARD = 2 OR P2FRLNG IN (1,4,5) OR
P2SPEAK IN (1,4,5)) THEN LANGUAGEX = 1;
ELSE IF P1FRLNG IN (1,4,5) OR P1SPEAK IN (1,4,5) OR P2FRLNG IN (1,4,5) OR P2SPEAK IN
(1,4,5) THEN LANGUAGEX = 2;
ELSE IF P1SPEAK IN (2,3) AND (P2GUARD = 2 OR P2SPEAK IN (2,3)) THEN LANGUAGEX = 3;

```

******PARGRADEX******

```

IF PAR1EDUC IN (1,2,3,4,5) AND PAR2EDUC IN (1,2,3,4,5) THEN PARGRADEX =
MAX(PAR1EDUC,PAR2EDUC);
ELSE PARGRADEX = PAR1EDUC;

```

Note: The derived variables PAR1EDUC and PAR2EDUC were used in the creation of PARGRADEX.

******PAR1MARST******

```

IF P1MRSTA = 1 THEN PAR1MARST = 1;
ELSE IF P1BFGF = 1 THEN PAR1MARST = 2;
ELSE IF P1MRSTA = 4 AND P1BFGF NE 1 THEN PAR1MARST = 3;
ELSE IF P1MRSTA = 3 AND P1BFGF NE 1 THEN PAR1MARST = 4;
ELSE IF P1MRSTA = 2 AND P1BFGF NE 1 THEN PAR1MARST = 5;
ELSE IF P1MRSTA = 5 AND P1BFGF NE 1 THEN PAR1MARST = 6;

```

******PAR2MARST******

```

IF P2MRSTA = -1 THEN PAR2MARST = -1;
ELSE IF P2MRSTA = 1 THEN PAR2MARST = 1;
ELSE IF P2BFGF = 1 THEN PAR2MARST = 2;
ELSE IF P2MRSTA = 4 AND P2BFGF NE 1 THEN PAR2MARST = 3;
ELSE IF P2MRSTA = 3 AND P2BFGF NE 1 THEN PAR2MARST = 4;
ELSE IF P2MRSTA = 2 AND P2BFGF NE 1 THEN PAR2MARST = 5;
ELSE IF P2MRSTA = 5 AND P2BFGF NE 1 THEN PAR2MARST = 6;

```

******INTACC******

```

IF HVINTCOM = 1 AND HVINTSPHO = 1 THEN INTACC = 1;
ELSE IF HVINTCOM = 1 AND HVINTSPHO = 2 THEN INTACC = 2;

```

ELSE IF HVINTSPHO = 1 AND HVINTCOM = 2 THEN INTACC = 3;
ELSE IF HVINTSPHO = 2 AND HVINTCOM = 2 THEN INTACC = 4;

****Child Care Variables (ECPP only)****

****ANYCAREX****

IF RCNOW = 1 OR NCNOW = 1 OR CPNNOWX = 1 THEN ANYCAREX = 1;
ELSE ANYCAREX = 2;

****ANYCARE2X****

IF RCWEEK=1 OR RCOTHC=1 OR NCWEEK=1 OR NCOTHC=1 OR CPWEEKX=1 OR CPOTHC=1
THEN ANYCARE2X=1;
ELSE ANYCARE2X=2;

****CAREHOURX****

LENGTH CAREHOURX 3;
IF RCHRS = -1 THEN RCHRSX = 0; ELSE RCHRSX = RCHRS;
IF RCTLHR = -1 THEN RCTLHRX = 0; ELSE RCTLHRX = RCTLHR;
IF NCHRS = -1 THEN NCHRSX = 0; ELSE NCHRSX = NCHRS;
IF NCTLHR = -1 THEN NCTLHRX = 0; ELSE NCTLHRX = NCTLHR;
IF CPHRS = -1 THEN CPHRSX = 0; ELSE CPHRSX = CPHRS;
IF CPTLHR = -1 THEN CPTLHRX = 0; ELSE CPTLHRX = CPTLHR;

IF RCHRS < 0 AND RCTLHR < 0 THEN TRCHRS = 0;
ELSE TRCHRS = SUM(RCHRSX, RCTLHRX);
IF NCHRS < 0 AND NCTLHR < 0 THEN TNCHRS = 0;
ELSE TNCHRS = SUM(NCHRSX, NCTLHRX);
IF CPHRS < 0 AND CPTLHR < 0 THEN TCPHRS = 0;
ELSE TCPHRS = SUM(CPHRSX, CPTLHRX);
CAREHOURX = SUM(TRCHRS, TNCHRS, TCPHRS);

****CPARRNEWX****

IF CPWEEKX = 1 AND CPOTHC = 1 THEN CPARRNEWX = 2;
ELSE IF CPWEEKX = 1 THEN CPARRNEWX = 1;
ELSE CPARRNEWX = 0;

****MOSTHRSX****

RELANUM = 0;
IF RCWEEK = 1 THEN RELANUM=1;
NRELNUM = 0;
IF NCWEEK = 1 THEN NRELNUM=1;
CENTNUM = 0;
IF CPWEEKX = 1 THEN CENTNUM=1;

NUMCARE = SUM(RELANUM,NRELNUM,CENTNUM);

IF NUMCARE = 0 THEN MOSTHRSX = -1;
ELSE IF NUMCARE = 1 THEN DO;
 IF RCWEEK = 1 & RCPLACE IN (1,3) THEN MOSTHRSX = 1;
 ELSE IF RCWEEK = 1 & RCPLACE = 2 THEN MOSTHRSX = 2;
 IF NCWEEK = 1 & NCPLACE IN (1,3) THEN MOSTHRSX = 3;
 ELSE IF NCWEEK = 1 & NCPLACE = 2 THEN MOSTHRSX = 4;

```

IF CPWEEKX = 1 THEN MOSTHRSX = 5;
END;
ELSE DO;
  X = MAX(RCHRS, NCHRS, CPHRS);
  IF X > 0 THEN DO;
    FOUNDIT = 0;
    ARRAY SAMENUM (3) RCHRS NCHRS CPHRS;
    DO i = 1 TO 3;
      IF SAMENUM(i) = X THEN FOUNDIT = FOUNDIT + 1;
    END;
    IF FOUNDIT > 1 THEN MOSTHRSX = 6;
    ELSE IF X = RCHRS & RCPLACE IN(1,3) THEN MOSTHRSX=1;
    ELSE IF X = RCHRS & RCPLACE = 2 THEN MOSTHRSX=2;
    ELSE IF X = NCHRS & NCPLACE IN(1,3) THEN MOSTHRSX=3;
    ELSE IF X = NCHRS & NCPLACE = 2 THEN MOSTHRSX=4;
    ELSE IF X = CPHRS THEN MOSTHRSX = 5;
  END;
END;

```

******NCARRNEWX******

```

IF NCWEEK = 1 AND NCOTHC = 1 THEN NCARRNEWX = 2;
ELSE IF NCWEEK = 1 THEN NCARRNEWX = 1;
ELSE NCARRNEWX = 0;

```

******RCARRNEWX******

```

IF RCWEEK = 1 AND RCOTHC = 1 THEN RCARRNEWX = 2;
ELSE IF RCWEEK = 1 THEN RCARRNEWX = 1;
ELSE RCARRNEWX = 0;

```

******Grade Level Variables (PFI only)******

******ALLGRADEX******

```

LENGTH ALLGRADEX $ 2;
IF GRADE IN (1,2,3) OR GRADEEQ IN (1,2) THEN ALLGRADEX = 'K';
ELSE IF GRADE = 4 OR GRADEEQ = 3 THEN ALLGRADEX = '1';
ELSE IF GRADE = 5 OR GRADEEQ = 4 THEN ALLGRADEX = '2';
ELSE IF GRADE = 6 OR GRADEEQ = 5 THEN ALLGRADEX = '3';
ELSE IF GRADE = 7 OR GRADEEQ = 6 THEN ALLGRADEX = '4';
ELSE IF GRADE = 8 OR GRADEEQ = 7 THEN ALLGRADEX = '5';
ELSE IF GRADE = 9 OR GRADEEQ = 8 THEN ALLGRADEX = '6';
ELSE IF GRADE = 10 OR GRADEEQ = 9 THEN ALLGRADEX = '7';
ELSE IF GRADE = 11 OR GRADEEQ = 10 THEN ALLGRADEX = '8';
ELSE IF GRADE = 12 OR GRADEEQ = 11 THEN ALLGRADEX = '9';
ELSE IF GRADE = 13 OR GRADEEQ = 12 THEN ALLGRADEX = '10';
ELSE IF GRADE = 14 OR GRADEEQ = 13 THEN ALLGRADEX = '11';
ELSE IF GRADE = 15 OR GRADEEQ = 14 THEN ALLGRADEX = '12';

```

******HMSCHLX******

```

/*HOMESCHOoled ONLY DUE TO ILLNESS*/

```

```

IF HSILLX = 1 AND HSSAFETYX NE 1 AND HSDISSATX NE 1 AND HSRELGON NE 1 AND
HSMORAL NE 1 AND HSDISABLX NE 1 AND HSSPCLNDX NE 1 AND HSALTX NE 1 AND
HSOTHERX NE 1 THEN HSILLNESS = 1;
ELSE HSILLNESS = 0;

/*CREATE DERIVED VARIABLE*/
IF QTYPE = 1 THEN DO;
  IF HSILLNESS = 1 THEN HMSCHLX = 3;
  ELSE IF HSILLNESS = 0 AND HSCOLL = 2 THEN HMSCHLX = 1;
  ELSE IF HSILLNESS = 0 AND HSCOLL = 1 THEN DO;
    IF HSSCHR = 0 THEN HMSCHLX = 1;
    ELSE IF HSSCHR LE 25 THEN HMSCHLX = 2;
    ELSE IF HSSCHR GT 25 THEN HMSCHLX = 3;
  END;
END;

ELSE IF QTYPE = 2 THEN DO;
  IF HMSCHARR IN (1,2) THEN DO;
    IF HSILLNESS = 1 THEN HMSCHLX = 3;
    ELSE IF HSILLNESS = 0 THEN DO;
      IF HSSCHR = 0 THEN HMSCHLX = 1;
      ELSE IF HSSCHR LE 25 THEN HMSCHLX = 2;
      ELSE IF HSSCHR GT 25 THEN HMSCHLX = 3;
    END;
  END;
  ELSE HMSCHLX = 3;
END;

```

****Respondent Characteristics (ATES)****

****EDUC****

```

IF EDUATTN >= 8 THEN EDUC = 6;
ELSE IF EDUATTN = 7 THEN EDUC = 5;
ELSE IF EDUATTN = 6 THEN EDUC = 4;
ELSE IF EDUATTN IN (4,5) THEN EDUC = 3;
ELSE IF EDUATTN IN (2,3) THEN EDUC = 2;
ELSE IF EDUATTN = 1 THEN EDUC = 1;

```

****EDUC2****

```

IF EDUATTN >= 7 THEN EDUC2 = 3;
ELSE IF EDUATTN IN (4,5,6) THEN EDUC2 = 2;
ELSE IF EDUATTN IN (1,2,3) THEN EDUC2 = 1;

```

****WKSTATUS****

```

IF EEFTJOB = 1 THEN WKSTATUS = 1;
ELSE IF EEPTJOB = 1 THEN WKSTATUS = 2;
ELSE IF EEL4WKS = 1 THEN WKSTATUS = 3;
ELSE IF EEL4WKS = 2 THEN WKSTATUS = 4;
ELSE WKSTATUS = 5;

```

******FTFY*****

IF EEWKS = 1 AND EEHRS GE 35 THEN FTFY = 1;
ELSE IF EELWRK IN (-1,3) THEN FTFY = 2;
ELSE IF EELWRK IN (1,2) THEN FTFY = 3;

******RACEETHN*****

IF XXRACE_HISP = 1 THEN RACEETHN = 3;
ELSE IF (XXRACE_WHITE = 1 & XXRACE_BLACK = 2 & XXRACE_AMIND = 2 &
XXRACE_ASIAN = 2 & XXRACE_PACI = 2) THEN RACEETHN = 1;
ELSE IF (XXRACE_BLACK = 1 & XXRACE_WHITE = 2 & XXRACE_AMIND = 2 &
XXRACE_ASIAN = 2 & XXRACE_PACI = 2) THEN RACEETHN = 2;
ELSE RACEETHN = 4;

******RACEETH2*****

IF XXRACE_HISP = 1 THEN RACEETH2 = 3;
ELSE IF (XXRACE_WHITE = 1 & XXRACE_BLACK = 2 & XXRACE_AMIND = 2 &
XXRACE_ASIAN = 2 & XXRACE_PACI = 2) THEN RACEETH2 = 1;
ELSE IF (XXRACE_BLACK = 1 & XXRACE_WHITE = 2 & XXRACE_AMIND = 2 &
XXRACE_ASIAN = 2 & XXRACE_PACI = 2) THEN RACEETH2 = 2;
ELSE IF ((XXRACE_ASIAN = 1 OR XXRACE_PACI = 1) & XXRACE_WHITE = 2 &
XXRACE_BLACK = 2 & XXRACE_AMIND = 2) THEN RACEETH2 = 4;
ELSE RACEETH2 = 5;

******AGECAT*****

IF 16 LE XXAGE LE 24 THEN AGECAT = 1;
ELSE IF 25 LE XXAGE LE 34 THEN AGECAT = 2;
ELSE IF 35 LE XXAGE LE 44 THEN AGECAT = 3;
ELSE IF 45 LE XXAGE LE 54 THEN AGECAT = 4;
ELSE IF 55 LE XXAGE LE 66 THEN AGECAT = 5;

******INTACC*****

IF XXINTHOME = 1 AND XXINTCELL = 1 THEN INTACC = 1;
ELSE IF XXINTHOME = 1 AND XXINTCELL = 2 THEN INTACC = 2;
ELSE IF XXINTCELL = 1 AND XXINTHOME = 2 THEN INTACC = 3;
ELSE IF XXINTCELL = 2 AND XXINTHOME = 2 THEN INTACC = 4;

******MARRIED*****

IF XXMARIT = 1 THEN MARRIED = 1;
ELSE IF XXBFGF = 1 THEN MARRIED = 2;
ELSE IF XXMARIT = 4 AND XXBFGF NE 1 THEN MARRIED = 3;
ELSE IF XXMARIT = 3 AND XXBFGF NE 1 THEN MARRIED = 4;
ELSE IF XXMARIT = 2 AND XXBFGF NE 1 THEN MARRIED = 5;
ELSE IF XXMARIT = 5 AND XXBFGF NE 1 THEN MARRIED = 6;

******CTLEVEL*****

IF LCENROLL IN (3,4) THEN CTLEVEL = 1;
ELSE IF LCENROLL IN (1,2) THEN CTLEVEL = 2;
ELSE CTLEVEL = 9;

****APPRENT****

```
IF WEPORG = 3 AND WEWAGE = 2 AND WEPRP_INSTR = 1 AND (WEPRP_COLLG = 1 OR  
WEPRP_TRAIN = 1) THEN APPRENT = 1;  
ELSE IF WEPORG = 3 THEN APPRENT = 2;  
ELSE APPRENT = 9;
```

****UNDEREMP****

```
IF EEPREFFT = 1 OR EEPERM = 1 THEN UNDEREMP = 1;  
ELSE UNDEREMP = 2;
```

Appendix J. ATES Certification and License Field Coding Manual for the NHES:2016

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Introduction

This manual includes detailed procedures for coding certification and license-related verbatim responses from the 2016 Adult Training and Education Survey (ATES). Verbatim coding is the recoding of text survey responses into numerical form so that statistical analyses can be performed on the responses. This technique is commonly used for open-ended survey questions, where respondents write in their preferred response. Given the variety of responses that can be provided to this type of question, a coding operation is needed to create a categorical variable that can be used by analysts. Done correctly, this procedure turns a collection of non-comparable word strings into a set of valid and reliable data that can be used by analysts, researchers, and policymakers.

Before you begin the coding operation, please take the time to review all the information included in this manual and become as familiar as possible with these procedures. It is important to remember that the coding task involves thoroughly reviewing the respondent's open-ended responses before determining the most appropriate code.

The Adult Training and Education Survey (ATES)

The data we will be coding comes from the 2016 administration of ATES, which was administered as part of the 2016 National Household Education Survey (NHES:2016). Most people completed the ATES using a paper instrument where they wrote in their responses to open-ended items, but some completed the ATES using a web-based instrument where they typed in their responses. ATES collected in-depth information from adults ages 16-65 on credentials related to work—including formal educational attainment, industry-recognized certifications, occupational licenses, and the completion of work experience programs such as apprenticeships. It also collected detailed information about the education and training in which adults participated in order to earn these credentials.

Certifications and Licenses

We will be focusing on the “Certifications and Licenses” section of the ATES. In this section, respondents are first asked if they have a currently active certification or license.

Do you have a currently active professional certification or a state or industry license? Do not include business licenses, such as a liquor license or vending license.

A professional certification or license shows you are qualified to perform a specific job and includes things like Licensed Realtor, Certified Medical Assistant, Certified Teacher, or an IT certification.

No → **GO TO question 30**

Yes

Certifications and licenses are relatively similar except for the credentialing body (see definitions below).

- A **certification** is a credential *awarded by a certification body* based on an individual demonstrating through an examination process that he or she has acquired the designated knowledge, skills, and abilities to perform a specific job. The examination can be either written, oral, or performance-based. A certification is a time-limited credential that is renewed through a recertification process.
- A **license** is a credential *awarded by a government agency* that constitutes legal authority to do a specific job. Licenses are based on some combination of degree or certificate attainment, certifications, assessments, or work experience; are time-limited; and must be renewed periodically.

Early ATES development work indicated that respondents are unable to reliably differentiate between these two credentials. As a result, the ATES asks about both types of credentials in the same question. From this point on, certifications and licenses will be referred to as “certifications” in this document for ease of discussion.

If respondents indicate they have a certification, then they are asked how many they have. After this, they are asked a series of detailed follow-up questions about up to three certifications, starting with their most important certification.

Responses to be Coded: Name of Certification and Kind of Work it is For

The ATES is the first national survey to ask in-depth questions about the attainment of certifications among adults in the U.S. Although one of the main goals of the ATES is to find out how many adults have a certification, NCES also wants to know what those certifications are for—for what kinds of skills are adults “credentialed”? For example, to what extent are certifications obtained in computer science, in health care, or in education? In other words, what are the *fields* of these certifications? This information has never been collected before, so we are breaking new ground in the coding and analysis of this issue.

To address the field-of-certification issue, two of the follow-up questions in the “Certifications and Licenses” section ask for the name of the certification and the kind of work it is for. These are both open-ended questions for which respondents need to write/type in their response. These write-in responses will be used to assign a *certification field code* to each certification, based on the taxonomy discussed in detail later in this manual. The image below shows how these questions were presented for the certification the respondent considered most important.

The next few questions ask about the certification and license that you consider to be your most important. What is the name of your most important certification or license?

What kind of work is your most important certification or license for?

The coding process described in this document will use the verbatim responses to these two questions to assign a numeric code to each certification in order to indicate the field of the certification. The rest of this document describes the steps and guidelines for this coding process; The last section of the manual includes the coding taxonomy and a detailed description of how to use the taxonomy to assign codes.

Assigning Codes

Two-Phase Coding Process

The coding process will proceed in two phases. The first phase is a development stage, where a subsample of cases will be used to refine the pilot taxonomy and to begin to establish inter-rater reliability. The second phase is the full-scale coding stage, where an acceptable level of inter-rater reliability will be established and the full set of verbatim responses will be coded.

1.) Phase 1: Refining the pilot taxonomy

- a. The pilot taxonomy is a newly created taxonomy for NHES:2016. The first phase of coding will be used to determine whether any changes need to be made to this pilot taxonomy. We expect to conduct two rounds of coding under this phase, although there may end up being additional rounds.
- b. In the first round of phase 1, we will use the pilot taxonomy to code an initial subsample of 600 cases. All cases will be double-coded to establish agreement across coders. Each person will code 200 of the 600 cases and two coders will be assigned to each case. NCES will also triple-code a subset of the cases.
- c. After the first round, we will calculate inter-coder reliability. Expert coders will review the codes to identify any points of confusion or changes that need to be made to the taxonomy. NCES will also review the results.
- d. Subsequent round(s) of Phase 1 will use a similar process to round 1, with an additional 600 cases for each round, and using the pilot taxonomy as revised in the previous round(s).
- e. A debriefing will occur after each round to discuss the coding process, any changes to the taxonomy, or challenges that were identified in the previous round.

2.) Phase 2: Full-scale coding

- a. The first round of Phase 2, using 600 cases, will be double-coded to establish intercoder reliability for the final taxonomy.
- b. Once a minimum level of reliability has been established ($\kappa \geq 0.80$), all subsequent cases will be coded by a single coder. We will recode some cases that were coded in the prior round(s) based on changes to the taxonomy.
- c. In total, we expect to code about 16,000 certifications and licenses by early 2017. We will break Phase 2 into multiple rounds in order to review the initial codes and debrief on how the coding is going.

Coding Steps

- 1.) You should gather all materials relevant to coding such as this manual, the training slides and the ATES questionnaire and keep them accessible during the coding process.
 - a. Make sure you are comfortable with the taxonomy before you begin coding.
- 2.) Open up the coding database in the specified folder. Your copy will have your initials next to the cases you are supposed to code.
- 3.) Starting with the first record:
 - a. Read the response carefully.
 - b. Discern the preferred coding category (see following sections for details).
 - c. Refer to the coding manual to confirm the preferred code.
 - d. Type the numeric code into the Code column.
 - e. If you use information you find online to help decide on the code, note that information in the Notes column and include a link to the site where you found the information. This is especially important for cases that you feel uncertain about.
 - f. Beyond assigning a certification field code, you should also flag especially difficult cases for review (see “Flagging Difficult Certifications” below).
 - g. Repeat this process for the remainder of the cases.
 - h. Check your work. Make sure you have coded all cases.
- 4.) Let the expert coders know when you have finished coding. In this e-mail note any particular challenges you faced or suggestions you have for changes/improvements to the taxonomy or coding protocol.

Coding Taxonomy

The coding taxonomy is the document you will use to determine codes during the coding process. The document lists each of the available codes and provides information about the types of responses that should be assigned to each of these codes. The taxonomy includes 30 codes, including 26 field-specific codes, a code “27” for cases where the specified certification field is not included in the prior 26 codes, and a code “28” for cases that do not provide sufficient information to determine the certification field. The full coding taxonomy is shown at the end of this appendix.

Coding Guidelines

- 1.) *Take Your Time and Use the Coding Manual.* Take your time and carefully follow the instructions and guidelines presented in this manual. Use this manual as a tool to correctly match the open-ended responses to the most appropriate code.
- 2.) *Focus on the Certification/License Name and Use Type of Work as Supporting Evidence.* Though you should always read both the certification name and the type of work provided by the respondent, you should generally focus more on the certification name when deciding what code to use – the kind of work will mostly be used as clarifying or supporting evidence. This is discussed in greater detail in the Potential Challenges section.
- 3.) *Focus on the Nature of the Skill the Credential is for, Not the Setting in Which the Work Takes Place:* Similarly, the guiding principle when coding should be the type of skill the credential implies the credential holder has. The location/setting in which the respondent uses these skills is less important. For example, a school counseling license allows the credentialed individual to *counsel* in a school setting and should be coded as a counseling rather than an education certification. Similarly, health administration credentials should be coded as business (administration) credentials and not as health care credentials.
- 4.) *Share Background Information About How You Decided on a Code.* If you find information online that helps you decide how to code a case, make sure to include it in the Notes column. Table 1 provides examples of the kind of notes you should take.
- 5.) *Flag a Case as “Difficult” When in Doubt.* It is important to assign the correct code to each open-ended response. If you have exhausted all search mechanisms and cannot find a clear match, you should flag the case as being difficult. This will trigger expert review to make a final determination. You should still code the case even when using this flag.

Table 1. Taking Notes When Coding: Examples

Name	Kind of work	Code	Difficult flag	Notes
Federal DEA License	Prescribe pain medication	13	1	<u>This</u> says the DEA license would be held by a pharmacist or doctor. Since this is a medical specialty held by a health care practitioner it would go under 18.
Manufactured Housing Retailer	Sell mobile homes	8	1	Is this a license to operate the business more so than being like what a regular realtor does?
Certification of Infectious Disease		13	1	See <u>this</u> where it says you need to have a license to practice medicine to have this CN – it looks like it is a medical specialty held by doctors.

Potential Challenges

- 1.) *Abbreviations.* There will be abbreviations in some of the write-in statements; if you are unsure of the meaning of the abbreviation do a web search for any information you can find to discern the meaning (e.g., LCSW = Licensed Clinical Social Worker). If you look up the abbreviation, please include it meaning in the notes column, as well as a URL link to the page where you found the meaning.
- 2.) *Spelling errors.* Spelling errors in the write-ins are inevitable; it is best to look past them as much as possible (e.g., “Easthetician”).
- 3.) *Encountering credentials and fields you have never heard of before.* There are a wide range of fields in which respondents can be certified or licensed, so it is inevitable that you will be unfamiliar with some of the listed credentials and be unsure what field of work they are associated with. In such cases, it is critical to do an online search to try to find out more about the listed credential. If you use a website to help you decide where to code something, please include the URL in the notes column of the coding spreadsheet.
- 4.) *Other fields vs. cannot determine placement.*
 - a. Use “other fields” (code “27”) when the respondent has provided information that suggests a particular certification field that does not fall under the first 26 specific codes in the taxonomy (e.g., scuba diving).
 - b. Use “cannot determine placement” (code “-8”) when the respondent:
 - i. Enters information that is too vague to determine whether it fits into any code (e.g., a string of numbers, the respondent’s name, etc.)
 - ii. Enters a response that is too vague or broad to make a choice between two specific field codes (e.g., a response of “paraprofessional” with no additional clarifying information provided would be coded here because a paraprofessional credential can refer to either the education or health care fields, so it is not possible to assign a specific field code)
 - iii. Note: sometimes when you cannot fit a credential into a specific code, you can still fit it into the “other” code in a particular category (you are not sure if it is a practitioner or a nurse credential, but you know it’s health care, so you can put it in “other health care”). This is an option to pursue before jumping right to the “cannot determine placement” code.
- 5.) *When respondents report an association instead of a certification/license name.* If you are unfamiliar with the association look it up online. You will likely want to provide notes about what you found and code these as “difficult” to trigger expert review. When possible, give respondents the benefit of the doubt. For example:

- a. If the association seems to be a credentialing body, give the respondent the benefit of the doubt and assume he or she has a certification.
 - b. If the association is for a profession that often requires certification or licensure, give the respondent the benefit of the doubt and assume he or she has a certification. For example, some respondents might write that they are a member of the Bar. Typically you need to have a law license to be a member of a state Bar.
- 6.) *When respondents report two or more/multiple certification names in a single response.*
- a. Code under the appropriate code for the first listed credential.
 - b. Sometimes, respondents will note the name of one certification in the “certification name” cell and another certification in the “type of work” cell. In this situation, refer only to the credential listed in the “certification name” cell when coding the certification field.
- 7.) *Using information from both certification name and type of work.* As noted above, you should always read both the certification name and type of work provided by the respondent. Generally you’ll end up looking to certification name as your first source of information about the certification field; and type of work will generally be used as supporting evidence. Additional guidelines include:
- a. Sometimes the provided certification name will not be specific enough to be sure where to code it. In these cases, refer to the kind of work the respondent says it is for to see if that response provides enough detail to determine the appropriate coding assignment.
 - i. If type of work also does not provide enough detail, code this in the “other” code for that category whenever possible. When there is not enough detail for even this to be possible (e.g., type of work is blank), place the case in the “cannot determine placement” (“-8”) code.
 - ii. If the information provided in the certification name cell is specific enough to assign a code, then the information provided in the type of work cell is irrelevant. For example, if a respondent reports his credential name is “medical license”, it doesn’t matter what type of work he says he uses it for (put this in “health practitioner or provider other than nursing” (“10”)).
 - b. The nature of the work permitted by the certification is more important than exactly what kind of work/setting the respondent says he or she actually uses it for. For example:
 - i. Some certifications can be used in a wide variety of jobs, such as CPR (Cardiopulmonary Resuscitation). The purpose of the CPR certification is to provide health care-related support. However, a CPR certification can be used in a wide variety of non-medical professions/settings (teaching, lifeguarding, firefighting, etc.). CPR and other basic life support certifications should always

- be coded in the basic life support code, regardless of the type of work the person says it is used for.
 - ii. Some certifications that indicate that the respondent has skills in a certain industry but he or she also says that the type of work it is used for is a setting aligned with a different industry: For example, some respondents may have business-related certifications that they use in health-care-related businesses. These should be coded in the other business code – not in a health-care code.
 - iii. Sometimes there will be inconsistent/illogical reporting by respondents. Some respondents will likely indicate they use the certification for a type of work that does not make sense based on the name of the certification. It is possible the respondent is not working in a field where he or she directly uses the certification and misunderstood the type of work question to be asking about the kind of work he or she currently does. In these cases, give preference to the information reported in the certification name variable. For example, a respondent might report having a real estate license but report the type of work it is for as plumbing. This should be coded under “real estate” (“8”).
- c. Occasionally the respondent might only report the kind of work the certification is for (leaving the name item blank). In these cases, you should code based on the information provided for this item.

Flagging Difficult Certifications

Please flag any case that is difficult to code or for which you feel uncertain of your response. This will trigger expert review to assign a final code (though you should still provide your best guess at the correct code).

Coding Taxonomy and Manual

Table 1. Taxonomy Summary

Field	Code
Science, engineering, and mathematics	
Architecture: Use this code for architecture certifications. Do not include urban planning, interior design, or surveying (put in “other fields” (27)). See “does not include” in the manual below for certifications that include the word architecture but should be coded elsewhere.	1
Engineering: Use this code for engineering certifications. See “does not include” in the manual below for certifications that include the word engineering but should be coded elsewhere.	2
Computers and information technology: Use this code for certifications in computer system and computer hardware-related certifications, software-related certifications, certifications in the use of specific software programs, and other computer-related certifications. Do not include certifications in fields that make heavy use of computers but are not specifically about the functioning of computer hardware, software, networks, etc.	3
Other science and mathematics: Use this code for science- or mathematics-related certifications that do not fit into any of the above categories, such as chemist or geologist. Do not include social sciences.	4
Business	
Accounting: Use this code for certifications in the field of accounting. Accounting is mainly concerned with budgets, audits, taxes and business financial operations. See description of “finance” code (7) to understand distinction between accounting and finance.	5
Other business: Use this code for business certifications that are not for accounting. For example, include certifications related to managing or coordinating organizations, projects or staff. Also use this code for certifications that are related to business operations or business support.	6
Finance, insurance, and real estate	
Finance or insurance: Use this code for certifications in insurance or finance. Financial fields are usually concerned with financial products such as stocks that are available to investors. Don’t include credentials in accounting or business management here (put these in the business codes).	7
Real estate: Use this code for certifications in the real estate industry, such as real estate brokers and appraisers.	8
Health care	
Basic life support: Use this code for basic first aid and life support-related certifications, such as CPR or basic life support (BLS). These are more general life support skills that might be learned or used even by those outside of the medical field. Code them here regardless of the type of work the person says they are used for (e.g., even if the person says it is used as part of their job as a teacher, code the certification here). Do not code EMT, paramedic, or advanced life support here; put these in “other health care” (12).	9
Health care practitioner or provider other than nursing: Use this code for certifications that provide authorization to practice medicine, such as medical license, physician assistant or pharmacist license. These are typically held by medical doctors. Do not code medical specialty certifications held by physicians, such as surgeon or radiologist, here (put in “other health care” (12)).	10
Nursing: Use this code for general nursing licenses, such as LPN or RN. Do not include nurse practitioners (NP) (put in “health care practitioner or other provider” (10)). Do not code certifications for nursing specialties, such as pediatric nursing, here (put in “other health care” (12)). Do not include credentials that enable personnel to work under the guidance of a nurse, such as nursing assistant or nursing aide (put these under “other health care” (12)).	11
Other health care. Use this code for any health care related certifications that do not fit into the above health care codes. Code health care aides/assistants (e.g., dental assistant, nursing assistant) and	12

<i>technicians/technologists here (e.g., radiology technician). Code medical-related therapists here (e.g., physical therapist). Use this code for nursing and practitioner specialty certifications (e.g., board certified surgeon, pediatric nursing). Put certifications here that refer to a medical specialty but do not make it clear what type of work they are for (e.g., simply writing “radiology”). Do not include management/office support for the health care field such as hospital administration (put in “other business” (6)), transcription (put in “other business” (6)), or billing/coding (put in “finance or insurance” (7)).</i>	
Personal care and services	
<i>Cosmetology: Use this for non-medical certifications focused on providing services that improve a person’s appearance (hair, skin, nails).</i>	13
<i>Childcare: Use this for certifications focused on providing care for young children. Include certifications for teaching preschool.</i>	14
<i>Other personal care and services: Use this for certifications related to providing services to individuals that do not fit into the codes above, such as personal trainer, chef/baker, or funeral director. Do not include fitness instructors here (put in “other instruction and training” (22)). Do not include more public/social/community focused service, such as law, protective service, or counseling – put those under the “public and social services” codes.</i>	15
Public and social services	
<i>Law or legal support: Use this code for certifications related to the practice of law.</i>	16
<i>Public safety: Use this code for certifications in fields related to law enforcement, fire/rescue, and ensuring public safety (traffic control, flight attendant).</i>	17
<i>Social work or counseling: Use this code for certifications in fields related to providing social assistance or counseling services.</i>	18
<i>Environmental, water, and food safety: Use this code for fields that are related to environmental or water sanitation (such as wastewater, pest control), or to ensuring proper food handling. Don’t code chef/baker certifications in this category (put in “other personal care and services” (15)).</i>	19
<i>Other public or social services: Use this code for other public or social services that do not fit any of the codes listed above, such as notary public or religious ordination.</i>	20
Teaching and Instruction	
<i>K-12 teaching: Use this code for fields related to providing instruction mainly within a K-12 school environment. Include certifications in fields that are taught in both K-12 and adult populations, even if they do not specify what age they teach (e.g., ESL, art). Do not include certifications for teaching preschool (put in “childcare” (14)) or post-secondary education (put in “other instruction and training” (22)).</i>	21
<i>Other instruction and training: Use this code for teaching credentials outside of the K-12 environment. Include basic adult education teaching credentials here. Include skills instruction here (e.g., flight instructor, Microsoft Excel instructor, yoga instructor).</i>	22
Trades	
<i>Construction: Use this code for fields related to construction and skilled trades used in construction, such as plumbing or electrician.</i>	23
<i>Vehicle maintenance/installation/repair: Use this code for fields related to the adjustment, maintenance, part replacement, installation, and repair of a vehicle (automobile, plane, or boat).</i>	24
<i>Transportation or materials moving: Use this code for fields concerned with transporting people or materials, such as CDL (commercial driver’s license,) pilot’s license, or crane operator.</i>	25
<i>Other trades: Use this code for any trade fields that do not fit any of the codes above. For example, code certifications here related to maintenance/installation/repair that is not specifically for vehicles. Code certifications related to production here as well (those concerned with setting up, operating, and tending of machines and hand production work, usually in factory).</i>	26

Other fields: Use this code for responses that clearly refer to a field of certification but the field does not fit any of the above 27 codes.	27
Cannot determine placement: Use this code if there is not enough information to make a specific field determination because the response is too vague to determine any field code (e.g., a string of numbers, the respondent's name), or to decide between two field codes (e.g., "paraprofessional" without reference to a particular type of work would be coded here because this credential can be used in both health and education fields, so it is not possible to assign a specific field code).	28

Detailed Codebook

SCIENCE, ENGINEERING, AND MATHEMATICS

Note: Drafting can apply to architecture and engineering. If the respondent just writes “drafting” and does not specify whether it is for architecture or engineering, look at what type of work he/she says it is for. If that is inconclusive, code the certification under “engineering” (“2”).

1. Architecture. *Use this code for architecture certifications. Do not include urban planning, interior design, or surveying.*

Includes:

- *Architecture:* Architect/ure, Licensed Architect, Registered Architect (RA), NCARB (National Council of Architectural Registration Boards), landscape architect
- *Architectural drafting*

Does not include:

- Certified Irrigation Designer (CID) (put in “other fields” (“27”))
- Professional surveyor, Land surveyor (put both in “other fields” (“27”))
- Planner/Urban Planner (AICP; put in “other fields” (“27”))
- Certified document imaging architect (CDIA), network architect, system architect (put both in “computers and information technology” (“3”)); *note the IT industry has co-opted the word architect for their occupations that build computer systems*
- Drafting that does not specify architecture (put in “engineering” (“2”))

2. Engineering. Use this code for engineering certifications. See “does not include” for certifications that include the word engineering but should be coded elsewhere.

Includes:

- *General engineering:* Engineer/ing, Professional Engineer (PE), Engineer in Training (EIT), Engineer intern (EI)
- *Engineering specialties:* Civil Engineering, Mechanical Engineer, Electrical engineering, Biomedical engineer, Certified Manufacturing Engineer (CMfgE), SME (Society of Manufacturing Engineers), Civil Engineering, Structural Engineer, Data Systems Engineer
- *Other engineering:* Certified Manufacturing Technologist (CMfgT), Nondestructive Testing (NDT; Magnetic and Penetrant Testing), Water-Based Systems Layout
- *Engineering drafting, mechanical drafting, electrical drafting; if respondents provide “drafting” but do not specify what kind of drafting it is, put it here.*

Does not include:

- Software Engineering (put in “computers and information technology” (“3”))
- Stationary Engineer (put in “other trades” (“26”))
- Certified Quality Engineer (CQE; put in “other business” (“6”))
- Hoisting engineer (put in “transportation and materials moving” (“25”))
- Network Engineer, Certified Linux Engineer (CLE), Novell Certified Engineer (NCE) (put in “computers and information technology” (“3”)); note the IT industry also has co-opted the word engineer for several of their occupations

3. Computers and information technology: Use this code for certifications in computer system and computer hardware-related certifications, software-related certifications, certifications in the use of specific software programs, and other computer-related certifications. Do not include certifications in fields that make heavy use of computers but are not specifically about the functioning of computer hardware, software, networks, etc.

Includes:

- *Computer networking:* Network+, Server+, Cisco Certified Entry Networking Technician (CCENT), Network Engineer
- *Computer administration:* Certified Linux Administrator/Professional/Engineer (CLA/P/E), Novell Certified Administrator/Professional/Engineer (NCA/P/E)
- *Computer security:* Security+, Computer Advanced Security Practitioner (CASP), Cisco Certified Networking Associate/Professional Expert: Security (CCNA/P/IE), Certified information systems security professional (CISSP), Symantec certification
- *Computer operating systems:* A+ (A plus), Microsoft Certified Solutions Associate/Expert (MCSA/E), Microsoft Technology Associate (MTA)
- *Computer applications:* Microsoft Office Specialist (MOS), TIBCO (The Information Bus Company)
- *Computer design/programming:* Software Engineering, Microsoft Certified Solutions Developer (MCSAD), Cisco Certified Design Associate/Professional/Expert (CCDA/P/E), Java, Oracle, COBOL, computer game development/design
- *Computer software:* Microsoft Office, Epic, Casper
- *Other IT:* Certified document imaging architect (CDIA), Information Technology Infrastructure Library (ITIL), computer science, database administrator

Does not include:

- Certified Coding Specialist (CCS put in “finance or insurance” (“7”))
- Computer Numerical Control (CNC) Programmer (put in “other trades” (“26”))
- Adobe Certified Instructor (ACI), Microsoft Certified Trainer (MCT) (put in “other instruction and training” (“22”))
- Credentials in fields that make heavy use of computers but are not specifically about the functioning of computer hardware, software, networks, etc. (put in the code associated with that field).

4. Other science and mathematics: *Use this code for science-or mathematics- related certifications that do not fit into any of the above categories, such as chemist or geologist. Do not include social sciences.*

Includes:

- *Life and physical sciences:* Professional geologist, Certified microbiologist (National Registry of Certified Microbiologists (NRCM)), Clinical chemist, Clinical chemistry technologist, toxicological chemist, toxicological chemistry technologist, National Registry of Certified Chemists (NRCC), Certified biometrics professional, Geographic Information Systems (GIS), broadcast meteorology, gemologist, social scientist

BUSINESS

5. **Accounting:** Use this code for certifications in the field of accounting. Accounting is mainly concerned with budgets, audits, taxes and business financial operations. See description of finance code (7) to understand distinctions between accounting and finance; also see “does not include” for certifications that include the word auditing but should be coded elsewhere.

Includes:

- *Accounting:* Certified Public Accountant (CPA), Certified Management Accountant (CMA), Enrolled Agent (EA), Certified Bookkeeper, Certified Payroll Professional (CPP), Enrolled agent, Tax assessor
- *Auditing:* Certified Internal Auditor (CIA)

Does not include:

- Financial work not specifically related to accounting or auditing (e.g., Chartered Financial Analyst (CFA), Certified Financial Planner (CFP), Chartered Financial Consultant (ChFC)); put all of these in “finance or insurance” (“7”))
- Certified Quality Auditor (put in “Other business” (“6”)), Energy Auditor (put in “construction” (“23”))

6. **Other business:** Use this code for business certifications that are not for accounting. For example, include certifications related to managing or coordinating organizations, projects or staff. Also use this code for certifications that are related to business operations or business support.

Includes:

- *Management:* Project Management Professional (PMP), Certified Business Manager (CBM), Medical Manager, Registered Health Information Administrator/Technician (RHIA/RHIT), Agile, ITIL, food manager, scrum master, CMRP, Certified/Professional Property/Residential Manager (CPM)
- *Administration:* hospital administrator, school administrator, principal, superintendent
- *Business operations:* Six Sigma (Black Belt, Green Belt, etc.), Certified Quality Engineer (CQE), Certified Quality Auditor (CQA), marketing, sales, automobile sales, purchasing (e.g., Massachusetts, Certified Public Purchasing Official)
- *HR:* Professional in Human Resources (PHR), Senior Professional in Human Resources (SPHR)

- *Business support:* Certified Administrative Professional (CAP), Medical Administrative Assistant, Certified Medical Office Assistant, Certified Healthcare Documentation Specialist, , Certified Healthcare Access Associate (CHAA), secretary, administrative services
- *Other business:* Federal Acquisition Certification in Contracting (FAC-C), Certified HIPAA Compliance Officer (CHCO), Health care compliance
- Business licenses

Does not include:

- Most finance-related CNs (see “finance or insurance” (“7”) code below)
- Microsoft Excel, etc. (put in “computers and information technology” (“3”))

FINANCE, INSURANCE, OR REAL ESTATE

- 7. Finance or insurance:** *Use this code for certifications in insurance or finance. Financial fields are usually concerned with financial products such as stocks that are available to investors. Don't include credentials in accounting or business management here.*

Includes:

- *Insurance:* Certified insurance counselor (CIC), Insurance agent (CPIA), Insurance sales, Insurance adjuster, Insurance appraisal, Insurance agent, Property/life/casualty insurance, Chartered Life Underwriter (CLU), Certified insurance service representative (CISR), Chartered Property Casualty Underwriter (CPCU), Construction Risk and Insurance Specialist (CRIS), Medical Billing and Coding, Certified medical insurance specialist (CMIS), Certified Ambulance Coder (CAC), Certified coding specialist (CCS), Resident producer
- *Finance:* “Series” (e.g., Series 7 (general securities representative exam), Series 63 (uniform securities agent state law exam), Series 24 (general securities principal exam)), Chartered Financial Analyst (CFA), Certified Financial Planner (CFP), Chartered Financial Consultant (ChFC), Certified Mortgage Banker, Mortgage Broker, FINRA (Financial Industry Regulatory Authority), NASD (Natl Assn of Securities Dealers), Certified Financial Manager (CFM), securities, Certified Regulatory Compliance Manager

- 8. Real estate:** *Use this code for certifications in the real estate industry, such as real estate brokers and appraisers.*

Includes: Real Estate, Realtor, Real Estate Broker

Does not include: Certified Mortgage Banker or Mortgage Broker (put in “finance or insurance” (“7”)), Certified/Professional Property/Residential Manager (CPM) (put in “other business” (“6”))

HEALTH CARE

9. Basic life support: Use this code for basic first aid and life support-related certifications, such as CPR or basic life support (BLS). These are more general life support skills that might be learned or used by those outside of the medical field. Code them here regardless of the type of work the person says they are used for (e.g., even if the person says it is used as part of their job as a teacher, code the certification here).

Includes:

- CPR
- Basic Life Support (BLS)
- Automated External Defibrillator (AED)
- Basic first aid

Does not include:

- EMT (put in “other health care” (“12”))
- Paramedic (put in “other health care” (“12”))
- ALS, ACLS, PALS, NRP or other advanced life support (put in “other health care” (“12”))
- Lifeguarding (put in “public safety” (“17”))

10. Health care practitioner or provider other than nursing: Use this code for credentials that provide authorization to practice medicine, such as medical license, physician assistant, or pharmacist license. These certifications are typically held by medical doctors. Do not code medical specialties, such as internist, pediatrician, surgeon, or radiologist, here (put these under “other health care” (“12”)).

Includes:

- Medical license, MD
- Nurse Practitioner (NP)/Advanced Practice Registered Nurse (APRN)
- Physician Assistant (PA)
- Pharmacist, pharmacy intern
- Dentist, DDS, DMD
- Veterinarian
- Optometrist

Does not include:

- Certifications for medical specialties, such as internist, pediatrician, surgeon, or radiologist (put these in “other health care” (“12”)) (“board certified” is often a clue the respondent is reporting his or her specialty certification)
- Certifications that permit individuals to work as health care aides/assistants or technicians/technologists that support the work of health care practitioners (put these in “other health care” (“12”))
- Nursing licenses (put these in “nursing” (“11”))

11. Nursing: Use this code for specific nursing licenses, such as LPN or RN. Do not include nurse practitioners (NP) (put in “health care practitioner or other provider” (“10”)). Do not include things that enable personnel to work under the guidance of a nurse, such as nursing assistant or home health care aide (put these under “other health care” (“12”)). Do not code nursing specialties, such as pediatric nursing, here (put these under “other health care” (“12”)).

Includes:

- Licensed practical nurse (LPN), Registered Nurse (RN), Registered practical nurse (RPN), Licensed Vocational Nurse (LVN), nursing, professional nursing

Does not include:

- Specialty nursing credentials, such as pediatric nursing (put in “other health care” (“12”))

- Nurse assistants/aides: Certified Nurse Assistant, Certified Nurse Aide (put in “other health care” (“12”))
- Nurse Practitioner, Advanced Practice Registered Nurse (put in “health care practitioner or provider other than nursing” (“10”))

12. Other health care. Use this code for any health care related certifications that do not fit into the above health care codes. Code health care aides/assistants (e.g., dental assistant, nursing assistant) and technicians/technologists (e.g., radiology technician) here. Code medical-related therapists here (e.g., physical therapist). Use this code for nursing and practitioner specialty certifications (e.g., board certified surgeon, pediatric nursing). Put certifications here that refer to a medical specialty but do not make it clear what type of work they are for (e.g., simply writing “radiology”). Do not include management/office support for the health care field, such as hospital administration (put in “other business” (“6”)), transcription (put in “other business” (“6”)), or billing/coding (put in “finance or insurance” (“7”)).

Includes:

- Paramedic, Emergency Medical Technicians (EMT), EMS, EMR, medic
- Advanced life support (ALS), Advanced Cardiovascular Life Support (ACLS), Advanced Medical Life Support (AMLS), Pediatric Advanced Life Support (PALS), Emergency Pediatric Care (EPC), Neonatal Resuscitation Program (NRP), Prehospital Trauma Life Support (PHTLS)
- Nursing specialties (Cardiac rehabilitation nursing, pediatric nursing, rheumatology nursing, nurse-midwife, progressive care (PCCN) etc.)
- Physician specialties (surgeon, internist, radiologist, chiropractor, etc.)
- Dental specialties (orthodontist, periodontist, etc.)
- Technicians/technologists, such as Certified Nuclear Medicine Technologist (CNMT), American Registry of Radiologic Technologists (ARRT), Pharmacy Technician, Phlebotomy Technician/Phlebotomist, Radiological Technologist, Sonographer, Dental hygienist, Veterinary technology, Ultrasound, Medical imaging, Cytology, Optician, (medical) laboratory science
- Assistants/aides, such as Home Health Aide (HHA), Personal Aide, Certified Nurse Assistant (CNA), State tested nursing assistant (STNA), Certified Nurse Aide, Certified Medical Assistant (CMA), Registered Medical Assistant (RMA), Approved Medication Assistive Personnel, Approved Medication Administration Personnel (AMAP), Dental assistant, Veterinary assistant, Physical therapy assistant, radiology assistant (RA)

- Medical therapy, such as physical therapy, respiratory therapy, occupational therapy, massage therapy/therapists, speech therapy/pathology
- Other health care, such as Dietician/Nutritionist, Acupuncture, Clinical researcher, Certified Midwife, Athletic trainer

Does not include:

- Personal trainer (put in “other personal care and services” (“15”))
- Medical Manager, Registered Health Information Administrator, Health care compliance (put in “Other business” (“6”))
- Medical Billing and Coding, Certified medical insurance specialist (CMIS), Certified Ambulance Coder (CAC) (put these in “finance or insurance” (“7”))
- Medical Administrative Assistant, Certified Medical Office Assistant, Certified Healthcare Documentation Specialist, Certified Healthcare Access Associate (CHAA) (put in “other business” (“6”))

Note about physician/nursing specialties:

- *There are several medical/nursing specialties that could apply to more than one job type (e.g., pediatrics could be a nurse or a doctor); these are above and beyond a basic medical or nursing license.*
 - *When respondents report a physician or nursing specialty but do not make it clear what kind of health care job it is used for, code this as “medical specialty and other health care” (e.g., if a respondent says the certification name is “pediatrics” and the type of job is left blank).*
- *For doctors and nurses: If a specialty is listed in the certification name (e.g., board certified surgeon, pediatric nursing), code this as “other health care”.*
 - *Note the following distinction:*
 - *Certification name = medical license, work type = surgeon; field code = health care practitioner (“10”)*
 - *Here the respondent is noting he has a medical license. He also mentions he uses it as a surgeon, but we are focused on the fact that he reported a general license to practice medicine.*
 - *Certification name = surgeon, work type = practice medicine; field code = other health care (“12”)*
 - *Here the respondent is reporting his CN is for a physician specialty. Since this is not a basic medical license, we will code it in other health care.*

PERSONAL CARE AND SERVICES

13. Cosmetology. *Use this for non-medical certifications focused on providing services that improve a person's appearance (hair, skin, nails).*

Includes:

- Cosmetologist
- Barber
- Nail Specialist/Technician, Nail Extensions
- Esthetician
- Hairdresser, Hair Stylist, Hair Design
- Manicurist/Pedicurist
- Skincare Specialist
- Eyelash Extensions
- Electrologist

14. Childcare. *Use this for certifications focused on providing care for young children. Include certifications for teaching preschool.*

Includes:

- Daycare Provider
- Childcare Provider
- Family Childcare Provider
- Child Development Associate (CDA)
- Early Childhood Education/Development
- Day Care License
- Preschool License

15. Other personal care and services. *Use this for certifications related to providing services to individuals that do not fit into the codes above, such as personal trainer, chef/baker, or funeral director. Do not include physical fitness instruction. Do not include more public/social/community focused services, such as law, protective service, or counseling – put those under “public and social services”.*

Includes:

- Mortician, funeral director
- Personal chef, master chef, baker
- Bartending license
- Travel agent
- Dog grooming
- Personal trainer
- Fishing guide
- Pet sitting
- Health/wellness coach

Does not include:

- Food Handling/Sanitation (put in “environment, water and food safety” (“19”))
- Physical Therapist, Massage (put in “other health care” (“12”))
- Law or legal support (put in “law or legal support” (“16”))
- Counseling (put in “social work or counseling” (“18”))
- Interpreter (put in “other fields” (“27”))
- Yoga instructor or other fitness instruction (put in “other instruction and training” (“22”))

PUBLIC AND SOCIAL SERVICES

16. Law or legal support: *Use this code for certifications related to the practice of law.*

Includes:

- Lawyer, Attorney, Juris Doctor, JD, [State] Bar, license to practice law
- Mediator, court magistrate, Court judge (Supreme Court, 5th Court of Appeals, etc.)
- Paralegal, legal secretary, process server, court reporter, stenographer
- Certified fraud examiner

Does not include: Police officer, security officer, corrections officer (put in “public safety” (“17”))

17. Public safety: *Use this code for certifications in fields related to work in law enforcement, fire/rescue, and ensuring public safety (traffic control, flight attendant).*

Includes:

- *Law enforcement/security:* law enforcement, security officer/guard, patrolman, corrections officer, federal police officer, security officer/guard, criminal/private investigator, peace officer, investigative agent, customs inspector
- *Fire and rescue:* firefighter, fire investigator, rescue technician, fire marshal, lifeguarding
- *Workforce safety:* health/safety officer, OSHA
- *Other:* Flight attendant, traffic control, air traffic control, aircraft dispatcher, fire sprinkler inspection, animal control

Does not include:

- EMT, paramedic, advanced life support (put in “other health care” (“12”))
- Basic life support (put in “basic life support” (“9”))
- Hazmat (put in “environmental, water, and food safety” (“19”))

18. Social work or counseling: Use this code for certifications in fields related to providing social assistance or counseling services.

Includes:

- *Social Work:* licensed independent/clinical social worker (LCSW), licensed master social worker (LMSW), licensed advanced practice social worker (LAPSW), certified social work case manager (C-SWCM), licensed baccalaureate social worker (LBSW), family life educator
- *Counseling/Psychology:* counselor, mental health counselor/practitioner, licensed psychologist, counselor supervisor, clinical psychologist, licensed mental health practitioner (LMHP), Christian counselor, life coach
- *Specialized Counseling/Psychology:* licensed alcohol and drug addictions counselor, rehabilitation counselor, licensed marriage and family therapist (LMFT), certified addiction counselor/professional (CAC/CAP), sex educator and counselor, licensed marriage and family intern therapist, mental health rehabilitation technician, guidance counselor, school counselor, pupil counseling, academic therapist, HIV Pre/Post Test Counseling, music therapy, genetic counselor, Board Certified Behavior Analyst(Bcba), credentialed prevention professional

Does not include:

- Psychiatrist (put in “health care practitioner or provider other than nursing” (“10”))
- Certified Special Needs Coordinator (put in “other business” (“6”))
- Interpreter (put in “other fields” (“27”))
- *Note that the word “advisor” can also be used to refer to an expert in a field who provides advice/counsel; that kind of advising should not be coded here. It should be coded under the field in which the certification qualifies the person to provide advice/counsel (e.g., “crop advisor” would go under “other fields” (“27”) because the certification qualifies the recipient to provide advice related to agriculture).*

19. Environmental, water, and food safety: Use this code for fields that are related to environmental or water sanitation (such as wastewater, pest control), or to ensuring proper food handling. Don’t code chef/baker certifications in this category (put in “other personal care and services” (“15”)).

Includes:

- Food preparation, food safety, food protection, Serve Safe, food sanitation
- Food service/handlers

- Water operator, wastewater, pesticide application, pest control, commercial applicator license, back flow inspector, waste water plant treatment
- Hazardous material (haz mat), asbestos inspector, Hazwoper OSHA training , septic tank, lead certified

Does not include:

- Chef/baker (put in “other personal care and services” (“15”))

20. Other public or social services: *Use this code for other public or social services that do not fit any of the codes listed above, such as notary public or religious ordination.*

Includes:

- Notary public
- Religious ordination: pastor, minister, Christian educator, interim ministry specialist
- Librarian, library science
- Marriage certificate

TEACHING AND INSTRUCTION

21. K-12 teaching: Use this code for fields related to providing instruction mainly within a K-12 school environment. Do not include certifications for teaching preschool (put in “childcare” (“14”)) or post-secondary education (put in “other instruction and training” (“22”)).

Includes:

- *General:* K-12 education, teaching certification, teaching certificate, educator license, Masters in education, elementary school teacher (grades 1-6, etc.), high school teacher (secondary school), substitute teacher, teaching assistant, paraprofessional that notes it is specifically for teaching, Pre-K mentioned alongside other grades (e.g., “preK-6th grade teaching license”)
- *Specializations:* alternative education, art teacher, special education, , science teacher
- If the respondent reports a type of teaching that can be done both for K-12 and other populations but does not mention the age of the students, assume it is for K-12 and place it here (e.g., ESL teacher, art teacher); if the respondent indicates he or she teaches adults, place it in “other instruction and training” (“22”)).
- If the respondent reports a field that is typically associated with K-12 education (e.g., just “ESL” or “learning disabilities” or “special education”) but does not explicitly include job type (e.g., the word “teacher”), assume it is for a K-12 teacher and place it here.

Does not include:

- Early childhood education/development/preschool (put in “childcare” (“14”)); put teaching that references pre-K only in “childcare” (“14”))
- Paraprofessional that does not specify what kind of work it is for (put in “cannot determine placement” (“28”))
- Put other kinds of instruction and training that are intended as skills development for adults or are outside of a K-12 setting in “other instruction or training” (“22”), such as police academy instructor, CPR instructor, flight instructor, CDL instructor, diabetes educator, personal driving instructor, yoga instructor, aerobics instructor, piano teacher
- Credentials for positions that are related to teaching but are not directly for teachers or teaching assistants (e.g., curriculum developer, special education consultant, reading specialist, educational specialist); put these in “other fields” (“27”).

22. Other instruction or training: Use this code for teaching credentials outside of the K-12 environment. Include basic adult education teaching credentials here. Include skills instruction here (e.g., flight instructor, Microsoft Excel instructor, yoga instructor).

Includes:

- Adult education, postsecondary education
- Skills instruction / training outside of K-12 environment: driving instructor, flight instructor, Microsoft Excel Instructor, diabetes educator, CPR instructor, Adobe trainer, fitness instruction, management training

Does not include:

- Teacher's license, teaching certificate, etc. (put in "K-12 teaching" ("21"))
- Preschool teacher (put in "childcare" ("14"))
- For instruction that can occur both in or out of a K-12 environment (e.g., ESL, art), put it in "K-12 teaching" ("21") if the respondent does not indicate that it takes place with adults

TRADES

Note: Many trade licenses may be referred to as either Journeyman or Masters licenses/certifications.

23. Construction: *Use this code for fields related to construction and skilled trades used in construction, such as plumbing or electrician.*

Includes:

- *Energy-related construction:* LEED, LEED Green Associate, LEED AP, LEED fellow, Registered Professional Landman (RPL), Renewable Energy Technology
- *General building/construction:* Building Analyst (BA), Construction Safety, General Contractor (Class A, B, or C), Demolition (C21), home inspection, home improvement contractor, residential builder, Building Inspector, certified construction specifier
- *Specific Trades:* Masonry, Framer, Scaffolding, Electrician, sheet metal, Roofing, Stone and Stucco, Gas and Plumbing, pipefitter, steamfitter, carpenter certification, ironworker, Electrical, registered roof observer
- *Electrical:* Electrician, electrical. If you see the word “electric” as part of a certification name, please make sure it is not listed somewhere else in the manual (e.g., electrical engineering, electrical hydraulics). If you do not see the certification listed elsewhere and are not sure its meaning, please search for it online. Only place electrical certifications in a code other than construction when (1) it is already listed elsewhere else in the manual (e.g., electrical engineering, electrical hydraulics), (2) an online search yields clear evidence that the credential is not for electrical work related to construction (e.g., it is for production, mechanics, or other trades).

Does not include:

- HVAC, air condition and refrigerant, air condition contractor (put these under “other trades” (“26”))
- Welding (put this under “other trades” (“26”))
- Several exclusions for including “electric” (e.g., electrical engineering, electrical hydraulics) as listed elsewhere in the manual

24. Vehicle maintenance/installation/repair: *Use this code for fields related to the adjustment, maintenance, part replacement, installation, and repair of a vehicle (e.g., automobile, plane, or boat).*

Includes: car safety inspector, auto repair/mechanic (ASE, brake repair, refrigerant, SAC, painting, AC), diesel engine repair, electrical hydraulics and brakes, aircraft painter, aviation mechanic, airframe and power plant license (aircraft maintenance), marine mechanic, marine mechanical technology

Does not include: Any kind of maintenance/installation/repair that is done on something other than a vehicle.

25. Transportation or materials moving: *Use this code for fields concerned with transporting people or materials, such as CDL (commercial driver's license,) pilot's license, or crane operator.*

Includes:

- Driver's license, pilot's license/commercial flight license, Commercial Driver's License (CDL/18 wheeler truck driver/limo driver/school bus driver), ship captain's license/boat license (coast guard certification), chauffeur license (taxi driver), remote control operator (locomotive operator/engineer), Fire Truck Operator/Driver
- Fire Truck Operator/Driver
- Crane Operator (NCCCO), Forklift/Manlift Operator/Heavy Equipment Operator (Aerial License, Nissan technician), heavy equipment operator, hoisting engineer/operator

Does not include:

- Maintenance on vehicles (put in "vehicle maintenance/installation/repair" ("24"))
- Aeronautical Engineer (put in "engineering" ("2"))
- Flight instructor, ground instructor, CDL instructor (put in "other instruction and training" ("22"))

26. Other trades: *Use this code for any trade fields that do not fit any of the codes above. For example, code certifications here that are related to maintenance/installation/repair that is not specifically for vehicles. Code certifications related to production here as well (those concerned with setting up, operating, and tending of machines and hand production work, usually in factory).*

Includes:

- *Heating/HVAC/refrigeration maintenance/installation/repair:* HVAC, testing and balancing (TAB), air condition and refrigerant, air condition contractor, oil heat technician, ice machine repair, Oil Burnman/Burner, Ventilation/Warm Air, Indoor Air Quality, Building Manager System Engineering

- *Other maintenance/installation/repair:* building maintenance, alarm/burglar alarm installer, fiber optics, cable television technician (CATV), fiberglass, pool operator, gunsmith (gun repair), violin repair, FASA/BASA, FCC general class operator (radio), general class radiotelephone operator license (GROL), broadcasting
- *Production:* Stationary Engineer (Boiler Engineer/Boiler Installer), welding/welder/iron worker, CNC machining (computer operator for metal fabrication), nuclear reactor operator, production and inventory management, soldering (wires and terminals), licensed upholster (furniture), machine operator, millwright, welding, machine shop tool technology, gage calibrator
- CEM (Certified Energy Manager)

Does not include:

- Manufacturing Engineering or Manufacturing technologist/CMfgT, Power Plant Engineer, Aeronautical engineer (put in “engineering” (“2”))
- Maintenance on vehicles (put in “vehicle maintenance/installation/repair” (“24”))

OTHER FIELDS

(27) Use this code for responses that clearly refer to a field of certification but the field does not fit any of the above “26” codes.

Includes (for example): Planner/Urban Planner (AICP), professional surveyor (PS), land surveyor, Certified Irrigation Designer (CID), scuba diving, interior design, arts, agriculture, arborist, computer graphics/graphic design, interpreter, sign language, translation, permaculture design, horticulture, gun/pistol/firearm license/permit, education credentials not specifically for teachers or teaching assistants (e.g., reading specialist, special education consultant, curriculum developer, educational specialist), Associate Coach Certification (ACC), forestry, John C. Maxwell certification program

CANNOT DETERMINE PLACEMENT

(-8) Use this code if there is not enough information to code the credential under any code (e.g., a string of numbers, the respondent’s name) or if there is not enough information to decide between two codes (e.g., “paraprofessional” without reference to a particular type of work would be coded here because this credential can be used in both health and education fields, so it is not possible to assign a specific field code).

Includes (for example): 12345, Joe Smith, I am retired; the following certification names without additional detail provided in the type of work field: paraprofessional, coaching, PhD

DIFFICULT FLAG

Use this flag to indicate that you thought this was a particularly difficult case that you had trouble with. This will trigger expert review. You should still assign a field code.