

8. COMPARISON OF NHES:2001 ESTIMATES WITH OTHER DATA SOURCES

Introduction

This chapter presents a comparison of selected estimates from the 2001 National Household Education Survey (NHES:2001) with estimates from previous NHES collections, the Current Population Survey (CPS), and other relevant extant data sources. The comparisons provide an indication of the reasonableness of selected NHES:2001 estimates. Where differences were found between NHES:2001 estimates and those from other sources, possible reasons are presented. All differences noted are significant at the 0.05 level; a Bonferroni adjustment was made for multiple comparisons.⁴⁷

The NHES:2001 was designed to cover a wide range of educational topics in three surveys, the Early Childhood Program Participation (ECPN-NHES:2001) survey, the Before-and After-School Programs and Activities Survey (ASPA-NHES:2001), and the Adult Education and Lifelong Learning Survey (AELL-NHES:2001). The Screener collected information about household composition and determined which members of the household were eligible for which extended interview(s), if any. Because the NHES:2001 covered a wide variety of topics relating to education, no single data source can be used for comparative purposes. The various data sources used for this comparative analysis were selected because they included topical information and samples similar to those used in one or more of the NHES:2001 interviews.

Populations of Interest and Data Sources

The estimates presented in this chapter reflect answers given by respondents representing three populations of interest. First, the NHES:2001 collected information about children age 0 through 6 who were not yet enrolled in kindergarten. Information on this population is reflected in parent responses to ECPN survey items. Second, the NHES:2001 collected data on children in kindergarten through grade 8, age 15 or younger, whose parents had completed an ASPA interview. The third population of interest was civilian, noninstitutionalized adults ages 16 and older who were not enrolled in grade 12 or below. These respondents reported on a number of adult education items. Estimates in this chapter include those from the ECPN, ASPA, and AELL surveys.

⁴⁷The Bonferroni adjustment for multiple comparisons is discussed in numerous books and articles on statistical analysis. See, for example, Neter, Wasserman, and Kutner (1983), p. 158.

Appendix B contains descriptions of each survey with which the NHES estimates are compared. The descriptions include information about the topics and populations covered, sample sizes, methods of survey design and administration, dates and periodicity of the surveys, sponsorship of the studies, and availability of the data. In the sections that follow, the data sources used to compare to each survey component are described briefly. Estimates from the NHES:1993, NHES:1995, NHES:1996, NHES:1999, and the CPS supplements contained in this chapter were generated from their respective data files; estimates from the other surveys were obtained from published sources. All data reported are weighted estimates.

Methodological Considerations in Data Comparisons

Sample and nonsampling errors, sample sizes, methods of survey administration, the timing of surveys, and unit response rates all affect the data collected and any comparisons made (Bradburn 1983; Groves 1989). In addition, question wording variation, question order, question context, and respondent recall can have a major impact on survey responses (Bradburn 1983; Groves 1989). As a result, it is important to note some general methodological issues.

Every survey, including the NHES:2001, is subject to both sampling error and nonsampling error. Sampling errors occur because the data are collected from a sample rather than a census of the population. Because the sample of telephone households selected for the NHES:2001 is just one of the many possible samples that could have been selected, estimates produced from the NHES:2001 sample may differ from estimates that would have been produced from other samples. In the same way, the data from the other surveys used for comparison are also subject to sampling error. Nonsampling error, however, are errors made in the collection and processing of data and may be caused by population coverage limitations and data collection, processing, and reporting procedures. The sources of nonsampling error are typically problems like unit and item nonresponse, the differences in respondents' interpretations of the meaning of the questions, response differences related to the particular time the survey was conducted, mistakes in data preparation, and response bias. Although the NHES surveys are designed to account for sampling error and minimize nonsampling error, the estimates presented in this chapter from the NHES and from other data sources are inclined to both types of error.

Population coverage is an issue that arises in the examination of results of any telephone survey because households without telephones are excluded from the sample. Approximately 5 percent of adults age 16 years or older and not enrolled in elementary or secondary school, about 8 percent of infants and preschoolers (children not yet enrolled in kindergarten), and about 6 percent of children

enrolled in kindergarten through grade 8 live in households without telephones (based on independent tabulations of the October 1999 Current Population Survey). Low-income persons, minority group members, and persons who do not own their own homes are more likely than others to live in nontelephone households (Groves and Kahn 1979; Thornberry and Massey 1988; Anderson, Nelson, and Wilson 1998).

The NHES:2001 data were statistically adjusted to reduce the effects of population undercoverage due to lack of telephone ownership. As a result, the estimates from the NHES:2001 sum to the total number of persons in all households, not just those in households with telephones.⁴⁸ Although these statistical adjustments may be useful in reducing biases in aggregates for the whole population, more serious biases may exist for estimates of segments of the population with relatively low telephone coverage rates (Brick, Burke, and West 1992).

Apart from population coverage, responses to survey items can vary depending upon the method of survey administration. Data collection modes differed for several of the survey sources used in this chapter. For example, the NHES:2001, NHES:1999, NHES:1996, NHES:1995, and the NHES:1993 were conducted by telephone in centralized facilities. The CPS surveys were primarily conducted by telephone from interviewers' homes, but about one-fourth to one-third of CPS interviews were conducted in person. Also, the context of the survey questions may produce different responses to similar questions. For example, surveys from the Department of Education that focus on educational issues may have similar items but different responses when compared to those from the Bureau of Labor Statistics, where the focus is on issues related to the labor force. These differences in mode and survey context may underlie some of the differences across survey estimates that are presented in this chapter.

Timing of survey administration in terms of the years in which surveys were conducted or the time of year they were administered also may affect responses. Where possible, estimates from surveys that were administered close in time to the NHES:2001 have been provided. However, in some cases, time gaps exist between administrations of the NHES:2001 and the extant sources most comparable for certain items. In such cases, the historical context of the surveys may vary substantially.

Another important consideration is the time of the year when the data are collected, which can affect responses to questions related to specific topics such as school attendance. For example, the relationship between age and grade in school can be affected by the time of year data are collected. A child at a given age in October (the time of the CPS Education Supplement) is most likely enrolled in the

⁴⁸ Similar statistical adjustments were made for the NHES:1999, NHES:1996, NHES:1995, and the NHES:1993 data, which are also included in comparisons in this chapter.

grade appropriate for his or her age during the fall. About one-sixth of those children, however, will have turned a year older by the new year, and would appear in the NHES:2001 as being a year older.

In this analysis, the NHES:2001 estimates have been adjusted to account for differences in the timing of the surveys, if appropriate. For example, to facilitate meaningful comparisons between the CPS Education Supplement conducted in October and the NHES:2001 conducted in January to April, ages of children whose birthdays fell in October, November, or December in the NHES:2001 were recoded (for this comparative analysis only) to more closely match the CPS convention. Despite these adjustments, it is important to keep in mind that the data collection period can be an important factor to consider when comparing estimates.

Variation in unit response rates across surveys can also result in differences in the estimates. To the extent that nonrespondents are different from respondents, low unit response rates may introduce biases into the survey estimates. The NHES:2001 Screener unit response rate was 69.2 percent. The unit response rate for the ECPP survey was 86.6 percent; thus, the overall unit response rate for the ECPP survey was 59.9 percent (69.2 percent times 86.6 percent). For the ASPA survey, the unit response rate was 86.4 percent, and the overall unit response rate was 59.7 percent (69.2 percent times 86.4 percent). For the AELL survey, the unit response rate was 77.2 percent and the overall unit response rate was 53.4 percent (69.2 percent times 77.2 percent). The issue of unit response rates for the NHES:2001 is addressed more thoroughly in chapter 6. Unit response rates for the comparable data sources discussed in this chapter were CPS March 2000 85.6 percent; CPS October 1999 89.7 percent; and IPEDS 1997 94.7 percent. The unit response rates of the previous NHES surveys that are used as comparisons in this chapter included the NHES:1999, which had a Screener unit response rate of 74.1 percent, the Parent survey overall unit response rate was 66.7 percent, and the Adult Education survey overall unit response rate was 62.3 percent. The NHES:1996 had a Screener unit response rate of 69.9 percent and the Parent and Family Involvement survey had an overall unit response rate of 62.5 percent. The NHES:1995 had a Screener unit response rate of 73.3 percent, the ECPP survey overall unit response rate was 66.3 percent, and the Adult Education survey overall unit response rate was 58.6 percent. The NHES:1993 Screener unit response rate was 82.1 percent and the School Readiness survey overall unit response rate was 73.6 percent. In 1991, the NHES had a Screener unit response rate of 81.0 percent and the Adult Education survey overall unit response rate was 68.6 percent.

Variations in question wording and operational definitions between surveys are other potential sources of differences between estimates. These issues are discussed for each survey in conjunction with the comparisons presented later in this chapter.

Any NHES estimate of a characteristic not specifically controlled for in the raking adjustment would not be expected to match CPS totals for one or more of the reasons discussed above.

General Comments on the NHES:2001 Estimates

The estimates to be presented here are just some of the multitude of comparisons that could be made between NHES:2001 estimates and those of other sources using different variables and categorizations of those variables. When many comparisons are made, some will undoubtedly show statistically significant differences. The multiple comparison adjustments are made assuming that the only comparisons being made are those in the particular table. This approach is still useful because the main purpose is to explore the data to determine whether there are some substantial differences in estimates that need to be investigated further.

Methodology for Significance Testing

Wherever possible, comparisons in this chapter were examined to ensure that the differences discussed were statistically significant at the 95 percent level of confidence. For comparisons in which NHES:2001 data and data from previous NHES studies are involved, the standard errors of estimates could be obtained and are provided in the tables. However, standard errors were not always available for the estimates from published data. Approximate determination of possible significant differences was made under the assumption that the comparison data set had standard errors about the same as the NHES.

For example, statistical significance testing was conducted with the assumption that the standard error of the CPS estimates was the same as the standard error for the NHES:2001 estimates. Because the CPS used roughly the same number of sampled households as the NHES:2001, one would expect the CPS standard errors to be roughly equivalent to NHES:2001 standard errors. Therefore, it is reasonable to use the same standard errors for both surveys.

Due to large sample sizes, some relatively small differences (3 to 5 percent) may be significant when all cases are included in an analysis. AELL interviews, for example, yielded responses from 10,873 respondents. In other cases, such as estimates from the ECPP file, differences of 3 to 5 percent may not be significant because of somewhat smaller sample sizes (6,730) or larger numbers of comparisons.

Other Data Considerations

Imputation. As is true for most surveys, responses were not obtained for all the NHES:2001 data items for all interviews. Despite the high item response rate, all NHES:2001 missing data items were imputed.⁴⁹ The CPS estimates provided as comparison data also contain imputed data.

Studies using adult respondents also differed from the AELL-NHES:2001 in their age criteria for inclusion in the survey. The CPS includes respondents age 15 and older, whereas AELL-NHES:2001 adults were at least 16 years old. Again, whenever possible, NHES comparisons with these sources include estimates from subsamples that most closely match the extant source. However, when such analyses are not possible using the available data, sample age differences may complicate comparisons with different data sources.

⁴⁹The median item response rate for items in the ECPP, ASPA, and AELL surveys were 99.29, 98.35, and 99.34 percent, respectively.

ECPP, ASPA, and AELL Comparisons with CPS Estimates

The Current Population Survey

The Current Population Survey is a monthly household survey conducted by the Bureau of the Census to provide information about employment, unemployment, and other characteristics of the civilian noninstitutionalized population. The CPS respondent is a household member age 15 or older and the survey is conducted each month in a sample of approximately 50,000 households, with interviews for approximately 120,000 individuals. The U.S. Department of Education is a joint sponsor of the annual October supplement to the CPS, which provides specific information on educational topics.

CPS data from October 1999 were used for comparison with estimates from the NHES:2001 ECPP and ASPA surveys, while the AELL survey was compared against the CPS March 2000 estimates. At the time this analysis was conducted, the October 1999 supplement contained the most recent available CPS data regarding child care arrangements and data relating enrollment status and grade to age and the March 2000 supplement contained the most recent CPS data on age, race/ethnicity by educational attainment, industry, and occupation. The data comparisons CPS and the ECPP, ASPA, and AELL surveys of the NHES:2001 cover the key estimates including the topics of age of subjects of interviews, student grade, enrollment status, and school type, and age, sex, and highest level of educational attainment of the adult population.

Comparability of the NHES:2001 and 1999 CPS Distributions for Age of Persons

Table 8-1 shows NHES:2001 and 1999 CPS estimates of the age distribution of the population as indicated by the age of persons who were subjects of NHES interviews (i.e., children from birth to age 15 and enrolled in grade 8 or below and noninstitutionalized adults age 16 or older and not enrolled in grade 12 or below). On the whole, the estimates of the two surveys were consistent, differing by 1 percent or less.

Table 8-1. Percentage distribution for age of subjects of interviews: ECPP-NHES:2001, ASPA-NHES:2001, AELL-NHES:2001, and CPS:1999

Age category	ECPP-NHES:2001, ASPA-NHES:2001, and AELL-NHES:2001 ¹		CPS:1999
	Percent	s.e.	Percent
0 through 2 years.....	5	<0.1	5
3 through 5 years.....	4	<0.1	5
6 through 9 years.....	6	0.1	6
10 through 15 years ²	7	<0.1	7
16 through 19 years ³	3	0.2	3
20 through 29 years.....	14	0.2	14
30 through 39 years.....	16	0.3	16
40 through 49 years.....	16	0.3	16
50 through 59 years.....	12	0.2	11
60 or more years.....	17	0.2	17

¹ Estimates of children (age 0 through 15 and enrolled in 8th grade or below) were obtained from the Early Childhood Program Participation (ECPP) Survey, and the Before- and After-School Programs and Activities (ASPA) Survey. Estimates of adults (age 16 and older and not enrolled in 12th grade or below) were obtained from the Adult Education and Lifelong Learning (AELL) Survey. Parent respondents to the ECPP and ASPA Surveys are not included in calculations for adult estimates.

² Age category 10 through 15 years only includes students enrolled in grade 8 or below.

³ Age category 16 through 19 years only includes persons **not** enrolled in grade 12 or below.

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001; Before- and After-School Programs and Activities (ASPA) Survey of the NHES, 2001; and Adult Education and Lifelong Learning (AELL) Survey of the NHES, 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October 1999.

School enrollment and grade level by age. Tables 8-2 and 8-2A provide the NHES:2001 and 1999 CPS estimates and standard errors for estimates of enrollment and current grade level among 0- to 15-year-olds. Since the CPS estimates were gathered in October, the ages of children in the NHES:2001 were recalculated to reflect their ages as of September 30, 2000, rather than the NHES standard of December 31, 2000.

A comparison of the number of 5-year-old children in tables 8-2 and 8-2A revealed a shortfall of about 500,000 children of this age in the NHES:2001 estimates. This anomaly led to the investigation of the NHES:2001 weights, summarized in chapter 7 and described in more detail in appendix K. The investigation indicated that the NHES:2001 weighting procedures were correctly applied, and no alternative weighting approach was found to be superior to the original approach.

Table 8-2. Percentage distribution of children ages 0 through 15 not enrolled in school or enrolled in 8th grade or below: ECPP-NHES:2001, ASPA-NHES:2001, and CPS:1999

Child's age	Number of children (thousands)	Not enrolled	Child's current grade									
			Pre-school/nursery school	K	1	2	3	4	5	6	7	8
NHES:2001												
0.....	3,905	100										
1.....	3,850	100										
2.....	4,027	94	6									
3.....	3,845	55	44	1								
4.....	3,779	27	64	9	#							
5.....	3,522	1	7	86	6	#						
6.....	4,217	#	#	11	83	6	#					
7.....	3,839				15	79	6	#				
8.....	4,090				1	15	77	6				
9.....	4,343					1	21	73	6	#		
10.....	4,177						1	17	75	7	#	
11.....	3,940							1	19	74	6	#
12.....	3,873							#	1	20	74	5
13.....	3,674								#	1	19	80
14.....	861									1	10	89
15.....	86								7		4	89

See notes at end of table.

**Table 8-2. Percentage distribution of children ages 0 through 15 not enrolled in school or enrolled in 8th grade or below: ECPP-NHES:2001, ASPA-NHES:2001, and CPS:1999—
Continued**

Child's age	Number of children (thousands)	Not enrolled	Child's current grade									
			Pre-school/nursery school	K	1	2	3	4	5	6	7	8
CPS:1999												
0.....	3,861	100										
1.....	3,895	100										
2.....	3,924	100										
3.....	3,862	61	38	1								
4.....	4,021	31	61	8								
5.....	4,037	6	15	74	5	#						
6.....	4,060	2	2	11	81	4	1					
7.....	4,083	1		1	18	73	6	#				
8.....	3,955				2	18	75	5	#			
9.....	4,269				1	1	23	70	5	1		
10.....	4,053					#	2	22	70	5	#	
11.....	4,042						#	2	24	68	4	1
12.....	3,905							1	3	23	68	6
13.....	3,709								#	3	25	71
14.....	1,020									1	8	90
15.....	166										24	76

Rounds to zero.

NOTE: For the NHES, kindergarten (K) includes grades classified as kindergarten, transitional kindergarten, and prefirst grade. Age in the NHES:2001 was recalculated to match the CPS definition of the child's age as of September 30. Homeschoolers are excluded from the NHES estimates, but not the CPS estimates. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001, and Before- and After-School Programs and Activities (ASPA) Survey of the NHES, 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October 1999.

Table 8-2A. Standard errors of the percentage distribution of children ages 0 through 15 not enrolled in school or enrolled in 8th grade or below: ECPP-NHES:2001 and ASPA-NHES:2001

Child's age	Number of children (thousands)	Not enrolled	Child's current grade									
			Center-based care	K	1	2	3	4	5	6	7	8
NHES:2001												
0.....	4,417	(1)										
1.....	4,130	(1)										
2.....	3,800	0.7	0.7									
3.....	3,421	1.1	1.1	0.2								
4.....	3,749	1.1	1.3	1.1	(1)							
5.....	3,495	0.4	0.8	1.1	0.8	(1)						
6.....	4,062	(1)	(1)	1.1	1.4	1.0	(1)					
7.....	3,817				1.5	1.5	1.0	(1)				
8.....	4,178				0.5	1.1	1.5	1.0				
9.....	4,264					0.4	1.6	1.6	0.7	(1)		
10.....	4,146						0.4	1.2	1.4	0.7	(1)	
11.....	4,021							0.5	1.5	1.6	0.6	(1)
12.....	3,969							(1)	0.4	1.1	1.2	0.5
13.....	3,754								(1)	0.3	1.0	1.0
14.....	1,546									0.7	1.8	1.9
15.....	192										6.7	3.1 7.3

¹ Standard errors are not provided for estimates of 100 percent or estimates of less than 1 percent.

NOTE: Standard errors increase for children who are 14 and 15 years old. This is because there are small numbers of those children in the grade categories shown above.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001, and Before- and After-School Programs and Activities (ASPA) Survey of the NHES, 2001.

Estimates of the number of children age 3 through 8th grade, by school type and by student grade level, are presented in table 8-3 for the ECPP and ASPA surveys and for CPS:1999. No differences were detected in comparisons of NHES:2001 and CPS:1999 estimates for numbers of children age 3 through 8th grade enrolled in public and private schools. The NHES:2001 estimated that there were 31,885,000 children enrolled in public schools and 3,896,000 enrolled in private schools. The CPS:1999 estimated that there were 32,192,000 children enrolled in public schools and 4,259,000 enrolled in private schools. Estimates of the number of children at each grade level from age 3 through grade 8 are consistent; this was expected to some degree because child weights were raked to estimates of grade by home tenure from the CPS.

Table 8-3. Number of children age 3 through 8th grade, by school type and by student grade level: ECPP-NHES:2001, ASPA-NHES:2001, and CPS:1999

School type and grade	NHES:2001		CPS:1999
	Number (thousands)	s.e. (thousands)	Number (thousands)
Total number of children age 3 through 8th grade	45,260	99	45,183
School type¹			
Public	31,885	173	32,192
Private	3,896	138	4,259
Student grade level			
Not enrolled	3,995	0	3,988
Preschool/nursery school	4,586	0	4,578
K	3,831	0	3,825
1	4,333	0	4,326
2	3,934	0	3,927
3	4,343	0	4,335
4	4,214	0	4,207
5	4,155	0	4,148
6	4,022	0	4,015
7	3,885	0	3,878
8	3,962	0	3,955

¹ Preschoolers and children who are homeschooled are not included.

NOTE: s.e. is standard error. Age in the NHES:2001 estimates was recalculated to match the CPS definition of the child's age as of September 30. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program, (NHES), 2001, and Before- and After-School Programs and Activities (ASPA) Survey of the NHES, 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October 1999.

Table 8-4 shows estimates of the number of children enrolled in kindergarten through 8th grade at each grade level in public versus private schools. There were no differences detected between the

ASPA-NHES:2001 and CPS:1999 with respect to enrollment in public and private schools across grade levels.

Table 8-4. Number and percentage of children in kindergarten through 8th grade enrolled in public and private schools: ASPA-NHES:2001 and CPS:1999

Child's current grade	School type					
	Public			Private		
	Number (thousands)	Percent	s.e.	Number (thousands)	Percent	s.e.
ASPA-NHES:2001						
K	3,125	84	1.6	575	16	1.6
1	3,750	89	1.5	484	11	1.5
2	3,368	88	1.2	477	12	1.2
3	3,829	90	1.2	436	10	1.2
4	3,585	88	1.5	490	12	1.5
5	3,667	92	0.9	337	8	0.9
6	3,549	90	0.9	404	10	0.9
7	3,448	91	0.8	343	9	0.8
8	3,535	91	0.8	343	9	0.8
CPS:1999						
K	3,167	83	—	658	17	—
1	3,802	88	—	524	12	—
2	3,502	89	—	426	11	—
3	3,817	88	—	519	12	—
4	3,773	90	—	433	10	—
5	3,701	89	—	447	11	—
6	3,590	89	—	426	11	—
7	3,405	89	—	434	11	—
8	3,435	90	—	393	10	—

—Not available.

NOTE: s.e. is standard error. For the NHES:2001, kindergarten (K) includes grades reported as kindergarten, transitional kindergarten, and prefirst grade. Grades reported as nursery school, preschool, or prekindergarten are not included. Preschoolers and children who are home schooled are not included.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October 1999.

Enrollment by household income. Table 8-5 presents NHES and CPS estimates of the percentage of children age 0 through 5, not yet enrolled in kindergarten who resided in households with particular income ranges. No differences were detected by income. Across income categories, estimates from both surveys were quite similar; only one difference was greater than 1 percent. The NHES:2001 estimates were raked to income figures from the CPS:1999 using three income categories: \$10,000 or less; \$10,001-\$25,000; and over \$25,000. Had these income categories been used for comparison, no differences between the NHES:2001 and the CPS:1999 would have been detected.

Table 8-5. Percentage of children ages 0 through 5 not yet enrolled in kindergarten, by household income: ECPP-NHES:2001 and CPS:1999

Household income	ECPP-NHES:2001		CPS:1999
	Percent	s.e.	Percent
\$5,000 or less	5	0.4	5
\$5,001 to \$10,000	7	0.4	6
\$10,001 to \$15,000	6	0.3	7
\$15,001 to \$20,000	7	0.4	6
\$20,001 to \$25,000	7	0.4	7
\$25,001 to \$30,000	6	0.4	7
\$30,001 to \$35,000	6	0.3	7
\$35,001 to \$40,000	6	0.3	6
\$40,001 to \$50,000	10	0.4	10
\$50,001 to \$60,000	10	0.5	10
\$60,001 to \$75,000	10	0.5	10
Over \$75,000.....	20	0.6	18

NOTE: s.e. is standard error. CPS estimates exclude cases with missing income data. Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October 1999.

Enrollment by household income and race/ethnicity. Few differences are observed in table 8-6, which compares NHES:2001 and CPS:1999 estimates of household income by race/ethnicity for children age 0 through 5. The NHES:2001 showed a lower percentage of Blacks in the \$30,001 to \$50,000 income category when compared to CPS estimates (15 versus 19 percent). There was also a significant difference found between Hispanics in the over \$50,000 income category; NHES:2001 showed a higher percentage of Hispanics in this category than did the CPS:1999 (20 versus 16 percent). Neither of these differences was large. The differences in these estimates may be accounted for in part by the different procedures used to deal with missing data in the two surveys. While missing income data from the NHES were imputed, missing income data from the CPS were dropped and therefore not included in the analyses. Further, the income categories presented in table 8-6 are somewhat different from the raking categories used in the NHES:2001.

Table 8-6. Number and percentage of children ages 0 through 5 not yet in kindergarten, by household income level and race/ethnicity: ECPP-NHES:2001 and CPS:1999

Race/ethnicity	Number of children (thousands)	Household income							
		Less than \$15,000		\$15,001 to \$30,000		\$30,001 to \$50,000		More than \$50,000	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
ECPP-NHES:2001									
White, non-Hispanic	12,353	9	0.5	16	0.7	24	0.8	51	0.9
Black, non-Hispanic	2,988	39	1.0	25	1.4	15	1.2	21	1.4
Hispanic	3,693	29	1.0	31	1.2	20	0.9	20	0.9
Other	1,219	18	2.8	19	2.2	19	2.1	44	2.8
CPS:1999									
White, non-Hispanic	12,493	10	—	16	—	24	—	49	—
Black, non-Hispanic	2,985	40	—	22	—	19	—	18	—
Hispanic	3,688	29	—	35	—	21	—	16	—
Other	1,080	13	—	21	—	20	—	45	—

—Not available.

NOTE: s.e. is standard error. CPS percentage estimates exclude cases with missing income data. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October 1999.

Table 8-7 presents estimates of children in kindergarten through 8th grade, by household income, from the ASPA-NHES:2001 and CPS:1999. For most estimates the ASPA and CPS estimates were within 2 percent or less. However, fewer children were from households with incomes between \$25,001 and \$30,000 in the ASPA:NHES:2001 than in the CPS:1999 (6 percent versus 8 percent). Also, fewer children were from households that earned between \$40,001 and \$50,000 per year in the ASPA:NHES:2001 than in the CPS:1999. Finally, 22 percent of households in the ASPA-NHES:2001 reported earnings of over \$75,000, compared to 19 percent of households according the CPS:1999. These differences are not large in magnitude but are statistically significant. These differences may be due in part to the fact that CPS estimates did not include missing income data and may also reflect that the income categories presented here are more detailed than the raking adjustment categories used in weighting.

Table 8-7. Percentage of children in kindergarten through 8th grade, by household income: ASPA-NHES:2001 and CPS:1999

Household income	ASPA-NHES:2001		CPS:1999
	Percent	s.e.	Percent
\$5,000 or less	3	0.3	4
\$5,001 to \$10,000	5	0.3	5
\$10,001 to \$15,000	6	0.3	7
\$15,001 to \$20,000	7	0.3	6
\$20,001 to \$25,000	7	0.3	8
\$25,001 to \$30,000	6	0.3	8
\$30,001 to \$35,000	6	0.3	6
\$35,001 to \$40,000	6	0.3	6
\$40,001 to \$50,000	9	0.4	11
\$50,001 to \$60,000	10	0.4	10
\$60,001 to \$75,000	11	0.4	11
Over \$75,000.....	22	0.5	19

NOTE: s.e. is standard error. CPS estimates exclude cases with missing income data. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October 1999.

Table 8-8 presents ASPA-NHES:2001 and CPS:1999 estimates of household income by race/ethnicity for children in kindergarten through 8th grade. While most estimates were consistent across

surveys, there were some differences. For instance, whereas 9 percent of children from other racial/ethnic⁵⁰ groups came from households with annual incomes of less than \$15,000 in the ASPA-NHES:2001, this was the case for 19 percent of children from other racial/ethnic groups from households in the CPS:1999. Also, more Hispanic children came from households earning more than \$50,000 in the ASPA-NHES:2001 than in the CPS:1999 (22 percent versus 16 percent), and fewer White, non-Hispanic children came from households earning \$30,001 to \$50,000 per year in the ASPA-NHES:2001 than in the CPS:1999 (22 percent versus 25 percent). These results might be due in part to the fact that CPS estimates exclude cases with missing income data. Also, these differences might be attributed in part to the 2-year time difference between surveys and because the income categories presented in this table are somewhat different from the raking categories used in the NHES:2001.

Table 8-8. Number and percentage of children in kindergarten through 8th grade, by household income and race/ethnicity: ASPA-NHES:2001 and CPS:1999

Race/ethnicity	Number of children (thousands)	Household income							
		Less than \$15,000		\$15,001 to \$30,000		\$30,001 to \$50,000		More than \$50,000	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
ASPA-NHES:2001									
White, non-Hispanic	22,938	8	0.3	15	0.6	22	0.6	55	0.6
Black, non-Hispanic	5,863	32	1.1	30	1.5	18	1.1	20	1.0
Hispanic	5,743	26	0.9	33	1.1	19	1.0	22	1.0
Other	2,135	9	1.6	23	2.7	22	2.3	46	2.8
CPS:1999									
White, non-Hispanic	23,047	8	—	16	—	25	—	51	—
Black, non-Hispanic	5,853	35	—	28	—	19	—	18	—
Hispanic	5,734	26	—	37	—	22	—	16	—
Other	1,983	19	—	20	—	19	—	43	—

—Not available.

NOTE: s.e. is standard error. CPS percentage estimates exclude cases with missing income data. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October 1999.

⁵⁰“Other” race includes Asians or Pacific Islanders, American Indians or Alaskan Natives, those who describe themselves as biracial or multiracial, and others who did not identify themselves as White, non-Hispanic; Black, non-Hispanic; or Hispanic.

Estimates from the ASPA-NHES:2001 and CPS:1999 for the number and percent of White, Black, Hispanic, and children of other races in kindergarten through grade 8 in public and private schools are presented in table 8-9. No differences were detected across surveys.

Table 8-9. Number and percentage of children enrolled in kindergarten through 8th grade in public and private schools, by race/ethnicity: ASPA-NHES:2001 and CPS:1999

Race/ethnicity	ASPA-NHES:2001					CPS:1999		
	Number of children (thousands)	Public		Private		Number of children (thousands)	Public	Private
		Percent	s.e.	Percent	s.e.		Percent	Percent
White, non-Hispanic.....	22,173	87	0.5	13	0.5	23,047	86	14
Black, non-Hispanic	5,827	92	1.0	8	1.0	5,853	92	8
Hispanic.....	5,690	95	0.4	5	0.4	5,734	94	6
Other.....	2,091	86	2.2	14	2.2	1,983	90	10

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.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October 1999.

Adult population, by sex and age. Table 8-10 shows estimates of the adult population by sex and age. As discussed in the previous chapter, the adult education weights were raked to control totals of age by sex from the CPS. Therefore, estimates from the two surveys were expected to be similar. The age estimates for both males and females from the NHES:2001 and the CPS:2000 were almost identical.

Table 8-10. Percentage distribution of the adult population, by sex and age: AELL-NHES:2001 and CPS:2000

Age	AELL-NHES:2001				CPS:2000	
	Male		Female		Male	Female
	Estimate	s.e.	Estimate	s.e.	Estimate	Estimate
Total number of adults ¹ (thousands).....	94,955	0.0	103,848	0.0	94,955	103,848
16 to 24 years	6%	0.2	6%	0.2	6%	6%
25 to 34 years	9	0.3	10	0.3	9	10
35 to 44 years	11	0.3	11	0.3	11	11
45 to 54 years	9	0.3	10	0.4	9	9
55 years and older	12	0.2	16	0.2	13	16

¹ Includes civilian, noninstitutionalized adults, age 16 or older, not enrolled in elementary or secondary school at the time of the interview.

NOTE: The percentages provided in this table are cell percentages and sum to 100 over females and males for each data set.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), March 2000.

Adult population by highest educational attainment and race/ethnicity. Race/ethnicity and educational attainment were also used in raking the adult education and lifelong learning weights. Since the CPS:2000 was the source of the control totals for raking the NHES:2001, estimates of educational attainment and race/ethnicity were expected to be similar. Educational attainment estimates shown here are not identical, however, because the NHES:2001 data were raked to a three-category educational attainment variable (less than high school, high school diploma or equivalent, and some college or more), whereas a four-category education attainment variable was used in the comparison.

As depicted in table 8-11, the NHES:2001 and the CPS:2000 estimates of educational attainment by race/ethnicity were quite consistent in most cases; however, some differences were observed for White, non-Hispanics and Hispanics. The NHES:2001 showed a 4 percent lower estimate of adults without a high school diploma for Hispanics. On the other hand, the NHES:2001 showed a 5 percent higher estimate of adults with a bachelor’s degree or higher for Hispanics and a 2 percent higher estimate of adults with a bachelor’s degree or higher for White, non-Hispanics than CPS. For all other races, the estimates of educational attainment by race/ethnicity were consistent between surveys.

Table 8-11. Percentage distribution of the adult population by highest educational attainment and race/ethnicity: AELL-NHES:2001 and CPS:2000

Race/ethnicity	Number of adults (thousands)	Highest educational attainment							
		Less than high school		High school diploma		Associate's or some college		Bachelor's or higher	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
AELL-NHES:2001									
Total adults ¹	198,803	16	0.1	33	0.4	26	0.5	25	0.2
White, non-Hispanic	144,147	11	0.3	33	0.6	28	0.6	28	0.4
Black, non-Hispanic	22,186	24	1.7	34	1.8	26	1.6	15	1.2
Hispanic	21,537	39	2.0	29	1.7	19	1.1	14	1.2
All other races	10,932	12	1.6	26	2.3	28	2.4	34	2.6
CPS:2000									
Total adults (thousands).....	198,803	16	—	33	—	27	—	23	—
White, non-Hispanic	146,164	12	—	34	—	28	—	26	—
Black, non-Hispanic	22,737	21	—	36	—	28	—	15	—
Hispanic	20,818	43	—	28	—	20	—	9	—
All other races	9,083	15	—	24	—	25	—	36	—

—Not available.

¹ Includes civilian, noninstitutionalized adults, age 16 or older, not enrolled in elementary or secondary school at the time of the interview.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), March 2000.

ECPP Survey Comparisons

Data comparisons in this section cover some of the major topical areas of the Early Childhood Program Participation survey for the NHES:2001. The 2001 estimates were compared to previous NHES cycles, which contained the same or similar items, as described below.

The 1993, 1995, 1996, and 1999 National Household Education Surveys

Information on early childhood education was collected in the NHES:1993, NHES:1995, NHES:1996, and NHES:1999. Data from these previous NHES administrations were used in comparisons of ECPP-NHES:2001 survey estimates concerning participation in child care arrangements and programs, participation in literacy-related activities with family members, disabling conditions, and parent and

household characteristics. The NHES:1993 School Readiness (SR) survey included 10,888 children age 3 to 7 years or in 2nd grade or below. The NHES:1995 Early Childhood Program Participation (ECP) survey contained 14,064 children age 10 and younger who were enrolled in 3rd grade or below. The NHES:1996 Parent and Family Involvement in Education and Civic Involvement (PFI/CI) survey contained 20,792 children ages 3 through 20 years enrolled in 12th grade or below. The NHES:1999 Parent survey included 24,600 children birth through 20 years of age who were either being homeschooled or in the 12th grade or below. The comparison of ECP-NHES:2001 survey estimates to estimates from previous NHES surveys is intended to reveal potential problems by identifying major differences or a difference in an unexpected direction.

Participation in care arrangements by race/ethnicity. Table 8-12 presents NHES:2001, NHES:1999, and NHES:1995 estimates of participation in various types of care arrangements by the race/ethnicity of the child. There were no differences detected between the estimates from NHES:2001 and the estimates from NHES:1999. However, differences were observed when comparing NHES:2001 to NHES:1995. The percentage of White children in both relative and nonrelative care was lower in 2001 than it was in 1995 (20 versus 28 percent and 19 versus 21 percent, respectively). Differences by race between NHES:2001 and NHES:1995 also existed with regard to children in center-based care or educational programs. In 2001, the NHES estimated that 21 percent of Hispanic children participated in center-based care, 40 percent of Black children did so, as did 37 percent of children from other racial or ethnic backgrounds. This was an increase in each of these racial/ethnic groups from 1995, which estimated 17 percent of Hispanic children, 33 percent of Black children, and 28 percent other race or ethnicity. The only difference with respect to parental care only was a decrease in percentage for Black children, from 34 percent in 1995 to 26 percent in 2001, perhaps offset by the increase in Black children in center-based programs.

Table 8-12. Percentage of children ages 0 through 5 not yet in kindergarten participating in different care arrangements, by race/ethnicity: ECPP-NHES:2001, Parent-NHES:1999, and ECPP-NHES:1995

Child's race/ethnicity	Number of children (thousands)	Type of arrangement								
		Relative care		Nonrelative care		Center- or school-based program		Parental care		
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	
ECPP-NHES:2001										
Hispanic	3,693	23	1.3	12	1.1	21	0.9	52	1.6	
White, non-Hispanic	12,353	20	0.8	19	0.7	35	0.7	38	0.9	
Black, non-Hispanic	2,988	35	2.3	13	1.3	40	2.0	26	2.3	
Other	1,219	23	2.5	15	2.2	37	2.6	35	3.1	
Parent-NHES:1999										
Hispanic	3,496	26	1.6	13	1.0	23	1.1	53	1.7	
White, non-Hispanic	12,515	20	0.8	19	0.8	35	0.7	39	0.9	
Black, non-Hispanic	2,867	36	2.2	13	1.3	43	2.0	25	1.8	
Other	1,347	29	3.2	12	1.6	34	2.7	34	3.2	
ECPP-NHES:1995										
Hispanic	2,838	23	1.3	12	1.0	17	1.1	54	1.6	
White, non-Hispanic	13,996	28	0.7	21	0.7	33	0.8	38	0.9	
Black, non-Hispanic	3,344	31	1.8	12	1.2	33	1.8	34	2.0	
Other	1,243	25	2.7	12	1.8	28	2.6	42	3.1	

NOTE: s.e. is standard error. Center-based programs include nursery schools, preschools, center-based Head Start programs, and prekindergartens. Relative and nonrelative care could also have been designated as Head Start in 2001. Row percentages do not sum to 100 because children may participate in more than one child care arrangement or program.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Early Childhood Program Participation (ECPP) of the NHES, 1995.

Participation in center-based programs by income. Table 8-13 presents NHES:2001, NHES:1999, NHES:1996, NHES:1995, and NHES:1993 estimates of differences in center-based program participation rates by high and low household income for children ages 3- through 5-years of age who are not yet in kindergarten. A decrease in participation in center-based care programs has occurred among children from high-income families between 1993-2001. The NHES:2001 estimate of center-based enrollment was lower than the NHES:1995 and NHES:1993 estimates. While the NHES:2001 estimated that 69 percent of children in this age and income group participated in center-based programs, the NHES:1995 estimated that 76 percent of children did so, and the NHES:1993 estimated that 75 percent participated. A difference also occurred with respect to children from low-income families. The NHES:1999 estimated that 56 percent of low-income children in this age group participated in center-based programs, which was statistically higher than NHES estimates from 1996 and 1993. NHES:2001 placed participation at 46 percent, some 10 percentage points below NHES:1999 estimates. Given that the 2001 estimate for low income children is most similar to those from 1996, 1995, and 1993, it is likely that the data for this category in 1999 were anomalous.

Table 8-13. Percentage of children ages 3 through 5 not yet in kindergarten participating in center-based programs, by high and low income: ECPP-NHES:2001, Parent-NHES:1999, PFI/CI-NHES:1996, ECPP-NHES:1995, and SR-NHES:1993

Income level	ECPP-NHES:2001		Parent-NHES:1999		PFI/CI-NHES:1996		ECPP-NHES:1995		SR-NHES:1993	
	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
High income	69	1.3	71	1.4	72	1.6	76	1.8	75	1.4
Low income	46	3.8	56	3.2	43	2.9	49	3.2	47	2.0

NOTE: s.e. is standard error. Center-based programs include nursery schools, preschools, center-based Head Start programs, and prekindergartens. High income was defined as household income of over \$50,000. Low income was defined as household income of \$10,000 or less.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; Parent and Family Involvement in Education/Civic Involvement (PFI/CI) Survey of the NHES, 1996; Early Childhood Program Participation (ECPP) Survey of the NHES, 1995; and School Readiness (SR) Survey of the NHES, 1993.

Participation in center-based programs by household income. The percent of children age 0 through 5 who were not yet in kindergarten and were participating in a center-based program, by household income, are presented in Table 8-14. Differences between the NHES:2001 and the NHES:1999 estimates were not detected, with the exception of the \$40,001 to \$50,000 household income category. In this category, there was a decrease in the percentage of children participating in center-based care or programs, from 35 percent in 1999 to 26 percent in 2001. The estimates from the ECPP-NHES:2001 showed a higher percentage of children in this age group as participating in center-based care than did the ECPP-NHES:1995 for three income categories. For example, in 1995, 17 percent of children in families with incomes of \$10,000 or less were estimated to be participating in center-based care or programs, compared to 25 percent in 2001. Participation was also higher in 2001 for children in families with incomes from \$10,001 to \$20,000, \$20,001 to \$30,000, and \$30,001 to \$40,000. In 1995, 18 percent of children in the \$10,001 to \$20,000 range were in center-based programs compared with 30 percent in 2001. Twenty-three percent of children in the \$30,001 to \$40,000 category were estimated to be in this type of care in 1995 versus 30 percent in 2001. These increases are consistent with the increases from 1995 estimates to 1999 estimates and might be due to increased public awareness of the importance of early educational programs for children’s learning and development, welfare-to-work requirements, or to increased programs and locations of programs geared towards low- and middle-income families, such as Head Start.

Table 8-14. Percentage of children ages 0 through 5 not yet in kindergarten participating in center-based programs, by household income: ECPP-NHES:2001, Parent-NHES:1999, and ECPP-NHES:1995

Household income	ECPP-NHES:2001		Parent-NHES:1999		ECPP-NHES:1995	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
\$10,000 or less	25	2.2	29	2.0	17	1.5
\$10,001–\$20,000.....	30	1.5	30	1.7	18	1.4
\$20,001–\$30,000.....	27	1.6	30	1.6	21	1.2
\$30,001–\$40,000.....	30	1.9	31	1.6	23	1.6
\$40,001–\$50,000.....	26	2.0	35	1.8	31	1.8
Over \$50,000.....	42	0.9	42	1.1	43	1.2

NOTE: s.e. is standard error. Center-based programs include nursery schools, preschools, Head Start programs, and prekindergartens.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Early Childhood Program Participation (ECPP) Survey of the NHES, 1995.

Family structure and household urbanicity. Estimates of the percentage of children age 0 through 5, not yet in kindergarten, by family structure, parents' highest education, and by household urbanicity for the NHES:2001, NHES:1999, and NHES:1995 are presented in table 8-15. The NHES:2001 estimates for family structure were found to be different from 1999 and 1995. For example, percentages of children in families with both a mother and father present were higher in 2001 than they were in 1995 (77 percent versus 73 percent in both 1999 and 1995), and percentages of children in families with a mother only or a nonparent guardian were lower than the 1999 or 1995 estimates (20 percent versus 23 and 24 percent and 1 percent versus 2 percent, in 1999 and 1995).

With regard to parents' educational attainment, no differences were detected between 2001 estimates and those from 1999. However, differences between 2001 and 1995 were observed. The estimated percentage of children with parents having graduated high school or having less than a high school diploma declined from 1995 to 2001. The NHES:1995 estimated that 11 percent of children in this age group had parents with less than a high school diploma and 32 percent had parents with a high school diploma. The NHES:2001 estimates were 9 percent and 26 percent for these categories, respectively. Conversely, the estimated percentage of children with parents having a college degree or graduate school increased from 1995 to 2001. In 1995, 17 percent of children in this age group had parents with a college degree and 13 percent had parents with a graduate school level of education. In 2001, the percentages increased to 20 percent and 16 percent, respectively, indicating that more parents of children in this age group were now continuing their education after high school in 2001 than in previous survey years. While these changes were significant, they were not large in magnitude.

The differences with respect to household urbanicity were for children living in rural areas, and these differences were less than 1 percent. In 2001, 24 percent of children were estimated to live in rural areas, slightly higher than the 23 percent in both the NHES:1999 and the NHES:1995.

Table 8-15. Percentage of children ages 0 through 5 not yet in kindergarten, by family structure, parents' highest level of education, and urbanicity of ZIP Code area: ECPP-NHES:2001, Parent-NHES:1999, and ECPP-NHES:1995

Family and community characteristics	ECPP-NHES:2001		Parent-NHES:1999		ECPP-NHES:1995	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Family structure						
Mother and father.....	77	0.5	73	0.7	73	0.5
Mother.....	20	0.5	23	0.7	24	0.6
Father	2	0.2	2	0.2	1	0.1
Nonparent guardian(s)	1	0.2	2	0.2	2	0.2
Parents' highest education						
Less than high school.....	9	0.5	9	0.5	11	0.5
High school graduate	26	0.8	26	0.6	32	0.7
Some college.....	29	0.7	30	0.8	28	0.6
College graduate	20	0.5	20	0.6	17	0.5
Graduate school	16	0.5	15	0.5	13	0.6
Household urbanicity						
Urban, inside urbanized area	64	0.5	65	0.6	65	0.6
Urban, outside urbanized area	11	0.5	12	0.5	11	0.4
Rural	24	<0.1	23	0.5	23	0.4

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, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Early Childhood Program Participation (ECPP) Survey of the NHES, 1995.

Parents' highest level of education by race/ethnicity of child. Table 8-16 presents parents' highest level of education by race/ethnicity of the child. The only difference detected between the NHES:2001 and the NHES:1999 estimates was for children of parents with a graduate education, who were of "other" race or ethnicity. Specifically, 29 percent of these children had parents with a graduate education in 2001, which was an increase from 21 percent in 1999. Wide differences in estimates for this small and diverse racial/ethnic group are not uncommon. The 2001 estimate for this category was also different from the NHES:1995 estimate, which was 18 percent. The NHES:2001 and the NHES:1995 estimates also differed with respect to Black children whose parents had a college degree (11 percent versus 8 percent) and for Black children whose parents had attended graduate school (8 versus 4 percent). These differences in level of education across survey years are consistent with previous research indicating increases in minorities seeking and obtaining postsecondary degrees and may reflect increases in educational requirements to maintain employment (U.S. Department of Education, 2002a).

Table 8-16. Number and percentage of children ages 0 through 5 not yet in kindergarten, by parents' highest level of education and race/ethnicity: ECPP-NHES:2001, Parent-NHES:1999, and ECPP-NHES:1995

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:2001											
White, non-Hispanic	12,353	4	0.5	23	0.9	29	0.9	24	0.8	19	0.8
Black, non-Hispanic.....	2,988	16	2.0	31	2.4	33	2.3	11	1.0	8	1.0
Hispanic	3,693	24	1.3	34	1.6	25	1.2	11	0.8	7	0.7
Other.....	1,219	5	1.2	24	2.8	23	2.5	20	2.2	29	2.7
Parent-NHES:1999											
White, non-Hispanic	12,515	3	0.4	22	0.8	30	1.0	25	0.9	19	0.8
Black, non-Hispanic.....	2,867	13	1.4	34	2.0	34	1.8	12	1.4	8	1.2
Hispanic	3,496	26	1.6	32	1.4	27	1.4	10	1.0	6	0.7
Other.....	1,347	10	2.2	21	2.2	25	2.3	23	2.5	21	2.4
ECPP-NHES:1995											
White, non-Hispanic	13,996	5	0.5	28	0.8	29	0.8	21	0.6	17	0.8
Black, non-Hispanic.....	3,344	19	2.0	41	2.1	28	1.6	8	1.1	4	0.7
Hispanic	2,838	30	1.4	35	1.4	23	1.3	6	0.6	6	0.7
Other.....	1,243	9	2.1	26	3.2	30	3.1	17	2.5	18	2.0

NOTE: s.e. is standard error. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Early Childhood Program Participation (ECPP) Survey of the NHES, 1995.

Literacy-related activities with family members. Table 8-17 presents results from the NHES:2001, NHES:1999, NHES:1996, NHES:1995, and the NHES:1993 with respect to parent reports of reading to or telling stories to their 3- to 5-year-old children. While no differences were detected between the 2001 and 1999 estimates, the estimates between NHES:2001 and the other survey years were significantly different. Specifically, the NHES:2001 reports that 84 percent of children had parents whom reported reading or telling stories to them regularly, which is 12 percentage points higher than the 1996 and 1995 estimates of 72 percent. This was also higher than the 1993 estimate of 66 percent.

Table 8-17. Percentage of children ages 3 through 5 whose parents reported reading or telling stories to them regularly: ECPP-NHES:2001, Parent-NHES:1999, PFI/CI-NHES:1996, ECPP-NHES:1995, and SR-NHES:1993

Survey	Percent	s.e.
ECPP-NHES:2001	84	0.8
Parent-NHES:1999	82	0.7
PFI/CI-NHES:1996	72	1.2
ECPP-NHES:1995	72	0.7
SR-NHES:1993	66	0.8

NOTE: s.e. is standard error. Children enrolled in kindergarten or above are not included. "Regularly" is defined as reading every day or telling a story three times a week or more.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; Parent and Family Involvement in Education/Civic Involvement (PFI/CI) Survey of the NHES, 1996; Early Childhood Program Participation (ECPP) Survey of the NHES, 1995; and School Readiness (SR) Survey of the NHES, 1993.

Specific disabilities. The final table presenting comparative estimates for the ECPP-NHES:2001 relates to the percentage of children with specific disabilities (table 8-18). The estimates for each disability were generally consistent across survey years; however, very small but significant differences in several disability categories between 2001, 1999, and 1996. The estimates in 2001 show a decrease of 1 percentage point in the category of learning disability, which is different from both 1999 and 1996 (1 percent in 2001 versus 2 percent in 1999 and 1996). There was also a 1 percentage decrease with respect to orthopedic impairment from 1996 to 2001 (2 versus 1 percent). For the category of blindness or another visual impairment, the estimate from the NHES:2001 is 2 percent, slightly higher than the estimate of 1 percent from 1996. The data did not suggest any explanations for these very small differences.

Table 8-18. Percentage of children ages 3 through 5 with specific disabilities: ECPP-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996

Disability	ECPP-NHES:2001		Parent-NHES:1999		PFI/CI-NHES:1996	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Learning disability	1	0.2	2	0.3	2	0.4
Mental retardation.....	#	(1)	#	(1)	#	(1)
Speech impairment	6	0.5	7	0.5	7	0.6
Serious emotional disturbance	1	0.2	1	0.2	1	0.2
Deafness or another hearing impairment ²	1	0.3	1	0.2	1	0.3
Blindness or another visual impairment ²	2	0.3	2	0.3	1	0.2
An orthopedic impairment.....	1	0.2	1	0.2	2	0.3
Another health impairment lasting 6 months or more.....	5	0.5	5	0.4	6	0.6
Percent with any disability.....	13	0.8	14	0.8	14	0.7

Rounds to zero.

¹ Standard errors are not provided for estimates of less than 1 percent.

² In the ECPP-NHES:1995, blindness was asked separately from another visual impairment and deafness was asked separately from another hearing impairment. In the later surveys, blindness was combined with another visual impairment and deafness was combined with another hearing impairment.

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Parent and Family Involvement/Civic Involvement (PFI/CI) Survey of the NHES, 1996.

ASPA Survey Comparisons

The data comparisons for the Before- and After-School Programs and Activities interview include topics such as school size, family structure, parents' highest level of education, children's disabilities, participation rates in before- and after-school arrangements (i.e., relative care, nonrelative care, center- or school-based programs, and self-care), and arrangement participation by child and household characteristics.

The data sources used for comparisons include the NHES:1999 Parent Interview, the NHES:1996 Parent and Family Involvement and Civic Involvement (PFI/CI) interview, and the NHES:1995 Early Childhood Program Participation (ECP) interview. Estimates from the 1995, 1996, and 1999 National Household Education Surveys can provide especially meaningful comparisons with the NHES:2001 Before- and After-School Programs and Activities (ASPA) data. For several ASPA-NHES:2001 estimates, there exist corresponding estimates from the ECP-NHES:1995, the PFI/CI-NHES:1996, and Parent-NHES:1999 administrations based on identical or nearly identical item wording and sampling. In some cases, however, wording changes were made to improve item clarity, and these changes may affect comparisons of estimates. The comparison of ASPA-NHES:2001 survey estimates to estimates from previous NHES surveys is intended to reveal potential problems by identifying major differences or a difference in an unexpected direction.

Participation rates among minorities in center- or school-based programs and self-care.

ASPA-NHES:2001 and Parent-NHES:1999 estimates involving after-school arrangement participation, by race/ethnicity, are presented in table 8-19. While there were no differences detected across years with respect to relative care and nonrelative care, there were some increases for center- or school-based program participation and self-care. Specifically, the percentage of Hispanic children that participated in center- or school-based programs increased from 15 in 1999 to 21 percent in 2001. This increase might be related to the greater availability of center- or school-based programs in urban settings for lower income families (see also tables 8-20 and 8-21), but might also be related to increasing household incomes among Hispanic families (see table 8-8), greater mobility, and the consequent need for patchworks of arrangements, since relatives may not be as readily available to care for children. This increase is consonant with slight increases in participation in center- or school-based programs for other ethnic groups. Table 8-19 also shows increases in rates of self-care among Hispanic, White, non-Hispanic, and Black, non-Hispanic children between 1999 and 2001 (from 11 to 13 percent for White children, 11 to 19 percent for Black children, and from 8 to 12 percent for Hispanic children). This might stem from the change in wording of the self-care questions in 2001, where parents were asked whether

their children were “responsible for themselves,” rather than “took care of themselves” during out-of-school time. This may also be related to welfare reform requirements to work and a lack of other available care arrangements for families that are no longer receiving welfare.

Table 8-19. Percentage of children enrolled in kindergarten through 8th grade participating in various types of care arrangements or programs after school, by race/ethnicity: ASPA-NHES:2001 and Parent-NHES:1999

Child’s race/ethnicity	Number of children (thousands)	Type of arrangement							
		Relative care		Nonrelative care		Center- or school-based program		Self-care	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
ASPA-NHES:2001									
Hispanic	5,743	17	1.2	7	0.8	21	1.2	12	0.8
White, non-Hispanic	22,938	15	0.6	6	0.4	15	0.6	13	0.4
Black, non-Hispanic	5,863	26	1.6	6	0.8	29	1.8	19	1.3
Other	2,135	14	1.8	4	0.8	23	2.2	14	1.7
Parent-NHES:1999									
Hispanic	5,394	20	1.0	6	0.6	15	0.9	8	0.7
White, non-Hispanic	23,273	15	0.5	7	0.4	15	0.5	11	0.4
Black, non-Hispanic	5,869	27	1.4	6	0.8	27	1.6	11	1.0
Other	1,850	21	2.4	7	1.1	20	1.9	11	1.6

NOTE: s.e. is standard error. Does not include homeschooled children. Children may have participated in more than one type of child care arrangement or program.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001; and Parent Survey of the NHES, 1999.

After-school center- or school-based program participation, by income. Estimates of differences in center- or school-based program participation rates by income for children in kindergarten through 3rd grade are presented in table 8–20, for the ASPA-NHES:2001, Parent-NHES:1999, and ECPP-NHES:1995. The percentage of K–3rd grade children from high-income families who participated in some form of center- or school-based arrangement increased from 1995 and 1999 to 2001. A similar increase occurred for K–3rd grade children from low-income families between 1995 and 2001.

Table 8-20. Percentage of students in kindergarten through 3rd grade participating in center- or school-based programs after school, by high and low income: ASPA-NHES:2001, Parent-NHES:1999, and ECPP-NHES:1995

Income level	ASPA-NHES:2001		Parent-NHES:1999		ECPP-NHES:1995	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
High income.....	25	1.3	18	0.6	20	1.1
Low income	25	4.4	19	1.8	11	1.6

NOTE: s.e. is standard error. High income was defined as household income of over \$50,000. Low income was defined as household income of \$10,000 or less.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Early Childhood Program Participation (ECP) Survey of the NHES, 1995.

Table 8-21 shows the percent of children enrolled in kindergarten through 8th grade who participated in center- or school-based programs after school by household income for the ASPA:2001 and the Parent-NHES:1999 surveys. No differences were detected in estimates across surveys were observed. Differences between surveys that appeared to be large were not statistically significant because of relatively high standard errors across some of the income categories. Participation rates ranged from 15 percent to 24 percent for both surveys across all household income categories.

Table 8-21. Percentage of children enrolled in kindergarten through 8th grade participating in center- or school-based programs after school, by household income: ASPA-NHES:2001 and Parent-NHES:1999

Household income	ASPA-NHES:2001		Parent-NHES:1999	
	Percent	s.e.	Percent	s.e.
\$10,000 or less	24	2.7	19	1.8
\$10,001–\$20,000.....	22	1.6	17	1.3
\$20,001–\$30,000.....	18	1.5	18	1.0
\$30,001–\$40,000.....	16	1.2	17	1.0
\$40,001–\$50,000.....	18	1.7	15	1.0
Over \$50,000.....	19	0.7	18	0.6

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001; and Parent Survey of the NHES, 1999.

School size. Comparisons of ASPA-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996 estimates concerning school size are presented in table 8-22. There were no differences detected in the percentages of kindergarten through 8th grade children attending schools with fewer than 300, 300–599, 600–999, and 1,000 or more students between 1996 and 2001.

Table 8-22. Percentage of children in kindergarten through 8th grade, by school size: ASPA-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996

School size	ASPA-NHES:2001		Parent-NHES:1999		PFI/CI-NHES:1996	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Under 300	20	0.6	21	0.6	21	0.5
300–599	44	0.6	45	0.6	45	0.6
600–999	22	0.5	22	0.5	22	0.4
1,000 or more	13	0.4	13	0.4	13	0.4

NOTE: s.e. is standard error. Students who are homeschooled are not represented. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Parent and Family Involvement/Civic Involvement (PFI/CI) Survey of the NHES, 1996.

Family structure, parents’ highest level of education, and household urbanicity. Table 8-23 presents estimates of the percentage of children in kindergarten through grade 8 by family structure, parents’ highest level of education, and by household urbanicity for the ASPA:NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996. Differences in estimates ranged from 1 to 3 percentage points. Although the number of two-parent households increased slightly between 1999 and 2001 from 66 percent to 70 percent, it is more likely that the 1999 data were anomalous. First, the 2001 data were in line with those of PFI/CI-NHES:1996. Second, the 2001 data are very close to those of the CPS 1999, where 68 percent of households had both a mother and a father, and 24 percent had a mother only.

With respect to parents’ highest level of education, estimates for percentages of children who had at least one parent with a college degree or at least one parent who had been in graduate school differed between the PFI/CI-NHES:1996 and the ASPA-NHES:2001. In 1996, 15 percent of children had a parent with a college degree, and 13 percent had a parent who had been in graduate school, compared to 18 percent and 15 percent respectively in 2001. There were no differences detected with respect to parents’ highest level of education between the ASPA-NHES:2001 and the Parent-NHES:1999 surveys.

Table 8-23. Percentage of children in kindergarten through 8th grade, by family structure, parents' highest level of education, and urbanicity of ZIP Code area: ASPA-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996

Family and community characteristics	ASPA-NHES:2001		Parent-NHES:1999		PFI/CI-NHES:1996	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Family structure						
Mother and father.....	70	0.6	66	0.4	69	0.5
Mother.....	24	0.5	27	0.4	25	0.4
Father	3	0.3	4	0.2	3	0.2
Nonparent guardian(s)	3	0.2	3	0.2	3	0.2
Parents' highest education						
Less than high school.....	9	0.4	9	0.3	10	0.3
High school graduate	29	0.7	28	0.5	31	0.5
Some college.....	29	0.6	30	0.5	30	0.6
College graduate	18	0.5	17	0.4	15	0.4
Graduate school	15	0.4	16	0.5	13	0.4
Household urbanicity						
Urban, inside urbanized area	63	0.5	63	0.4	62	0.5
Urban, outside urbanized area	12	0.5	12	0.4	14	0.5
Rural	25	0.0	25	0.4	25	0.3

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, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Parent and Family Involvement/Civic Involvement (PFI/CI) Survey of the NHES, 1996.

Parents' highest level of education by race/ethnicity. Table 8-24 presents ASPA-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996 estimates related to parents' highest level of education by child's race/ethnicity, for children in kindergarten through grade 8. There were no differences detected.

Table 8-24. Number and percentage of students in kindergarten through 8th grade, by parents' highest level of education and race/ethnicity: ASPA-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996

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.
ASPA-NHES:2001											
White, non-Hispanic	22,938	3	0.3	26	0.8	31	0.9	22	0.7	18	0.6
Black, non-Hispanic.....	5,863	13	1.4	38	2.0	31	1.7	12	0.9	6	0.6
Hispanic	5,743	28	1.4	32	1.4	24	1.3	9	0.7	6	0.6
Other.....	2,135	5	1.0	23	2.5	23	2.2	20	2.2	29	2.8
Parent-NHES:1999											
White, non-Hispanic	23,273	3	0.3	25	0.6	32	0.7	20	0.7	20	0.6
Black, non-Hispanic.....	5,869	11	1.1	41	1.4	30	1.4	10	0.7	8	0.8
Hispanic	5,394	30	1.4	29	1.4	25	1.1	9	0.7	7	0.6
Other.....	1,850	5	1.2	22	2.0	27	2.7	20	1.9	25	2.5
PFI/CI-NHES:1996											
White, non-Hispanic	23,738	5	0.4	28	0.6	32	0.7	19	0.6	16	0.4
Black, non-Hispanic.....	5,792	15	1.1	42	1.6	30	1.4	8	0.6	5	0.6
Hispanic	4,677	31	1.4	34	1.5	21	1.3	7	0.9	7	0.8
Other.....	1,506	6	1.2	26	2.1	31	2.4	20	2.3	18	1.8

NOTE: s.e. is standard error. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Parent and Family Involvement/Civic Involvement (PFI/CI) Survey of the NHES, 1996.

There were, however, several differences for children whose parents' highest level of education was a college degree or at least some graduate school. The ASPA-NHES:2001 found that 22 percent of White children had parents whose highest level of education was a college degree, compared to 19 percent in the PFI/CI-NHES:1996. Similarly 18 percent of White children in the ASPA-NHES:2001 had at least one parent with at least some graduate school, compared to 16 percent in the PFI/CI-NHES:1996. More Black children had parents whose highest level of education was a college degree in 2001 than in 1999 (12 percent versus 8 percent), and more children of other racial/ethnic groups had parents whose highest level of education was graduate school in 2001 than in 1996 (29 percent versus 18 percent). These general increases in level of education across survey years may be indicative of increased access to higher education and higher retention rates among minority groups.

School contacts with family. Table 8-25 compares ASPA-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996 estimates of kindergarten through 8th grade children whose parents reported that they were never contacted by their children’s schools about their children’s academic performance or behavior. Survey findings over the 5-year period between 1996 and 2001 showed what appeared to be a continuing modest trend in the direction of parent reports of less contact by schools for both indicators.

Table 8-25. Percentage of students enrolled in kindergarten through 8th grade whose parents reported selected school contacts with family: ASPA-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996

School effort to contact family	ASPA-NHES:2001		Parent-NHES:1999		PFI/CI-NHES:1996	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
School never contacted parents about student’s academic performance	78	0.5	76	0.5	73	0.4
School never contacted parents about student’s behavior	83	0.4	80	0.3	76	0.4

NOTE: s.e. is standard error. Students who are homeschooled are not represented.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Parent and Family Involvement/Civic Involvement (PFI/CI) Survey of the NHES, 1996.

Disability. Estimates from the ASPA-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996 surveys of children in kindergarten through 8th grade with specific disabilities are shown in table 8-26. Estimates reveal a gradual but slight decrease in the reported percentages of children with specific disabilities. For instance, 2 percent of children in the ASPA-NHES:2001 were reported as having serious emotional disturbance, compared to 3 percent in the Parent-NHES:1999 and PFI/CI-NHES:1996 surveys. Similarly, 4 percent of children were reported to have blindness or another visual impairment in the APSA-NHES:2001, compared to 5 percent in the Parent-NHES:1999 and PFI/CI-NHES:1996 surveys. Overall, since 1996, where 24 percent of children were reported in the PFI/CI-NHES:1996 survey to have any disability, the percent decreased to 19 percent, according to the ASPA-NHES:2001. The data did not suggest a ready explanation for these differences. The very large sample sizes and inclusion of all children might have shown significant differences due to low standard errors.

Table 8-26. Percentage of children in kindergarten through 8th grade with specific disabilities: ASPA-NHES:2001, Parent-NHES:1999, and PFI/CI-NHES:1996

Disability	ASPA-NHES:2001		Parent-NHES:1999		PFI/CI-NHES:1996	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Learning disability	9	0.4	9	0.4	9	0.4
Mental retardation.....	1	0.2	1	0.1	1	0.1
Speech impairment.....	5	0.3	5	0.3	7	0.3
Serious emotional disturbance	2	0.2	3	0.3	3	0.3
Deafness or another hearing impairment.....	1	0.1	1	0.1	2	0.2
Blindness or another visual impairment.....	4	0.2	5	0.2	5	0.3
An orthopedic impairment	1	0.1	1	0.1	2	0.2
Another health impairment lasting 6 months or more	6	0.3	6	0.3	7	0.3
Percent with any disability.....	19	0.5	21	0.4	24	0.7

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001; Parent Survey of the NHES, 1999; and Parent and Family Involvement/Civic Involvement (PFI/CI) Survey of the NHES, 1996.

AELL Survey Comparisons

The data comparisons for the Adult Education and Lifelong Learning (AELL) Survey of the NHES:2001 include employment status, participation rates in educational activities, and demographic characteristics of adults. Brief descriptions of the data sources (other than CPS, which is described above) used for the AELL comparisons follow.

The 1995 and 1999 National Household Education Surveys Program

Data collected in the Adult Education (AE) survey of the NHES:1995 and the Adult Education (AE) survey of the NHES:1999 provide information on participation rates of adults in educational activities by a number of demographic characteristics, such as age, gender, race/ethnicity, household income, marital status, highest education credential attained, and years of school completed. The AE-NHES:1995 survey contains records on 19,722 adults 16 and older, not enrolled in elementary or

secondary school at the time of the interview. The AE-NHES:1999 survey includes 6,697 adults 16 and older, not enrolled in elementary or secondary school. The comparison of AELL-NHES:2001 survey estimates to estimates from previous NHES surveys is intended to reveal potential problems by identifying major differences or a difference in an unexpected direction.

Integrated Postsecondary Education Data System (IPEDS)

The Integrated Postsecondary Education Data System (IPEDS) surveys are conducted annually to collect various data from all postsecondary education institutions. The Fall Enrollment survey of the 1997 IPEDS collected data on student access to postsecondary education institutions. The 1997 IPEDS data were the most recent information available when analyses were conducted for this chapter. Estimates of adults participating in credential programs were compared to those from the AELL-NHES:2001.

Adult Education Program Facts

Each year the Office of Vocational and Adult Education (OVAE) of the U.S. Department of Education publishes an annual fact sheet reporting estimates of adults who took part in adult basic education (ABE), adult secondary education (ASE), or English as a second language (ESL) programs. OVAE collects adult education participation information exclusively from adult education programs that receive federal funding. The OVAE's 1998 estimates of adults participating in ABE and ESL programs were compared to those from the AELL-NHES:2001.

Adult Education and Lifelong Learning Survey Findings

The data comparisons for AELL cover most of the major topics included in the questionnaire. The estimates compared below include employment status, adult education participation rates, and demographic characteristics of adults.

Employment status and demographic characteristics. The comparisons in this section include employment status and percentage of the employed adults by industry and occupation. For occupational comparisons, the March 2000 CPS was used. As shown in tables 8-27 to 8-29, most of the AELL estimates were consistent with comparable estimates from the CPS:2000.

In table 8-27, the estimates of employment status from the AELL-NHES:2001, AE-NHES:1999, and the CPS:2000 are presented for adults aged 16 or older. There was a slight decrease in estimates of employment from AE-NHES:1999 to AELL-NHES:2001 (76 percent versus 73 percent). About 73 percent of adults reported that they worked for pay or income in the past 12 months in the AELL and about 71 percent reported working in the CPS:2000. The slightly higher rate of employment observed in the AELL may be partly attributed to the decrease in the unemployment rate from 2000 to 2001.

Table 8-27. Percentage of adults who worked for pay or income in the past 12 months: AELL-NHES:2001, AE-NHES:1999, and CPS:2000

Worked in the past 12 months	AELL-NHES:2001		AE-NHES:1999		CPS:2000
	Estimate	s.e.	Estimate	s.e.	Estimate
Total number of adults ¹ (thousands).....	198,803	0.0	194,625	0.0	198,803
Worked in the past 12 months.....	73%	0.4	76%	0.6	71%
Not worked in the past 12 months	27	0.4	24	0.6	29

¹ Includes civilian, noninstitutionalized adults, age 16 or older, not enrolled in elementary or secondary school at the time of the interview.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), March 2000.

Estimates of the percentage of the employed adult population by industry and occupation from the AELL-NHES:2001 and the CPS:2000 appear in tables 8-28 and 8-29. The estimates are generally consistent. No differences were detected by industry. By occupation, estimates of technologists and technicians (excluding health) and teachers (college, university, and other postsecondary institution) were slightly higher in the AELL, while two occupations (executive and precision production occupations) were slightly higher in the CPS:2000.

Table 8-28. Percentage distribution of the employed adult population, by industry: AELL-NHES:2001 and CPS:2000

Industry	AELL-NHES:2001		CPS:2000
	Estimate	s.e.	Estimate
Total number of adults ¹ (thousands).....	198,803	0	198,803
Number of adults reporting industry (thousands)	145,249	852	137,808
Agriculture, forestry, and fishing.....	3%	0.3	3%
Mining.....	1	0.1	#
Construction.....	6	0.4	7
Manufacturing.....	15	0.5	15
Transportation, communication, utility, and sanitary services	7	0.4	7
Wholesale trade.....	1	0.2	4
Retail trade.....	15	0.6	16
Finance, insurance, and real estate.....	6	0.3	7
Services.....	22	0.6	20
Health services.....	8	0.4	8
Educational services	10	0.4	9
Public administration	6	0.4	5
Nonclassifiable establishment/not employed.....	1	0.1	#

Rounds to zero.

¹Includes civilian, noninstitutionalized adults, age 16 or older, not enrolled in elementary or secondary school at the time of the interview.

NOTE: s.e. is standard error. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001. U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), March 2000.

Table 8-29. Percentage distribution of the employed adult population, by occupation: AELL-NHES:2001 and CPS:2000

Occupation	AELL-NHES:2001		CPS:2000
	Estimate	s.e.	Estimate
Total number of adults (thousands).....	198,803	0	198,803
Number of adults reporting occupation (thousands).....	145,249	852	137,808
Executive, administrative, and managerial occupations.....	12%	0.4	15%
Engineers, surveyors, and architects	2	0.2	2
Natural scientists and mathematicians	1	0.2	2
Social scientists, social workers, religious workers, and lawyers	2	0.2	2
Teachers: college, university, and other post-secondary institution; counselors, librarians, archivists	2	0.2	1
Teachers, except postsecondary institutions.....	4	0.2	4
Health diagnosing and treating practitioners.....	1	0.1	1
Registered nurses, pharmacists, dieticians, therapists, and physician's assistants	2	0.1	2
Writers, artists, entertainers, and athletes.....	2	0.2	2
Health technologists and technicians	2	0.2	1
Technologists and technicians, except health.....	4	0.3	2
Marketing and sales occupations.....	12	0.5	12
Administrative support occupations, including clerical	15	0.5	14
Service occupations.....	14	0.4	14
Agricultural, forestry, and fishing occupations	2	0.3	2
Mechanics and repairers.....	4	0.3	4
Construction and extractive occupations.....	5	0.3	5
Precision production occupations.....	1	0.2	3
Production working occupations	7	0.4	6
Transportation and material moving occupations	5	0.4	4
Handlers, equipment cleaners, helpers, and laborers.....	2	0.3	4
Miscellaneous occupation	1	0.1	#

Rounds to zero.

¹ Includes civilian, noninstitutionalized adults, age 16 or older, not enrolled in elementary or secondary school at the time of the interview.

NOTE: s.e. is standard error. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), March 2000.

Participation rates, by demographic characteristics. This section provides estimates concerning participation rates in adult education activities. Since there are few data sources for comparing participation rates in adult education activities, particularly from individual respondents, the previous NHES estimates were used for comparisons. Table 8-30 shows estimates of participation rates in adult education from the AELL-NHES:2001, the AE-NHES:1999, and the AE-NHES:1995. The estimates of participation rates in the AELL-NHES:2001 are higher than the AE-NHES:1995, and the observed difference may be largely related to changes in adults' participation in training, retraining, and other educational activities over the 6 years (Snyder & Hoffman, 2001; U.S. Department of Education, 2002b).

Table 8-30. Percentage of adults who participated in adult education activities in the past 12 months: AELL-NHES:2001, AE-NHES:1999, and AE-NHES:1995

Types of adult education participation	AELL-NHES:2001		AE-NHES:1999		AE-NHES:1995	
	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.
Total number of adults ¹ (thousands)	198,803	0	194,625	0	189,576	153
Participation in any adult education, including full-time credential programs only	49%	0.5	48%	0.8	45%	0.5
Participation in any adult education, excluding full-time credential programs only	46	0.5	45	0.7	40	0.5

¹ Includes civilian, noninstitutionalized adults, age 16 or older, not enrolled in elementary or secondary school at the time of the interview.

NOTE: Adult education includes adult basic education, ESL classes, credential programs, apprenticeship programs, work-related education or training, and personal interest/development courses.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001; Adult Education (AE) Survey of the NHES, 1999; Adult Education (AE) Survey of the NHES, 1995.

Table 8-31 shows overall participation rates in adult education activities (excluding participation in full-time credential programs only) from the AELL-NHES:2001, the AE-NHES:1999, and the AE-NHES:1995 by a number of demographic characteristics. There was no difference detected between the overall estimate of participation in the AELL-NHES:2001 and that reported in the AE-NHES:1999 (46 percent versus 45 percent). Both years had higher participation rates than reported in the AE-NHES:1995 (40 percent). In the AELL-NHES:2001, the AE-NHES:1999, and the AE-NHES:1995, a greater percentage of adults who earned more than \$50,000 a year or already had a Bachelor's degree indicated that they participated in education within the past 12 months. Also, a lower percentage of adults over 55 years of age indicated that they participated in education across the AELL-NHES:2001, the AE-NHES:1999, and the AE-NHES:1995 compared to that of younger adults.

Table 8-31. Number and percentage of adults who participated in adult education activities in the past 12 months, by characteristics of adults: AELL-NHES:2001, AE-NHES:1999, and AE-NHES:1995

Characteristics	Number (thousands)	Adult education participants in the past 12 months			
		Number (thousands)	s.e. (thousands)	Percent	s.e.
AELL-NHES:2001					
Total adults ¹	198,803	92,278	1,089	46	0.5
Age					
16–24 years	23,523	12,420	533	53	2.0
25–34 years	38,325	20,432	669	53	1.6
35–44 years	43,355	23,304	689	54	1.2
45–54 years	38,109	20,368	664	53	1.4
55 years and over	55,490	15,755	537	28	0.9
Sex					
Male	94,955	40,897	788	43	0.8
Female.....	103,848	51,382	808	50	0.8
Race/ethnicity					
White, non-Hispanic	144,147	68,335	923	47	0.6
Black, non-Hispanic.....	22,186	9,605	333	43	1.5
Hispanic	21,537	8,984	490	42	2.3
Other race, non-Hispanic	10,932	5,355	402	49	2.5
Household income					
\$10,000 or less	15,433	4,153	305	27	2.0
\$10,001 to 30,000	52,027	17,277	597	33	1.1
\$30,001 to 50,000	44,696	20,848	690	47	1.3
\$50,001 to 75,000	40,725	22,699	793	56	1.5
More than \$75,000.....	45,922	27,302	688	59	1.3
Marital status					
Never married	41,829	21,089	696	50	1.4
Currently married.....	121,455	57,644	984	47	0.7
Other	35,519	13,545	488	38	1.3
Educational attainment					
Less than high school.....	31,343	6,957	473	22	1.5
High school.....	64,606	21,692	677	34	0.9
Associate’s degree or some college	52,559	30,273	815	58	1.1
Bachelor’s degree or higher.....	50,295	33,357	676	66	1.1

See notes at end of table.

Table 8-31. Number and percentage of adults who participated in adult education activities in the past 12 months, by characteristics of adults: AELL-NHES:2001, AE-NHES:1999, and AE-NHES:1995—Continued

Characteristics	Number (thousands)	Adult education participants in the past 12 months			
		Number (thousands)	s.e. (thousands)	Percent	s.e.
AE-NHES:1999					
Total adults ¹	194,625	86,659	1,437	45	0.7
Age					
16–24 years	23,438	11,739	740	50	2.7
25–34 years	37,851	21,314	970	56	2.0
35–44 years	45,299	22,781	841	50	1.8
45–54 years	35,193	17,082	737	49	2.1
55 years and over	52,845	13,743	700	26	1.2
Sex					
Male	93,137	38,831	1,039	42	1.1
Female.....	101,488	47,828	963	47	1.0
Race/ethnicity					
White, non-Hispanic	143,201	63,589	1,224	44	0.8
Black, non-Hispanic.....	22,129	10,241	482	46	2.2
Hispanic	19,491	8,045	415	41	2.1
Other race, non-Hispanic	9,804	4,785	465	49	3.9
Household income					
\$10,000 or less	14,335	3,329	381	23	2.7
\$10,001 to \$30,000	54,902	17,791	797	32	1.4
\$30,001 to \$50,000	49,496	22,985	918	46	1.6
\$50,001 to \$75,000	35,984	19,828	745	55	1.9
More than \$75,000.....	39,909	22,726	795	57	1.7
Marital status					
Never married	40,190	19,296	826	48	1.8
Currently married.....	120,250	55,504	1,225	46	0.9
Other	34,185	11,859	543	35	1.4
Educational attainment					
Less than high school.....	33,343	7,287	568	22	1.7
High school	95,674	39,416	1,251	41	1.1
Associate's degree or some college	11,275	6,384	428	57	2.7
Bachelor's degree or higher	54,332	33,572	1,183	62	1.4

See notes at end of table.

Table 8-31. Number and percentage of adults who participated in adult education activities in the past 12 months, by characteristics of adults: AELL-NHES:2001, AE-NHES:1999, and AE-NHES:1995—Continued

Characteristics	Number (thousands)	Adult education participants in the past 12 months			
		Number (thousands)	s.e. (thousands)	Percent	s.e.
AE-NHES:1995					
Total adults ¹	189,576	76,272	921	40	0.5
Age					
16–24 years	22,439	10,550	289	47	1.1
25–34 years	40,326	19,508	449	48	1.0
35–44 years	42,304	20,814	450	49	0.9
45–54 years	31,807	14,592	428	46	1.2
55 years and over	52,700	10,808	466	21	0.8
Sex					
Male	90,275	34,453	584	38	0.7
Female.....	99,301	41,818	594	42	0.6
Race/ethnicity					
White, non-Hispanic	144,602	59,988	774	41	0.5
Black, non-Hispanic.....	20,808	7,705	302	37	1.5
Hispanic	15,705	5,284	187	34	1.2
Other race, non-Hispanic	8,461	3,294	210	39	2.1
Household income					
\$10,000 or less	30,212	6,888	305	23	1.0
\$10,001 to \$30,000	56,851	18,336	487	32	0.9
\$30,001 to \$50,000	49,076	21,787	508	44	0.8
\$50,001 to \$75,000	29,161	15,169	460	52	0.9
More than \$75,000.....	24,277	14,091	369	58	1.3
Marital status					
Never married	38,658	17,105	398	44	0.8
Currently married.....	114,680	48,200	731	42	0.6
Other	36,238	10,967	400	30	1.1
Educational attainment					
Less than high school.....	29,347	4,621	303	16	1.1
High school	62,957	19,343	522	31	0.8
Associate’s degree or some college	50,736	25,230	428	50	0.8
Bachelor’s degree or higher	46,535	27,078	560	58	1.0

¹ Includes civilian, noninstitutionalized adults, age 16 or older, not enrolled in elementary or secondary school at the time of the interview.

NOTE: s.e. is standard error. Adult education includes ESL classes, adult basic education, credential programs, apprenticeship programs, work-related education or training, and personal interest/development courses. Detail may not sum to totals because of rounding..

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001; Adult Education (AE) Survey of the NHES, 1999; and Adult Education (AE) Survey of the NHES, 1995.

Participation was higher for females (50 percent in AELL-NHES:2001, 47 percent in AE-NHES:1999, and 42 percent in AE-NHES:1995) than males (43 percent, 42 percent, and 38 percent, respectively). There was an increase in White participants in AELL-NHES:2001 from the AE-NHES:1999. There were also differences in participation rates by race/ethnicity in the AELL-NHES:2001 versus the AENHES:1995 such that a higher percentage of White (47 percent versus 41 percent), Black (43 percent versus 37 percent), Hispanic (42 percent versus 34 percent), and others (49 percent versus 39 percent) participated in AELL-NHES:2001.

Table 8-32 shows participation rates for persons 16 years and older who were employed in the previous 12 months by occupation. The observed participation rates are higher than the total rates for all adults. This is reasonable, because work-related adult education is one of the two most common types of adult education and lifelong learning and employed adults are more likely to participate in such educational activities (Darkenwald, Kim, & Stowe, 1998). With a few exceptions, the results also showed that the relative rates of participation within occupations were consistent in the AELL-NHES:2001, the AE-NHES:1999, and the AE-NHES:1995. There was an increase in participation among executive, administrative, and managerial occupations in AELL-NHES:2001 from AE-NHES:1999 (66 percent versus 57 percent and 56 percent respectively) as well as an increase among those in marketing and sales (51 percent in AELL-NHES:2001 versus 44 percent in AE-NHES:1999 and AE-NHES:1995) and administrative support (59 percent in AELL-NHES:2001 versus 50 percent in AE-NHES:1999 and 52 percent in AE-NHES:1995). Also, there were increases in AELL-NHES:2001 from AE-NHES:1999 in percentages of health technologists and technicians (86 percent versus 67 percent) and non-health technologists and technicians (70 percent versus 60 percent). The reader should note that the standard errors were quite large for some estimates, due to small numbers of cases in a given occupational group, and for this reason, some differences that may appear rather large were not statistically significant.

Table 8-32. Percentage of employed adults who participated in adult education activities during the past 12 months, by occupation: AELL-NHES:2001, AE-NHES:1999, and AE-NHES:1995

Occupation	AELL-NHES:2001		AE-NHES:1999		AE-NHES:1995	
	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.
Number of adults ¹ (thousands).....	198,803	0	194,625	0	189,576	153
All employed adults (thousands).....	145,249	852	148,629	1,131	131,899	760
Executive, administrative, and managerial occupations.....	66%	1.6	57%	2.2	56%	3.5
Engineers, surveyors, and architects	68	4.5	80	6.1	66	6.4
Natural scientists and mathematicians	74	4.5	61	6.9	72	4.9
Social scientists, social workers, religious workers, and lawyers.....	84	3.1	79	3.9	77	3.4
Teachers: college, university, and other post-secondary institution; counselors, librarians, archivists	69	4.6	66	5.5	55	8.5
Teachers, except postsecondary institution	80	3.0	78	3.3	77	2.6
Health diagnosing and treating practitioners.....	78	6.4	80	9.2	71	8.1
Registered nurses, pharmacists, dieticians, therapists, and physician's assistants.....	83	3.8	85	3.8	87	2.9
Writers, artists, entertainers, and athletes.....	47	6.0	50	6.0	50	8.8
Health technologists and technicians	86	3.2	67	6.4	75	4.9
Technologists and technicians, except health.....	70	3.3	60	4.4	64	4.4
Marketing and sales occupations.....	51	2.1	44	2.7	44	3.0
Administrative support occupations, including clerical	59	1.7	50	2.7	52	2.4
Service occupations.....	49	2.2	51	2.3	47	3.0
Agricultural, forestry, and fishing occupations	46	6.8	34	6.8	26	13.5
Mechanics and repairers.....	35	3.4	42	5.3	48	5.7
Construction and extractive occupations.....	32	3.2	35	5.1	38	6.4
Precision production occupations.....	35	6.2	38	7.6	43	10.1
Production working occupations.....	39	2.8	38	3.7	31	4.2
Transportation and material moving occupations.....	30	3.3	33	3.7	28	8.2
Handlers, equipment cleaners, helpers, and laborers.....	18	3.2	21	5.0	25	10.8
Miscellaneous occupation	65	7.1	43	9.3	57	6.4

¹ Includes civilian, noninstitutionalized adults, age 16 or older, not enrolled in elementary or secondary school at the time of the interview.

NOTE: s.e. is standard error. Adult education includes ESL classes, adult basic education, credential programs, apprenticeship programs, work-related education or training, and personal interest/development courses.

SOURCE: SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001; Adult Education (AE) Survey of the NHES, 1999; and Adult Education (AE) Survey of the NHES, 1995.

Adult basic education/GED preparation and English as a second language programs.

Table 8-33 presents estimates of participants in basic skills education and English as a second language (ESL) programs from the Office of Vocational and Adult Education (OVAE) of the U.S. Department of Education and from the AELL-NHES:2001. The 1998 OVAE data estimated that about 2 million adults participated in basic skills education and about 1.9 million adults participated in ESL programs, as compared to about 3.2 million and 2.3 million, respectively, estimated in the AELL.

Table 8-33.—Number of adults who participated in basic skills education and ESL classes: AELL-NHES:2001, AE-NHES:1999, and 1998 Adult Education Program Facts of the Office of Vocational and Adult Education (OVAE)

Adult basic education	AELL-NHES:2001		AE-NHES:1999		OVAE (1998)
	Number of participants	s.e.	Number of participants	s.e.	Number of participants
Basic skills education.....	3,214,070	310,566	3,259,000	392,538	2,024,077
English as a second language.....	2,319,004	331,430	1,791,436	293,928	1,920,448

NOTE: s.e. is standard error.

SOURCE: SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001; and Adult Education (AE) Survey of the NHES, 1999. U.S. Department of Education, Office of Vocational and Adult Education (OVAE), 1998 Adult Education Program Facts.

The OVAE estimate of basic skills education participants included only those who participated in federal grant-receiving adult basic education programs, whereas the AELL-NHES:2001 estimate counted participants irrespective of how the adult basic education program was funded. This may explain why the AELL estimate was larger than that indicated by OVAE. The same difference in approaches to counting participants existed between OVAE and AELL counts of ESL participants. However, the two estimates appear fairly consistent. Part of the reason for this may be due to the fact that while OVAE only counted those participants who were in federal grant-receiving ESL programs and AELL counted participants irrespective of how the ESL program was funded, OVAE counted participants regardless of what language they spoke. In contrast, because the AELL survey was conducted only in English or Spanish, it only counted ESL participants who could speak English and/or Spanish. Thus, though AELL was less restrictive in terms of funding sources for ESL programs, it was more restrictive than OVAE in terms of language spoken.

Credential programs. Table 8-34 shows estimates from the AELL-NHES:2001, AE-NHES:1999, and the 1997 IPEDS data for enrollment in postsecondary credential programs. The AELL-NHES:2001 estimate of participation in college or university degree programs was about 19.3 million adults, and the estimate of participation in vocational or technical programs was about 3.7 adults. Thus, the AELL estimates that about 22.9 million adults participated in some form of postsecondary credential program over the 12-month period covered by the survey.

The IPEDS estimates were quite different. According to the 1997 IPEDS, about 15.1 million people were enrolled in postsecondary institutions in the fall of 1997, about 9.1 million in 4-year colleges and universities and about 6.1 million in 2-year or less than 2-year institutions. Although the numbers of participants in vocational or technical programs were not reported separately in the IPEDS data, it can be assumed that they were included in the estimate of 6.1 million participants in less-than-2-year institutions (an estimate that also includes many associate degree seekers in 2-year colleges). The AELL-NHES:2001 estimate of the number of adults enrolled in vocational or technical diploma programs was about 3.7 million.

Table 8-34. Number of adults who participated in credential programs: AELL-NHES:2001, AE-NHES:1999, and 1997 Integrated Postsecondary Education Data System (IPEDS)

Type of degree program	Number of participants	
	Number	s.e.
AELL-NHES:2001		
College or university.....	19,274,562	637,978
Vocational or technical	3,650,401	273,894
AE-NHES:1999		
College or university.....	22,733,309	783,126
Vocational or technical	11,644,949	693,157
1997 IPEDS		
4-year colleges and universities	9,064,878	—
2-year or less than 2-year colleges.....	6,068,785	—

—Not available.

NOTE: s.e. is standard error.

SOURCE: SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education and Lifelong Learning (AELL) Survey of the National Household Education Surveys Program (NHES), 2001; and Adult Education (AE) Survey of the NHES, 1999. U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), 1997.

The differences observed between IPEDS and AELL estimates might result from important methodological differences between the two surveys. First, the NHES data were collected by type of credential program, whereas the IPEDS estimates were collected by type of institution. These were not directly comparable approaches, since some college degree seekers (e.g., associate's degree candidates) as well as vocational/technical students were enrolled in the same institution type (2-year or less than 2-year).

Second, the NHES included those who had been postsecondary credential seekers in the 12-month time frame addressed in the survey, whereas IPEDS included all students regardless of degree candidate status. This might have led to a higher estimate from the IPEDS given the broader population, but this was mitigated by another methodological difference. Specifically, while the AELL represents participation in a 12-month period (and therefore includes more than one academic year), IPEDS estimates represent fall enrollment for one academic year.

Finally, differences between AELL estimates and the AE-NHES:1999 estimates might have been in part the result of a change in the structure of the credential sections in the AELL instrument. In surveys prior to 2001, postsecondary credential programs (including college and vocational programs) were collected in the same section of the questionnaire. In the AELL, these two sections were separated so that college degree programs were collected in one section and vocational/technical in another. The changes in the structure of the credential sections might have resulted in some differences in estimates.

Summary

Overall, the comparisons of selected estimates from the NHES:2001 with comparable data sources have provided an indication of the reasonableness of the NHES:2001 estimates. Although the estimates presented here were just some of the multitude of comparisons that could be made between NHES:2001 estimates and those of other sources using different variables and categorizations, this approach has proven useful in determining whether significant differences in estimates existed, and if so, providing possible reasons for these differences.

9. ASPA-NHES:2001 REINTERVIEW

This chapter describes a reinterview study that was conducted for the ASPA-NHES:2001. As with the reinterview studies conducted for the SR-NHES:1993, SSD-NHES:1993, the AE-NHES:1995, the PFI/CI-NHES:1996, and the YCI-NHES:1996, this study was done in order to assess data item reliability and to inform future NHES surveys. The ASPA reinterview questionnaire is in appendix L.

Introduction

This chapter examines measurement errors arising in interviewing respondents in the ASPA-NHES:2001 survey. The estimates from this survey and every survey are subject to both sampling error and nonsampling error. Sampling errors, the differences between the population values and the sample estimates that arise because data are obtained from only a sample of the population, are generally well understood and can be estimated from the survey data themselves. Nonsampling errors, on the other hand, arise from a variety of sources and are more difficult to measure. Important components of nonsampling error for the NHES include coverage, nonresponse, and measurement errors. Population coverage and nonresponse are addressed in previous chapters of this report; this chapter examines measurement error, specifically response variability.

For the ASPA-NHES:2001, measurement errors were estimated by reinterviewing a sample of respondents and asking them a subset of the same questions included in the original interview. The reinterview procedure does not account for all the measurement errors in the interviewing process. For example, systematic errors that might be made in both the original interview and the reinterview are not discovered with this approach. Rather, the statistics produced by comparing the original interview and reinterview responses estimate the consistency of reporting, assuming both interviews were conducted under the same general conditions. A general review of the design and analysis of reinterviews is given by Forsman and Schreiner (1991). Brick et al. (1994) discuss the use of reinterviews in the context of other nonsampling errors. Brick, Collins, and Chandler (1997), Brick, Wernimont, and Montes (1996), and Montaquila, Brick, and Brock (1997) used these methods in the analysis of the SR-NHES:1993 and SSD-NHES:1993; the AE-NHES:1995; and the PFI/CI-NHES:1996 and YCI-NHES:1996 reinterview data.

When the same respondents are asked the same questions on different occasions, different responses may be obtained. Not all the differences are necessarily the result of measurement error. Discrepancies in responses can be grouped into four categories:

- Circumstances related to the topic under study may have changed between the first report and the second; both answers, although different, may be correct.
- The original response may have been recorded (interviewer error) or reported (respondent error) incorrectly.
- The reinterview response may have been recorded or reported incorrectly.
- Both the original and reinterview responses may have been recorded or reported incorrectly.

The primary objectives for the NHES:2001 reinterview program were:

- To identify survey questions that were not reliable, i.e., the two interviews did not elicit the same response;
- To quantify the magnitude of the response variance for groups of questions collected from the same respondent at two different times; and
- To provide feedback to improve the design of questions for future surveys.

An objective in some reinterview programs is to provide a check on interviewers who might be recording entire interviews without speaking to the respondents. Since the NHES:2001 was a computer-assisted telephone interview (CATI) survey operated in a centralized location, there was no need to design reinterviews to verify that the interviews were genuine. The CATI interviews were routinely monitored throughout data collection, and it was highly unlikely that a telephone interviewer could invent whole interviews.⁵¹

A subset of the original ASPA-NHES:2001 questions was included in the reinterview. This was done to reduce the burden on respondents who had already completed one or more full interviews

⁵¹Monitoring of interviews involved simultaneously listening to the interview and observing the entry of responses into the CATI system.

and to avoid asking some questions that were very time dependent.⁵² In general, the items administered in the reinterview (see appendix L) were selected based on the following criteria:

- Questions that were key statistics or were used for calculating critical estimates;
- Questions required for critical skip patterns or that provided information for displays for the subsequent sections and questions;
- Questions that were not time dependent; and
- Questions that were new to the ASPA-NHES:2001 and had not been tested in other NHES surveys.

For the ASPA-NHES:2001 reinterview, questions were selected from the following specific subject areas:

- School characteristics;
- Relative care;
- Nonrelative care;
- Center- or school-based programs;
- Before- and after-school activities;
- Self-care;
- Parental care;
- Perceptions of quality and factors in parental choice;
- Health and disability;
- Mother items; and
- Father items.

⁵²An item is considered time dependent if the reference is to a specific time period and/or the response is likely to change over time. Examples would be events associated with the school year, or sports activities typically associated with a given season of the year.

Reinterview Design

The ASPA-NHES:2001 reinterviews were conducted with the original interview respondents and were designed to provide information about the reliability of the data collected. Twelve random samples of completed interviews were selected on a weekly basis, beginning during the third week of data collection and ending on April 4, two weeks before the close of data collection. The reinterview sampling was terminated on April 4 to allow resources at the end of the data collection period to be devoted mainly to the primary (ECP, ASPA, and AELL) interviews.

Table 9-1 gives the number and percent of households eligible for reinterview sampling as well as the reasons for ineligibility. The exclusions given in the table were determined by reviewing completed ASPA interviews for eligibility.

Table 9-1. Number of interviews eligible for reinterview sampling: ASPA-NHES:2001

Characteristic	Number of completed ASPA-NHES:2001 interviews	Percent of completed ASPA-NHES:2001 interviews
Total number of completed ASPA-NHES:2001 interviews	9,583	100.0
Total number sampled for the reinterview	902	9.4
Total number eligible but not sampled for the reinterview	5,121	53.4
Total number excluded from reinterview sampling	3,560	37.1
Homeschooler or enrolled in grades K-2	2,409	†
At least one interview in the household not conducted in English	454	†
Not all interviews in household finalized and sufficiently “aged” by time of reinterview sampling	697	†

† Not applicable.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Reinterview Survey of the National Household Education Surveys Program (NHES), 2001.

One criterion for determining whether an ASPA interview was eligible for the reinterview was that all of the interviews in the household had to have been completed (all completes or a combination of completes and ineligibles). Thus, if some of the interviews in the household were not completed and others were completed, then a completed ASPA interview in the household was not eligible for reinterview sampling. This restriction in the sample was implemented to prevent the reinterview activity from disrupting the completion of the original interviews. Additionally, to be eligible for the reinterview, the original ASPA interview must have been completed at least 2 weeks (14 days)

prior to the reinterview sampling date. This restriction was implemented so that respondents were unlikely to simply remember and repeat their earlier responses. The time restriction was relaxed near the end of the data collection period so that more interviews had an opportunity to be sampled.⁵³ A total of 697 ASPA interviews were ineligible for the reinterview because either not all interviews within their household were completed and/or the ASPA interview itself was not sufficiently “old” enough at the time of the final reinterview sampling.

Interviews were reviewed for other eligibility criteria before they were included in the reinterview sample. One such restriction was that only those interviews in households in which all interviews were conducted in English were eligible. A total of 454 interviews were ineligible for sampling because not all interviews in the household were conducted in English.

Table 9-2 shows the target and actual numbers of cases sampled for and completing the reinterview, by type of care arrangement. In order to ensure that items pertaining to different types of care were asked of sufficient numbers of people during the reinterview, ASPA interviews were sampled for the reinterview at different rates depending upon the type(s) of care the child received. Specifically, ASPA interviews of children with no reported nonparental care arrangements were sampled at the lowest rate (about 1 in 12.7); ASPA interviews of children with either self-care, center- or school-based care, or relative care were sampled at a rate of about 1 in 6.3; and ASPA interviews of children with either non-relative care or multiple care arrangements were sampled at the highest rate (about 1 in 3.2). Late in the data collection period, it became apparent that the reinterview yield would fall short of the target and as a result, the reinterview sampling rates were changed. The rate for children with self-care remained fixed at about 1 in 6.3. The rates for children having non-relative or multiple care arrangements were changed to about 1 in 1.6; the rates for children in center- or school-based or relative care arrangements were changed to about 1 in 3.2; and the rates for children with no nonparental care arrangements were changed to about 1 in 6.3. The reinterview data are weighted to reflect these different selection probabilities based on different types and combinations of care arrangements and based on the time of selection.

A sample of 902 ASPA-NHES:2001 interviews was selected for reinterview. A total of 730 ASPA-NHES:2001 reinterviews were completed for an estimated unit response rate of 84.5 percent. Unit response rates varied among subgroups defined by the types of care arrangements. Thus, a separate reinterview nonresponse adjustment was performed, using the types of care arrangements to form cells. After the reinterview nonresponse adjustment was applied, a poststratification adjustment was applied in

⁵³Specifically, in the 11th week of reinterview sampling (March 30, 2001), the time restriction was relaxed to 1 week; in the 12th week of reinterview sampling (April 4, 2001), the time restriction was relaxed to 3 days.

order to align the totals of the person-level reinterview weights to grade by home tenure control totals from the CPS. The control totals used for this adjustment are the same as those used in raking the ASPA interview weights. (See table 7-8.)

Table 9-2. Target and actual numbers of interviews sampled for and completing the reinterview, by type of care arrangement: ASPA-NHES:2001

Type of care arrangement	Target		Actual		
	Number sampled for reinterview	Number of completed reinterviews	Number sampled for reinterview	Number of completed reinterviews	Estimated unit response rate (%)
Total	1,110	1,000	902	730	84.5
Self-care.....	225	203	242	201	86.2
Non-relative care	102	92	78	60	77.3
Multiple care arrangements	112	101	81	65	82.3
Center- or school-based care	156	140	116	87	79.2
Relative care	183	165	130	99	80.3
No care arrangements	332	299	255	218	86.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Reinterview Survey of the National Household Education Surveys Program (NHES), 2001.

The main reason for not completing a reinterview was the refusal of the respondent to participate. Approximately 61 percent of the sampled reinterviews that were not completed were final respondent refusals. The majority of the remaining nonresponse was due to the inability of interviewers to contact the respondent during the reinterview time period. Twenty-seven percent of the nonresponse cases received 14 or more call attempts without being completed. Other reasons for not completing a reinterview were that the telephone number had been disconnected or changed, or the ASPA interview respondent had moved to a new household with no telephone or forwarding number.

The reinterview was conducted using the same CATI system that was used in the original interview, modified to display the selected reinterview items instead of all the original items. For nearly all questions, the interviewers read identical words to the same respondent who completed the original interview. Exceptions were a revised introduction, in which the respondent was informed that a subset of questions was being asked again for quality control purposes, questions for which an introductory statement was added about an answer given in the original interview to introduce a reinterview topic (for example, “When we spoke with you last time, you told us child is cared for by (his/her) (RELATIVE)...”), and questions regarding temporal changes in activities, discussed below.

One question in the ASPA-NHES:2001 reinterview asked about activities in which the child participated (ASNOW2). When the reinterview response was different from the original response, the interviewer asked the respondent either whether any of the child's activities had ended since the original interview (ACTEND2), or whether the child had started any new activities since the original interview (ACTNEW2). For example, if the respondent said in the original interview that the child was not participating in activities on weekdays before or after school on a regular basis, but reported in the reinterview that the child was participating in activities on weekdays before or after school on a regular basis, then the respondent was asked during the reinterview whether the child had started any new activities since the original interview. These follow-up items (ACTEND2 and ACTNEW2) were used to reconcile some discrepancies between the original response and the reinterview response. In the above example, if the respondent reported that the child had started new activities since the original interview, then it is likely that the original interview response was correct; if the respondent reported that the child had not started new activities since the original interview, then there appears to be a discrepancy in the responses. This discrepancy may be attributable to a number of reasons, such as recall error, recording error, or reporting error. The two follow-up items were used to create a new variable, called a "presumed true value" variable, that is based on the responses to the four questions. If the reinterview respondent reported an activity (ASNOW2 = 1) but no activity was reported in the original interview (ASNOW = 2), the reinterview respondent was asked whether the child had started a new activity since the original interview (ACTNEW2). If so (ACTNEW2 = 1), then this discrepancy was deemed to have been resolved. Similarly, if the reinterview respondent reported no activity (ASNOW2 = 2) but an activity was reported in the original interview (ASNOW = 1), the reinterview respondent was asked whether the child had finished an activity since the original interview (ACTEND2). If so (ACTEND2 = 1), then this discrepancy was also deemed to have been resolved. All other combinations were deemed unresolved discrepancies and treated as such in the analysis.

Analysis Methods

Several statistics have been developed to assess the reliability of responses using reinterview data. The two statistics used in this report are the gross difference rate and the net difference rate. These two statistics were used in previous NHES reinterview reports (Brick and West 1992, Brick Wernimont, and Montes 1996, Brick, Collins, and Chandler 1997, and Montaquila, Brick, and Brock 1997) and are well documented in the reinterview literature (Hansen et al. 1964; Forsman and Schreiner 1991).

For dichotomous response variables, the gross difference rate measures the proportion of cases with different responses in the two administrations of the interview. Thus, it is an estimate of the reliability or consistency of reporting. The net difference rate, which is the average difference between the original interview and reinterview responses, takes account of offsetting misclassifications. If the second interview contains the true value for the respondent, the net difference rate estimates the bias.

Table 9-3 shows the general format of the possible reporting outcomes from the original interviews and reinterviews when the question has only two possible values. From tables formatted in this fashion, it is possible to estimate several features of the consistency of the reporting between the original survey and the reinterview. For example, the off-diagonal cells estimate the responses that were reported differently in the original interview and the reinterview. The definitions of the statistics used in this report are given below, where the cell counts are the weighted totals. Cases with missing values for the characteristic are dropped from the analysis.

Table 9-3. General format of interview-reinterview results: ASPA-NHES:2001

Reinterview	Original interview		Total
	Number of cases with characteristic	Number of cases without characteristic	
Total.....	a + c	b + d	n = a + b + c + d
Number of cases with characteristic	a	b	a + b
Number of cases without characteristic	c	d	c + d

NOTE: All values given in the table represent weighted counts.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001.

Gross Difference Rate

The gross difference rate is the weighted ratio of the gross difference divided by the estimated total number of cases. The gross difference rate is:

$$gdr = \frac{1}{\sum_1^n w_i} \sum_1^n w_i \{x_{1i} - x_{2i}\}^2 \tag{9.1}$$

where x_{1i} is the response to the original interview question for case i ;
 x_{2i} is the response to the reinterview question for case i ; and
 w_i is the full sample weight for case i .

For characteristics that have exactly two possible outcomes, the gross difference rate, expressed as a percentage, can be written using the terms from table 9-3 as

$$gdr = 100 \frac{b+c}{n} \quad (9.2)$$

This can easily be seen to be a special case of (9.1) where the x_i terms only take on the values of 0 or 1. The gross difference rates for all questions were computed using (9.2) and only data from the original and reinterview responses, unless otherwise noted. For binary data, it is clear from (9.2) that the gross difference rate is an estimate of the percentage of cases not reported the same in both interviews, i.e., those falling in the off-diagonal cells. The gross difference rate divided by 2 is a measure of the response variance. Forsman and Schreiner (1991) show that this is an unbiased estimate of response variance if the observations are independent and identically distributed. The response variance is defined as the variation associated with the responses to the same question when the survey is repeated under the same general conditions.

For nominal variables, neither (9.1) nor (9.2) can be used to compute the gross difference rate because the values assigned to the levels of the characteristic are not scaled. For such questions, a set of binary variables was computed based on the response to the original variable, and then the gross difference rate was computed for each new variable using (9.2). The number of binary variables created from each original variable was equal to the number of response categories for the original variable. For example, one of the questions in the ASPA-NHES:2001 reinterview (RCQUAL2) asked how the respondent would rate the quality and care of the child's activities in his/her arrangement. This item had four response categories: Excellent, good, fair, and poor. Four binary variables were created from this variable. The first binary variable has the value 1 if the response was "Excellent" and has the value 0 otherwise; the second binary variable has the value 1 if the response was "Good" and has the value 0 otherwise; the third binary variable has the value 1 if the response was "Fair" and has the value 0 otherwise; and the fourth binary variable has the value 1 if the response was "Poor" and 0 otherwise. The same procedure of creating binary variables was used for net difference rates as discussed below.

Net Difference Rate

The net difference rate can be defined for characteristics that are binary or continuous. The net difference rate for a continuous variable is given by

$$ndr = \frac{1}{\sum_1^n w_i} \sum_1^n w_i \{x_{1i} - x_{2i}\} \quad (9.3)$$

where the variables are defined as in (9.1). The net difference rate is thus the average difference between the original and reinterview responses.

For the binary case, the net difference is the difference between the weighted number of cases with a characteristic as reported in the original interview and the weighted number of cases in the reinterview. That is, $(a + c) - (a + b) = c - b$, using the terms in table 9-3. Thus, a positive net difference rate indicates that more adults reported having the characteristic in the original interview than in the reinterview. While the gross difference indicates differences in both directions, the net difference is the nonoffsetting part of the gross difference. Written as a percentage, the net difference rate is:

$$ndr = 100 \frac{c - b}{n} \quad (9.4)$$

If the reinterview response is the “true” value, or at least a better approximation to the true value, then the net difference rate is a measure of the bias (or reduction in bias) of the estimate. Generally speaking, this was not the case in the ASPA-NHES:2001 since the reinterview responses were collected under the same conditions as the original interview (i.e., using the same mode of data collection, virtually the same questionnaire, and the same respondent as in the original interview). Brick, et al. (1994) discuss this issue in more detail. In some surveys, it is assumed that when the original and reinterview differences are reconciled with the respondent, more accurate responses result. In these cases the net difference rate computed using the original and the reconciled responses is a valid estimate of the response bias. Brick and West (1992) and Brick, et al. (1994) found that there was little empirical support for this assumption, even for reconciled data.

The net difference rate computed from the original and reinterview data can be used to evaluate one of the assumptions associated with the gross difference rate. If the reinterview is an independent replication of the original interview, then the gross difference rate is a valid measure of response variance. Generally, it is assumed that this condition holds, but the net difference rate provides a

means of partially evaluating this assumption. If the interviews are replications, then the estimated net difference rate should be equal to zero in expectation (the original interview and reinterview should have the same average value). Biemer and Forsman (1992) discuss this issue more fully. Thus, the net difference rates for the questions in the ASPA-NHES:2001 reinterview study presented below are used for this purpose.

Findings

The gross and net difference rates for the reinterview questions are presented below along with a discussion of the implications of the results for the analysis of estimates from the ASPA-NHES:2001 survey and the planning of future NHES studies that address similar topics. A number of items were selected for analysis, including several key items of interest, and all items with a gross difference rate larger than 20 percent or a net difference rate that was significantly different from zero. For these select items, the estimates and their standard errors are presented along with the gross and net difference rates and their standard errors. The estimates are the weighted percent of respondents reporting in the first response category of the question based only on the data from the respondents to the reinterview. Since these are restricted to the reinterview subsample, the estimates may differ from those from the full ASPA-NHES:2001 sample. The sample sizes vary from item to item because of skip patterns in the interviews.

The primary focus of the ASPA-NHES:2001 reinterview study was to measure the random component of measurement error using the gross difference rate based on the reinterview data. Some rough rules of thumb for interpretation may be employed when using the gross difference rate as an estimator of the impact of measurement error on the estimates (Brick, Wernimont, and Montes 1995; U.S. Census Bureau 1985). These rules are most applicable when the estimated characteristic is between 20 and 80 percent. The rules are, if the gross difference rate is:

- Less than 20, the impact of measurement error is low;
- Between 20 and 45, the impact of measurement error is moderate; or
- Greater than 45, the impact of measurement error is high.

If it is determined that measurement error is nonnegligible, the next step might be to characterize the nature of the measurement error. For example, it would be useful to know whether the measurement error tends to be due to response error as opposed to a true change in conditions. Another

hypothesis is that the time between the original interview and the reinterview might influence the response errors. A specific concern is that if the time between the interviews is short then the respondents might simply be recalling their previous responses. If this is true then the general expectation is that response error should increase as this lag time increases. In order to examine this hypothesis, gross difference rates for the reinterview variables and for the original variables are tabulated by LAGCAT, a variable that classifies the amount of time between the two interviews. One additional hypothesis is that parents' level of education may influence the response errors. To examine this, gross difference rates for the reinterview variables and for the original variables are tabulated by PARGRADE, a variable that classifies the parents' highest level of education.

Table 9-4 shows the estimates, the gross and net difference rates, and the standard errors for the questions from the ASPA reinterview. The variable names given in the table can be referenced to the specific questions by looking at the reinterview questionnaire in appendix L. For example, SSCHOMM2 is the question that asks how long it usually takes for the child to get home from school.

Gross and net difference rates were computed for all variables in the ASPA reinterview. The gross and net difference rates are tabulated in this chapter for a select subset of 143 items. Key measures of interest in the survey (such as participation in activities) are included in these tabulations. All items with gross difference rates of at least 20 percent are presented. In addition, all items with net difference rates significantly different from zero are presented. An additional 159 items of the 302 total items in the reinterview are not shown in the tabulations presented here; all of those items had gross difference rates under 20 and net difference rates not significantly different from zero.

The overall gross difference rates for the ASPA reinterview questions are all either low or moderate for all questions. Of the 143 items in the table, 60 have low gross difference rates and 69 have moderate gross difference rates.⁵⁴ Among the 69 items that have moderate gross difference rates, 54 have rates of 20 to 30 percent, and 15 have rates of 31 to 45 percent. The gross difference rates for the remaining 14 items could not be computed due to insufficient sample sizes in one or more of the four required cells for computing the gross difference rate, as defined in Table 9-3. None of the items in the ASPA reinterview was found to have a high gross difference rate.

⁵⁴Items are individual measures as described earlier in this chapter, and not interview questions. As noted earlier, recoding into dichotomous items was done for questions with more than two response categories. Thus, a question with four response categories would have yielded four items for this analysis: 1 or otherwise, 2 or otherwise, 3 or otherwise, and 4 or otherwise.

Some insight into the nature of the measurement error encountered in the ASPA survey can be obtained by examining those items that have moderate gross difference rates. In general, these items fall into 6 groups:

- Items pertaining to the parent/guardian's satisfaction with the child's care arrangements, addressed in reinterview questions RSF26, RSG25, and SH34;
- Items pertaining to specific after-school activities within before- or after-school arrangements, including:
 - Outdoor and indoor play and television viewing in relative care arrangements (SF24);
 - Reading, indoor and play, and television viewing in nonrelative care arrangements (SG23);
 - Homework or educational activities, reading, arts, outdoor play, and other activities for center- or school-based programs (SH25);
 - Homework or educational activities, outdoor play, and television viewing for self-care (SJ15); and
 - Homework or educational activities, using a computer, reading, arts, outdoor and indoor play, and television viewing for after-school hours in parental care (SK6);
- Items pertaining to reasons for choosing parental care for the child (SM0);
- Items pertaining to the parents' perspective on the child's participation in care, including preferred arrangement, obstacles and degree of difficulty in obtaining care, having more than one option to consider, and feeling there are good choices for care (RSM1, SM3, SM4, SM5, SM6);
- Items pertaining to parent ratings of the importance of specific characteristics of care arrangements including enrichment education, sports or physical activity, a small number of children in the group, convenient location, reasonable cost, and transportation to the arrangement (SM8).
- A small number of various other items including whether the child spends time after school outdoors at home while in self-care (RSJ14), or parental care (SK5), whether the child's care needs influenced the mother's choice of a job or work schedule (PH16), and how easy it is for the child's father to leave work if the child gets sick or needs him unexpectedly (PV16).

It is interesting to note that the great majority of items cited above are subjective or perceptual items. That is, they are items pertaining to satisfaction and preferences. While some of the items are factual (with a number pertaining to several specific activities while in arrangements), these represent the minority of items with moderate response variance. In addition, for the factual items

involving activities within arrangements, parents were asked to list spontaneously up to 3 activities in which their children usually participated. Given the time lapse between the original and reinterview surveys, it is not surprising that some parents reported different activities.

As noted above, only 69 of the items in the ASPA reinterview (out of a total of 302 items) had moderate response variance. Among these, many of the items are at the lower end of the moderate range (that is, under 30). The findings suggest that the overall impact of measurement error is low or moderate.

The net difference rates in table 9-4 are based on the comparison of the original interview and reinterview values. The net difference rates for only 25 of the 143 items presented here would be statistically different from zero with a significance level of 0.05. Thus, for the most part, the estimates are consistent with the assumption that the reinterview was an independent replication of the original interview, at least for these questions. The assumption that the gross difference rate is a valid measure of response variability is supported by these results.

Table 9-5 presents statistics on continuous variables for which a difference was computed between the original response variable and the reinterview variable. For example, the variable SSCHOMM2 asks how long it usually takes the child to get home from school in minutes. The difference variable was computed as SSCHOMM – SSCHOMM2. There were two special cases in creating the difference variables. For the set of variables SSTRTHR2, SSTRTMN2, and SSTRAMP2, the information from all three variables was combined to create one time value. This was done for the corresponding set of original variables as well, and then the difference between the two was computed. Additionally, this combining was done for the set of variables SENDHR2, SENDMN2, and SENDAMP2, as well as their corresponding original variables. For the 23 continuous items, the means and standard errors for the original variable and for the new difference variable are reported. There were no differences detected in the difference variables for any of the items. These results reinforce the findings that the overall impact of measurement error is low or moderate.

Table 9-6 presents the gross difference rates, where cases are classified according to the amount of time between the original interview and the reinterview. Of the 730 completed ASPA reinterviews, 312 occurred within 21 days of the original interview and 418 occurred more than 22 days after the original interview. These categories do not represent large differences in lag time between interviews, but the tight interviewing schedule for the NHES limits the possible variability in the lag times between the original interviews and the reinterviews, and it is not possible to further differentiate

the lag times in an analytically meaningful way. The gross difference rates in table 9-6 correspond to the reinterview variable. This table shows that, in general, time between interviews does not play a significant role in the magnitude of the measurement error. There are eight variables out of 153 that show a significant difference between gross difference rates for the two categories of LAGCAT. In some of these cases, the length of time could have had an effect due to the respondent's recall of his or her original response. However, the variables that show significance are a very small percentage of those assessed. Thus, in this limited study there appears to be little support for the hypothesis that the time between interviews is important. Of course, shorter lag times between interviews might show effects, but it is not possible to examine this from these data.

Table 9-7 presents the gross difference rates, where cases are classified into two categories according to the parent's education; whether they have less than a high school diploma or a high school diploma or higher. Of the 730 completed ASPA reinterviews, 251 respondents have less than a high school diploma and 479 have a high school diploma or higher. There are eight variables out of 162 that show a significant difference between gross difference rates for the two categories of PARGRADE. This indicates that perhaps a few items are less reliable for one group than the other, but the very low prevalence of significant differences indicates that there is little support for the hypothesis that parent's education level is important in this regard.

Table 9-4. Estimated percentage, gross and net difference rates based on unreconciled reinterview responses, by ASPA questions: ASPA-NHES:2001

Question	Sample size	Prevalence estimate		Gross difference rate		Net difference rate	
		Percent	s.e	Percent	s.e	Percent	s.e
Relative care							
RCAEDUC2.....	157	77	4.6	19	4.0	2	4.7
RCAOUTP2.....	156	34	5.3	28	5.4	5	5.1
RCAINPL2.....	156	15	3.7	23	4.0	-7	5.0
RCATV2.....	156	52	6.1	22	4.2	-4	5.1
RCQUAL2(1).....	161	55	5.0	23	3.9	7	4.3
RCQUAL2(2).....	161	37	4.9	30	4.5	-4	5.7
RCQUAL2(3).....	161	6	1.8	11	2.5	-1	3.0
RCQUAL2(4).....	161	(1)	(1)	(1)	(1)	(1)	(1)
RCAFFOR2(1).....	161	79	3.8	22	4.0	4	4.4
RCAFFOR2(2).....	161	16	3.5	21	4.3	-5	4.0
RCAFFOR2(3).....	161	3	2.0	4	1.8	-1	1.9
RCAFFOR2(4).....	161	(1)	(1)	(1)	(1)	(1)	(1)
RCRELIAB2(1).....	161	81	3.7	19	4.0	4	4.6
RCRELIAB2(2).....	161	17	3.5	21	4.1	-3	4.8
RCRELIAB2(3).....	161	2	1.6	3	1.3	-1	1.3
RCRELIAB2(4).....	161	(1)	(1)	(1)	(1)	(1)	(1)
RCTRANS2(1).....	70	78	6.2	21	5.7	4	6.2
RCTRANS2(2).....	70	18	6.1	19	5.7	-5	6.0
RCTRANS2(3).....	70	(1)	(1)	(1)	(1)	(1)	(1)
RCTRANS2(4).....	70	(1)	(1)	(1)	(1)	(1)	(1)
Non-relative care							
NCAREAD2.....	68	12	5.9	22	7.7	-14	8.2
NCAOUTP2.....	68	45	8.4	20	6.1	0	6.7
NCAINPL2.....	68	37	8.2	31	7.2	1	8.0
NCATV2.....	68	48	8.1	32	8.2	16	9.7
NCQUAL2(1).....	77	47	7.5	18	5.9	-4	7.0
NCQUAL2(2).....	77	35	6.7	22	5.7	5	5.4
NCQUAL2(3).....	77	17	6.8	16	6.0	0	6.7
NCQUAL2(4).....	77	(1)	(1)	(1)	(1)	(1)	(1)
NCAFFOR2(1).....	76	53	7.4	31	7.1	7	8.9
NCAFFOR2(2).....	76	41	7.8	34	7.2	0	9.1
NCAFFOR2(3).....	76	3	2.3	10	3.7	-6	3.7
NCAFFOR2(4).....	76	2	1.7	3	2.1	-1	2.1
NCTRANS2(1).....	51	70	9.2	26	9.1	-16	9.6
NCTRANS2(2).....	51	22	6.8	18	6.2	8	6.1
NCTRANS2(3).....	51	(1)	(1)	(1)	(1)	(1)	(1)
NCTRANS2(4).....	51	(1)	(1)	(1)	(1)	(1)	(1)
Center-based programs							
CPSIGNU2.....	153	83	4.9	17	5.7	-10	4.5
CPAEDUC2.....	120	60	6.1	25	5.7	-4	4.9
CPAREAD2.....	120	20	8.4	30	8.2	-2	11.6
CPAART2.....	120	31	7.8	22	4.4	-7	5.2
CPAOUTP2.....	120	37	6.7	23	5.1	6	5.3

See notes at end of table.

Table 9-4. Estimated percentage, gross and net difference rates based on unreconciled reinterview responses, by ASPA questions: ASPA-NHES:2001—Continued

Question	Sample size	Prevalence estimate		Gross difference rate		Net difference rate	
		Percent	s.e	Percent	s.e	Percent	s.e
CPAOTHE2	120	26	4.4	20	3.9	18	3.9
CPQUAL2(1)	144	50	6.7	26	5.1	8	5.6
CPQUAL2(2)	144	39	6.1	28	5.4	-10	6.1
CPQUAL2(3)	144	9	2.3	4	1.7	0	1.7
CPQUAL2(4)	144	(1)	(1)	(1)	(1)	(1)	(1)
CPAFFOR2(1)	140	64	6.0	23	5.3	13	5.3
CPAFFOR2(2)	140	26	5.3	29	5.4	-13	5.2
CPAFFOR2(3)	140	8	2.9	5	1.9	-1	2.0
CPAFFOR2(4)	140	(1)	(1)	(1)	(1)	(1)	(1)
CPRELIA2(1)	143	75	4.5	21	4.0	-1	4.6
CPRELIA2(2)	143	22	4.4	24	4.1	-1	4.5
CPRELIA2(3)	143	3	1.5	3	1.5	2	1.5
CPRELIA2(4)	143	(1)	(1)	(1)	(1)	(1)	(1)
CPTRANS2(1)	137	73	4.5	21	4.7	1	4.8
CPTRANS2(2)	137	20	4.5	28	5.1	0	5.5
CPTRANS2(3)	137	(1)	(1)	(1)	(1)	(1)	(1)
CPTRANS2(4)	137	2	1.0	4	2.2	-2	2.2
CPSAFTY2(1)	144	73	4.5	21	4.7	1	4.8
CPSAFTY2(2)	144	22	4.0	24	5.2	-4	5.1
CPSAFTY2(3)	144	4	2.2	5	2.3	3	2.3
CPSAFTY2(4)	144	(1)	(1)	(1)	(1)	(1)	(1)
Before and after school programs							
ASNOW2 ⁺⁺	718	55	2.5	17	2.2	2	2.1
ASNOW2 ⁺⁺	718	55	2.7	14	1.9	3	2.2
ASACAD2	391	20	2.8	13	2.5	5	2.0
ASSCSPO2	268	35	4.1	11	2.8	-7	2.8
ASWEEK2	392	90	1.8	15	2.4	5	2.4
ASCOVER2	333	21	3.7	10	2.2	3	2.0
Self-care							
SCAHOMI2	165	88	3.9	10	2.7	-1	2.6
SCAHOMO2	165	26	5.1	30	4.4	1	6.4
SCAEDUC2	162	87	3.4	23	4.8	12	4.6
SCAOUTP2	162	19	4.7	23	4.9	0	5.9
SCATV2	162	57	4.7	30	3.9	-5	4.3
Parental care							
PAAHMOU2	226	56	4.5	36	4.3	2	5.2
PAAFRND2	226	16	3.4	20	4.0	-1	4.8
PAAEDUC2	226	64	4.8	23	4.1	1	5.1
PAACOMP2	226	47	4.3	38	4.7	25	6.5
PAAREAD2	226	41	4.3	37	4.4	25	5.1
PAAOUTP2	226	56	5.1	26	3.8	1	4.1
PAAINPL2	226	20	4.0	25	4.6	-6	5.2
PAATV2	226	46	4.3	33	4.3	-14	5.2
PACHOOS2	194	22	4.6	15	3.3	1	3.3

See notes at end of table.

Table 9-4. Estimated percentage, gross and net difference rates based on unreconciled reinterview responses, by ASPA questions: ASPA-NHES:2001—Continued

Question	Sample size	Prevalence estimate		Gross difference rate		Net difference rate	
		Percent	s.e	Percent	s.e	Percent	s.e
Perceptions of quality, etc.							
PPNOWOR2	162	14	3.5	26	4.4	-14	5.4
PPWORKH2	162	1	0.6	3	1.4	-3	1.4
PPBEST2	162	35	5.3	43	5.1	-21	6.0
PPRESPO2	162	23	3.5	43	4.8	-12	7.3
PPOther2	162	40	4.9	38	4.8	36	4.9
PPREFE2(1).....	525	9	1.8	9	1.6	1	2.0
PPREFE2(2).....	525	4	0.9	4	0.9	0	1.0
PPREFE2(3).....	525	23	2.5	20	2.0	-7	2.3
PPREFE2(4).....	525	5	1.0	7	1.2	-3	1.3
PPREFE2(5).....	525	41	2.8	25	2.3	-1	2.8
PPREFE2(6).....	525	4	0.8	8	1.6	-2	1.5
PPREFE2(7).....	525	15	1.9	18	2.2	11	2.1
PPOBSTC2(1).....	117	19	4.5	13	3.7	-3	4.1
PPOBSTC2(2).....	117	9	3.1	12	4.0	-3	4.0
PPOBSTC2(3).....	117	2	1.5	5	2.3	-4	2.2
PPOBSTC2(4).....	117	14	3.6	13	4.1	0	4.3
PPOBSTC2(5).....	117	(1)	(1)	(1)	(1)	(1)	(1)
PPOBSTC2(6).....	117	34	7.1	23	4.7	-4	5.4
PPOBSTC2(7).....	117	20	5.4	20	5.3	14	5.1
PPDIFCL2(1).....	498	6	1.1	8	1.4	-1	1.7
PPDIFCL2(2).....	498	10	1.6	12	1.8	4	1.9
PPDIFCL2(3).....	498	7	1.5	9	1.4	1	1.6
PPDIFCL2(4).....	498	64	2.3	26	2.6	-3	3.2
PPDIFCL2(5).....	498	13	1.6	14	2.0	-1	2.4
PPOPTIO2	502	59	2.6	24	2.2	2	2.7
PPBCHOI2(1).....	521	44	2.7	23	2.8	0	2.5
PPBCHOI2(2).....	521	43	3.0	23	2.3	2.5	2.5
PPBCHOI2(3).....	521	13	1.9	16	2.2	-2	2.3
PPHWHL2(1).....	558	85	2.5	15	2.6	-5	2.4
PPHWHL2(2).....	558	12	2.5	13	2.7	3	2.4
PPHWHL2(3).....	558	3	0.9	2	0.8	2	0.7
PPENRCH2(1).....	559	57	2.8	28	2.6	-1	2.5
PPENRCH2(2).....	559	38	2.5	31	2.8	0	2.8
PPENRCH2(3).....	559	5	1.2	9	2.0	0	1.7
PPSPORT2(1).....	558	45	3.0	32	2.5	-2	3.3
PPSPORT2(2).....	558	48	3.0	33	2.9	2	3.6
PPSPORT2(3).....	558	7	1.3	10	1.5	0	1.9
PPCONV2(1).....	556	75	2.7	20	1.9	3	2.1
PPCONV2(2).....	556	23	2.7	19	1.9	-2	2.2
PPCONV2(3).....	556	2	0.8	3	0.8	-1	0.9
PPCOST2(1).....	558	74	2.9	20	2.7	-5	2.9
PPCOST2(2).....	558	24	2.9	20	2.8	6	0.9
PPCOST2(3).....	558	2	0.6	3	0.7	-1	0.7
PPKIDS2(1).....	558	52	2.7	30	2.6	-1	2.7
PPKIDS2(2).....	558	37	2.9	35	2.3	2	3.2

See notes at end of table.

Table 9-4. Estimated percentage, gross and net difference rates based on unreconciled reinterview responses, by ASPA questions: ASPA-NHES:2001—Continued

Question	Sample size	Prevalence estimate		Gross difference rate		Net difference rate	
		Percent	s.e	Percent	s.e	Percent	s.e
PPKIDS2(3)	558	11	1.7	15	2.3	-1	2.3
PPTRANS2(1)	558	64	2.8	25	3.0	-5	3.4
PPTRANS2(2)	558	25	2.9	24	2.8	4	3.4
PPTRANS2(3)	558	10	1.5	10	1.9	1	1.6
Health and disability							
HDADD2	720	8	1.4	2	0.5	0	0.6
Mother items							
MOMCHOI2	539	53	3.2	24	2.5	-1	2.9
MOMACCT2(1)	458	28	2.9	5	1.3	-1	1.4
MOMACCT2(2)	458	69	2.8	9	2.0	3	2.0
MOMACCT2(3)	458	3	0.9	4	1.3	-3	1.3
Father items							
DADLVEA2(1)	481	54	3.3	18	2.6	5	3.0
DADLVEA2(2)	481	26	2.7	24	2.8	-2	3.6
DADLVEA2(3)	481	11	2.6	12	2.1	-3	2.0
DADLVEA2(4)	481	9	1.6	6	1.3	0	1.2
DADACCT2(1)	391	20	2.2	4	1.1	2	1.2
DADACCT2(2)	391	74	2.6	14	3.1	5	3.4
DADACCT2(3)	391	6	1.7	10	3.0	-8	3.0

++The first row of ASNOW2 results contains the information from the unreconciled variables. The second row of ASNOW2 results contains the information after reconciliation of the original and reinterview variables using ACTEND2 and ACTNEW2.

¹ Estimates, gross difference rates, and net difference rates cannot be computed for variables without all four cells as defined in Table 9-3.

NOTE: Gross difference rates of 20 percent or higher for variables CPBEDUC2, CPBCOMP2, CPBOUTP2, CPBINPL2, CPBEAT2, CPBTV2, PPLANG2(1), PPLANG2(2), and PPLANG2(3) are not presented due to sample sizes less than thirty. The following 25 variables have values significantly different from zero: PPOTHER2, PPCOST2(2), PPPREFE2(7), PAAREAD2, CPAOTHE2, PAACOMP2, PPBEST2, PPPREFE2(3), PPHWHL2(3), PPOBSTC2(7), PAATV2, DADACCT2(3), SCAEDUC2, PPNOWOR2, CPAFFOR2(2), ASACAD2, ASSCSPO2, CPAFFOR2(1), PPPREFE2(4), MOMACCT2(3), CPSIGNU2, PPWORKH2, PPDIFICL2(2), ASWEEK2, PPHWHL2(1).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001, and ASPA Reinterview Survey of the NHES, 2001.

Table 9-5. Means and standard errors for original ASPA continuous variables and computed difference variables: ASPA-NHES:2001

Question	Original variable		Reinterview sample size	Difference variable	
	Mean	s.e		Mean	s.e
School characteristics					
SSTRTHR, MN, AMPM.....	(1)	(1)	728	-1.5	0.67
SENDHR, MN, AMPM.....	(1)	(1)	730	0.2	0.68
SSCHOMM2.....	17.8	0.74	722	0.2	0.50
Relative care					
RCHOMM2.....	9.9	1.09	68	0.5	0.47
RCSCMM2.....	13.9	0.89	69	-0.6	0.83
RCAFT62.....	1.6	0.32	149	-0.2	0.50
Non-relative care					
NCHOMM2.....	6.5	1.16	52	-0.8	1.30
NCSCMM2.....	13.5	1.25	49	-0.2	0.76
NCAFT62.....	0.7	0.22	68	-4.5	4.01
Center- or school-based care					
CPHOMM2.....	9.9	1.49	41	0.2	1.18
CPSCMM2.....	8.5	0.94	36	-1.1	1.23
CPAFT62.....	0.5	0.15	130	0.0	0.13
CPKIDS2.....	19.6	1.77	119	0.5	1.38
CPADLTS2.....	2.6	0.22	133	0.0	0.29
Before and after school programs					
ASDAYS2.....	2.3	0.10	240	-0.1	0.07
ABSHRS2.....	2.1	0.35	15	0.2	0.36
ASHRS2.....	3.8	0.21	234	-0.1	0.10
ASAFT62.....	1.6	0.15	236	0.1	0.20
Self-care					
SCAFT62.....	0.4	0.09	156	-0.2	0.27

¹ Means and standard errors were not reported for school start and end time values due to lack of analytical interest.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001, and ASPA Reinterview Survey of the NHES, 2001.

Table 9-6. Gross difference rates (GDR) by LAGCAT, a categorization of the number of days between the original ASPA interview and the ASPA reinterview: ASPA-NHES:2001

Question	Length of time between interviews less than 22 days			Length of time between interviews 22 days or more		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
Relative care						
RCAEDUC.....	49	26	8.1	107	15	4.3
RCAOUTP.....	49	29	11.7	107	28	5.1
RCAINPL.....	49	17	6.4	107	27	5.3
RCATV.....	49	27	8.5	107	19	4.2
RCQUAL2(1).....	50	17	7.3	111	26	4.3
RCQUAL2(2).....	50	31	8.3	111	30	5.3
RCQUAL2(3).....	50	11	4.0	111	11	3.3
RCQUAL2(4).....	50	(1)	(1)	111	(1)	(1)
RCAFFOR2(1).....	50	22	8.9	111	22	4.2
RCAFFOR2(2).....	50	21	8.9	111	20	4.7
RCAFFOR2(3).....	50	(1)	(1)	111	5	2.8
RCAFFOR2(4).....	50	(1)	(1)	111	(1)	(1)
RCRELIAB2(1).....	50	15	6.0	111	21	5.7
RCRELIAB2(2).....	50	16	6.0	111	24	5.8
RCRELIAB2(3).....	50	(1)	(1)	111	4	2.0
RCRELIAB2(4).....	50	(1)	(1)	111	(1)	(1)
RCTTRANS2(1).....	[a]	[a]	[a]	49	25	7.8
RCTTRANS2(2).....	[a]	[a]	[a]	49	23	7.7
RCTTRANS2(3).....	[a]	[a]	[a]	49	(1)	(1)
RCTTRANS2(4).....	[a]	[a]	[a]	49	(1)	(1)
Non-relative care						
NCAREAD2.....	32	19	9.0	36	25	12.3
NCAOUTP2.....	32	11	6.8	36	27	9.8
NCAINPL2.....	32	35	10.2	36	28	9.8
NCATV2.....	32	31	10.9	36	32	13.3
NCQUAL2(1).....	37	17	7.5	40	19	9.4
NCQUAL2(2).....	37	23	8.6	40	20	7.3
NCQUAL2(3).....	37	18	8.3	40	14	9.1
NCQUAL2(4).....	37	(1)	(1)	40	(1)	(1)
NCAFFOR2(1).....	37	33	9.9	39	29	10.5
NCAFFOR2(2).....	37	34	9.9	39	33	10.7
NCAFFOR2(3).....	37	(1)	(1)	39	(1)	(1)
NCAFFOR2(4).....	37	(1)	(1)	39	(1)	(1)

See notes at end of table.

Table 9-6. Gross difference rates (GDR) by LAGCAT, a categorization of the number of days between the original ASPA interview and the ASPA reinterview: ASPA-NHES:2001—Continued

Question	Length of time between interviews less than 22 days			Length of time between interviews 22 days or more		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
Center-based programs						
CPSIGNU2.....	62	19	9.5	91	16	5.9
CPCHANGE2(1) ⁺⁺	57	27	5.9	86	11	4.1
CPCHANGE2(2).....	57	(1)	(1)	86	(1)	(1)
CPCHANGE2(3).....	57	8	4.8	86	7	3.3
CPCHANGE2(4).....	57	20	6.8	86	6	3.0
CPAEDUC2.....	50	28	10.8	70	23	6.2
CPAREAD2.....	50	18	6.9	70	38	13.0
CPAART2.....	50	25	6.2	70	20	6.3
CPAOUTP2.....	50	21	7.9	70	24	7.5
CPAOTHE2.....	50	10	4.7	70	(1)	(1)
CPPHYS2 ⁺⁺	58	23	5.7	85	8	3.3
CPQUAL2(1).....	58	26	8.3	86	26	6.5
CPQUAL2(2).....	58	26	8.0	86	30	7.0
CPQUAL2(3).....	58	8	3.6	86	1	0.9
CPQUAL2(4).....	58	(1)	(1)	86	(1)	(1)
CPAFFOR2(1).....	56	16	7.2	84	29	7.4
CPAFFOR2(2).....	56	25	8.4	84	33	7.6
CPAFFOR2(3).....	56	9	4.4	84	2	1.3
CPAFFOR2(4).....	56	(1)	8	84	(1)	(1)
CPRELIA2(1).....	58	26	7.5	85	16	4.7
CPRELIA2(2) ⁺⁺	58	33	6.7	85	16	4.7
CPRELIA2(3).....	58	7	3.4	85	(1)	(1)
CPRELIA2(4).....	58	(1)	(1)	85	(1)	(1)
CPTRANS2(1).....	55	25	7.1	82	37	10.2
CPTRANS2(2).....	55	28	7.2	82	29	7.4
CPTRANS2(3).....	55	(1)	(1)	82	(1)	(1)
CPTRANS2(4).....	55	5	2.7	82	(1)	(1)
CPSAFTY2(1).....	58	22	8.2	86	19	5.5
CPSAFTY2(2).....	58	23	8.2	86	24	7.0
CPSAFTY2(3).....	58	(1)	(1)	86	(1)	(1)
CPSAFTY2(4).....	58	(1)	(1)	86	(1)	(1)
Before and after school programs						
ASNOW2 ⁺	308	15	3.2	410	19	2.5
ASNOW2 ⁺	308	13	3.1	410	15	2.2
ASACAD2.....	165	11	3.1	226	15	3.6
ASSCART2.....	66	10	4.8	95	8	3.2
ASSCSPO2.....	118	15	4.4	150	7	2.4
ASWEEK2.....	166	12	3.3	226	18	3.4
ASCOVER2 ⁺⁺	145	6	2.5	188	15	3.7

See notes at end of table.

Table 9-6. Gross difference rates (GDR) by LAGCAT, a categorization of the number of days between the original ASPA interview and the ASPA reinterview: ASPA-NHES:2001—Continued

Question	Length of time between interviews less than 22 days			Length of time between interviews 22 days or more		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
Self-care						
SCAHOMI2	66	7	3.7	96	11	4.1
SCAHOMO2.....	66	33	8.0	96	27	5.2
SCAEDUC2.....	66	27	7.9	96	19	4.3
SCAOUTP2.....	66	26	8.5	96	20	5.2
SCAPHON2.....	66	7	2.9	96	16	4.1
SCAEAT2 ⁺⁺	66	6	2.4	96	20	5.6
SCATV2.....	66	29	7.1	96	15	4.2
Parental care						
PAAHMIN2.....	306	9	3.9	415	22	5.5
PAAHMOU2.....	111	39	7.5	115	32	4.9
PAAFRND2.....	111	23	6.3	115	18	5.1
PAAEDUC2.....	111	24	5.8	115	23	4.8
PAACOMP2.....	111	33	6.8	115	44	6.8
PAAREAD2.....	111	37	6.2	115	39	6.5
PAAOUTP2.....	111	29	4.8	115	24	5.8
PAAINPL2.....	111	29	7.1	115	20	5.0
PAATV2.....	111	31	6.5	115	35	5.3
PACHOOS2.....	95	14	4.3	99	16	4.3
Perceptions of quality, etc.						
PPNOWOR2.....	76	22	5.2	86	30	6.8
PPWORKH2.....	76	1	0.5	86	(1)	(1)
PPBEST2.....	76	40	8.0	86	46	6.5
PPRESPO2.....	76	51	7.1	86	36	6.4
PPOTHER2.....	76	37	7.5	86	(1)	(1)
PPPREFE2(1).....	217	10	3.3	308	9	1.6
PPPREFE2(2).....	217	3	1.2	308	4	1.3
PPPREFE2(3).....	217	20	3.2	308	20	2.6
PPPREFE2(4) ⁺⁺	217	10	2.0	308	5	1.3
PPPREFE2(5).....	217	30	3.7	308	22	2.9
PPPREFE2(6).....	217	10	2.6	308	7	1.6
PPPREFE2(7).....	217	20	3.8	308	17	2.6
PPOBSTC2(1).....	40	16	7.1	77	12	4.4
PPOBSTC2(2).....	40	19	9.3	77	9	3.9
PPOBSTC2(3).....	40	(1)	(1)	77	5	2.4
PPOBSTC2(4).....	40	23	7.2	77	8	5.0
PPOBSTC2(5).....	40	(1)	(1)	77	(1)	(1)
PPOBSTC2(6).....	40	37	10.1	77	18	4.9
PPOBSTC2(7).....	40	(1)	(1)	77	22	6.5
PPDIFCL2(1).....	201	6	1.7	297	10	1.8
PPDIFCL2(2).....	201	12	2.9	297	12	2.4

See notes at end of table.

Table 9-6. Gross difference rates (GDR) by LAGCAT, a categorization of the number of days between the original ASPA interview and the ASPA reinterview: ASPA-NHES:2001—Continued

Question	Length of time between interviews less than 22 days			Length of time between interviews 22 days or more		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
PPDIFCL2(3).....	201	7	2.0	297	10	2.0
PPDIFCL2(4).....	201	24	3.9	297	27	3.3
PPDIFCL2(5).....	201	14	3.0	297	15	2.8
PPOPTIO2.....	205	26	4.3	297	22	3.3
PPACHOI2(1).....	220	24	3.4	317	17	2.2
PPACHOI2(2).....	220	19	3.2	317	15	2.5
PPACHOI2(3).....	220	12	3.1	317	11	2.1
PPBCHOI2(1) ⁺⁺	213	29	5.0	308	18	2.4
PPBCHOI2(2).....	213	25	4.0	308	21	2.6
PPBCHOI2(3).....	213	13	2.7	308	19	2.8
PPHWHL2(1).....	229	14	2.7	329	16	3.9
PPHWHL2(2).....	229	12	2.7	329	15	3.9
PPHWHL2(3).....	229	3	1.3	329	2	1.0
PPENRCH2(1).....	230	23	4.3	329	31	3.1
PPENRCH2(2).....	230	29	4.5	329	32	3.2
PPENRCH2(3).....	230	10	3.0	329	8	2.0
PPSPORT2(1).....	230	35	3.8	328	29	3.7
PPSPORT2(2).....	230	37	4.0	328	30	3.9
PPSPORT2(3).....	230	11	2.7	328	10	2.0
PPCONV2(1).....	230	20	3.2	326	21	2.7
PPCONV2(2).....	230	16	3.1	326	20	3.0
PPCONV2(3).....	230	5	1.5	326	2	1.1
PPCOST2(1).....	230	22	3.4	328	19	4.0
PPCOST2(2).....	230	20	3.2	328	20	4.0
PPCOST2(3).....	230	5	1.4	328	2	0.8
PPKIDS2(1).....	230	32	4.2	328	28	3.7
PPKIDS2(2).....	230	39	4.2	328	32	3.0
PPKIDS2(3).....	230	16	3.8	328	14	2.3
PPTRANS2(1).....	229	27	3.9	329	24	4.2
PPTRANS2(2).....	229	24	3.1	329	25	4.2
PPTRANS2(3).....	229	12	3.5	329	10	1.9
Health and disability						
HDADD2.....	309	1	0.8	411	2	0.8

See notes at end of table.

Table 9-6. Gross difference rates (GDR) by LAGCAT, a categorization of the number of days between the original ASPA interview and the ASPA reinterview: ASPA-NHES:2001—Continued

Question	Length of time between interviews less than 22 days			Length of time between interviews 22 days or more		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
Mother items						
MOMCHOI2.....	225	23	4.0	314	26	3.2
MOMLVEA2(1).....	223	17	3.9	313	18	3.0
MOMLVEA2(2).....	223	17	3.9	313	20	3.1
MOMLVEA2(3).....	223	5	1.5	313	7	1.8
MOMLVEA2(4) ⁺⁺	223	2	1.0	313	7	2.1
MOMACCT2(1).....	186	4	1.5	272	7	2.2
MOMACCT2(2).....	186	9	2.9	272	10	2.5
MOMACCT2(3).....	186	5	2.3	272	3	1.4
Father items						
DADLVEA2(1).....	216	16	4.6	265	19	2.9
DADLVEA2(2).....	216	22	4.8	265	27	3.4
DADLVEA2(3).....	216	11	3.2	265	13	2.5
DADLVEA2(4).....	216	7	1.8	265	6	1.8
DADACCT2(1).....	174	3	1.4	217	6	1.8
DADACCT2(2).....	174	14	5.1	217	15	3.0
DADACCT2(3).....	174	11	5.2	217	9	2.7

+ The first row of ASNOW2 results contains the information from the unreconciled variables. The second row of ASNOW2 results contains the information after reconciliation of the original and reinterview variables using ACTEND2 and ACTNEW2.

++ These variables showed statistical significance between gross difference rates.

¹ Estimates and gross difference rates cannot be computed for variables without all four cells as defined in Table 9-3.

[a] indicates that for the corresponding category of LAGCAT, the variable had sample sizes less than thirty so no data are reported.

NOTE: Gross difference rates of 20 percent or higher for variables CPBEDUC2, CPBCOMP2, CPBOUPT2, CPBINPL2, CPBEAT2, CPBTV2, PPLANG2(1), PPLANG2(2), and PPLANG2(3) are not presented due to sample sizes less than thirty. The following 8 variables have values significantly different from zero: RCAINPL2, PPTRANS2(3), PPKIDS2(2), RCAFFOR2(2), PPCONV2(2), RCTRANS2(1), DADLVEA2(2), SCAHOMO2.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001, and ASPA Reinterview Survey of the NHES, 2001.

Table 9-7. Gross difference rates (GDR) by parents' highest education level: ASPA-NHES:2001

Question	Parent's education level less than high school			Parent's education level high school diploma or higher		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
Relative care						
RCAEDUC2.....	70	23	6.6	86	15	5.0
RCAOUTP2.....	70	27	7.1	86	29	8.1
RCAINPL2 ⁺⁺	70	35	6.4	86	13	3.9
RCATV2.....	70	21	6.2	86	23	6.3
RCQUAL2(1).....	71	25	5.3	90	21	5.6
RCQUAL2(2).....	71	34	6.1	90	27	6.4
RCQUAL2(3).....	71	13	4.2	90	10	3.5
RCQUAL2(4).....	71	(1)	(1)	90	(1)	(1)
RCAFFOR2(1).....	71	29	7.0	90	17	5.5
RCAFFOR2(2) ⁺⁺	71	31	6.8	90	12	5.4
RCAFFOR2(3).....	71	8	4.0	90	(1)	(1)
RCAFFOR2(4).....	71	(1)	(1)	90	(1)	(1)
RCRELIAB2(1).....	71	19	5.7	90	19	6.6
RCRELIAB2(2).....	71	21	5.5	90	22	6.6
RCRELIAB2(3).....	71	(1)	(1)	90	(1)	(1)
RCRELIAB2(4).....	71	(1)	(1)	90	(1)	(1)
RCTRANS2(1) ⁺⁺	33	31	9.8	37	9	3.3
RCTRANS2(2).....	33	29	10.0	37	9	3.3
RCTRANS2(3).....	33	(1)	(1)	37	(1)	(1)
RCTRANS2(4).....	33	(1)	(1)	37	(1)	(1)
Non-relative care						
NCAREAD2.....	[a]	[a]	[a]	53	26	9.6
NCAOUTP2.....	[a]	[a]	[a]	53	20	7.3
NCAINPL2.....	[a]	[a]	[a]	53	26	8.0
NCATV2.....	[a]	[a]	[a]	53	29	9.4
NCQUAL2(1).....	[a]	[a]	[a]	60	13	5.0
NCQUAL2(2).....	[a]	[a]	[a]	60	21	6.0
NCQUAL2(3).....	[a]	[a]	[a]	60	15	5.8
NCQUAL2(4).....	[a]	[a]	[a]	60	(1)	(1)
NCAFFOR2(1).....	[a]	[a]	[a]	59	24	7.6
NCAFFOR2(2).....	[a]	[a]	[a]	59	28	7.6
NCAFFOR2(3).....	[a]	[a]	[a]	59	13	4.8
NCAFFOR2(4).....	[a]	[a]	[a]	59	4	2.7
NCRELIA2(1).....	[a]	[a]	[a]	60	8	4.6
NCRELIA2(2).....	[a]	[a]	[a]	60	6	2.8
NCRELIA2(3).....	[a]	[a]	[a]	60	(1)	(1)
NCRELIA2(4).....	[a]	[a]	[a]	60	(1)	(1)
NCTRANS2(1).....	[a]	[a]	[a]	39	26	11.3
NCTRANS2(2).....	[a]	[a]	[a]	39	14	6.5
NCTRANS2(3).....	[a]	[a]	[a]	39	(1)	(1)
NCTRANS2(4).....	[a]	[a]	[a]	39	(1)	(1)

See notes at end of table.

Table 9-7. Gross difference rates (GDR) by parents' highest education level: ASPA-NHES:2001—Continued

Question	Parent's education level less than high school			Parent's education level high school diploma or higher		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
Center-based programs						
CPSIGNU2.....	46	12	6.1	107	21	8.1
CPCHANGE2(1).....	43	17	7.7	100	18	4.1
CPCHANGE2(2).....	43	(1)	(1)	100	3	1.6
CPCHANGE2(3).....	43	3	1.9	100	10	4.5
CPCHANGE2(4).....	43	15	7.3	100	11	4.0
CPAEDUC2.....	40	29	8.5	80	22	6.8
CPAREAD2.....	40	29	20.5	80	(1)	(1)
CPAART2.....	40	18	8.2	80	25	5.9
CPAOUTP2.....	40	23	10.9	80	23	5.7
CPAOTHE2.....	40	(1)	(1)	80	24	5.5
CPPHYS2.....	42	13	5.9	101	16	4.5
CPQUAL2(1).....	44	29	9.4	100	24	6.0
CPQUAL2(2).....	44	24	8.7	100	30	6.7
CPQUAL2(3).....	44	5	3.5	100	4	1.8
CPQUAL2(4).....	44	(1)	(1)	100	(1)	(1)
CPAFFOR2(1).....	43	20	8.8	97	25	6.3
CPAFFOR2(2).....	43	26	10.0	97	32	7.0
CPAFFOR2(3).....	43	(1)	(1)	97	6	2.7
CPAFFOR2(4).....	43	(1)	(1)	97	(1)	(1)
CPRELIA2(1).....	44	25	8.6	99	18	5.5
CPRELIA2(2).....	44	30	9.5	99	20	5.0
CPRELIA2(3).....	44	5	3.0	99	(1)	(1)
CPRELIA2(4).....	44	(1)	(1)	99	(1)	(1)
CPTRANS2(1).....	44	40	13.6	93	27	6.2
CPTRANS2(2).....	44	25	8.5	93	30	6.4
CPTRANS2(3).....	44	(1)	(1)	93	(1)	(1)
CPTRANS2(4).....	44	(1)	(1)	93	(1)	(1)
CPSAFTY2(1).....	44	17	6.9	100	22	5.8
CPSAFTY2(2).....	44	23	8.8	100	24	5.9
CPSAFTY2(3).....	44	(1)	(1)	100	3	2.1
CPSAFTY2(4).....	44	(1)	(1)	100	(1)	(1)
Before and after school programs						
ASNOW2+.....	248	16	3.0	470	18	2.7
ASNOW2+.....	248	14	2.7	470	14	2.3
ASACAD2.....	97	16	7.0	294	12	2.6
ASSCART2.....	27	(1)	(1)	134	11	3.6
ASSCSPO2.....	55	15	15	213	11	2.9
ASWEEK2.....	97	18	18	295	14	2.6
ASCOVER2.....	76	6	6	257	11	2.8

See notes at end of table.

Table 9-7. Gross difference rates (GDR) by parents' highest education level: ASPA-NHES:2001—Continued

Question	Parent's education level less than high school			Parent's education level high school diploma or higher		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
Self-care						
SCAHOMI2	55	17	5.8	107	5	2.1
SCAHOMO2 ⁺⁺	55	19	5.7	107	36	6.4
SCAEDUC2	55	22	6.1	107	23	6.8
SCAOUTP2	55	23	7.5	107	23	6.6
SCAPHON2	55	12	4.7	107	12	3.3
SCAEAT2	55	20	6.7	107	10	4.1
SCATV2.....	55	29	6.7	107	31	5.3
Parental care						
PAAHMIN2	249	13	6.0	472	17	4.2
PAAHMOU2	72	35	7.4	154	36	5.3
PAAFRND2	72	26	7.5	154	18	5.0
PAAEDUC2.....	72	18	5.6	154	26	5.3
PAACOMP2	72	44	9.4	154	35	5.7
PAAREAD2.....	72	36	8.5	154	38	5.4
PAAOUTP2	72	27	6.5	154	26	4.7
PAAINPL2.....	72	17	5.7	154	28	5.6
PAATV2	72	33	7.8	154	33	5.7
PACHOOS2	65	24	7.4	129	11	3.4
Perceptions of quality, etc.						
PPNOWOR2	48	30	8.8	114	25	5.3
PPWORKH2	48	(1)	(1)	114	4	1.9
PPBEST2	48	42	9.0	114	43	6.5
PPRESPO2.....	48	34	6.6	114	47	6.1
PPOTHER2	48	(1)	(1)	114	38	5.7
PPPREFE2(1).....	181	7	2.0	344	11	2.1
PPPREFE2(2).....	181	4	1.8	344	4	1.1
PPPREFE2(3).....	181	24	3.9	344	18	2.4
PPPREFE2(4).....	181	5	1.3	344	8	1.8
PPPREFE2(5).....	181	22	3.3	344	27	3.1
PPPREFE2(6).....	181	10	2.5	344	8	1.8
PPPREFE2(7).....	181	17	3.4	344	19	2.9
PPOBSTC2(1).....	44	13	5.8	73	13	4.8
PPOBSTC2(2).....	44	(1)	(1)	73	14	5.8
PPOBSTC2(3).....	44	(1)	(1)	73	7	3.5
PPOBSTC2(4).....	44	8	3.7	73	16	6.5
PPOBSTC2(5).....	44	(1)	(1)	73	(1)	(1)
PPOBSTC2(6).....	44	17	7.3	73	27	6.5
PPOBSTC2(7).....	44	18	7.1	73	22	7.0
PPDIFCL2(1).....	178	9	2.7	320	8	1.7
PPDIFCL2(2).....	178	11	2.7	320	13	2.5
PPDIFCL2(3).....	178	(1)	(1)	320	10	1.9

See notes at end of table.

Table 9-7. Gross difference rates (GDR) by parents' highest education level: ASPA-NHES:2001—Continued

Question	Parent's education level less than high school			Parent's education level high school diploma or higher		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
PPDIFCL2(4).....	178	27	4.4	320	25	3.1
PPDIFCL2(5).....	178	19	3.9	320	12	2.1
PPOPTIO2.....	174	19	3.5	328	26	3.1
PPACHOI2(1).....	189	19	3.6	348	20	2.8
PPACHOI2(2).....	189	16	3.2	348	17	2.5
PPACHOI2(3).....	189	10	2.8	348	12	2.6
PPBCHOI2(1).....	183	25	4.3	338	22	3.5
PPBCHOI2(2).....	183	25	4.5	338	21	2.6
PPBCHOI2(3).....	183	17	3.9	338	16	2.6
PPHWHL2(1).....	198	15	6.0	360	15	2.4
PPHWHL2(2).....	198	14	6.1	360	13	2.4
PPHWHL2(3).....	198	(1)	(1)	360	3	1.0
PPENRCH2(1).....	198	28	3.9	361	27	3.7
PPENRCH2(2).....	198	26	3.7	361	33	4.0
PPENRCH2(3).....	198	(1)	(1)	361	11	2.5
PPSPORT2(1).....	197	34	5.0	361	30	2.8
PPSPORT2(2).....	197	34	5.0	361	33	3.1
PPSPORT2(3).....	197	13	2.7	361	8	2.1
PPCONV2(1).....	197	18	3.2	359	22	2.6
PPCONV2(2) ⁺⁺	197	14	2.7	359	22	2.5
PPCONV2(3).....	197	4	1.6	359	2	1.0
PPCOST2(1).....	198	18	5.9	360	21	2.9
PPCOST2(2).....	198	18	5.9	360	21	2.9
PPCOST2(3).....	198	3	1.3	360	3	1.0
PPKIDS2(1).....	197	29	4.4	361	31	3.2
PPKIDS2(2) ⁺⁺	197	28	3.6	361	39	3.0
PPKIDS2(3).....	197	10	2.7	361	18	3.2
PPTRANS2(1).....	198	21	6.2	360	28	3.1
PPTRANS2(2).....	198	22	6.3	360	26	2.8
PPTRANS2(3) ⁺⁺	198	6	1.6	360	14	3.0
Health and disability						
HDADD2.....	247	2	1.0	473	2.	0.7
Mother items						
MOMCHOI2.....	164	22	3.7	375	25	3.2
MOMLVEA2(1).....	165	16	4.1	371	18	2.8
MOMLVEA2(2).....	165	15	4.0	371	20	3.1
MOMLVEA2(3).....	165	9	2.7	371	5	1.1
MOMLVEA2(4).....	165	7	2.4	371	4	1.1
MOMACCT2(1).....	140	8	3.1	318	4	1.2
MOMACCT2(2).....	140	11	3.5	318	9	2.1
MOMACCT2(3).....	140	3	1.8	318	5	1.6

See notes at end of table.

Table 9-7. Gross difference rates (GDR) by parents' highest education level: ASPA-NHES:2001—Continued

Question	Parent's education level less than high school			Parent's education level high school diploma or higher		
	Sample size	GDR estimate	GDR s.e.	Sample size	GDR estimate	GDR s.e.
Father items						
DADLVEA2(1).....	127	15	3.9	354	19	3.4
DADLVEA2(2) ⁺⁺	127	16	4.3	354	27	3.4
DADLVEA2(3).....	127	11	3.8	354	13	2.4
DADLVEA2(4).....	127	11	3.6	354	4	1.2
DADACCT2(1).....	101	3	1.4	290	5	1.5
DADACCT2(2).....	101	8	2.7	290	16	3.9
DADACCT2(3).....	101	5	2.3	290	12	3.8

+ The first row of ASNOW2 results contains the information from the unreconciled variables. The second row of ASNOW2 results contains the information after reconciliation of the original and reinterview variables using ACTEND2 and ACTNEW2.

++ These variables showed statistical significance between gross difference rates.

[a] Indicates that for the corresponding category of PARGRADE, the variable had sample sizes less than 30, so no data are reported.

¹ Estimates and gross difference rates cannot be computed for variables without all four cells as defined in Table 9-3.

NOTE: Gross difference rates of 20 percent or higher for variables CPBEDUC2, CPBCOMP2, CPBOUTP2, CPBINPL2, CPBEAT2, CPBTV2, PPLANG2(1), PPLANG2(2), and PPLANG2(3) are not presented due to sample sizes less than 30.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Before- and After-School Programs and Activities (ASPA) Survey of the National Household Education Surveys Program (NHES), 2001, and ASPA Reinterview Survey of the NHES, 2001.

Conclusions

The ASPA reinterview for the NHES:2001 is used in this report to examine how consistently respondents responded when asked the same questions on two occasions. The important findings of the reinterview analyses and their implications are summarized below.

Overall, the reinterview analysis indicates that the impact of measurement error on the estimates is low to moderate, as measured by the gross difference rates. In addition, the net difference rates support the use of the gross difference rates as measures of response variance.

The reinterview served its major purpose of investigating to find questions with high error rates and providing feedback to help improve the design of the questions for future surveys. In this survey, there were no questions that had high response errors; thus, the results of this reinterview study did not suggest the need for any changes to question wording. Due to adequate sample sizes for most questions, the gross difference rates from the NHES:2001 reinterview generally attained adequate levels of precision. This is similar to the NHES:1996, but in contrast to the NHES:95 (Brick et al. 1996c) where some subgroups had small sample sizes and the reinterview could not provide precise measures of response variance. Finally, neither the time lag between interviews nor the parents' level of education were significant factors in this reinterview.

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