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# **NATIONAL CENTER FOR EDUCATION STATISTICS**

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Statistical Analysis Report

March 1996

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**NATIONAL EDUCATION  
LONGITUDINAL STUDY: 1988-1994**

## **Descriptive Summary Report**

**With an Essay on Access and Choice in Postsecondary Education**

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LONGITUDINAL STUDY: 1988-1994**

## **Descriptive Summary Report**

**With an Essay on Access and Choice in Postsecondary Education**

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Section 404 of the National Education Statistics Act of 1994 (20 U.S.C. 9003).**

March 1996

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## Highlights

The essay presented in this report used data from the National Education Longitudinal Study of 1988 eighth graders to examine postsecondary access and choice issues confronted by this nationally representative cohort in both 1992 (as high school seniors) and in 1994 (two years out of high school). The analysis focuses on potential barriers to access and choice as experienced by women, racial and ethnic minorities, and those in lower socioeconomic groups. Special attention was paid to students who scored in the highest quartile of the 1992 math and reading test composite.

- Nearly 63 percent of 1988 eighth graders had attended some type of postsecondary education by 1994 (Table 6A). Of those attending postsecondary education, about 57 percent matriculated at public or private four-year colleges or universities; 36 percent enrolled in public two-year institutions; and the remainder (7 percent) attended trade or technical programs of shorter duration (Table 10A).
- In 1988, 66 percent of the 1988 eighth graders who participated in both the 1988 and 1992 surveys expressed the expectation of attaining at least a bachelor's degree, and an additional 22 percent expected to obtain some postsecondary education (Table 1).
- There was a five percent decline between 1988 and 1992, from 66 percent to 61 percent, in the percentage of the 1988 eighth grade cohort expecting to attain a bachelor's degree or higher (Table 1).
- High school transcripts for this cohort indicate that approximately 62 percent of the cohort pursued programs that would constitute college preparation; 38 percent were enrolled in general or vocational tracks (Table 2A).
- By 1994, 81 percent of 1988 eighth graders had received a regular high school diploma. Another 6 percent had earned a GED certificate (Table 3A).
- By the spring of 1992, about 40 percent of 1988 eighth graders had not submitted any postsecondary applications; of those who had applied, 88 percent had completed at least two applications (Table 5A).
- Almost three-fourths of 1988 eighth graders who enrolled in four-year institutions attended them in their home state (Table 16A).
- Approximately 71 percent of cohort members who attended a four-year institution indicated that the college or university they attended represented their first or second choice (Table 17A).
- Over 96 percent of 1988 eighth graders who attended four-year institutions were enrolled full-time (Table 18A).

- A greater percentage of females than males in the 1988 eighth grade cohort reported in 1992 that they expected to obtain a bachelor's or higher degree (Table 1). In choosing a college, a greater percentage of women than men reported being concerned about the institution's reputation (Table 11A) and about the crime rate (Table 15A).
- Greater percentages of Asians or Pacific Islanders in the cohort reported expectations for a bachelor's or higher degree (Table 1), had graduated from high school by 1994 (Table 3A), and had enrolled in postsecondary education by 1994 than any other racial/ethnic group (Table 6A). Hispanics who were in the eighth grade in 1988 were more inclined than any other racial/ethnic group to enroll in public two-year institutions (Table 10A). Blacks in this cohort enrolled in private four-year institutions at rates comparable to Asians and whites (Table 10A).
- There were no significant differences by sex or race/ethnicity in the access and choice variables for 1988 eighth grade cohort members who scored in the highest quartile in the 1992 achievement test. However, respondents in the highest socioeconomic status quartile had a higher rate of expectation for a bachelor's or higher degree (Table 1), a higher graduation rate (Table 3B), a greater percentage reporting filing two or more postsecondary applications by 1992 (Table 5B), and a smaller percentage delaying entry (Table 10B).

## Foreword

This report describes the 1994 postsecondary education attendance patterns, job experiences, lifestyles, and values of the eighth grade class of 1988. The data from the report are from the 1994 Third Follow-up of the National Education Longitudinal Study of 1988 eighth graders (NELS:88/94). NELS:88/94 collected information on postsecondary education participation, employment, earnings, family formation, and other activities and experiences relevant to individuals as they are about to enter their adult lives.

NELS:88/94 contains information that represents several nationally representative samples, including 1988 eighth graders, 1990 tenth graders, and 1992 twelfth graders enrolled in public or private schools. By the time of the 1994 follow-up study most NELS:88 sample members had completed four years of high school. However, some had dropped out of high school or had attended alternative programs to complete their diploma. (A more complete description of the NELS:88 sample can be found in Appendix A of this report.)

The first section of this report is an essay that examines the postsecondary education *access* and *choice* of the 1988 eighth grade cohort. Access to postsecondary education is defined in terms of factors related to enrollment into a postsecondary institution. Student-level factors, such as their expectations and their academic preparation, may combine with background characteristics, and with life circumstances, to facilitate or inhibit enrollment. The meaning of postsecondary educational choice covers the type of institution attended, whether it was a "first-choice" institution, the level of intensity (full or part time), and location, among other things. Access and choice are examined differentially by sex, race, socioeconomic status, and tested achievement.

The second part of the report consists of sets of tables which present other information about the education, jobs, and life experiences of the 1988 eighth grade cohort. The tables are organized into four sections: Postsecondary Education Expectations and Experiences, Labor Force Participation, Family and Financial Circumstances, and Values, Other Activities, and Civic Participation. As in the essay, these experiences are examined for young people with different types of high school experiences and backgrounds.

The results presented in this report were produced using the NELS:88/94 Data Analysis System (DAS). The DAS is a microcomputer-based program that allows users to create these and other tables from the NELS:88 data. The DAS produces survey design-adjusted standard errors appropriate for testing the statistical significance of differences between the groups shown in the tables. Additional information about the NELS:88/94 DAS, including how it may be obtained, is presented in Appendix A of this report.

We hope that the information provided in this report will be useful to a wide range of interested readers. We also hope that the results reported here will encourage others to use the NELS:88/94 data. We welcome recommendations for improving the format, content, and analytic approach, so that future descriptive reports will be more informative and useful.

Paul D. Planchon  
Associate Commissioner

## Acknowledgments

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## Introduction

This essay uses the data from the National Education Longitudinal Study, Third Follow-up (NELS:88/94), to study access and choice issues related to postsecondary educational experiences of a national sample of young Americans who were eighth graders in 1988. Most of these young people are now leaving their teenage years and are engaged in independent decision-making and adult experiences in areas such as marriage and parenting, postsecondary education alternatives, and labor market searches and employment. Acquiring additional training and/or continuing formal study beyond high school are important objectives for many people in their twenties. Thus, this summary report focuses on two fundamental postsecondary education issues--access and choice--during the initial two-year period after high school.

Postsecondary education in the United States entails considerable heterogeneity and flexibility. Although curricular differences certainly exist in elementary and secondary education, they are relatively minor in comparison with the postsecondary landscape (i.e., institutional type, the type and length of certificate and degree programs, and so forth). Furthermore, whereas legislation requires nearly universal participation for all children under age 16, participation in postsecondary education is voluntary.<1> Finally, while students progress through elementary and secondary school in a more or less regular fashion, progressions in postsecondary education do not have this same inherent regularity.

The factors affecting participation in elementary and, to some degree, secondary education result in education systems that mirror the nation's population. In the absence of these forces, however, the postsecondary education system is highly subject to individual preferences, decisions, opportunities, and constraints. The consequences can be both positive and negative. On the positive side, individual choices may result in a closer match between predilections, abilities, and goals on the one hand, and postsecondary educational decisions concerning participation, curriculum, intensity, and timing on the other. On the negative side, constraints may lead to lost opportunities as well as social or economic inequities.

The analyses that follow document the experiences of and effects on various economic, social and ethnic groups as they participate in and navigate through the heterogeneity in American postsecondary education. As noted above, there is enormous diversity by type and length of program, intensity of enrollment (i.e., full- vs. part-time), institutional size and control, and the relative cost of postsecondary education alternatives. There may not be the full diversity or representation of the American population in postsecondary education, however, if significant barriers to access and choice exist. This could occur through deliberate means as when some state postsecondary education systems restrict access (and distribute students) on the basis of high school performance. It could also occur implicitly, such as when students and their parents consider their options and constraints in making postsecondary enrollment decisions, and limit their participation to ways that they would otherwise consider less desirable. (Of course, some inequalities in the enrollment distribution by, say, gender could occur across institutions or programs as the result of individual student preferences, and thus are not the result of access or choice barriers.)

The National Educational Longitudinal Study (NELS:88) has to date collected for 1988 eighth grade cohort members data that bracket an individual's life, from approximately ages 14 to

20. Cohort members were surveyed in 1988, 1990, 1992, and 1994. This period encompasses years in which lifestyle expectations are formed and perhaps cemented, information on many fronts is gathered and assessed, and important decision making, some of which includes or at least affects postsecondary education, occurs. The 1988 to 1994 time period covered by NELS:88 is also marked by important continuing trends in American labor markets and higher education, environments into which most members of the 1988 eighth grade cohort have just entered. These include the increasing tendency of individuals to mix work and learning by holding jobs while continuing their formal education, as well as contemporary educational paths that entail interruptions and adjustments rather than continuous, seamless enrollment patterns. The rising premium on skills and college degrees, the widening inequality of earnings across skill levels, and the increasing net financial burden on those who seek college degrees (as tuition levels continue to rise and financial aid programs shift from grants to loans) represent additional personal and societal concerns. NELS:88/94 data represent a rich source of information which can shed light on obstacles to and opportunities to participate in postsecondary education as seen by those who were in the eighth grade in the United States in 1988.

Access to postsecondary education can be affected by many factors. Students' academic aspirations or expectations, the quality and level of their preparation, and their achievements are cardinal influences. Personal considerations, such as peer influences, family background, and lifestyle choices may also affect postsecondary enrollment decisions. Through providing descriptive information about access in tables and accompanying narrative, this report addresses many of these issues. The tables explicitly examine factors influencing postsecondary education decisions by sex, race/ethnicity, socioeconomic status, and tested achievement.

Throughout the document, special attention will be paid to students who scored in the highest quartile of the composite of the math and reading cognitive tests administered in NELS:88/92 (the Second Follow-up). Obstacles to access, if they exist at all, should be less severe for these students, a group which has demonstrated its intellectual readiness for postsecondary education. The presence of obstacles to access here may be cause to evaluate education policy in light of meritocratic principles. The other focus will be those who enroll in public and private four-year institutions.

Choice and access are related to each other in the sense that access factors may limit choices. Beyond this, choice is related to such considerations as institution or program type, the timing and intensity of enrollment, and other institutional characteristics, such as its location, reputation, size, cost, and social environment. As with the discussion of access, the narrative summaries and tabular displays discuss choice in the context of sex, race/ethnicity, socioeconomic status, and tested achievement.

There are, to be sure, other dimensions of access and choice. These would include: nontraditional enrollments, remedial course-taking, training and retraining opportunities, and life-long learning (i.e., adult continuing education). Although important in and of themselves, these areas are beyond the scope of this essay.



## Access

Educational aspirations and expectations, perhaps formed fairly early in life, are certainly key factors influencing access. They are, in turn, undoubtedly influenced by academic benchmarks such as achievement levels in elementary and secondary school, the type of secondary education program followed, and persistence through high school to awarding of the diploma.

Other important determinants of access arise from circumstances over which the student has had little or no control. Among these are one's background, which includes family structure as well as the expectations parents have for their children, available role models, educational opportunities, and perhaps even health.<2> In addition, lifestyle choices, such as whether and when to get married and start a family (as well as some forms of pro-social or anti-social behavior), affect postsecondary educational opportunities and decisions. Finally, because postsecondary education must start with the application and enrollment process, the failure to take these steps, for whatever reasons, can be viewed as obstacles to postsecondary access.

*Educational expectations.* Early goals and images of ability level and opportunities may affect achievement throughout life. The NELS:88 data contain reports of the highest level of education students expected to attain, collected while cohort members were in the eighth grade and then four years later.

As early as eighth grade, almost two-thirds of the NELS:88 eighth grade cohort expected to attain a bachelor's degree or higher, and an additional 22 percent expected to obtain some postsecondary education.<3> There was an overall decline between 1988 and 1992 in the percentage who expected to earn a bachelor's or higher degree (Table 1). This may reflect more realism and knowledge acquired during this four-year interim as students assess their own interests and abilities, learn more about the availability and costs of postsecondary alternatives, consider other life-style choices such as marriage, gain some employment experience, and become more aware of the potential gains from a college or advanced degree.

Considering 1992 expectations, a greater percentage of women than men, and a greater percentage of Asians than other racial/ethnic groups, reported that they expected to obtain at least a baccalaureate degree. Also, a lower percentage of Hispanic 1988 eighth graders than whites expected to earn a bachelor's degree or higher. As one moves up the socioeconomic ladder there is a pronounced increase in the percentage of 1988 eighth graders who expected in 1992 to earn at least a bachelor's degree, from 36 percent in the lowest socioeconomic quartile to 86 percent in the highest quartile. In addition, as tested achievement increases so does the percentage of cohort members with expectations for a bachelor's or higher degree: Approximately 92 percent of those in the highest test quartile in 1992 expected to complete college and/or additional postgraduate work (Table 1). Students in this latter group have likely done well in high school, and thus have probably received more positive feedback and encouragement with respect to continuing their formal learning.<4>

**Table 1 Percentage of 1988 eighth graders indicating in 1988 and 1992 the highest level of education they expect to obtain, by selected background characteristics**

	Year	Less than high school diploma	High school graduate	Some college or vocational school	Bachelor's degree or more
Total	1988	1.5	10.3	22.4	65.8
	1992	2.3	8.1	28.1	61.4
<b>Sex</b>					
Male	1988	1.8	11.7	23.2	63.3
	1992	2.8	8.9	28.6	59.7
Female	1988	1.1	8.9	21.7	68.2
	1992	1.9	7.2	27.6	63.2
<b>Race/ethnicity</b>					
Asian or Pacific Islander	1988	1.8	4.8	21.3	72.2
	1992	2.7	4.3	19.2	73.8
Hispanic regardless of race	1988	2.3	13.1	29.8	54.8
	1992	4.2	9.4	33.8	52.7
Black not of Hispanic origin	1988	2.3	7.5	25.9	64.3
	1992	1.8	10.5	28.7	59.0
White not of Hispanic origin	1988	1.1	10.5	20.7	67.6
	1992	2.2	7.4	27.6	62.8
<b>Socioeconomic status (1992)</b>					
Lowest quartile	1988	3.2	22.2	32.5	42.2
	1992	6.9	16.2	40.9	35.9
Middle two quartiles	1988	1.0	9.8	25.1	64.1
	1992	1.4	7.3	31.5	59.7
Highest quartile	1988	0.8	1.4	8.9	88.9
	1992	0.2	2.4	11.0	86.3
<b>Test quartile (1992)</b>					
Lowest quartile	1988	2.7	22.5	35.7	39.0
	1992	4.8	15.4	47.8	31.9
Middle two quartiles	1988	0.9	7.6	23.9	67.6
	1992	1.6	6.3	31.6	60.5
Highest quartile	1988	0.3	1.0	7.5	91.3
	1992	0.0	1.0	6.9	92.1

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding. The estimates in this table include those who dropped out of school between eighth and twelfth grade.

**Academic preparation.** Access to various postsecondary education options in general, and to four-year colleges and universities in particular, is affected first and foremost by academic preparation. Nearly 62 percent of all 1988 eighth graders reported being enrolled in a high school academic/college preparatory track in 1992; 38 percent were enrolled in a general or vocational program (Table 2A).<5> A significantly higher percentage of females than males were in academic/college preparatory programs. Asians had significantly higher percent representation in high school academic programs than any other racial/ethnic group except whites. Blacks and Hispanics showed lower representations than the other two racial/ethnic groups (but with no significant differences between blacks and Hispanics). Those in the middle and highest socioeconomic and test quartiles participated in academic programs in greater percentages (Table 2A).

Among the 1988 eighth graders in the highest 1992 test quartile, only 13 percent were enrolled in vocational or general study programs in high school. In contrast to observations about the entire cohort above, there were no differences in academic program participation by sex, race/ethnicity, or socioeconomic status (Table 2B).

For the vast majority of students, attaining a high school diploma is a necessary, but not sufficient, condition for the successful attainment of a bachelor's or advanced degree. Also important are the particular high school courses taken and the level of achievement attained in them. By 1994, 81 percent of those who were eighth graders in 1988 had received a regular high school diploma, 6 percent had received a GED certificate, 0.4 percent reported that they were still working toward a high school diploma, and 5 percent were working toward a GED or certificate (Table 3A). The remainder, 7.2 percent, reported not having earned a diploma or certificate and were not continuing to pursue one.<6>

Asians were graduated at a rate higher than the other racial/ethnic subgroups, and whites had statistically higher rates than blacks or Hispanics. High school graduation rates vary directly by socioeconomic and test quartile. In the highest test quartile, almost all students had earned diplomas (Table 3B).

**Table 2A Percentage of 1988 eighth graders reporting in 1992 their type of high school program at the last high school attended, by various characteristics**

	Academic	Vocational & other
Total	61.9	38.1
<b>Sex</b>		
Male	60.1	39.9
Female	63.7	36.3
<b>Race/ethnicity</b>		
Asian or Pacific Islander	72.1	27.9
Hispanic regardless of race	53.0	47.0
Black not of Hispanic origin	53.2	46.8
White not of Hispanic origin	64.7	35.3
<b>Socioeconomic status (1992)</b>		
Lowest quartile	45.1	54.9
Middle two quartiles	62.1	37.9
Highest quartile	78.5	21.5
<b>Test quartile (1992)</b>		
Lowest quartile	44.5	55.5
Middle two quartiles	73.0	27.0
Highest quartile	86.6	13.4

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 2B Percentage of 1988 eighth graders in the highest 1992 test quartile reporting in 1992 their type of high school program at the last high school attended, by various characteristics**

	Academic	Vocational & other
Total	86.6	13.4
<b>Sex</b>		
Male	85.4	14.6
Female	87.8	12.2
<b>Race/ethnicity</b>		
Asian or Pacific Islander	85.7	14.3
Hispanic regardless of race	81.8	18.2
Black not of Hispanic origin	79.5	20.5
White not of Hispanic origin	87.2	12.8
<b>Socioeconomic status (1992)</b>		
Lowest quartile	79.7	20.3
Middle two quartiles	86.7	13.3
Highest quartile	87.2	12.8

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 3A Percentage of 1988 eighth graders in 1994 high school diploma status groups, by various characteristics**

	Received a high school diploma	Received a GED or certificate	Enrolled in high school	Working toward high school equivalence	
<b>Dropout</b>					
Total	81.3	6.2	0.4	4.9	7.2
<b>Sex</b>					
Male	80.2	7.1	0.4	4.7	7.5
Female	82.4	5.2	0.4	5.1	6.9
<b>Race/ethnicity</b>					
Asian or Pacific Islander	91.3	1.4	0.2	2.0	5.1
Hispanic regardless of race	72.7	5.9	1.4	5.7	14.3
Black not of Hispanic origin	71.8	10.5	0.5	8.9	8.4
White not of Hispanic origin	84.4	5.5	0.3	4.0	5.7
<b>Socioeconomic status (1992)</b>					
Lowest quartile	64.8	7.8	0.9	8.7	17.8
Middle two quartiles	83.6	6.3	0.4	4.6	5.0
Highest quartile	93.6	4.0	0.1	1.4	0.9
<b>Test quartile (1992)</b>					
Lowest quartile	72.0	5.6	0.9	9.3	12.2
Middle two quartiles	90.7	4.8	0.2	2.0	2.3
Highest quartile	99.1	0.7	0.0	0.1	0.1

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 3B Percentage of 1988 eighth graders in the highest 1992 test quartile, in 1994 high school diploma status groups, by various characteristics**

	Received a high school diploma	Received a GED or certificate	Enrolled in high school	Working toward high school equivalence	
<b>Dropout</b>					
Total	99.1	0.7	0.0	0.1	0.1
<b>Sex</b>					
Male	99.0	0.8	0.0	0.0	0.1
Female	99.1	0.6	0.0	0.2	0.1
<b>Race/ethnicity</b>					
Asian or Pacific Islander	99.9	0.0	0.0	0.0	0.1
Hispanic regardless of race	99.4	0.3	0.0	0.3	0.0
Black not of Hispanic origin	99.5	0.5	0.0	0.0	0.0
White not of Hispanic origin	99.0	0.8	0.0	0.1	0.1
<b>Socioeconomic status (1992)</b>					
Lowest quartile	98.0	0.7	0.0	0.7	0.5
Middle two quartiles	98.5	1.3	0.0	0.1	0.2
Highest quartile	99.7	0.2	0.0	0.1	0.0

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Academic performance.** Achievement in mathematics and reading, as measured by scores on the NELS:88/92 Second Follow-up cognitive test score composite, was used in this report as a proxy for college readiness. Those in the highest test quartile are a subgroup that should have experienced the fewest academic access barriers. Consistent with educational expectations, type of high school program pursued, and high school diploma status, a significantly smaller percentage of women than men scored in the lowest test quartile, and significantly more women than men scored in the middle two quartiles. There was no observed difference between men and women in the highest quartile (Table 4).

The NELS:88 data do show differences, however, across test quartiles by racial/ethnic groupings and socioeconomic status. A higher percentage of Asians and whites than blacks and Hispanics in the 1988 eighth grade cohort fall into the highest test quartile. Furthermore, a significantly higher percentage of Hispanics than blacks scored in the highest test quartile. About six percent of students from the lowest socioeconomic quartile scored in the highest test quartile, while about half of those in the highest socioeconomic quartile did so; conversely, 44 percent of students in the lowest socioeconomic group also fell into the lowest test quartile while only 7.5 percent of those in the highest socioeconomic quartile did.

**Table 4 Percentage of 1988 eighth graders in 1992 tested achievement quartile groups, by various characteristics**

	<b>Lowest quartile</b>	<b>Middle two quartiles</b>	<b>Highest quartile &lt;7&gt;</b>
Total	23.0	50.1	26.9
<b>Sex</b>			
Male	25.0	48.3	26.7
Female	20.9	52.0	27.1
<b>Race/ethnicity</b>			
Asian or Pacific Islander	15.9	46.8	37.3
Hispanic regardless of race	36.5	50.4	13.1
Black not of Hispanic origin	45.0	47.0	7.9
White not of Hispanic origin	17.4	50.9	31.7
<b>Socioeconomic status (1992)</b>			
Lowest quartile	44.2	49.3	6.5
Middle two quartiles	22.0	55.0	23.0
Highest quartile	7.5	42.3	50.3

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding. Refer to endnote 7 for details regarding construction of quartiles.

**Applications.** As noted above (Table 3A), 81 percent of 1988 eighth graders had earned a regular high school diploma by 1994 (the Third Follow-up). In the vast majority of cases this would have occurred soon after the Second Follow-up survey in 1992. In 1992, 61 percent of the eighth grade cohort expressed the expectation of obtaining at least a bachelor's degree, and an additional 28 percent expected to obtain some postsecondary education (Table 1). However, by spring of 1992 (i.e., the senior year in high school for most of these students), 40 percent of the 1988 eighth graders had not submitted a completed postsecondary application (Table 5A). This group should include at least three categories: those who fully intend to apply at some point but are delaying entry, those who intend to enroll sometime in 1992 and will apply after high school (such as to local community colleges that have multiple, as well as more flexible, application deadlines), and those who currently do not intend to enroll in postsecondary education.

Of those who had applied to a postsecondary institution by 1992, about 12 percent reported applying to only one institution, while almost 88 percent who had applied to a postsecondary institution reported completing at least two applications (Table 5A). There was considerable variation by sex, race/ethnicity, socioeconomic status and tested ability in the application process.

A significantly greater percentage of males than females failed to file an application by the 1992 survey date, while a significantly greater percentage of females than males had filed two or more applications by that date. A higher percentage of Asians and whites than blacks and Hispanics filed at least one postsecondary application. A greater percentage of Asians also reported filing multiple applications than did any group except whites. Blacks and Hispanics did not differ from each other with regard to filing no applications.

More than twice the percentage of 1988 eighth graders in the lowest socioeconomic quartile did not file an application in comparison to those in the highest socioeconomic quartile. Furthermore, those in the lowest test quartile had nearly four times the percentage of non-filers compared to those in the highest test quartile. At the other end of the spectrum, over three-fourths of those in the highest socioeconomic quartile and 85 percent of cohort members in the highest test quartile filed two or more applications while only 31 and 29 percent in the lowest socioeconomic and test quartiles, respectively, did so (Table 5A).<8>

Whereas for the 1988 eighth grade population as a whole, 40 percent had not filed a postsecondary application by spring of 1992, within the highest tested achievement quartile only 15 percent had not done so (Table 5B). Inasmuch as virtually all of this group, at the same point in time, expressed the expectation of extending their formal learning beyond high school, and most of that in a baccalaureate institution (92 percent), it would be reasonable to assume that this 15 percent figure represents delayed entry rather than withdrawal. If this is a valid assumption, delay may be more pronounced among the lower socioeconomic quartiles and for Hispanics in comparison to Asians and whites. (Hispanics, even when they do apply and enroll, attend two-year community-college programs in significantly greater percentages--see below.)

**Table 5A Percentage of 1988 eighth graders reporting numbers of postsecondary applications filed in 1992, by various characteristics**

	<b>Zero</b>	<b>One</b>	<b>Two or more</b>
Total	40.1	7.3	52.6
<b>Sex</b>			
Male	45.6	6.8	47.6
Female	34.5	7.7	57.8
<b>Race/ethnicity</b>			
Asian or Pacific Islander	32.8	2.2	65.0
Hispanic regardless of race	50.5	11.0	38.5
Black not of Hispanic origin	47.6	8.2	44.2
White not of Hispanic origin	36.9	6.8	56.4
<b>Socioeconomic status (1992)</b>			
Lowest quartile	55.2	14.3	30.6
Middle two quartiles	42.3	6.7	51.0
Highest quartile	20.8	1.5	77.7
<b>Test quartile (1992)</b>			
Lowest quartile	58.0	13.0	29.0
Middle two quartiles	41.6	2.8	55.6
Highest quartile	15.1	0.3	84.7

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 5B Percentage of 1988 eighth graders in the highest 1992 test quartile reporting numbers of postsecondary applications filed in 1992, by various characteristics**

	<b>Zero</b>	<b>One</b>	<b>Two or more</b>
Total	15.1	0.3	84.7
<b>Sex</b>			
Male	18.3	0.3	81.5
Female	11.8	0.2	88.0
<b>Race/ethnicity</b>			
Asian or Pacific Islander	8.9	0.0	91.1
Hispanic regardless of race	28.4	0.0	71.6
Black not of Hispanic origin	18.0	0.0	82.0
White not of Hispanic origin	14.5	0.3	85.2
<b>Socioeconomic status (1992)</b>			
Lowest quartile	34.0	0.9	65.1
Middle two quartiles	21.4	0.5	78.1
Highest quartile	7.9	0.0	92.1

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.



**Participation.** Overall, about 63 percent of the NELS:88 eighth grade cohort had attended some form of postsecondary education by 1994. In general, enrollment patterns followed those for applications. A greater percentage of women than men reported attending at least one postsecondary institution.<9> In the overall 1988 eighth grade respondent population, Asians showed the greatest percentage having attended a postsecondary educational institution compared to all other racial/ethnic groups. Blacks and Hispanics had lower enrollment rates than Asians or whites.

Sizable differences were also found for test and socioeconomic groupings; a greater percentage of 1988 eighth graders in the highest and middle two socioeconomic quartiles (88 percent and 63 percent, respectively) reported attending at least one postsecondary institution, whereas among those in the lowest quartile only 36 percent reported doing so. The enrollment percentage was much higher (92.7 percent) for those in the highest test quartile than in the middle two quartiles (69.3 percent) or in the lowest quartile (38.6 percent). Furthermore, a greater percentage of those in the middle test quartile than those in the lowest quartile reported having attended a postsecondary institution by 1994 (Table 6A).

Similar differences in enrollment patterns as those noted above also occurred by sex among cohort members in the highest test quartile. No significant differences in postsecondary attendance by race/ethnicity were observed for the highest test quartile (Table 6B).

**Table 6A Percentage of 1988 eighth graders reporting attendance at a postsecondary institution (PSE) by 1994, by various characteristics**

	Did not attend a PSE	Attended at least one PSE
Total	37.3	62.7
<b>Sex</b>		
Male	40.4	59.6
Female	34.2	65.8
<b>Race/ethnicity</b>		
Asian or Pacific Islander	19.5	80.5
Hispanic regardless of race	48.8	51.2
Black not of Hispanic origin	47.1	52.9
White not of Hispanic origin	34.0	66.0
<b>Socioeconomic status (1992)</b>		
Lowest quartile	64.0	36.0
Middle two quartiles	37.0	63.0
Highest quartile	11.7	88.3
<b>Test quartile (1992)</b>		
Lowest quartile	61.4	38.6
Middle two quartiles	30.7	69.3
Highest quartile	7.3	92.7

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 6B Percentage of 1988 eighth graders in the highest 1992 test quartile reporting attendance at a postsecondary institution (PSE) by 1994, by various characteristics**

	Did not attend a PSE	Attended at least one PSE
Total	7.3	92.7
<b>Sex</b>		
Male	9.8	90.2
Female	4.9	95.1
<b>Race/ethnicity</b>		
Asian or Pacific Islander	3.7	96.3
Hispanic regardless of race	12.4	87.6
Black not of Hispanic origin	6.9	93.1
White not of Hispanic origin	7.3	92.7
<b>Socioeconomic status (1992)</b>		
Lowest quartile	23.1	76.9
Middle two quartiles	11.1	88.9
Highest quartile	2.6	97.4

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

## Background and individual decision making

Academic considerations, such as high school preparation, performance and persistence, can certainly affect one's readiness for and access to (and, of course, success in) postsecondary education. However, family background and personal choices can also be important influences and/or determinants. We now turn to three of these issues: at-risk factors, marriage, and parenting.

*At-risk of school failure.* The NELS:88/94 data contain information on 1988 eighth graders who were identified as "at risk" of dropping out of high school based on background and family circumstances present while in eighth grade.<10> The factors constituting risk were whether the student lived in a single-parent family, was from a family with an annual income of less than \$15,000, had an older sibling who had dropped out of school, had parents who did not finish high school, had limited proficiency in English, and/or was at home without adult supervision more than three hours a day. Overall, 55 percent of NELS:88 participants showed no at-risk factors, 25 percent had one, and almost one-fifth, 19 percent, had two or more (Table 7A). Eighth graders with two or more of these factors present may experience a substantial barrier to postsecondary education participation and success.<11>

While the presence of two or more risk factors appears to be independent of gender, it is not independent of race/ethnicity or tested achievement. (Differences in the number of risk factors are not examined by socioeconomic status because family income and parent's education, two components of socioeconomic status, are also components of the "at-risk" variable. Thus, the number of risk factors is related to socioeconomic status, which would result in artificially inflated differences in risk factors for the different socioeconomic status groups.) A smaller percentage of Asians and whites, in comparison to blacks and Hispanics, had two or more risk factors (Table 7A). Eighth-grade risk factors are strongly associated with 1992 tested achievement, indicating a justification for concern that these factors affect students' learning opportunities. More than three-fourths of those in the highest test quartile had no risk factors, while only about half that percentage (37 percent) in the lowest test quartile had no risk factors. By contrast, only 5 percent of high tested achievement students had two or more risk factors, as did 16 percent of those in the middle two test quartiles and nearly one-third of those in the lowest test quartile (Table 7B).<12>

**Table 7A Percentage of 1988 eighth graders with numbers of factors placing them at risk of school failure, by various characteristics**

	<b>Zero</b>	<b>One</b>	<b>Two or more</b>
Total	55.4	25.4	19.2
<b>Sex</b>			
Male	54.7	26.4	18.9
Female	56.1	24.4	19.5
<b>Race/ethnicity</b>			
Asian or Pacific Islander	59.5	25.7	14.9
Hispanic regardless of race	33.5	31.7	34.9
Black not of Hispanic origin	31.3	30.2	38.5
White not of Hispanic origin	63.1	23.5	13.4
<b>Socioeconomic status (1992)</b>			
Lowest quartile	16.2	29.0	54.8
Middle two quartiles	60.4	28.3	11.4
Highest quartile	79.4	16.8	3.8
<b>Test quartile (1992)</b>			
Lowest quartile	37.4	29.8	32.8
Middle two quartiles	58.9	24.7	16.4
Highest quartile	76.8	18.0	5.2

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 7B Percentage of 1988 eighth graders in the highest 1992 test quartile with numbers of factors placing them at risk of school failure, by various characteristics**

	<b>Zero</b>	<b>One</b>	<b>Two or more</b>
Total	76.8	18.0	5.2
<b>Sex</b>			
Male	78.2	16.8	5.0
Female	75.4	19.2	5.3
<b>Race/ethnicity</b>			
Asian or Pacific Islander	77.0	21.0	2.0
Hispanic regardless of race	55.8	29.0	15.2
Black not of Hispanic origin	45.0	38.6	16.4
White not of Hispanic origin	79.3	16.4	4.3
<b>Socioeconomic status (1992)</b>			
Lowest quartile	22.9	39.9	37.2
Middle two quartiles	72.7	21.2	6.1
Highest quartile	85.6	13.2	1.1

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

***Marriage and family formation.*** For purposes of postsecondary education decisions, which include attendance, intensity of enrollment, and financing of studies, it is unclear whether people in “marriage-like” relationships, who constituted 7 percent of 1988 eighth graders overall in 1994, behave more like single or married respondents (Table 8A). The number of divorced, separated, or widowed respondents is too small to draw conclusions about these members of the cohort. Consequently, married and single, never married cohort members constitute the focus of this discussion.

With regard to access and choice in postsecondary education, the impact of marriage by itself, without taking children in the household or other factors into consideration, is ambiguous. For example, marriage may provide financial support if one spouse is enrolled in a postsecondary institution and the other is employed, as well as providing stability, maturity, purpose, and other generally accepted positive byproducts. On the other hand, marriage can bring financial pressures. These, in turn, could affect the timing of participation in postsecondary education (i.e., delayed entry), a preference for part-time enrollment coupled with employment rather than full-time student status, and perhaps even a tendency to attend an institution or program closer to home.

Most 1988 eighth graders (83 percent), most of whom were about twenty years old, had never been married by 1994 (Table 8A). Higher reported marriage rates for 1988 eighth grade women is consistent with known tendencies for men to marry at a later age and for husbands to be several years older than their wives. Thus some women in the NELS:88 survey are married to men who are older than twenty and are therefore not in the 1988 eighth grade cohort. In every category less than fifteen percent of the population reported being married. The percent married decreases as one moves up socioeconomic and test quartiles.

A greater percentage of those in the highest test quartile group reported never having been married by 1994 (94 percent). Within the 1992 high tested achievement quartile there are no significant differences in reported marriage rates by race/ethnicity or socioeconomic status. However, those in the lowest and middle two socioeconomic quartiles have significantly lower rates of remaining single than those in the highest quartile (Table 8B).<13>

Unlike marriage, where there can be counterbalancing or offsetting forces as noted above, the presence of young children most likely constitutes a financial burden for the NELS:88 cohort member. This would in turn be expected to reduce immediate postsecondary education participation, or certainly limit it to part-time enrollments. Overall, approximately 16 percent of 1988 eighth graders reported having at least one child. The percentages of Asian and white 1988 eighth graders with children by 1994 were lower than for Hispanics or blacks (Table 9A).

When grouped by test quartiles, the percentage of 1988 eighth graders reporting no children varied inversely with tested achievement, and within the highest test quartile there were no reported differences by race/ethnicity. However, a greater proportion of those who were also in the highest socioeconomic quartile reported having no children than did those in the other two socioeconomic groupings (Table 9B).

**Table 8A Percentage of 1988 eighth graders reporting their marital status as of 1994, by various characteristics**

	Single never married	Married	Divorced or separated or widowed	In marriage-like relationship
Total	82.6	9.3	1.3	6.9
<b>Sex</b>				
Male	87.6	6.0	1.1	5.3
Female	77.5	12.6	1.5	8.5
<b>Race/ethnicity</b>				
Asian or Pacific Islander	90.7	4.2	0.5	4.6
Hispanic regardless of race	74.8	14.2	1.4	9.6
Black not of Hispanic origin	89.3	3.2	0.3	7.2
White not of Hispanic origin	82.4	9.7	1.5	6.4
<b>Socioeconomic status (1992)</b>				
Lowest quartile	72.6	13.9	2.9	10.6
Middle two quartiles	82.5	10.1	1.0	6.4
Highest quartile	92.6	3.6	0.3	3.5
<b>Test quartile (1992)</b>				
Lowest quartile	76.6	13.4	1.3	8.8
Middle two quartiles	84.0	8.2	1.5	6.3
Highest quartile	94.2	2.9	0.3	2.6

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 8B Percentage of 1988 eighth graders in the highest 1992 test quartile reporting their marital status as of 1994, by various characteristics**

	Single never married	Married	Divorced or separated or widowed	In marriage-like relationship
Total	94.2	2.9	0.3	2.6
<b>Sex</b>				
Male	96.3	2.2	0.2	1.3
Female	92.0	3.7	0.4	3.9
<b>Race/ethnicity</b>				
Asian or Pacific Islander	96.1	1.8	1.3	0.8
Hispanic regardless of race	95.0	1.3	0.3	3.4
Black not of Hispanic origin	93.3	1.4	0.0	5.2
White not of Hispanic origin	94.0	3.2	0.3	2.5
<b>Socioeconomic status (1992)</b>				
Lowest quartile	83.2	7.8	1.1	7.9
Middle two quartiles	92.0	3.8	0.6	3.6
Highest quartile	97.1	1.7	0.0	1.2

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 9A Percentage of 1988 eighth graders reporting number of children of their own as of 1994, by various characteristics**

	None	One or more
Total	84.1	15.9
<b>Sex</b>		
Male	90.1	9.9
Female	78.1	21.9
<b>Race/ethnicity</b>		
Asian or Pacific Islander	92.7	7.3
Hispanic regardless of race	73.7	26.4
Black not of Hispanic origin	70.8	29.2
White not of Hispanic origin	88.2	11.8
<b>Socioeconomic status (1992)</b>		
Lowest quartile	70.5	29.5
Middle two quartiles	85.2	14.8
Highest quartile	95.8	4.2
<b>Test quartile (1992)</b>		
Lowest quartile	75.0	25.0
Middle two quartiles	88.3	11.7
Highest quartile	97.6	2.4

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 9B Percentage of 1988 eighth graders in the highest 1992 test quartile reporting number of children of their own as of 1994, by various characteristics**

	None	One or more
Total	97.6	2.4
<b>Sex</b>		
Male	98.5	1.5
Female	96.8	3.2
<b>Race/ethnicity</b>		
Asian or Pacific Islander	98.7	1.3
Hispanic regardless of race	97.4	2.6
Black not of Hispanic origin	94.5	5.5
White not of Hispanic origin	97.7	2.3
<b>Socioeconomic status (1992)</b>		
Lowest quartile	90.7	9.3
Middle two quartiles	96.4	3.6
Highest quartile	99.4	0.6

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

## Choice

The American postsecondary education system is very diverse, and, taken as a whole, presents opportunities to those with any predilection and from virtually all walks of life. A young person just out of high school who contemplates the full range of possibilities might find the options overwhelming. However, choices are shaped by, among other things, abilities, interests, social influences, societal expectations, group membership, and resource limitations. These influences and constraints may reduce the decision task to a more tractable and comfortable set of alternatives. But in some ways they could also impose tight limits.

This section examines postsecondary education decisions made by the NELS:88 cohort members by 1994. Four factors are discussed: the choice of institutional type and sector, the influences of social and financial concerns, the role of institutional location, and the intensity of enrollment. These factors are considered for all 1988 eighth graders with postsecondary enrollment by 1994 and for that portion of this population who were in the highest cognitive test quartile in 1992. The population of 1988 eighth graders attending baccalaureate institutions by 1994 constitutes an additional focus in this section.

***Choice of institution type and sector.*** One of the most important decisions a young person aspiring to postsecondary education must make is which type of institution to attend. This decision is affected by many factors, such as academic performance in high school, family background and parental influences, and the student's own career goals. Of course, financial and life circumstances also play a role.

About five percent of 1988 eighth graders with postsecondary enrollment by 1994 reported attending a private-for-profit institution, about two percent reported attending private not-for-profit institutions, and nearly one percent reported attending public less-than-two-year institutions (Table 10A). These three types of postsecondary institutions are most likely trade or technical programs. Thirty-six percent enrolled in community colleges (public two-year institutions), 38 percent matriculated at public four-year institutions, and 19 percent reported attending private four-year colleges or universities (Table 10A). A comparison of attendance rates for the three most frequently attended types of postsecondary institutions revealed a number of differences. Almost 50 percent of Hispanics first enrolled in community colleges; a smaller percentage of Hispanics than Asians, blacks, or whites enrolled in private not-for-profit four-year institutions. Blacks enrolled in private four-year institutions at rates comparable to Asians and whites. For four-year public institutions, a lower percentage of Hispanics were enrolled than whites. No other race/ethnicity differences were significant for four-year public institutions.

A higher percentage of 1988 eighth graders with postsecondary enrollment by 1994 from higher socioeconomic status and test quartiles enrolled in private four-year institutions. Attendance at public four-year schools is also associated with socioeconomic status and tested achievement. Furthermore, those in the lowest groupings on socioeconomic status and tested achievement reported a higher percentage of enrollments at public two-year institutions than did those in the middle and highest quartiles (Table 10A).

Of the 1988 eighth graders who were in the highest test quartile in 1992 and had attended a postsecondary institution by 1994, 82 percent enrolled in either a public or private not-



for-profit four-year institution. In contrast to the entire population of 1988 eighth graders attending postsecondary institutions by 1994, there were no significant differences by sex, race/ethnicity, or socioeconomic status with regard to enrollment in public four-year institutions by those in the highest 1992 test quartile. For enrollment in private four-year institutions by high test quartile students, there were no observed differences by sex or race/ethnicity, but there were differences by socioeconomic status: A higher percentage of 1992 high test quartile students in the highest socioeconomic quartile than in the mid or low socioeconomic quartiles attended private four-year colleges and universities. However, while a greater percentage of Hispanics overall first enrolled at public two-year institutions, this difference was no longer significant for Hispanics in the highest test quartile (Table 10B).

**Table 10A Percentage of 1988 eighth graders with postsecondary enrollment by 1994 by type of first institution attended, by various characteristics**

	Private for-profit	Private not-for-profit less than 4-year	Public less than 2-year	Public 2-year	Private not-for-profit 4-year	Public 4-year
Total	4.9	1.5	0.7	35.6	19.2	38.0
<b>Sex</b>						
Male	3.8	1.6	0.9	37.5	18.2	38.2
Female	6.0	1.5	0.5	33.9	20.1	37.9
<b>Race/ethnicity</b>						
Asian or Pacific Islander	2.2	0.8	0.0	35.3	24.2	37.5
Hispanic regardless of race	7.1	1.8	0.5	49.2	10.5	30.9
Black not of Hispanic origin	11.9	0.6	2.5	29.9	18.6	36.5
White not of Hispanic origin	3.8	1.7	0.5	34.6	20.1	39.2
<b>Socioeconomic status (1992)</b>						
Lowest quartile	12.7	1.3	1.5	47.7	10.0	26.8
Middle two quartiles	5.1	1.4	1.0	41.8	14.7	36.0
Highest quartile	1.9	1.9	0.0	22.5	28.9	44.8
<b>Test quartile (1992)</b>						
Lowest quartile	8.7	3.1	1.8	62.1	7.0	17.3
Middle two quartiles	5.4	1.5	0.3	41.6	15.5	35.6
Highest quartile	0.9	0.6	0.1	16.4	30.3	51.7

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 10B Percentage of 1988 eighth graders in the highest 1992 test quartile with postsecondary enrollment by 1994 by type of first institution attended, by various characteristics**

	Private for-profit	Private not-for-profit less than 4-year	Public less than 2-year	Public 2-year	Private not-for-profit 4-year	Public 4-year
Total	0.9	0.6	0.1	16.4	30.3	51.7
<b>Sex</b>						
Male	0.9	0.4	0.0	17.1	27.6	53.8
Female	0.9	0.8	0.1	15.8	32.8	49.6
<b>Race/ethnicity</b>						
Asian or Pacific Islander	0.1	0.0	0.0	16.0	36.4	47.4
Hispanic regardless of race	2.0	0.0	0.4	21.9	28.1	47.6
Black not of Hispanic origin	0.0	0.0	0.0	8.7	30.5	60.7
White not of Hispanic origin	0.9	0.7	0.1	16.6	30.0	51.7
<b>Socioeconomic status (1992)</b>						
Lowest quartile	3.3	0.0	1.2	21.1	21.3	53.1
Middle two quartiles	1.4	0.7	0.1	22.0	22.3	53.4
Highest quartile	0.3	0.6	0.0	11.8	37.0	50.3

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

***Enrollment in four-year postsecondary institutions.*** Overall, 57 percent of the NELS:88 eighth grade cohort members who had attended a postsecondary institution by 1994 were in a four-year college or university (Table 10A). Furthermore, most of those in the highest test quartile who had enrolled also chose a public or private four-year institution (Table 10B). For these reasons, the remainder of this essay will limit tables and analyses to those individuals who chose this type of postsecondary alternative.

There are many possible considerations that influence a student's choice of four-year postsecondary institution, including the availability of courses and awarding of degrees in the student's preferred field of study, as well as the institution's track record for placing its graduates in jobs or graduate/professional programs. Other considerations might include athletic programs, where one's parents went to college, the social environment, racial composition of the student body, and total enrollment at the institution. In light of considerations reported by 1988 eighth graders as very important in the Second Follow-up (1992), five variables were isolated for analysis: (1) the institution's reputation, (2) the expected expenses, (3) the availability of financial aid, (4) the option of living at home (which could include both financial benefits and more family support), and (5) the crime rate at or around the institution.

Overall, 64 percent of those enrolled in baccalaureate-granting colleges and universities indicated in 1992 that the institution's reputation was a very important factor in their enrollment decision. Across all sex, racial/ethnic, socioeconomic and tested achievement categories, the majority of 1988 eighth graders listed this factor as very important (Tables 11A and 11B). A higher percentage of women than men said that the reputation of the institution was a very important consideration, as did a higher percentage of those in the highest test quartile.

Only 24 percent of 1988 eighth graders indicated that the level of college expenses was very important in their decision as to where to enroll, and 44 percent indicated that the availability of financial aid was also very important (Tables 12A, 12B, 13A and 13B). Thus it appears that students may regard college expenses (including tuition, which is not shown separately) in tandem with financial aid.<14> A higher percentage of women than men, of blacks than Asians, whites, or Hispanics, of Hispanics than whites, and of those in the lowest socioeconomic and test quartiles indicated that the level of college expenses was a very important consideration. With regard to the availability of financial aid, the same pattern of differences was observed for sex, and race/ethnicity, except that Hispanics also had a significantly higher percentage than Asians, and blacks also had a significantly higher percentage than Hispanics, reporting that the availability of financial aid was a very important consideration. Among those in the highest tested achievement quartile, a greater percentage of women than men, of black students compared to all other racial/ethnic groups, and of those in the lowest socioeconomic quartile reported that financial aid was an important consideration.

An institution's location, whether it be urban versus rural, or close to one's home and family versus far from them, can be a criterion upon which students base an enrollment decision. On the NELS:88 Second Follow-up survey (1992), 1988 eighth graders did not indicate that location, measured on one of those dimensions--living at home--was a very important consideration in choosing a college; only 10 percent of baccalaureate-bound students indicated that being able to live at home was very important to them (Table 14A). However, a greater percentage of women than men, of Hispanics than of whites or blacks and of those in the lowest

and middle socioeconomic categories reported that it was a very important consideration for them. (Since this analysis is limited to four-year institutions, the higher incidence for Hispanics is not the community-college effect noted earlier.) Only five percent of 1988 eighth graders in the highest 1992 test quartile said that choosing an institution that would allow them to live at home was very important, a significantly lower percentage than in the other test quartile groups (Table 14B).

Of the 1988 eighth graders attending public or private four-year institutions by 1994, 27 percent listed a low crime environment as a very important consideration in their choice of a college. Not surprisingly perhaps, a higher percentage of women than men were interested in safe surroundings. Higher percentages of Asians and blacks exhibited concern about crime than did Hispanics and whites (Table 15A). The percentage of students indicating that crime was a very important consideration decreased as one moved up both the socioeconomic status and tested achievement quartiles; within the high tested achievement quartile, a higher percentage of women than men again indicated that a safe environment was important to them. There were no differences by racial/ethnic divisions (Table 15B).

**Table 11A** Percentage of 1988 eighth graders attending public or private not-for-profit four-year institutions by 1994 who rated the reputation of the institution as very important in their consideration of which institution to attend, by various characteristics

	Very important	Less than very important
Total	63.5	36.5
<b>Sex</b>		
Male	58.9	41.1
Female	67.6	32.4
<b>Race/ethnicity</b>		
Asian or Pacific Islander	71.4	28.6
Hispanic regardless of race	62.3	37.7
Black not of Hispanic origin	66.7	33.3
White not of Hispanic origin	62.8	37.2
<b>Socioeconomic status (1992)</b>		
Lowest quartile	60.4	39.6
Middle two quartiles	59.3	40.8
Highest quartile	67.9	32.1
<b>Test quartile (1992)</b>		
Lowest quartile	53.1	46.9
Middle two quartiles	57.1	42.9
Highest quartile	69.7	30.3

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 11B** Percentage of 1988 eighth graders in the highest 1992 test quartile attending public or private not-for-profit four-year institutions by 1994 who rated the reputation of the institution as very important in their consideration of which institution to attend, by various characteristics

	Very important	Less than very important
Total	69.7	30.3
<b>Sex</b>		
Male	65.3	34.8
Female	73.8	26.2
<b>Race/ethnicity</b>		
Asian or Pacific Islander	81.5	18.5
Hispanic regardless of race	65.3	34.8
Black not of Hispanic origin	72.4	27.6
White not of Hispanic origin	69.2	30.8
<b>Socioeconomic status (1992)</b>		
Lowest quartile	64.6	35.4
Middle two quartiles	66.7	33.3
Highest quartile	72.0	28.0

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 12A** Percentage of 1988 eighth graders attending public or private not-for-profit four-year institutions by 1994 who rated expenses as very important in their consideration of which institution to attend, by various characteristics

	Very important	Less than very important
Total	23.8	76.2
<b>Sex</b>		
Male	21.3	78.7
Female	25.9	74.1
<b>Race/ethnicity</b>		
Asian or Pacific Islander	23.5	76.5
Hispanic regardless of race	31.2	68.8
Black not of Hispanic origin	44.4	55.6
White not of Hispanic origin	20.6	79.4
<b>Socioeconomic status (1992)</b>		
Lowest quartile	41.3	58.7
Middle two quartiles	28.2	71.8
Highest quartile	16.5	83.5
<b>Test quartile (1992)</b>		
Lowest quartile	39.3	60.7
Middle two quartiles	23.3	76.7
Highest quartile	20.2	79.8

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 12B** Percentage of 1988 eighth graders in the highest 1992 test quartile attending public or private not-for-profit four-year institutions by 1994 who rated expenses as very important in their consideration of which institution to attend, by various characteristics

	Very important	Less than very important
Total	20.2	79.8
<b>Sex</b>		
Male	18.3	81.7
Female	22.1	77.9
<b>Race/ethnicity</b>		
Asian or Pacific Islander	14.4	85.6
Hispanic regardless of race	27.9	72.1
Black not of Hispanic origin	41.0	59.0
White not of Hispanic origin	19.3	80.7
<b>Socioeconomic status (1992)</b>		
Lowest quartile	38.3	61.7
Middle two quartiles	26.9	73.1
Highest quartile	14.6	85.4

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 13A Percentage of 1988 eighth graders attending public or private not-for-profit four-year institutions by 1994 who rated financial aid as very important in their consideration of which institution to attend, by various characteristics**

	Very important	Less than very important
Total	43.8	56.2
<b>Sex</b>		
Male	38.9	61.1
Female	48.0	52.0
<b>Race/ethnicity</b>		
Asian or Pacific Islander	41.6	58.4
Hispanic regardless of race	58.1	41.9
Black not of Hispanic origin	73.1	26.9
White not of Hispanic origin	38.9	61.1
<b>Socioeconomic status (1992)</b>		
Lowest quartile	74.9	25.0
Middle two quartiles	51.8	48.3
Highest quartile	31.0	69.1
<b>Test quartile (1992)</b>		
Lowest quartile	54.3	45.7
Middle two quartiles	43.0	57.0
Highest quartile	43.3	56.7

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 13B Percentage of 1988 eighth graders in the highest 1992 test quartile attending public or private not-for-profit four-year institutions by 1994 who rated financial aid as very important in their consideration of which institution to attend, by various characteristics**

	Very important	Less than very important
Total	43.3	56.7
<b>Sex</b>		
Male	38.8	61.2
Female	47.6	52.4
<b>Race/ethnicity</b>		
Asian or Pacific Islander	36.7	63.3
Hispanic regardless of race	56.4	43.6
Black not of Hispanic origin	80.2	19.8
White not of Hispanic origin	41.1	58.9
<b>Socioeconomic status (1992)</b>		
Lowest quartile	76.3	23.7
Middle two quartiles	56.8	43.2
Highest quartile	32.1	67.9

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 14A Percentage of 1988 eighth graders attending public or private not-for-profit four-year institutions by 1994 who rated living at home as very important in their consideration of which institution to attend, by various characteristics**

	Very important	Less than very important
Total	9.7	90.3
<b>Sex</b>		
Male	8.3	91.7
Female	10.9	89.2
<b>Race/ethnicity</b>		
Asian or Pacific Islander	14.3	85.7
Hispanic regardless of race	22.7	77.3
Black not of Hispanic origin	9.6	90.4
White not of Hispanic origin	8.4	91.6
<b>Socioeconomic status (1992)</b>		
Lowest quartile	19.0	81.0
Middle two quartiles	12.2	87.8
Highest quartile	5.6	94.4
<b>Test quartile (1992)</b>		
Lowest quartile	27.1	72.9
Middle two quartiles	11.4	88.6
Highest quartile	5.0	95.0

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 14B Percentage of 1988 eighth graders in the highest 1992 test quartile attending public or private not-for-profit four-year institutions by 1994 who rated living at home as very important in their consideration of which institution to attend, by various characteristics**

	Very important	Less than very important
Total	5.0	95.0
<b>Sex</b>		
Male	3.8	96.2
Female	6.1	93.9
<b>Race/ethnicity</b>		
Asian or Pacific Islander	8.0	92.0
Hispanic regardless of race	14.9	85.1
Black not of Hispanic origin	6.6	93.4
White not of Hispanic origin	4.3	95.7
<b>Socioeconomic status (1992)</b>		
Lowest quartile	6.7	93.3
Middle two quartiles	8.6	91.4
Highest quartile	2.6	97.4

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.



**Table 15A Percentage of 1988 eighth graders attending public or private not-for-profit four-year institutions by 1994 who rated a low crime environment as very important in their consideration of which institution to attend, by various characteristics**

	Very important	Less than very important
Total	27.2	72.8
<b>Sex</b>		
Male	20.3	79.7
Female	33.3	66.7
<b>Race/ethnicity</b>		
Asian or Pacific Islander	42.4	57.6
Hispanic regardless of race	26.5	73.5
Black not of Hispanic origin	43.1	56.9
White not of Hispanic origin	24.2	75.8
<b>Socioeconomic status (1992)</b>		
Lowest quartile	39.9	60.1
Middle two quartiles	28.8	71.2
Highest quartile	23.4	76.6
<b>Test quartile (1992)</b>		
Lowest quartile	43.0	57.0
Middle two quartiles	30.2	69.8
Highest quartile	20.7	79.3

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 15B Percentage of 1988 eighth graders in the highest 1992 test quartile attending public or private not-for-profit four-year institutions by 1994 who rated a low crime environment as very important in their consideration of which institution to attend, by various characteristics**

	Very important	Less than very important
Total	20.7	79.3
<b>Sex</b>		
Male	15.6	84.4
Female	25.6	74.4
<b>Race/ethnicity</b>		
Asian or Pacific Islander	27.3	72.7
Hispanic regardless of race	18.1	81.9
Black not of Hispanic origin	21.1	78.9
White not of Hispanic origin	20.5	79.5
<b>Socioeconomic status (1992)</b>		
Lowest quartile	22.9	77.2
Middle two quartiles	20.3	79.8
Highest quartile	20.9	79.1

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

*Out-of-state attendance.* To the extent that geographic location matters to students, whether it comes in the form of being able to attend a postsecondary institution close to home and family or far away from them, the lack of desirable programs within a given area could restrict choice. (For that matter, it could restrict access as well.) Enrollment in an out-of-state institution may reflect a positive personal preference or a location constraint. The decision to pursue postsecondary education out of state may depend on a number of factors, including the types of in-state alternatives and the student's available financial resources. While many states offer a wide range of postsecondary education, in general, students who can attend postsecondary institutions outside of their home state have access to an even wider range of options, albeit in most instances at a higher net financial cost to them. Unfortunately, some students may not be able to afford to take advantage of this wider range of opportunities.

Almost three-fourths of 1988 eighth graders who subsequently enrolled in a four-year postsecondary institution did so in their home state (Table 16A). A higher percentage of blacks than Hispanics indicated attendance at an out-of-state college or university. Also, a higher percentage of students in the highest socioeconomic and/or highest tested achievement quartiles reported out-of-state enrollment (Table 16A).

In the highest test quartile, about one-third of males and females attended out-of-state colleges, and over 40 percent of the highest socioeconomic quartile did as well, the latter being a significantly higher percentage than the other socioeconomic groups.

**Table 16A Percentage of 1988 eighth graders attending public or private not-for-profit four-year institutions by 1994 who attended their first postsecondary institution in or out of their home state, by various characteristics**

	Home state	Different state
Total	72.0	28.0
<b>Sex</b>		
Male	70.4	29.6
Female	73.5	26.5
<b>Race/ethnicity</b>		
Asian or Pacific Islander	77.8	22.2
Hispanic regardless of race	83.2	16.9
Black not of Hispanic origin	65.5	34.5
White not of Hispanic origin	71.7	28.3
<b>Socioeconomic status (1992)</b>		
Lowest quartile	84.8	15.2
Middle two quartiles	80.0	20.0
Highest quartile	62.3	37.7
<b>Test quartile (1992)</b>		
Lowest quartile	81.4	18.5
Middle two quartiles	78.4	21.6
Highest quartile	67.5	32.5

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 16B Percentage of 1988 eighth graders in the highest 1992 test quartile attending public or private not-for-profit four-year institutions by 1994 who attended their first postsecondary institution in or out of their home state, by various characteristics**

	Home state	Different state
Total	67.5	32.5
<b>Sex</b>		
Male	67.1	32.9
Female	68.0	32.0
<b>Race/ethnicity</b>		
Asian or Pacific Islander	73.1	26.9
Hispanic regardless of race	73.8	26.2
Black not of Hispanic origin	69.0	31.0
White not of Hispanic origin	66.8	33.2
<b>Socioeconomic status (1992)</b>		
Lowest quartile	84.3	15.7
Middle two quartiles	81.2	18.8
Highest quartile	57.3	42.7

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

***Institution of choice.*** Those who eventually matriculated at a postsecondary institution had to employ their considerations and selection criteria, from net cost to reputation to location, as well as an assessment of their own abilities and constraints, in coming to a decision about which college or university they would like to attend. When they weighed all of these factors and available information, completed the application process, and finally were accepted, to what degree were their hopes to attend a particular postsecondary institution fulfilled?

In 1992, 1988 eighth grade cohort members were asked to list the names of their first and second postsecondary institutions of choice. Of those who then had actually attended at least one four-year college or university in the interim (i.e., 1992 to 1994), 71 percent indicated in 1994 that they were able to attend their first or second choice institution (Table 17A). <15> There was no significant difference across sex, race/ethnicity, socioeconomic, and test groups with regard to the percentage of students who were able to attend one of their preferred institutions.

Within the highest tested achievement quartile, 69 percent reported that they were able to attend one of their preferred institutions. There was no significant difference with regard to attendance in a preferred institution within the high achievement test group by sex, race/ethnicity, or socioeconomic status (Table 17B).

For 71 percent of the students to have been matched with an institution of choice is a strong indication that the widely varied preferences of baccalaureate-bound students are being satisfied by the postsecondary education system, at least in terms of admission. Of course, this does not mean that these students' preferences and expectations will be met, or remain constant, once they enroll and progress toward their undergraduate degree and program objectives. But it does suggest that the availability of information and the varied postsecondary landscape are serving high school graduates well as they leave one educational environment and begin the task of adapting to a new one.

***Intensity of enrollment.*** Not being able to attend college at a level of intensity that assures timely degree completion may limit one's ability to establish and to achieve educational and career goals. Among 1988 eighth graders who attended four-year institutions, over 96 percent were enrolled full-time, a path that one would expect to lead to more timely program completions as they work toward the baccalaureate; the percentage was 98 for those in the highest test quartile (Tables 18A and 18B). There were no significant differences by sex or race/ethnicity with regard to the intensity of enrollments. However, a greater percentage of those in the highest socioeconomic and tested achievement quartiles attended full-time, compared to those in the lowest and middle two quartiles. Within the highest tested achievement quartile, however, no significant differences were observed by sex, race/ethnicity, or socioeconomic status.

**Table 17A Percentage of 1988 eighth graders attending public or private not-for-profit four-year institutions by 1994 who attended their first or second choice postsecondary institution, by various characteristics**

	Attended	Did not attend
Total	70.8	29.2
<b>Sex</b>		
Male	69.0	31.0
Female	72.3	27.6
<b>Race/ethnicity</b>		
Asian or Pacific Islander	65.8	34.2
Hispanic regardless of race	72.0	28.0
Black not of Hispanic origin	64.8	35.2
White not of Hispanic origin	71.9	28.1
<b>Socioeconomic status (1992)</b>		
Lowest quartile	74.0	26.0
Middle two quartiles	73.0	27.0
Highest quartile	68.5	31.5
<b>Test quartile (1992)</b>		
Lowest quartile	64.7	35.3
Middle two quartiles	71.8	28.2
Highest quartile	68.9	31.1

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 17B Percentage of 1988 eighth graders in the highest 1992 test quartile attending public or private not-for-profit four-year institutions by 1994 who attended their first or second choice postsecondary institution, by various characteristics**

	Attended	Did not attend
Total	68.9	31.1
<b>Sex</b>		
Male	67.1	32.9
Female	70.6	29.4
<b>Race/ethnicity</b>		
Asian or Pacific islander	57.9	42.1
Hispanic regardless of race	66.8	33.3
Black not of Hispanic origin	61.3	38.7
White not of Hispanic origin	69.9	30.0
<b>Socioeconomic status (1992)</b>		
Lowest quartile	76.6	23.4
Middle two quartiles	72.9	27.1
Highest quartile	65.9	34.1

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 18A Percentage of 1988 eighth graders attending public or private not-for-profit four-year institutions by 1994 who were enrolled in their first postsecondary institution full-time or less than full-time, by various characteristics**

	Full-time	Less than full-time
Total	96.2	3.8
<b>Sex</b>		
Male	96.1	3.9
Female	96.3	3.7
<b>Race/ethnicity</b>		
Asian or Pacific Islander	96.1	3.9
Hispanic regardless of race	92.2	7.8
Black not of Hispanic origin	96.9	3.0
White not of Hispanic origin	96.5	3.5
<b>Socioeconomic status (1992)</b>		
Lowest quartile	92.6	7.4
Middle two quartiles	95.5	4.5
Highest quartile	97.5	2.5
<b>Test quartile (1992)</b>		
Lowest quartile	92.2	7.8
Middle two quartiles	94.9	5.1
Highest quartile	98.4	1.6

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

**Table 18B Percentage of 1988 eighth graders in the highest 1992 test quartile attending public or private not-for-profit four-year institutions by 1994 who were enrolled in their first postsecondary institution full-time or less than full-time, by various characteristics**

	Full-time	Less than full-time
Total	98.4	1.6
<b>Sex</b>		
Male	98.4	1.6
Female	98.4	1.5
<b>Race/ethnicity</b>		
Asian or Pacific Islander	99.4	0.6
Hispanic regardless of race	97.5	2.5
Black not of Hispanic origin	97.4	2.6
White not of Hispanic origin	98.5	1.5
<b>Socioeconomic status (1992)</b>		
Lowest quartile	96.1	3.9
Middle two quartiles	98.0	2.0
Highest quartile	98.9	1.1

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

## Conclusions

Any discussion of postsecondary education must include an assessment of how well it is serving its current participants and the nation as a whole. That assessment, in keeping with the postsecondary education world itself, should be multidimensional in nature. This particular essay has restricted its coverage to some aspects of access and choice that can be gleaned from NELS:88 data. Within this scope, then, one should attempt to measure postsecondary education in terms of how well it serves racial and ethnic minorities, and those on the lower socioeconomic rungs in comparison with those whose backgrounds and circumstances are more privileged.

With regard to gender, it is important to investigate whether young females hold educational expectations different from their male counterparts, and whether in high school females are represented in programs similar to males, test as well as males, and receive diplomas at the same rate as males. Compared to males, it is important to test whether females follow similar postsecondary education paths--with regard to the type, timing, and intensity of enrollment. These and other differences that can be detected for women versus men can, and should, be examined for the other categories of potential barriers and inequalities as well. This section provides each of these comparisons.

**Gender.** Data from NELS:88/94 (the Third Follow-up) suggest that females in the 1988 eighth grade cohort held similar or even higher educational expectations compared to males. In comparison with their male counterparts, a higher percentage of women also chose or were "tracked into" academic over vocational or general programs. A smaller percentage of women than men scored in the lowest 1992 test quartile, and a higher percentage of women scored in the middle two test quartiles, while there was no observed difference between men and women in the highest test quartile.<16> A smaller percentage of women than men failed to file a postsecondary application by 1992, and a greater percentage of women filed multiple postsecondary applications. Thus, on these various access comparisons, which hold for the overall 1988 eighth grade cohort and for the high tested achievement quartile, women appear to be at least on a par with men in terms of being positioned to take advantage of postsecondary educational opportunities

With regard to choice, women and men in NELS:88 enrolled in public and private not-for-profit four-year institutions by 1994 in approximately equal percentages. Women attending four-year institutions also enrolled out of state, attended full-time, and attended an institution of their choice at the same rates as men. Again, these conclusions hold both for the aggregate NELS:88 cohort with postsecondary enrollment by 1994 and for those in the highest 1992 test quartile. Thus, on the criterion of choice, postsecondary education again appears to be meeting the needs of women at least as well as it does for men. There are few observed sex differences across NELS:88 categories, and where there are differences, they tend to favor women. On the criteria of access and choice, then, there do not appear to be postsecondary education barriers that affect women disproportionately

**Race/ethnicity.** While in high school, a higher percentage of Asian students reported the expectation of earning at least a bachelor's degree than for any racial/ethnic group, and a significantly lower percentage of Hispanics than whites held this level of expectation (there were no significant differences across other racial/ethnic categories). Asians also had higher percent

enrollment in academic tracks and had higher high school graduation rates. (With regard to academic program enrollment and graduation, whites showed higher rates than blacks and Hispanics; there were no significant differences between these last two groups.) Within the highest achievement test quartile, racial/ethnic differences by enrollment or graduation disappeared, though higher percentages of Asians and Whites than blacks and Hispanics ranked in the highest quartile on the cognitive test composite.

A higher percentage of Asians than other racial/ethnic groups filed postsecondary applications and enrolled in postsecondary institutions right after high school. Again, these differences disappear in the highest test quartile. A higher proportion of blacks and Hispanics, even within the highest tested achievement quartile, exhibited two or more at-risk factors than whites and Asians. The tendency for Hispanics to enroll in public two-year colleges and for blacks to enroll out of state were the only pronounced postsecondary attendance patterns, and even these do not hold for the highest test quartile. There were no racial or ethnic differences with regard to attendance at a preferred four-year institution, or the tendency to enroll full-time in a four-year institution.

***Socioeconomic status.*** More observed differences across the potential access and choice barriers (i.e., sex, race/ethnicity, socioeconomic conditions, or tested achievement) occur by socioeconomic status, and they occur from the outset. Educational expectations, in terms of the percentages of those who indicated achievement of at least a bachelor's degree, vary directly by socioeconomic ranking. The same is true for representation in academic tracks in high school, the rate of earning a regular high school diploma, and performance on the cognitive test battery. This pattern continues with respect to the postsecondary application process, where a smaller percentage of 1988 eighth graders in the lowest socioeconomic quartile completed applications. In turn, a smaller percentage from this group matriculated, and when they did enroll there was more delay and a higher incidence of enrollment at public two-year institutions (and in state).

On the personal side, the percentage of 1988 eighth graders who had never married by 1994, and the percentage who reported not having children, varied directly by socioeconomic status. Within the high tested achievement quartile, however, many of these socioeconomic differences disappear or are lessened.

***Tested achievement.*** Those in the highest tested achievement quartile have the fewest postsecondary access and choice barriers. Their initial expression of educational expectations in the eighth grade and their higher rate of postsecondary enrollment characterize them as well motivated. Their higher rate of out-of-state enrollment suggests that they are more mobile than their counterparts; and, for lack of a better word, their discipline as regards the timing of marriage and children position them to take better advantage of the opportunities that the heterogeneous postsecondary world has to offer.

Specifically, over 90 percent of this group want at least a baccalaureate degree from the outset. They take academic subjects in high school, receive their diplomas on time, file multiple applications, enroll soon after high school graduation (mostly in four-year institutions). On the personal side, they are saddled with fewer at-risk factors to begin with, and they do not marry or have children by their early twenties, which reduce even further the obstacles in their paths to achieving their educational goals.



When one restricts comparisons to those in the highest tested achievement quartile, some differences observed for the overall eighth grade cohort with regard to race/ethnicity or socioeconomic status disappear. This is true for type of high school program attended (i.e., academic vs. general/vocational track) and high school graduation rate. However, Asians and whites tend to exhibit significantly different levels for some of the other access and choice variables, such as at-risk factors and application patterns.

The most glaring inequalities within the high tested achievement quartile occur across socioeconomic divisions, as opposed to sex or racial/ethnic differences. Although there were no observed differences in terms of high school programs pursued or graduation rates by socioeconomic quartile, personal considerations (i.e., at-risk factors, marriage rates, and the incidence of parenthood), postsecondary application patterns and attendance, institution type (four-year versus other and in-state versus out-of-state), and intensity of enrollment were associated with one's socioeconomic grouping. Some of these same access and choice barriers appear to be present by socioeconomic status, as opposed to sex or race/ethnicity, for the whole 1988 eighth grade cohort as well as for those in the 1992 highest tested achievement quartile.

## Endnotes

- <1> In addition, laws such as those that prohibit or significantly restrict employment opportunities for those under 16 years of age who might otherwise choose work over school do not generally restrict individuals in the postsecondary education age range from making that choice. This means that employment may represent an attractive alternative to more education for some young people.
- <2> Chapter 6 in the NELS:88/92 report *A Profile of the American High School Senior in 1992* (June 1995) discusses in some detail parental educational attainment and parents' expectations for their children (vs. their children's own expectations) as of 1992. Thus, the current essay will not cover that same ground. However, inasmuch as parents' educational backgrounds may affect family decision-making with regard to human capital investments as well as the desired educational and occupational horizons as seen by their children, this factor should be acknowledged explicitly in any treatment of educational access. In addition, the Table Compendium that follows this essay--see section 1 and table 1-1--provides several important linkages in this regard. Those include the fact that: 1988 eighth graders whose parents completed high school or less were more likely to set their own educational expectations at that level than were those whose parents had at least a bachelor's degree; and students whose parents finished college or earned graduate degrees were more likely to expect to obtain a graduate degree themselves than those whose parents had completed high school or less. These relationships hold for both the mother's and the father's level of educational attainment.
- <3> In these analyses expectations of bachelor degree attainment was combined with expectations to attain all other higher degrees, in part because one has to obtain the former before being admitted into graduate and first professional programs. Just as completing high school is a prerequisite for beginning college, a college degree is an access variable with regard to participation in graduate school/first professional program.
- <4> With regard to expectations or any of the other dimensions on which postsecondary access and choice issues are discussed in this essay, distributions are presented by sex, race/ethnicity, socioeconomic status, and tested achievement. There is obviously overlap among variables, and to the extent that, say, socioeconomic status and ethnicity are highly correlated, distribution comparisons by race/ethnicity and by socioeconomic quartile may actually represent only one comparison not two. The table below provides cross-tabulations for race with both socioeconomic level and test quartile. As is apparent, blacks and Hispanics fall disproportionately in the bottom socioeconomic and test quartiles, while Asians and whites are over-represented in the top quartiles, relative to their presence in the overall 1988 eighth grade cohort. However, in the middle fifty percent of each distribution, there is significant representation across all racial/ethnic groups. In fact, it is only in the highest socioeconomic and test quartiles that one notices a predominance of only one of the four racial/ethnic groups--whites. In virtually all other situations, distinctions made in the text by socioeconomic status or test quartile would not be referring implicitly to any one racial/ethnic group.

**Race/ethnicity by socioeconomic status and achievement test quartile**

	Race or ethnicity as of 1994			
	Asian	White	Black	Hispanic
Total	3.8	71.6	13.5	11.1
<b>Socioeconomic status (1992)</b>				
Lowest quartile	2.8	51.3	22.3	23.6
Middle quartiles	3.5	75.1	12.9	8.5
Highest quartile	5.0	84.5	6.8	3.7
<b>Test quartile (1992)</b>				
Lowest quartile	2.7	56.9	24.1	16.3
Middle quartiles	3.6	75.0	11.3	10.1
Highest quartile	5.3	86.3	3.5	4.9

Source: NCES, National Education Longitudinal Study: 1988-94 9/25/95

Note: Rows may not sum to 100 percent due to rounding.

- <5> Because of the small percentage of students in vocational programs, and because our main focus in this report is academic preparation for four-year colleges, the vocational and general categories were combined.
- <6> The true dropout rate is difficult to calculate as cohort members might report "still trying" while moving to a "dropout" status. Distinguishing between these categories at this point in the development of this cohort is difficult, and for this reason we turn our focus in this essay toward those who have graduated and/or received the necessary prerequisites to participate in postsecondary education.
- <7> The quartile rankings for tested achievement and socioeconomic status were intended to produce an approximately symmetric division of the NELS:88/94 sample, with 50 percent in the middle group and 25 percent in the upper and lower tails of the distribution. The actual breakdown deviates from this intention for two reasons. First, the underlying centile scores are expressed as integer values. Therefore, any regrouping into quartiles will only be approximate. Second, the centile ranking was constructed using the NELS:88/92 Second Follow-up questionnaire weight. Thus, the analyses using the 1988 eighth grade cohort and Third Follow-up weight will also produce a degree of asymmetry when quartiles are defined. Nonetheless, the observed deviation was not dramatic, resulting in a lower quartile that is slightly more exclusive (23.0%) and an upper quartile that is slightly more inclusive (26.9%).
- <8> The application process is one important step in access to postsecondary education. Thus, variations in reported application patterns by sex, race/ethnicity, socioeconomic status, and tested achievement are one indication of possible inequality, and thus less diversity, in postsecondary educational participation than in elementary and secondary school programs. This is a concern expressed at the outset of this essay, and one to which we will return later.
- <9> Attendance in this report is measured by the variable NUMATND1 (Number of attendance spells at the first postsecondary institution attended). This was used (indirectly) as an index of whether or not a respondent ever attended a postsecondary

institution, and whether there were gaps in attendance at that institution. It should not be misinterpreted as an indication of whether the respondent attended more than one institution. See the Glossary for more information on this variable.

- <10> The "at-risk" factors used in this report are the same ones used in a number of previous NCES reports (Hafner, A., Ingels, S.J., Schneider, B., and Stevenson, D.L. *A Profile of the American Eighth Grader*, 1990; NCES 90-458; Green, P.J., and Scott, L.A. *"At-Risk" Eighth Graders Four Years Later*, NCES, 1995; NCES 95-380; Kaufman, P., and Bradby, D. *Characteristics of At-Risk Students in NELS:88*, 1992; NCES 92-042). These factors have been suggested by previous studies (e.g., Pallas, A., Natriello, G., and McDill, E. "The Changing Nature of the Disadvantaged Population: Current Dimensions and Future Trends," *Educational Researcher* (June-July 1989).) as increasing the risk of school failure. The factors chosen are a small subset of factors related to the risk of school failure. Kaufman and Bradby (1992) have identified others.
- <11> Green, P.J., and Scott, L.A. *"At-Risk" Eighth Graders Four Years Later*, NCES, 1995; NCES 95-380.
- <12> It should be noted that the 33 percent of 1988 eighth graders in the lowest test quartile with two or more risk factors may also be an underestimate because many in the high at-risk category did in fact drop out, and test scores are missing from a larger percentage of dropouts than any other group.
- <13> The analysis has done relatively little with the marital status variable because of uncertainties about the "in a marriage-like relationship" category. For purposes of postsecondary education decisions, which include attendance, intensity of enrollment, and even financing one's studies, it is not clear if people in the "marriage-like relationship" group, who constitute 7 percent of 1988 eighth graders overall, behave more like single or married respondents. Furthermore, inasmuch as little is known about the divorced-separated-widowed members, this was another complication with delving too deeply into the marital status variable.
- <14> The NELS:88/94 surveys were not designed to elicit substantial information on how students and their families finance higher education, or how financial aid affects enrollment decisions; understanding those considerations has been the chief goal of the National Postsecondary Student Aid Study, NPSAS:90-93. As such, this essay does not dwell on issues of tuition, financial aid, and/or the net costs of postsecondary education to students and their families.
- <15> To the extent that 1988 eighth grade cohort members listed their institutions of choice in the spring of 1992 after having filed completed applications, and in some instances after they may have already received admission results from some colleges or universities, there was undoubtedly selection bias in terms of listing; that is, it is unlikely that a high school senior would have listed as his or her first and second choice institutions to which he/she had already been denied admission.
- <16> With regard to sex differences, one can presumably at first blush treat as constant racial/ethnicity, socioeconomic, and at-risk factors, since these should be largely independent of sex. This will not be the case when the review turns to the other equity

variables. The only area in which one could see sex differences that matter would be in marriage rates and fertility, which, as noted in the body of the essay, is attributable to different ages at first marriage between men and women.

## **Table Compendium**

## **Section 1**

### **Education Experiences**

#### **1994 Highest Level of Expected Education**

- In 1994, 1988 eighth grade women were more likely to expect to obtain a graduate degree than were 1988 eighth grade men (Table 1-1) (37 percent to 32 percent).
- 1988 eighth graders who had one or more children by 1994 were more likely to expect only to obtain a high school diploma or less compared to those without children (Table 1-1) (28 percent to 8 percent).
- A greater percentage of 1988 eighth graders without children than those with children by 1994 expected in 1994 to obtain a graduate degree (Table 1-1) (39 percent to 12 percent).
- 1988 eighth graders who were in the highest socioeconomic quartile were more likely to expect in 1994 to obtain a graduate degree than those in the middle two and lowest socioeconomic quartiles (Table 1-1) (61 percent to 30 percent and 16 percent respectively).
- In 1994, a higher percentage of 1988 eighth grade Asians or Pacific Islanders expected to obtain graduate degrees than 1988 eighth grade Hispanics, blacks, and whites (Table 1-1) (50 percent to 25 percent, 29 percent, and 37 percent respectively).
- 1988 eighth graders who were single in 1994 were more likely to expect to obtain a graduate degree than those who were in a marriage-like relationship, were married, or were divorced, separated, or widowed in 1994 (Table 1-1) (39 percent to 16 percent, 12 percent, and 12 percent respectively).
- 1988 eighth graders whose parents finished college or earned graduate degrees were more likely in 1994 to expect to obtain a graduate degree than those whose parents completed high school or less (Table 1-1) (54 percent and 70 percent to 22 percent respectively for fathers; 56 percent and 64 percent to 24 percent respectively for mothers).
- 1988 eighth graders who attended Catholic or other (non-Catholic) private sector high schools were more likely in 1994 to expect to obtain a graduate degree than those who attended public sector high schools (Table 1-2) (59 percent and 68 percent to 34 percent).
- 1988 eighth graders in the highest 1992 test quartile were more likely in 1994 to expect to obtain a graduate degree than those in the middle two or lowest 1992 test quartiles (Table 1-2) (67 percent to 34 percent and 13 percent respectively).

**Table 1-1 Percentage of 1988 eighth graders with different levels of educational expectation in 1994, by selected background characteristics**

	High school or less	Trade/ vocational	Some college	Bachelor's degree	Graduate degree
Total	10.9	9.8	13.1	31.4	34.7
<b>Sex</b>					
Male	11.4	11.5	12.8	32.4	31.9
Female	10.4	8.1	13.5	30.5	37.5
<b>Alcohol consumption during lifetime in 1992</b>					
No occasions	13.2	6.8	10.8	31.5	37.5
One or two occasions	10.8	8.7	10.7	30.7	39.2
Three - nineteen occasions	8.0	8.4	11.3	31.8	40.5
Twenty or more occasions	11.0	10.8	14.4	32.0	31.8
<b>Cocaine or crack use during lifetime in 1992</b>					
No occasions	9.9	8.4	12.1	32.0	37.6
One or two occasions	15.0	18.3	10.8	34.0	21.9
Three to nineteen occasions	13.6	15.9	13.4	24.0	33.0
Twenty or more occasions	11.4	15.3	18.6	30.4	24.2
<b>Socioeconomic status (1992)</b>					
Lowest quartile	23.9	16.9	15.8	28.0	15.5
Middle two quartiles	9.2	10.3	15.5	34.5	30.4
Highest quartile	1.8	2.3	5.8	28.9	61.1
<b>Children</b>					
None	7.8	8.0	12.2	33.1	38.8
One or more	27.6	19.7	18.1	22.3	12.3
<b>Race/ethnicity</b>					
Asian or Pacific Islander	6.2	4.3	8.1	31.2	50.1
Hispanic regardless of race	13.6	12.4	16.6	32.6	24.9
Black not of Hispanic origin	10.1	13.3	14.0	33.4	29.2
White not of Hispanic origin	10.5	9.0	12.7	31.1	36.7
<b>Education level of father as of 1992</b>					
High school or less	16.1	13.8	16.9	31.3	22.0
Trade school after high school	5.7	10.3	11.7	37.5	34.8
College after high school	4.1	7.0	14.0	31.4	43.5
Finished college	3.6	2.9	6.5	32.7	54.3
Graduate degree	1.9	1.7	3.9	22.9	69.6
<b>Education level of mother as of 1992</b>					
High school or less	15.0	13.9	15.8	31.2	24.0
Trade school after high school	4.5	5.9	12.1	37.5	40.0
College after high school	5.2	6.8	12.4	33.1	42.5
Finished college	3.4	2.6	7.1	31.3	55.6
Graduate degree	2.9	2.4	5.5	24.8	64.5
<b>Current marital status</b>					
Single never married	7.9	8.3	11.7	33.0	39.1
Married	27.9	16.4	19.7	24.0	11.9
Divorced/separated/widowed	21.9	23.6	17.3	25.7	11.5
In marriage-like relationship	23.1	16.3	20.6	23.8	16.2

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.



**Table 1-2 Percentage of 1988 eighth graders with different levels of educational expectation in 1994, by selected secondary education characteristics**

	High school or less	Trade/ vocational	Some college	Bachelor's degree	Graduate degree
Total	10.9	9.8	13.1	31.4	34.7
<b>High school sector</b>					
Public	10.4	9.9	13.6	32.3	33.8
Catholic	0.5	2.1	4.0	33.9	59.4
Other private	1.9	2.7	7.9	19.1	68.5
<b>Last high school program type</b>					
Academic	4.6	6.1	10.4	34.5	44.4
Vocational	20.4	19.1	22.5	27.3	10.8
Other	21.5	14.6	15.3	26.8	21.7
<b>Test quartile (1992)</b>					
Lowest quartile	22.9	17.1	18.0	29.1	12.9
Middle two quartiles	5.7	9.0	13.9	37.3	34.2
Highest quartile	0.7	1.2	4.3	26.7	67.1
<b>High school status (1994)</b>					
Graduate	5.7	7.8	12.2	33.8	40.5
Dropout	56.6	19.9	10.8	9.6	3.1
GED or equivalent	13.9	16.5	23.7	27.5	18.5
<b>Highest level of education expected in 1992</b>					
High school or less	44.5	19.3	14.3	16.8	5.1
Trade/vocational	18.4	26.5	23.8	24.0	7.3
Some college	9.4	13.4	24.5	39.3	13.5
Finish college	2.0	3.0	8.6	45.0	41.4
Graduate degree	1.4	2.1	4.4	23.5	68.6
<b>At risk of school failure factors (1988)</b>					
None	6.1	6.6	11.5	31.7	44.1
One	11.2	11.1	13.4	33.1	31.1
Two or more	20.6	15.3	16.4	30.0	17.7

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

## Enrollment Status in First Postsecondary Educational Institution

- A greater percentage of 1988 eighth graders who enrolled by 1994 in a postsecondary education institution and whose parents finished college or earned graduate degrees enrolled in their first postsecondary institution full-time by 1994 than those whose parents completed high school or less (Table 1-3) (90 percent and 92 percent compared to 80 percent respectively for fathers; 91 percent and 90 percent compared to 83 percent respectively for mothers).
- 1988 eighth graders who enrolled by 1994 in a postsecondary education institution and were in the lowest 1992 test quartile were less likely to have enrolled in their first postsecondary institution full-time by 1994 than those in the middle two and highest 1992 test quartiles (Table 1-4) (76 percent compared to 85 percent and 93 percent respectively).
- A higher percentage of 1988 eighth graders who enrolled by 1994 in a postsecondary education institution and who, in 1992, expected to obtain a baccalaureate or a graduate degree enrolled in their first postsecondary education institution full-time by 1994 than those who expected to complete trade or vocational education, or to complete some college (Table 1-4) (87 percent and 93 percent compared to 71 percent and 77 percent respectively).
- 1988 eighth graders who, by 1992, had used crack or cocaine either on one or two occasions or from three to nineteen occasions during their lifetime were more likely in 1994 to report no postsecondary education enrollment than those who had never used crack or cocaine (Table 1-5) (64 percent and 52 percent compared to 33 percent respectively).
- 1988 eighth graders with parents whose education did not go beyond high school were more likely not to have enrolled in a postsecondary education institution by 1994 than those whose parents finished college or earned a graduate degree (Table 1-5) (50 percent compared to 16 percent and 10 percent respectively for fathers; 48 percent compared to 17 percent and 14 percent respectively for mothers).

**Table 1-3 Percentage of 1988 eighth graders with postsecondary enrollment by 1994 with different enrollment statuses by 1994 at first postsecondary education institution, by selected background characteristics**

	<b>Full-time</b>	<b>Half-time</b>	<b>Less than half-time</b>
Total	85.1	9.2	5.7
<b>Sex</b>			
Male	84.7	8.8	6.5
Female	85.5	9.5	5.0
<b>Race/ethnicity</b>			
Asian or Pacific Islander	86.2	9.1	4.8
Hispanic regardless of race	78.9	13.6	7.5
Black not of Hispanic origin	87.6	9.6	2.8
White not of Hispanic origin	85.5	8.5	6.0
<b>Current marital status</b>			
Single never married	86.7	8.3	5.0
Married	66.8	18.6	14.6
Divorced/separated/widowed	54.4	21.6	24.0
In marriage-like relationship	75.6	16.4	8.0
<b>Alcohol consumption during lifetime in 1992</b>			
No occasions	88.8	7.7	3.5
One or two occasions	86.1	9.5	4.4
Three to nineteen occasions	87.2	7.8	4.9
Twenty or more occasions	83.4	10.0	6.6
<b>Cocaine or crack use during lifetime in 1992</b>			
No occasions	86.3	8.6	5.2
One or two occasions	74.9	13.3	11.8
Three to nineteen occasions	77.1	14.4	8.5
Twenty or more occasions	82.2	11.0	6.8
<b>Socioeconomic status (1992)</b>			
Lowest quartile	82.3	11.3	6.4
Middle two quartiles	82.2	10.9	6.9
Highest quartile	90.4	5.9	3.7
<b>Children</b>			
None	86.2	8.4	5.3
One or more	69.8	19.6	10.5
<b>Education level of father as of 1992</b>			
High school or less	80.5	11.8	7.7
Trade school after high school	83.4	10.8	5.8
College after high school	84.6	11.3	4.1
Finished college	90.2	5.1	4.8
Graduate degree	92.2	5.2	2.7
<b>Education level of mother as of 1992</b>			
High school or less	82.6	10.6	6.8
Trade school after high school	83.7	10.1	6.2
College after high school	83.9	11.4	4.7
Finished college	90.6	4.9	4.6
Graduate degree	90.3	6.6	3.1

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 1-4 Percentage of 1988 eighth graders with postsecondary enrollment by 1994 with different enrollment statuses by 1994 at first postsecondary education institution, by selected secondary education characteristics**

	Full-time	Half-time	Less than half-time
Total	85.1	9.2	5.7
<b>High school sector</b>			
Public	85.1	9.1	5.8
Catholic	90.8	6.1	3.1
Other private	88.8	9.7	1.5
<b>Last high school program type</b>			
Academic	87.7	8.0	4.3
Vocational	71.3	17.7	11.0
Other	79.5	12.0	8.5
<b>Test quartile (1992)</b>			
Lowest quartile	75.7	17.4	7.0
Middle two quartiles	84.8	9.5	5.7
Highest quartile	93.4	3.9	2.7
<b>High school status (1994)</b>			
Graduate	86.2	8.7	5.1
Dropout	64.3	12.0	23.7
GED or equivalent	64.7	18.9	16.4
<b>Highest level of education expected in 1992</b>			
High school or less	63.8	15.6	20.6
Trade/vocational	70.8	17.1	12.1
Some college	76.8	14.4	8.8
Finish college	86.8	8.5	4.6
Graduate degree	92.7	4.9	2.3
<b>At risk of school failure factors (1988)</b>			
None	87.1	8.4	4.6
One	83.4	9.9	6.7
Two or more	81.0	10.9	8.1

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 1-5 Percentage of 1988 eighth graders reporting in 1994 different numbers of postsecondary attendance spells, by selected background characteristics**

	None	One	Two	Three or more
Total	37.3	59.2	3.4	0.2
<b>Sex</b>				
Male	40.4	56.0	3.4	0.2
Female	34.2	62.4	3.3	0.1
<b>Race/ethnicity</b>				
Asian or Pacific Islander	19.5	77.3	3.1	0.2
Hispanic regardless of race	48.8	46.5	4.4	0.4
Black not of Hispanic origin	47.1	49.4	3.4	0.2
White not of Hispanic origin	34.0	62.7	3.2	0.1
<b>Current marital status</b>				
Single never married	31.0	65.3	3.5	0.2
Married	67.2	29.9	2.8	0.1
Divorced/separated/widowed	70.5	25.3	4.3	0.0
In marriage-like relationship	66.1	31.7	2.2	0.1
<b>Alcohol consumption during lifetime in 1992</b>				
No occasions	37.5	60.4	2.1	0.0
One or two occasions	33.4	63.6	2.9	0.1
Three to nineteen occasions	30.9	65.9	3.2	0.1
Twenty or more occasions	38.3	57.7	3.8	0.2
<b>Cocaine or crack use during lifetime in 1992</b>				
No occasions	33.0	63.6	3.3	0.1
One or two occasions	63.7	34.6	1.5	0.2
Three to nineteen occasions	51.8	43.5	4.4	0.3
Twenty or more occasions	47.7	47.2	5.1	0.0
<b>Socioeconomic status (1992)</b>				
Lowest quartile	64.0	33.8	2.1	0.2
Middle two quartiles	37.0	59.0	3.8	0.2
Highest quartile	11.7	84.4	3.8	0.2
<b>Children</b>				
None	30.4	66.0	3.5	0.2
One or more	73.7	23.2	3.0	0.1
<b>Education level of father as of 1992</b>				
High school or less	49.9	47.0	3.0	0.1
Trade school after high school	28.4	66.7	4.5	0.4
College after high school	25.4	71.5	2.9	0.3
Finished college	16.1	78.8	4.8	0.3
Graduate degree	10.2	86.4	3.3	0.1
<b>Education level of mother as of 1992</b>				
High school or less	47.5	48.9	3.6	0.1
Trade school after high school	24.5	71.3	3.8	0.4
College after high school	25.5	71.3	3.0	0.2
Finished college	17.0	80.0	2.8	0.2
Graduate degree	14.3	82.1	3.4	0.2

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

## **Continuity of Enrollment in First Postsecondary Educational Institution**

- 1988 eighth graders who were single in 1994 were more likely to be still enrolled in their first postsecondary institution than those who were married, were in a marriage-like relationship, or were divorced, separated, or widowed in 1994 (Table 1-6) (63 percent compared to 32 percent, 31 percent, and 19 percent respectively).
- 1988 eighth graders who, by 1992, had never consumed alcohol, had consumed it on one or two occasions, or had consumed it on three to nineteen occasions were more likely to be still enrolled in their first postsecondary education institution than those who had consumed alcohol on twenty or more occasions (Table 1-6) (66 percent, 67 percent, and 65 percent compared to 55 percent respectively).
- 1988 eighth graders whose parents finished college or earned a graduate degree were more likely to be still enrolled in their first postsecondary education institution in 1994 than those whose parents finished high school or less (Table 1-6) (69 percent and 72 percent compared to 54 percent respectively for fathers; 68 percent and 69 percent compared to 54 percent respectively for mothers).
- A greater percentage of 1988 eighth graders in the highest 1992 test quartile were still enrolled in their first postsecondary institution in 1994 than those in the lowest or middle two 1992 test quartiles (Table 1-7) (74 percent compared to 45 percent and 60 percent respectively).
- 1988 eighth graders who were high school graduates by 1994 were more likely to be still enrolled in their first postsecondary institution in 1994 than those who had a GED or equivalent by 1994 (Table 1-7) (62 percent compared to 23 percent).

**Table 1-6 Percentage of 1988 eighth graders with postsecondary enrollment by 1994 still enrolled in first postsecondary education institution in 1994, by selected background characteristics**

	Percentage still enrolled
Total	60.3
<b>Sex</b>	
Male	59.0
Female	61.4
<b>Race/ethnicity</b>	
Asian or Pacific Islander	73.2
Hispanic regardless of race	52.2
Black not of Hispanic origin	52.0
White not of Hispanic origin	61.8
<b>Current marital status</b>	
Single never married	63.3
Married	31.6
Divorced/separated/widowed	19.2
In marriage-like relationship	30.8
<b>Alcohol consumption during lifetime in 1992</b>	
No occasions	66.4
One or two occasions	66.9
Three to nineteen occasions	65.3
Twenty or more occasions	55.2
<b>Cocaine or crack use during lifetime in 1992</b>	
No occasions	62.8
One or two occasions	42.1
Three to nineteen occasions	41.7
Twenty or more occasions	38.9
<b>Socioeconomic status (1992)</b>	
Lowest quartile	46.7
Middle two quartiles	57.0
Highest quartile	69.9
<b>Children</b>	
None	62.3
One or more	30.9
<b>Education level of father as of 1992</b>	
High school or less	53.5
Trade school after high school	58.8
College after high school	60.1
Finished college	68.6
Graduate degree	72.0
<b>Education level of mother as of 1992</b>	
High school or less	53.6
Trade school after high school	59.7
College after high school	64.3
Finished college	68.3
Graduate degree	68.9

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

**Table 1-7 Percentage of 1988 eighth graders with postsecondary enrollment by 1994 still enrolled in first postsecondary education institution in 1994, by selected secondary education characteristics**

	Percentage still enrolled
Total	60.3
<b>High school sector</b>	
Public	60.2
Catholic	70.9
Other private	66.8
<b>Last high school program type</b>	
Academic	64.7
Vocational	38.6
Other	49.9
<b>Test quartile (1992)</b>	
Lowest quartile	45.2
Middle two quartiles	60.3
Highest quartile	74.1
<b>High school status (1994)</b>	
Graduate	62.3
Dropout	9.0
GED or equivalent	23.1
<b>Highest level of education expected in 1992</b>	
High school or less	33.1
Trade/vocational	38.0
Some college	47.8
Finish college	63.7
Graduate degree	69.3
<b>At risk of school failure factors (1988)</b>	
None	65.3
One	55.1
Two or more	45.8

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95



## Section 2

### Labor Force Participation and Earnings

The analyses reported in this section represent one of three populations, as noted below and in the tables: 1) 1988 eighth graders in the labor force in 1993 (including sample members employed for one or more months in 1993 who reported that they were not students or that they were students but were primarily employed in 1993 and sample members who were unemployed for all of 1993 but were seeking work; 2) 1988 eighth graders employed in 1993 (sample members who were in the labor force in 1993, excluding those who were unemployed for all of 1993); and 3) all 1988 eighth graders.

#### Employment, Unemployment, and Earnings

Of the 1988 eighth graders who were employed for one or more months in 1993:

- Men's 1993 average total earnings exceeded those of women (Table 2-1) (\$10,194 to \$6,723).
- Those in the lowest socioeconomic quartile were unemployed longer in 1993 than those in the middle two socioeconomic quartiles (Table 2-1) (1.8 compared to 1.2 months).
- Blacks were unemployed longer in 1993 than 1988 eighth grade whites, Asians or Pacific Islanders, and Hispanics (Table 2-1) (3.2 to 0.9, 1.3, and 1.8 months respectively).
- Those in the lowest and middle two 1992 socioeconomic quartiles held fewer jobs in 1993 than those in the highest test quartile (Table 2-1) (1.6 and 1.6 to 1.9 respectively).
- Those in the highest 1992 test quartile were unemployed for fewer months in 1993 than those in the lowest or middle two test quartiles (Table 2-2) (0.6 to 2.0 and 1.0 respectively).
- Those who expected, in 1992, to obtain a baccalaureate degree were unemployed for fewer months in 1993 than those who expected to obtain a high school diploma or less (Table 2-2) (1.1 to 2.1 months).

Of the 1988 eighth graders who were in the labor force in 1993:

- Those in the lowest socioeconomic quartile were more likely to be unemployed from six to twelve months in 1993 than those in the middle two socioeconomic quartiles (Table 2-3) (14 percent to 9 percent).
- Blacks were more likely to be unemployed from six to twelve months in 1993 than whites, Asian/Pacific Islanders, or Hispanics (Table 2-3) (27 percent to 7 percent, 10 percent, and 14 percent respectively).
- A greater percentage of those in the lowest 1992 test quartile were unemployed from six to twelve months in 1993 than those in the middle two or highest test quartiles (Table 2-

4) (17 percent to 8 percent and 4 percent respectively).

- Those who were high school dropouts by 1994 were more likely to be unemployed from six to twelve months in 1993 than those who were high school graduates (Table 2-4) (18 percent to 8 percent).
- A higher percentage of those with two or more at-risk of school failure factors were unemployed from six to twelve months in 1993 than those with no at-risk factors or with one at-risk factor (Table 2-4) (15 percent to 7 percent and 12 percent respectively).

The results reported below are based on the full eighth grade cohort, without selection for 1993 labor force status.

- A smaller percentage of 1988 eighth grade men than women were employed for only one to five months in 1993 (4 percent to 6 percent), while a smaller percentage of 1988 eighth grade women than men were employed for six or more months in 1993 (Table 2-5) (24 percent to 36 percent).
- 1988 eighth grade blacks were more likely to be unemployed for all of 1993 than were Asian/Pacific Islanders, Hispanics, or whites (Table 2-5) (8 percent to 1 percent, 3 percent, and 1 percent respectively).
- 1988 eighth graders who had one child or more by 1994 were more likely to be unemployed for the whole year in 1993 than those without children (Table 2-5) (8 percent to 2 percent).
- A higher percentage of 1988 eighth graders who attended public sector high schools were unemployed for all of 1993 than those who attended other private high schools (Table 2-6) (2 percent to 1 percent).
- 1988 eighth graders who participated in vocational high school programs were more likely to be employed for six or more months in 1993 than those who participated in traditional academic or other high school programs (Table 2-6) (55 percent to 21 percent and 42 percent respectively).
- A greater percentage of 1988 eighth graders who, in 1992, expected to obtain a high school diploma or less were unemployed for all of 1993 than those who expected to obtain a baccalaureate or graduate degree (Table 2-6) (8 percent to 1 percent and 1 percent respectively).

**Table 2-1 Average number of jobs held, average earnings, and average number of months unemployed in 1993 for 1988 eighth graders who were employed in 1993<a>, by selected background characteristics**

	Average jobs held in 1993	Average earnings from jobs in 1993	Average months unemployed in 1993
Total	1.6	\$8,728	1.5
<b>Sex</b>			
Male	1.6	10,194	1.3
Female	1.6	6,723	1.7
<b>Alcohol consumption during lifetime in 1992</b>			
No occasions	1.5	7,609	2.2
One or two occasions	1.5	7,450	1.8
Three to nineteen occasions	1.6	8,337	1.3
Twenty or more occasions	1.7	9,150	1.4
<b>Cocaine or crack use during lifetime in 1992</b>			
No occasions	1.6	8,528	1.5
One or two occasions	2.1	8,921	1.5
Three to nineteen occasions	1.7	7,861	1.4
Twenty or more occasions	1.6	9,416	1.5
<b>Socioeconomic status (1992)</b>			
Lowest quartile	1.6	8,182	1.8
Middle two quartiles	1.6	9,042	1.2
Highest quartile	1.9	8,926	1.4
<b>Children</b>			
None	1.6	9,011	1.2
One or more	1.6	7,698	2.4
<b>Race/ethnicity</b>			
Asian or Pacific Islander	1.6	8,205	1.3
Hispanic regardless of race	1.5	8,133	1.8
Black not of Hispanic origin	1.5	6,674	3.2
White not of Hispanic origin	1.7	9,210	0.9
<b>Education level of father as of 1992</b>			
High school or less	1.6	8,597	1.3
Trade school after high school	1.7	9,303	0.9
College after high school	1.7	8,981	1.6
Finished college	1.8	9,261	1.4
Graduate degree	1.8	7,924	1.3
<b>Education level of mother as of 1992</b>			
High school or less	1.6	8,826	1.3
Trade school after high school	1.7	8,406	1.2
College after high school	1.9	8,363	1.9
Finished college	1.6	9,245	0.9
Graduate degree	1.8	9,038	2.3
<b>Current marital status</b>			
Single never married	1.6	8,790	1.5
Married	1.6	8,770	1.1
Divorced/separated/widowed	2.5	8,873	1.0
In marriage-like relationship	1.7	8,210	2.0

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

<a> This table is based on 1988 eighth graders whose 1993 labor force status indicated they were students but were primarily employed in 1993 or were not students and were employed one or more months during 1993.

**Table 2-2 Average number of jobs held, average earnings, and average number of months unemployed in 1993 for 1988 eighth graders who were employed in 1993<a>, by selected secondary education characteristics**

	Average jobs held in 1993	Average earnings from jobs in 1993	Average months unemployed in 1993
Total	1.6	\$8,278	1.5
<b>High school sector</b>			
Public	1.6	8,786	1.4
Catholic	1.7	8,163	1.2
Other private	1.6	8,825	0.9
<b>Last high school program type</b>			
Academic	1.6	8,454	1.0
Vocational	1.5	9,933	1.3
Other	1.6	8,287	2.0
<b>Type of first institution</b>			
Private for-profit	1.8	6,264	1.3
Private not-for-profit less than 4-year	low n	low n	low n
Public less than 2-year	1.6	low n	0.8
Public 2-year	1.7	8,727	0.7
Private not-for-profit 4-year	1.9	6,586	0.9
Public 4-year	2.0	7,932	0.9
<b>Test quartile (1992)</b>			
Lowest quartile	1.5	8,340	2.0
Middle two quartiles	1.7	8,638	1.0
Highest quartile	1.9	8,080	0.6
<b>High school status (1994)</b>			
Graduate	1.6	8,882	1.0
Dropout	1.6	8,245	2.2
GED or equivalent	1.7	9,743	2.1
<b>Highest level of education expected in 1992</b>			
High school or less	1.6	9,369	2.1
Trade/vocational	1.5	9,270	1.5
Some college	1.6	8,618	1.3
Finish college	1.7	8,165	1.1
Graduate degree	1.8	7,194	1.4

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: "low n" indicates too few cases for reliable estimate.

<a> This table is based on 1988 eighth graders whose 1993 labor force status indicated they were students but were primarily employed in 1993 or were not students and were employed one or more months during 1993.

**Table 2-3 Percentage of 1988 eighth graders in the labor force in 1993<a> unemployed for different numbers of months in 1993, by selected background characteristics**

	None	One month	Two months	Three to five months	Six to twelve months
Total	76.9	2.5	3.1	6.0	11.6
<b>Sex</b>					
Male	78.7	3.0	2.6	5.8	9.9
Female	74.6	1.9	3.6	6.2	13.6
<b>Alcohol consumption during lifetime in 1992</b>					
No occasions	71.1	1.6	2.5	8.0	16.9
One or two occasions	73.9	2.5	3.2	5.8	14.6
Three to nineteen occasions	79.8	1.5	3.1	4.7	10.9
Twenty or more occasions	77.5	2.7	3.0	6.2	10.7
<b>Cocaine or crack use during lifetime in 1992</b>					
No occasions	77.5	2.2	2.9	5.7	11.7
One or two occasions	77.1	2.3	4.1	4.9	11.7
Three to nineteen occasions	73.0	0.4	5.8	10.7	10.1
Twenty or more occasions	72.9	3.3	5.6	6.5	11.7
<b>Socioeconomic status (1992)</b>					
Lowest quartile	71.9	3.0	3.6	7.2	14.3
Middle two quartiles	80.2	2.5	2.5	5.5	9.4
Highest quartile	79.0	1.7	3.9	4.5	10.9
<b>Children</b>					
None	79.7	2.4	3.0	5.8	9.1
One or more	67.5	2.9	3.2	6.7	19.8
<b>Race/ethnicity</b>					
Asian or Pacific Islander	80.4	2.0	4.5	3.2	9.9
Hispanic regardless of race	72.6	3.5	3.2	6.2	14.5
Black not of Hispanic origin	58.8	2.5	3.0	8.9	26.8
White not of Hispanic origin	82.3	2.5	2.7	5.5	7.0
<b>Education level of father as of 1992</b>					
High school or less	77.6	2.8	3.0	6.3	10.4
Trade school after high school	83.5	2.0	2.1	5.2	7.1
College after high school	76.3	2.3	3.9	5.1	12.4
Finished college	79.9	2.3	2.7	3.9	11.2
Graduate degree	83.1	0.0	0.5	5.2	11.1
<b>Education level of mother as of 1992</b>					
High school or less	77.6	2.7	3.2	6.6	9.9
Trade school after high school	78.9	2.0	4.5	4.8	9.8
College after high school	77.1	1.3	2.0	4.4	15.2
Finished college	81.4	2.3	3.8	4.8	7.7
Graduate degree	74.1	2.8	0.3	2.2	20.7
<b>Current marital status</b>					
Single never married	77.0	2.4	3.0	6.1	11.5
Married	79.1	3.7	3.3	5.6	8.2
Divorced/separated/widowed	78.9	4.3	4.0	4.4	8.4
In marriage-like relationship	73.1	1.1	3.1	6.0	16.7

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

<a> This table is based on 1988 eighth graders whose 1993 labor force status indicated they were students but were primarily employed in 1993, were not students and were employed one or more months during 1993, or were unemployed for all of 1993 and were seeking work.

**Table 2-4 Percentage of 1988 eighth graders in the labor force in 1993<a> unemployed for different numbers of months in 1993, by selected secondary education and labor force characteristics**

	None	One month	Two months	Three to five months	Six to twelve months
Total	76.9	2.5	3.1	6.0	11.6
<b>High school sector</b>					
Public	78.5	2.1	3.1	5.7	10.6
Catholic	84.4	1.2	0.0	5.1	9.3
Other private	82.9	1.9	7.3	1.0	6.8
<b>Last high school program type</b>					
Academic	83.0	1.6	2.8	5.5	7.1
Vocational	80.3	2.3	1.8	3.8	11.8
Other	68.9	3.3	4.1	6.8	16.9
<b>Industry of longest held 1993 job</b>					
Agriculture or forestry	75.8	5.5	2.9	5.7	10.1
Construction	80.7	3.4	4.1	6.0	5.8
Manufacture of durable goods	77.5	1.5	5.0	7.5	8.5
Manufacture of non-durable goods	81.6	1.8	1.8	9.4	5.5
Transportation/communications/utilities	80.9	4.2	3.2	5.0	6.8
Wholesale trade	87.2	0.4	1.9	4.5	6.0
Retail trade	81.7	1.9	3.1	5.7	7.6
Finance/insurance/real estate	83.4	4.1	4.1	5.3	3.1
Business and repair services	77.8	3.7	3.0	8.4	7.1
Personal services	80.3	4.0	6.7	2.2	6.8
Entertainment or recreation	78.7	2.8	5.2	9.7	3.5
Professional and related services	81.6	4.1	1.1	7.8	5.4
Public administration	77.1	0.0	3.6	12.4	6.9
Military	95.1	1.5	1.1	1.2	1.0
<b>Test quartile (1992)</b>					
Lowest quartile	70.6	2.8	4.2	5.5	17.0
Middle two quartiles	82.4	1.8	2.8	5.2	7.9
Highest quartile	89.3	1.0	2.0	4.1	3.6
<b>High school status (1994)</b>					
Graduate	82.2	2.1	2.5	5.3	7.8
Dropout	67.5	2.6	4.4	7.7	17.8
GED or equivalent	67.9	3.0	4.3	7.9	16.8
<b>At risk of school failure factors (1988)</b>					
None	82.8	1.8	2.5	5.7	7.2
One	77.1	3.6	2.7	5.1	11.6
Two or more	71.2	2.8	3.3	7.5	15.2

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

<a> This table is based on 1988 eighth graders whose 1993 labor force status indicated they were students but were primarily employed in 1993, were not students and were employed one or more months during 1993, or were unemployed for all of 1993 and were seeking work.

**Table 2-5 Percentage of 1988 eighth graders with different 1993 postsecondary education attendance and employment statuses, by selected background characteristics**

	-----Postsecondary education student-----				-----Non-student-----			
	Traditional postsecondary education student	Part-time student not employed	Primarily postsecondary education student	Primarily employed	Employed 6 months or more	Employed 1 to 5 months	Unemployed for the whole year	Out of work force
Total	37.1	2.5	8.1	9.9	30.2	4.9	2.6	4.7
<b>Sex</b>								
Male	34.0	2.2	8.6	10.3	36.0	3.9	2.2	2.8
Female	40.3	2.8	7.6	9.5	24.4	5.9	2.9	6.6
<b>Alcohol consumption during lifetime in 1992</b>								
No occasions	40.3	3.3	9.5	6.0	23.0	4.9	4.1	8.9
One or two occasions	43.1	2.5	9.3	7.5	24.3	4.6	3.2	5.6
Three to nineteen occasions	44.3	1.7	7.9	10.4	26.2	3.8	2.0	3.7
Twenty or more occasion	33.8	2.8	8.2	11.4	32.7	5.2	2.5	3.3
<b>Cocaine or crack use during lifetime in 1992</b>								
No occasions	41.7	2.6	8.5	9.6	26.6	4.5	2.5	4.0
One or two occasions	12.6	1.1	6.3	9.6	47.6	5.7	4.5	12.6
Three to nineteen occasions	15.0	3.2	13.6	12.4	36.4	6.2	2.5	10.9
Twenty or more occasion	16.4	3.2	7.8	17.5	40.9	6.2	4.3	3.8
<b>Socioeconomic status (1992)</b>								
Lowest quartile	13.9	2.8	6.3	7.7	47.2	8.1	4.2	9.7
Middle two quartiles	34.1	2.1	8.4	12.5	32.1	4.9	2.0	3.9
Highest quartile	65.4	2.9	9.3	6.8	10.7	1.7	1.7	1.3
<b>Children</b>								
None	43.3	2.1	8.9	10.5	28.1	3.3	1.6	2.1
One or more	3.7	4.4	4.0	6.9	41.5	13.1	7.7	18.8
<b>Race/ethnicity</b>								
Asian or Pacific Islander	55.9	3.3	9.0	8.7	16.5	2.7	1.4	2.7
Hispanic regardless of race	23.5	2.8	9.1	10.5	34.6	7.7	3.0	8.8
Black not of Hispanic origin	26.9	4.1	9.0	8.1	26.6	8.8	8.2	8.4
White not of Hispanic origin	40.7	2.1	7.8	10.3	30.6	3.8	1.2	3.4
<b>Education level of father as of 1992</b>								
High school or less	23.4	2.3	6.7	11.2	41.7	6.0	2.7	5.9
Trade school	41.5	2.3	10.2	12.1	27.0	2.9	1.5	2.6
Some college	46.4	3.6	11.3	8.5	21.3	4.1	2.7	2.2
Finished college	60.4	2.1	9.4	8.9	13.5	2.6	2.0	1.1
Graduate degree	69.7	2.1	9.5	5.2	9.4	1.5	1.0	1.6
<b>Education level of mother as of 1992</b>								
High school or less	25.6	2.3	7.1	11.3	39.5	5.8	2.9	5.6
Trade school	45.1	2.1	10.2	12.1	22.9	4.0	1.2	2.4
Some college	46.7	3.1	11.2	9.2	19.5	4.6	3.7	2.0
Finished college	62.0	1.8	8.8	6.8	15.3	2.8	0.6	1.8
Graduate degree	63.9	4.6	9.5	5.0	11.1	1.1	3.3	1.5
<b>Current marital status</b>								
Single never married	43.3	2.4	8.9	9.6	26.1	4.1	2.2	3.4
Married	6.3	3.1	4.3	10.7	50.0	9.1	3.1	13.3
Divorced/separated/widowed	1.8	4.6	3.8	10.2	61.3	9.1	2.5	6.8
In marriage-like relationship	9.4	2.0	4.7	12.3	48.5	8.1	6.3	8.9

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 2-6 Percentage of 1988 eighth graders with different 1993 postsecondary education attendance and employment statuses, by selected secondary and postsecondary education characteristics**

	-----Postsecondary education student-----				-----Non-student-----			
	Traditional postsecondary education student	Part-time student not employed	Primarily postsecondary education student	Primarily employed	Employed 6 months or more	Employed 1 to 5 months	Unemployed for the whole year	Out of work force
Total	37.1	2.5	8.1	9.9	30.2	4.9	2.6	4.7
<b>High school sector</b>								
Public	37.1	2.3	8.3	10.4	30.7	4.7	2.3	4.3
Catholic	67.1	3.2	9.7	7.9	8.7	1.1	1.3	1.0
Other private	61.2	6.7	10.6	6.5	9.0	2.9	0.7	2.4
<b>Last high school program type</b>								
Academic	51.0	2.6	9.4	10.2	20.6	2.6	1.2	2.5
Vocational	8.7	2.0	5.2	12.0	55.3	6.3	4.3	6.3
Other	17.4	2.4	6.5	8.8	42.4	9.1	5.2	8.2
<b>Type of first institution</b>								
Private for-profit	18.0	10.8	28.0	25.8	12.3	3.0	0.4	1.7
Private not-for-profit								
less than 4-year	45.7	3.4	11.9	26.0	7.8	4.2	0.0	1.2
Public less than 2-year	7.0	9.1	40.5	13.3	24.3	2.8	0.0	3.0
Public 2-year	40.6	4.6	16.6	25.4	10.2	1.3	0.5	0.8
Private not-for-profit 4-year	84.8	2.0	7.1	3.6	1.8	0.4	0.1	0.1
Public 4-year	75.8	2.3	9.8	8.5	2.5	0.5	0.3	0.3
<b>Test quartile (1992)</b>								
Lowest quartile	14.4	2.5	6.3	9.3	44.9	8.3	5.7	8.6
Middle two quartiles	40.0	2.7	9.9	11.6	27.7	3.2	1.4	3.6
Highest quartile	73.2	2.0	6.9	7.1	8.5	1.4	0.3	0.6
<b>High school status (1994)</b>								
Graduate	45.3	2.5	9.4	11.1	25.1	3.0	1.1	2.4
Dropout	0.2	0.6	1.9	2.0	57.2	12.7	7.5	17.9
GED or equivalent	2.9	4.8	3.7	8.9	51.5	9.0	8.1	11.2
<b>Highest level of education expected in 1992</b>								
High school or less	1.3	1.0	2.5	2.6	62.5	9.8	7.7	12.6
Trade/vocational	7.9	1.7	6.7	9.9	52.8	7.8	4.9	8.3
Some college	19.4	2.4	7.5	15.4	39.4	6.6	3.0	6.3
Finish college	52.1	3.3	11.2	11.5	16.4	2.4	1.3	1.9
Graduate degree	66.3	2.6	8.5	7.4	10.6	2.3	1.1	1.2

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.



## 1993 Employment Conditions and Employee Fringe Benefits

Of the 1988 eighth graders who were employed in 1993:

- Men were more likely than women to report receiving employer-provided medical benefits (52 percent to 38 percent), dental benefits (36 percent to 27 percent), life insurance (38 percent to 26 percent), sick days with pay (39 percent to 32 percent), paid vacation (53 percent to 46 percent), pension plans (32 percent to 21 percent), and childcare assistance (13 percent to 7 percent) from their longest held job in 1993 (Table 2-7).
- Whites and Hispanics were more likely than blacks to receive employer-provided medical benefits in their longest held job in 1993 (Table 2-7) (47 percent and 45 percent to 35 percent respectively).
- A greater percentage of whites than Hispanics and blacks received employer-provided unpaid leave to care for others in their longest held job in 1993 (Table 2-7) (45 percent to 34 percent and 27 percent respectively).
- Those with two or more at-risk of school failure factors were less likely to receive employer-provided unpaid leave to care for others in their longest held job in 1993 than those with no at-risk factors (Table 2-7) (35 percent to 45 percent).

**Table 2-7 Percentage of 1988 eighth graders employed in 1993<a> reporting different fringe benefits received from longest held job in 1993, by selected background characteristics**

	Employer provided medical benefits	Employer provided dental benefits	Employer provided life insurance	Employer provided sick days with pay	Employer provided paid vacation	Employer provided maternity or paternity leave	Employer provided unpaid maternity or paternity leave	Employer provided pension plan	Employer provided childcare assistance	Employer provided unpaid leave to care for others
Total	45.6	31.8	32.7	36.2	50.2	27.4	36.8	27.2	10.4	40.9
<b>Sex</b>										
Male	51.5	35.8	37.9	39.4	53.2	27.0	32.5	32.1	13.0	40.8
Female	38.0	26.8	26.2	32.1	46.4	27.8	42.4	20.8	7.1	41.1
<b>Socioeconomic status (1992)</b>										
Lowest quartile	46.7	30.7	33.3	37.1	53.0	26.9	34.4	27.1	10.4	36.6
Middle two quartiles	46.2	33.2	33.6	36.4	50.3	27.9	39.4	28.0	10.5	43.8
Highest quartile	39.1	29.8	27.5	33.0	41.3	26.7	32.6	22.8	11.1	41.5
<b>Children</b>										
None	47.6	33.6	33.5	37.6	51.4	29.5	36.2	28.2	11.3	42.2
One or more	38.3	25.4	29.6	31.1	46.0	19.9	39.2	23.6	7.3	36.8
<b>Race/ethnicity</b>										
Asian or Pacific Islander	52.3	43.9	33.9	40.2	55.5	26.7	27.3	23.9	12.4	38.9
Hispanic regardless of race	45.0	30.7	30.0	37.1	49.8	27.8	32.9	24.6	7.5	33.9
Black not of Hispanic origin	35.0	25.5	27.1	31.8	42.2	24.2	29.5	22.4	11.6	26.9
White not of Hispanic origin	47.3	32.9	33.8	36.6	51.4	27.8	38.8	28.5	10.7	45.1
<b>Current marital status</b>										
Single never married	45.2	32.1	32.1	36.7	49.6	28.0	34.8	26.7	11.0	40.0
Married	49.3	34.4	39.3	36.7	55.2	28.3	45.6	28.8	9.3	45.5
Divorced/separated/widowed	58.1	25.3	47.8	45.2	62.3	16.7	26.8	44.3	10.1	25.1
In marriage-like relationship	41.3	27.9	25.3	30.1	45.6	24.0	40.7	24.5	7.9	44.1
<b>At risk of school failure factors (1988)</b>										
None	46.1	33.3	33.9	37.9	50.1	29.5	38.2	27.9	11.0	45.0
One	44.9	31.2	32.2	35.2	49.9	27.8	38.0	26.3	10.8	40.4
Two or more	44.5	29.6	31.9	34.8	51.2	24.9	35.3	27.6	9.1	35.4

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

<a> This table is based on 1988 eighth graders whose 1993 labor force status indicated they were students but were primarily employed in 1993 or were not students and were employed one or more months during 1993.

## Tuition Assistance, Job Training, and Job Satisfaction

Of the 1988 eighth graders employed in 1993:

- Blacks were more likely than whites to report receiving on-site formal training at their longest held job in 1993 (86 percent to 70 percent) (Table 2-8).
- A higher percentage of whites than blacks reported receiving employer-provided tuition assistance at their longest held job in 1993 (Table 2-8) (27 percent to 12 percent).
- Men reported spending more weeks and more hours per week attending job training for their longest held job in 1993 than 1988 eighth grade women (Table 2-9) (12 weeks to 6 weeks; 29 hours per week to 16 hours per week).
- A greater percentage of men than women reported being very satisfied with opportunities for advancement in their longest held job in 1993 (Table 2-10) (32 percent to 27 percent).
- Whites were more likely than blacks to be very satisfied with job security (46 percent to 31 percent) and with working conditions (44 percent to 33 percent) in their longest held job in 1993. (Table 2-10).
- A higher percentage of those in the middle two socioeconomic quartiles than those in the lowest quartile were very satisfied with job security in their longest held job in 1993 (Table 2-10) (46 percent to 39 percent).
- Those who were married by 1994 were more likely to be very satisfied with the opportunity to use their education in their longest held job in 1993 than those who were never married, were divorced, separated or widowed, or were in a marriage-like relationship (Table 2-10) (35 percent to 27 percent, 16 percent, and 23 percent respectively).
- A greater percentage of those who were married by 1994 were very satisfied with job security in their longest held job in 1993 than those who had never married or were in a marriage-like relationship in 1994 (Table 2-10) (51 percent to 42 percent and 36 percent respectively).

**Table 2-11 Percentage of 1988 eighth graders reporting in 1994 their expectations to be in different occupations by age 30, by various background characteristics**

	Clerical	Craftsman/ Skilled operative	Govt./manager/ administrator	Military	Proprietor	Protective service	Sales mgmt.	School teacher
Total	13.7	19.4	9.5	3.5	10.0	21.8	5.3	11.7
<b>Sex</b>								
Male	3.7	30.6	11.2	5.3	15.1	20.9	6.6	7.0
Female	27.4	4.1	8.0	1.1	5.6	23.0	4.1	15.9
<b>Socioeconomic status (1992)</b>								
Lowest quartile	14.3	22.9	9.8	2.4	14.9	20.5	3.8	8.9
Middle two quartiles	14.1	20.0	10.8	3.9	10.6	22.4	4.8	12.0
Highest quartile	10.9	8.1	7.5	5.3	5.8	21.8	7.0	13.3
<b>Children</b>								
None	12.2	19.7	9.8	4.2	9.6	21.6	5.5	12.1
One or more	18.9	18.2	7.3	1.5	12.7	22.2	3.8	8.8
<b>Race/ethnicity</b>								
Asian or Pacific Islander	13.4	16.8	10.8	2.1	10.6	19.1	5.7	4.6
Hispanic regardless of race	21.0	18.9	8.1	2.1	11.1	21.2	4.1	12.1
Black not of Hispanic origin	14.8	19.5	7.1	5.1	14.0	26.5	2.5	5.1
White not of Hispanic origin	12.4	19.4	10.1	3.6	9.1	21.7	5.9	13.6
<b>Education level of father in 1992</b>								
High school or less	14.6	22.9	11.4	2.5	12.4	22.0	5.6	10.5
Trade school after high	11.6	19.9	9.9	3.4	9.3	21.6	4.2	14.2
College after high school	11.6	15.8	9.1	4.7	8.7	19.7	5.5	13.6
Finished college	12.4	10.2	8.2	5.2	6.2	26.5	6.3	14.0
Graduate degree	8.2	6.4	6.4	7.7	6.4	20.6	6.5	12.6
<b>Education level of mother in 1992</b>								
High school or less	15.0	21.8	10.7	2.7	11.8	22.6	5.3	11.9
Trade school after high	11.6	19.3	9.2	1.6	7.9	25.4	6.3	12.0
College after high	9.7	10.9	10.2	3.5	7.7	20.9	5.7	9.8
Finished college	13.5	11.9	8.5	5.0	6.7	18.6	5.1	13.3
Graduate degree	7.3	9.1	7.5	8.9	6.1	21.1	5.0	13.1
<b>Current marital status</b>								
Single never married	12.3	20.1	9.3	4.2	9.4	23.0	5.2	12.0
Married	18.8	15.4	12.1	2.3	11.8	18.9	6.5	13.0
Divorced/separated/widowed	11.6	20.7	4.7	0.0	8.8	11.4	9.9	10.9
Marriage-like relationship	17.9	19.0	10.6	1.3	18.2	19.1	3.9	7.0

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows do not sum to 100 percent because columns are not exhaustive.

**Table 2-12 Percentage of 1988 eighth graders reporting in 1994 their expectations to be in different occupations by age 30, by selected secondary education characteristics**

	Clerical	Craftsman/ Skilled operative	Govt./manager/ administrator	Military	Proprietor	Protective service	Sales mgmt.	School teacher
Total	13.7	19.4	9.5	3.5	10.0	21.8	5.3	11.7
<b>Last high school program type</b>								
Academic	15.6	14.2	9.3	3.4	7.2	22.7	5.5	13.1
Vocational	11.3	36.2	15.1	0.6	17.0	16.2	6.7	5.5
Other	11.8	22.1	9.2	4.4	14.4	21.8	4.3	10.1
<b>Test quartile (1992)</b>								
Lowest quartile	13.5	20.5	9.3	1.7	19.9	24.5	6.4	8.1
Middle two quartiles	15.5	18.4	10.3	2.5	8.7	23.6	5.8	13.8
Highest quartile	12.7	7.1	8.4	11.2	3.9	15.9	4.2	12.4
<b>High school status (1994)</b>								
Graduate	15.0	17.7	9.4	4.4	8.6	22.2	5.6	12.9
Dropout	8.1	24.3	11.8	0.9	24.1	17.1	3.9	1.2
GED or equivalent	10.9	23.7	7.7	1.7	15.5	24.9	4.3	5.0
<b>Highest level of education expected in 1992</b>								
High school or less	11.2	23.1	12.5	2.1	21.8	17.0	5.6	4.1
Trade/vocational	16.4	30.5	14.9	1.8	19.5	20.3	5.5	4.3
Some college	18.7	17.6	9.5	1.4	16.4	23.5	4.4	10.2
Finish college	13.4	7.9	9.6	4.2	6.6	28.4	5.5	16.9
Graduate degree	13.9	9.4	7.8	11.1	5.0	19.4	5.2	11.9
<b>Highest level of education expected in 1994</b>								
High school or less	8.4	23.6	22.8	1.1	28.5	15.4	5.6	2.1
Trade/vocational	15.0	34.6	13.3	0.3	32.0	22.1	5.2	2.1
Some college	20.4	20.2	10.8	1.5	15.7	22.7	6.8	5.1
Finish college	14.0	11.2	9.5	5.8	10.1	28.9	6.8	13.4
Graduate degree	11.4	6.9	7.3	11.5	4.1	21.4	3.8	14.1

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 2-8 Percentage of 1988 eighth graders employed in 1993<a> receiving employer-provided tuition assistance and job training benefits in 1993, by selected background characteristics**

	On-site formal training received	Informal on-the-job training received	Off-site formal training received	Employer-provided tuition assistance received
Total	72.1	55.1	42.2	23.4
<b>Sex</b>				
Male	72.8	54.3	42.7	21.0
Female	71.1	56.3	41.4	26.9
<b>Socioeconomic status (1992)</b>				
Lowest quartile	78.2	49.7	36.4	19.0
Middle two quartiles	67.3	56.7	45.9	26.2
Highest quartile	79.4	61.7	40.2	20.5
<b>Children</b>				
None	72.8	56.9	42.0	24.9
One or more	68.7	44.3	44.2	14.1
<b>Race/ethnicity</b>				
Hispanic regardless of race	73.2	48.9	40.0	16.3
Black not of Hispanic origin	86.5	45.4	34.5	11.9
White not of Hispanic origin	70.2	57.6	43.4	27.0
<b>Current marital status&lt;b&gt;</b>				
Single never married	70.9	53.5	42.9	24.9
Married	75.4	60.5	46.2	21.8
In marriage-like relationship	77.7	55.5	32.1	17.9

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

<a> This table is based on 1988 eighth graders whose 1993 labor force status indicated they were students but were primarily employed in 1993 or were not students and were employed one or more months during 1993.

<b> The category “Divorced/separated/widowed” is not included because there are too few cases for reliable estimates.

**Table 2-9 Average number of weeks attended, and average hours per week, by 1988 eighth graders employed in 1993<a> in job-related training in 1993, by selected background characteristics**

	Average number of weeks training was attended in 1993	Average hours per week training was attended in 1993
Total	9.5	23.8
<b>Sex</b>		
Male	12.1	29.0
Female	5.6	16.1
<b>Socioeconomic status (1992)</b>		
Lowest quartile	8.7	21.0
Middle two quartiles	9.8	25.3
Highest quartile	10.3	24.7
<b>Children</b>		
None	9.7	24.1
One or more	8.5	22.4
<b>Race/ethnicity</b>		
Hispanic regardless of race	7.1	23.1
Black not of Hispanic origin	8.9	23.0
White not of Hispanic origin	10.1	24.1
<b>Current marital status&lt;b&gt;</b>		
Single never married	9.2	23.8
Married	11.3	26.5
In marriage-like relationship	8.6	18.7

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

<a> This table is based on 1988 eighth graders whose 1993 labor force status indicated they were students but were primarily employed in 1993 or were not students and were employed one or more months during 1993.

<b> The category “Divorced/separated/widowed” is not included because there are too few cases for reliable estimates.

**Table 2-10 Percentage of 1988 eighth graders employed in 1993<a> reporting they are very satisfied with various employment conditions and benefits from longest held job in 1993, by selected background characteristics**

	Pay and benefits	Importance	Working conditions	Opportunity for advancement	Opportunity to use education	Security	Opportunities for education
Total	26.0	33.5	41.4	29.5	27.4	42.7	29.5
<b>Sex</b>							
Male	27.5	34.5	39.6	31.6	28.0	43.6	31.0
Female	24.1	32.2	43.8	26.9	26.7	41.6	27.6
<b>Socioeconomic status (1992)</b>							
Lowest quartile	24.9	32.4	39.7	26.9	25.8	38.6	28.8
Middle two quartiles	26.2	33.8	42.0	30.4	27.9	45.5	29.4
Highest quartile	29.7	35.1	44.2	34.3	30.3	43.7	33.1
<b>Children</b>							
None	26.5	33.8	42.0	30.3	27.7	43.2	30.5
One or more	24.3	32.3	39.3	26.8	26.2	40.8	25.6
<b>Race/ethnicity</b>							
Asian or Pacific Islander	32.2	33.2	35.2	34.1	31.6	43.6	30.9
Hispanic regardless of race	25.2	32.9	39.2	29.1	25.6	39.8	31.1
Black not of Hispanic origin	20.9	29.1	32.7	23.0	25.4	30.9	30.1
White not of Hispanic origin	27.0	34.4	43.9	30.7	27.9	45.7	29.1
<b>Education level of father as of 1992</b>							
High school or less	26.8	33.5	43.2	29.5	27.5	44.8	30.7
Trade school after H.S.	27.6	36.4	39.8	31.9	24.6	45.9	27.1
College after H.S.	27.1	38.2	36.1	30.9	32.1	44.2	28.5
Finished college	30.4	32.5	43.1	33.0	27.4	45.8	30.1
Graduate degree	28.1	38.4	49.0	28.1	25.1	38.4	31.4
<b>Education level of mother as of 1992</b>							
High school or less	26.2	33.4	42.0	29.1	27.0	43.3	29.4
Trade school after H.S.	25.5	29.9	42.1	30.6	28.5	47.2	28.0
College after H.S.	27.7	35.9	37.2	29.0	29.8	43.8	29.3
Finished college	32.3	37.4	47.5	37.8	28.8	45.4	38.2
Graduate degree	22.5	38.2	38.2	33.1	30.2	37.4	30.7
<b>Current marital status</b>							
Single never married	26.9	33.0	41.4	29.4	26.9	41.9	30.9
Married	27.0	39.3	43.0	34.6	35.0	50.9	29.1
Divorced/separated/widowed	16.0	28.7	50.8	20.3	16.4	47.0	18.5
In marriage-like relationship	21.0	30.1	37.5	25.8	22.8	36.5	22.5

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

<a> This table is based on 1988 eighth graders whose 1993 labor force status indicated they were students but were primarily employed in 1993 or were not students and were employed one or more months during 1993.





## Expected Occupations and Incomes

The following analyses represent the self-reports for all 1988 eighth graders in 1994 regarding the occupation and income they expected to have at age 30. It may be useful to note that *CPS Trends in Income: 1990-1992* estimates median income of 25-34 year olds in 1992 as \$21,605 for males and \$13,713 for females. By contrast, the NELS:88/94 respondents reported expectations of \$63,719 for males and \$44,683 for females at age 30. It is apparent that the income expectations of the NELS:88/94 respondents are, to say the least, optimistic even taking into account potential inflation by the time they reach age 30. Therefore, the data on income expectations reported below should be considered in terms of relative differences among subgroups rather than absolute dollar amounts.

- 1988 eighth grade women were more likely than 1988 eighth grade men to expect in 1994 to be in a clerical occupation at age 30 (27 percent compared to 4 percent). However, men were more likely than women to report expecting to be craftsmen by age 30 (Table 2-11) (31 percent compared to 4 percent).
- A greater percentage of 1988 eighth grade women than men reported in 1994 that they expected to be school teachers at age 30 (Table 2-11) (16 percent compared to 7 percent).
- A smaller percentage of 1988 eighth graders in the lowest socioeconomic quartile than those in the middle two and highest quartiles expected in 1994 to be school teachers by age 30. (Table 2-11) (9 percent compared to 12 percent and 13 percent).
- In 1994, 1988 eighth graders who were enrolled in high school vocational programs were more likely to expect to be craftsmen by age 30, compared to those in academic or other high school programs (Table 2-12) (36 percent compared to 14 percent and 22 percent).
- 1988 eighth grade men expected in 1994 to have higher incomes by age 30 than did 1988 eighth grade women (Table 2-13) (\$63,157 to \$44,649).
- The 1994 reported average income expected by age 30 was higher for 1988 eighth graders in the highest socioeconomic quartile than for those in the middle two or lowest socioeconomic quartiles (Table 2-13) (\$62,817 compared to \$55,789 and \$46,137, respectively).

- 1988 eighth graders without children by 1994 expected in 1994 to have higher incomes by age 30 than did those with one or more children (Table 2-13) (\$56,031 to \$39,872).
- 1988 eighth grade blacks expected in 1994 to have higher incomes by age 30 than did Hispanics (Table 2-13) (\$66,966 compared to \$48,474).
- 1988 eighth graders who, in 1992, expected to earn a graduate degree also reported higher expected incomes by age 30 in 1994 than those who expected to complete less than four years of college, or to complete high school or less (Table 2-14) (\$61,775 to \$45,961, and \$45,838, respectively).

**Table 2-13 Average of 1988 eighth graders' reports in 1994 of expected income at age 30, by selected characteristics**

<b>Average expected income at age 30</b>	
Total	\$54,328
<b>Sex</b>	
Male	63,157
Female	44,649
<b>Socioeconomic status (1992)</b>	
Lowest quartile	46,137
Middle two quartiles	53,789
Highest quartile	62,817
<b>Children</b>	
None	56,031
One or more	39,872
<b>Race/ethnicity</b>	
Asian or Pacific Islander	63,047
Hispanic regardless of race	48,474
Black not of Hispanic origin	66,966
White not of Hispanic origin	52,673
<b>Education level of father as of 1992</b>	
High school or less	48,660
Trade school after high school	51,476
College after high school	63,024
Finished college	59,267
Graduate degree	66,528
<b>Education level of mother as of 1992</b>	
High school or less	49,578
Trade school after high school	57,234
College after high school	63,852
Finished college	65,014
Graduate degree	62,251
<b>Current marital status</b>	
Single never married	57,016
Married	36,602
Divorced/separated/widowed	43,227
In marriage-like relationship	45,018

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

**Table 2-14 Average of 1988 eighth graders' reports in 1994 of expected income at age 30, by selected secondary education characteristics**

<b>Average expected income at age 30</b>	
Total	\$54,328
<b>Last high school program type</b>	
Academic	54,546
Vocational	47,239
Other	54,880
<b>Test quartile (1992)</b>	
Lowest quartile	52,358
Middle two quartiles	52,133
Highest quartile	54,932
<b>High school status (1994)</b>	
Graduate	53,878
Dropout	53,300
GED or equivalent	58,297
<b>Highest level of education expected in 1992</b>	
High school or less	45,838
Trade/vocational	49,217
Some college	45,961
Finished college	54,592
Graduate degree	61,775
<b>Highest level of education expected in 1994</b>	
High school or less	46,795
Trade/vocational	44,414
Some college	46,599
Finish college	54,117
Graduate degree	61,666

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

## Section 3

### Sex, Marriage, and Family

The data reported in this section describe the relationship between various characteristics and marriage, family, and sexual experiences reported in 1994 by the 1988 eighth grade cohort members. These variables provide a context for assessing important factors in the personal development of the cohort as they move beyond high school.

#### Reported Sexual Experiences

- The majority of 1988 eighth graders overall reported having had sexual intercourse by 1994. Women were more likely than men to report that they had not had intercourse by 1994 (Table 3-1) (18 percent to 14 percent).
- A greater percentage of 1988 eighth graders in the lowest socioeconomic quartile reported in 1994 that they had experienced their first sexual intercourse before high school than those in the middle two or highest socioeconomic quartiles (Table 3-1) (26 percent to 17 percent and 9 percent respectively).
- 1988 eighth grade Hispanics, blacks, and whites were more likely to report in 1994 that they had experienced their first sexual intercourse before high school than 1988 eighth grade Asians or Pacific Islanders (Table 3-1) (17 percent, 32 percent, and 15 percent to 8 percent).
- 1988 eighth graders who participated in vocational and other high school programs were more likely to report in 1994 that they had experienced their first sexual intercourse before high school than those who participated in academic high school programs (Table 3-2) (26 percent and 26 percent to 11 percent respectively).
- In 1994, a higher percentage of 1988 eighth graders who had graduated from high school by 1994 reported that they had experienced their first sexual intercourse after high school than those who were high school dropouts or had a GED or equivalent by 1994 (Table 3-2) (15 percent to 4 percent and 3 percent respectively).
- 1988 eighth graders who, in 1992, expected to complete some college after high school, finish college, or earn a graduate degree were more likely to report in 1994 never having sexual intercourse than those who expected only to complete high school or less (Table 3-2) (11 percent, 19 percent, 23 percent to 5 percent respectively).
- Overall reported usage of birth control during first sexual intercourse was high for 1988 eighth grade cohort members. A greater percentage of men than women reported in 1994 not using birth control during their first sexual intercourse (Table 3-3) (29 percent to 25 percent).

- 1988 eighth graders in the highest and middle two socioeconomic quartiles were more likely in 1994 to report having used birth control during their first sexual intercourse than those in the lowest socioeconomic quartile (Table 3-3) (80 percent and 75 percent to 64 percent respectively).
- In 1994, a higher percentage of 1988 eighth graders with children than those without children reported not having used birth control during their first sexual intercourse (Table 3-3) (43 percent to 23 percent).
- 1988 eighth grade Asians/Pacific Islanders, blacks, and whites were more likely in 1994 to report having used birth control during their first sexual intercourse than 1988 eighth grade Hispanics (Table 3-3) (72 percent, 70 percent, and 76 percent to 61 percent respectively).
- 1988 eighth graders in the middle two and highest 1992 test quartiles were more likely in 1994 to report having used birth control during their first sexual intercourse than those in the lowest 1992 test quartile (Table 3-4) (76 percent and 85 percent to 68 percent respectively).
- 1988 eighth graders who were high school dropouts or had a GED or equivalent by 1994 were more likely in 1994 to report not having used birth control during their first sexual intercourse than those who were high school graduates by 1994 (Table 3-4) (48 percent and 44 percent to 22 percent respectively).
- In 1994, a smaller percentage of 1988 eighth graders who, in 1992, expected only to complete high school reported using birth control during their first sexual intercourse than those who expected to complete some college, finish college, or earn a graduate degree (Table 3-4) (60 percent to 73 percent, 80 percent, and 81 percent respectively).
- 1988 eighth graders not married in 1994 in the lowest socioeconomic quartile were more likely in 1994 to report not having used birth control during their last sexual intercourse than those in the middle two or highest socioeconomic quartiles (Table 3-5) (26 percent to 17 percent and 13 percent respectively).
- In 1994, a greater percentage of 1988 eighth graders not married in 1994 who were high school graduates by 1994 reported having used birth control during their last sexual intercourse than those who were high school dropouts by 1994 (Table 3-6) (85 percent to 66 percent).
- 1988 eighth graders not married in 1994 with no 1988 at risk of school failure factors were more likely to report in 1994 having used birth control during their last sexual intercourse than those with two or more 1988 at-risk factors (Table 3-6) (86 percent to 73 percent).

**Table 3-1 Percentage of 1988 eighth graders by timing of first sexual intercourse<a>, by selected background characteristics**

	Never	Before high school	During high school	After high school	Date unknown
Total	15.7	17.2	48.4	13.1	5.6
<b>Sex</b>					
Male	13.7	24.0	47.4	10.5	4.5
Female	17.9	10.2	49.3	15.8	6.8
<b>Socioeconomic status (1992)</b>					
Lowest quartile	11.2	25.5	45.7	10.8	6.9
Middle two quartiles	13.9	17.3	50.3	13.1	5.4
Highest quartile	23.6	8.7	47.2	15.5	5.0
<b>Race/ethnicity</b>					
Asian or Pacific Islander	35.3	7.5	34.2	16.1	6.9
Hispanic regardless of race	15.4	17.4	46.9	14.2	6.1
Black not of Hispanic origin	7.4	32.3	45.6	8.6	6.1
White not of Hispanic origin	16.5	14.6	50.0	13.6	5.3
<b>Education level of father as of 1992</b>					
High school or less	11.0	21.1	49.4	12.6	5.8
Trade school after high school	16.0	16.9	47.9	14.3	4.8
College after high school	16.6	13.7	47.0	15.9	6.7
Finished college	23.1	8.2	48.2	15.5	5.0
Graduate degree	25.3	8.0	46.7	15.6	4.4
<b>Education level of mother as of 1992</b>					
High school or less	11.7	20.1	49.7	12.5	6.0
Trade school after high school	17.0	14.1	52.1	12.1	4.7
College after high school	17.6	14.1	47.2	15.2	5.9
Finished college	24.1	9.8	46.3	14.7	5.1
Graduate degree	19.3	12.0	47.3	17.2	4.3
<b>Current marital status</b>					
Single never married	18.9	15.5	46.7	13.4	5.5
Married	0.4	19.9	57.9	15.1	6.7
Divorced/separated/widowed	1.0	53.2	41.9	2.3	1.6
In marriage-like relationship	1.0	26.9	56.9	8.9	6.3

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

<a> Reported in 1994.



**Table 3-2 Percentage of 1988 eighth graders by timing of first sexual intercourse<a>, by selected secondary education and labor force characteristics**

	Never	Before high school	During high school	After high school	Date unknown
Total	15.7	17.2	48.4	13.1	5.6
<b>High school sector</b>					
Public	15.3	16.2	49.2	13.6	5.7
Catholic	21.0	12.8	44.7	17.7	3.8
Other private	39.4	3.1	40.1	11.0	6.3
<b>Last high school program type</b>					
Academic	19.3	11.4	48.4	15.9	5.0
Vocational	10.5	26.3	47.8	9.3	6.0
Other	10.4	25.8	49.1	8.8	5.9
<b>Labor force status in 1993</b>					
<i>Postsecondary education student</i>					
Traditional PSE student	26.2	6.5	44.5	17.6	5.2
Part time student not employed	21.4	20.7	37.2	18.0	2.7
Primarily PSE student, also employed	16.4	13.6	50.7	14.9	4.4
Primarily employed, also student	10.5	15.6	56.4	11.8	5.7
<i>Non-student</i>					
Employed 6 months or more	7.2	26.3	50.7	9.5	6.3
Employed 1 to 5 months	8.1	23.4	55.3	7.2	6.0
Unemployed	11.1	37.2	37.5	8.9	5.3
Out of work force	5.9	30.5	49.3	7.2	7.0
<b>Test quartile (1992)</b>					
Lowest quartile	9.1	25.7	48.3	10.9	6.0
Middle two quartiles	15.5	14.6	50.6	14.0	5.4
Highest quartile	28.3	4.6	43.5	19.7	3.9
<b>High school status (1994)</b>					
Graduate	18.6	12.1	48.4	15.1	5.8
Dropout	3.1	40.8	46.7	4.3	5.1
GED or equivalent	1.9	40.0	51.0	3.4	3.8
<b>Highest level of education expected in 1992</b>					
High school or less	4.6	35.3	45.3	7.7	7.1
Trade/vocational	8.5	23.0	53.3	9.7	5.6
Some college	11.3	19.3	50.9	11.9	6.6
Finish college	19.3	12.2	48.8	15.0	4.7
Graduate degree	23.2	8.9	46.6	16.7	4.6
<b>At risk of school failure factors (1988)</b>					
None	19.3	11.8	48.7	15.3	4.9
One	13.2	19.2	50.1	12.0	5.5
Two or more	9.2	26.4	48.4	9.3	6.7

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

<a> Reported in 1994.

**Table 3-3 Percentage of 1988 eighth graders reporting in 1994 that they used birth control during their first sexual intercourse, by selected background characteristics**

	<b>Did use birth control</b>	<b>Did not use birth control</b>
Total	73.2	26.8
<b>Sex</b>		
Male	71.3	28.7
Female	75.3	24.7
<b>Socioeconomic status (1992)</b>		
Lowest quartile	64.2	35.8
Middle two quartiles	75.1	24.9
Highest quartile	79.8	20.2
<b>Children</b>		
None	77.1	22.9
One or more	56.8	43.2
<b>Race/ethnicity</b>		
Asian or Pacific Islander	72.0	28.0
Hispanic regardless of race	60.6	39.4
Black not of Hispanic origin	69.7	30.4
White not of Hispanic origin	76.2	23.8
<b>Education level of father as of 1992</b>		
High school or less	72.0	28.0
Trade school after high school	74.9	25.1
College after high school	75.6	24.4
Finished college	78.4	21.6
Graduate degree	83.0	17.0
<b>Education level of mother as of 1992</b>		
High school or less	71.5	28.5
Trade school after high school	74.8	25.2
College after high school	76.9	23.1
Finished college	79.9	20.1
Graduate degree	79.6	20.4
<b>Current marital status</b>		
Single never married	75.2	24.8
Married	67.4	32.6
Divorced/separated/widowed	46.2	53.8
In marriage-like relationship	66.6	33.4

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 3-4 Percentage of 1988 eighth graders reporting in 1994 that they used birth control during their first sexual intercourse, by selected secondary education and labor force characteristics**

	<b>Did use birth control</b>	<b>Did not use birth control</b>
Total	73.2	26.8
<b>High school sector</b>		
Public	74.3	25.7
Catholic	78.6	21.4
Other private	87.7	12.3
<b>Last high school program type</b>		
Academic	78.9	21.1
Vocational	68.3	31.7
Other	65.8	34.2
<b>Labor force status in 1993</b>		
<i>Postsecondary education student</i>		
Traditional PSE student	84.3	15.7
Part-time student not employed	73.6	26.4
Primarily PSE student, also employed	79.3	20.7
Primarily employed, also PSE student	72.1	28.0
<i>Non-student</i>		
Employed 6 months or more	68.4	31.6
Employed 1 to 5 months	64.1	35.9
Unemployed	55.8	44.2
Out of work force	48.1	51.9
<b>Test quartile (1992)</b>		
Lowest quartile	67.8	32.2
Middle two quartiles	76.2	23.8
Highest quartile	84.6	15.4
<b>High school status (1994)</b>		
Graduate	78.5	21.5
Dropout	51.5	48.5
GED or equivalent	56.4	43.6
<b>Highest level of education expected in 1992</b>		
High school or less	60.5	39.5
Trade/vocational	66.3	33.7
Some college	73.0	27.0
Finish college	79.7	20.3
Graduate degree	80.7	19.3
<b>At risk of school failure factors (1988)</b>		
None	79.3	20.7
One	71.4	28.6
Two or more	62.4	37.6

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 3-5 Percentage of 1988 eighth graders not married in 1994 who reported that they used birth control during their last sexual intercourse, by selected background characteristics**

	<b>Did use birth control</b>	<b>Did not use birth control</b>
Total	81.8	18.2
<b>Sex</b>		
Male	82.2	17.8
Female	81.3	18.6
<b>Socioeconomic status (1992)</b>		
Lowest quartile	74.5	25.5
Middle two quartiles	83.3	16.8
Highest quartile	87.1	12.9
<b>Children</b>		
None	83.7	16.3
One or more	71.4	28.6
<b>Race/ethnicity</b>		
Asian or Pacific Islander	78.7	21.3
Hispanic regardless of race	73.0	27.0
Black not of Hispanic origin	81.8	18.2
White not of Hispanic origin	83.5	16.5
<b>Education level of father as of 1992</b>		
High school or less	79.5	20.5
Trade school after high school	85.3	14.7
College after high school	86.8	13.2
Finished college	84.9	15.1
Graduate degree	87.3	12.6
<b>Education level of mother as of 1992</b>		
High school or less	79.6	20.4
Trade school after high school	84.0	16.0
College after high school	85.3	14.8
Finished college	87.8	12.2
Graduate degree	85.4	14.6

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 3-6 Percentage of 1988 eighth graders not married in 1994 who reported that they used birth control during their last sexual intercourse, by selected secondary education and labor force characteristics**

	<b>Did use birth control</b>	<b>Did not use birth control</b>
Total	81.8	18.2
<b>High school sector</b>		
Public	82.3	17.7
Catholic	88.5	11.5
Other private	91.2	8.8
<b>Last high school program type</b>		
Academic	85.7	14.3
Vocational	78.4	21.6
Other	75.8	24.2
<b>Labor force status in 1993</b>		
<i>Postsecondary education student</i>		
Traditional PSE student	90.3	9.7
Part-time student not employed	86.0	14.0
Primarily PSE student, also employed	86.0	14.0
Primarily employed, also PSE student	80.7	19.3
<i>Non-student</i>		
Employed 6 months or more	75.5	24.5
Employed 1 to 5 months	71.7	28.3
Unemployed	73.9	26.1
Out of work force	68.9	31.1
<b>Test quartile (1992)</b>		
Lowest quartile	76.7	23.4
Middle two quartiles	83.8	16.2
Highest quartile	89.4	10.6
<b>High school status (1994)</b>		
Graduate	84.7	15.3
Dropout	65.8	34.2
GED or equivalent	78.3	21.8
<b>Highest level of education expected in 1992</b>		
High school or less	71.9	28.1
Trade/vocational	77.8	22.2
Some college	79.9	20.0
Finish college	84.9	15.1
Graduate degree	87.8	12.2
<b>At risk of school failure factors (1988)</b>		
None	85.7	14.3
One	81.7	18.3
Two or more	73.2	26.8

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

## Marital Status and Family

- The majority of 1988 eighth graders had never been married by 1994. Men were more likely than women to be single, never married (88 percent to 78 percent). 1988 eighth grade women were more likely than men to be married or in a marriage-like relationship in 1994 (Table 3-7) (13 percent to 6 percent for those married; 8 percent to 5 percent for those in marriage-like relationships).
- Only 1 percent of 1988 eighth graders overall reported that they were divorced, separated, or widowed in 1994. Those in the lowest and middle two socioeconomic quartiles were more likely to be divorced, separated, or widowed by 1994 than those in the highest socioeconomic quartile (Table 3-7) (3 percent and 1 percent to 0.3 percent respectively).
- 1988 eighth grade Hispanics were more likely to be married in 1994 than Asians/Pacific Islanders, blacks, or whites (Table 3-7) (14 percent to 4 percent, 3 percent, and 10 percent respectively).
- 1988 eighth graders who attended public sector high schools were more likely to be married in 1994 than those who attended Catholic high schools (Table 3-8) (9 percent to 2 percent).
- 1988 eighth graders in the lowest 1992 test quartile were more likely to be divorced, separated, or widowed by 1994 than those in the highest test quartile (Table 3-8) (1 percent compared to 0.3 percent).
- 1988 eighth graders who, in 1992, expected to have an education of high school or less, or to attend trade school or to complete some college after high school, were more likely to be married by 1994 (20 percent, 14 percent, and 12 percent respectively) than those who expected to finish college or earn a graduate degree (Table 3-8) (5 percent and 4 percent respectively).
- 1988 eighth grade women were more likely than 1988 eighth grade men to have one child, or two or more children by 1994 (Table 3-9) (16 percent to 8 percent for one child; 6 percent to 2 percent for two or more children).
- 1988 eighth graders in the highest and middle two socioeconomic quartiles were more likely not to have children by 1994 than those in the lowest socioeconomic quartile (Table 3-9) (96 percent and 85 percent to 70 percent respectively).
- 1988 eighth grade Hispanics, and blacks were more likely to have two or more children by 1994 than 1988 eighth grade Asians/Pacific Islanders and whites (Table 3-9) (8 percent, and 9 percent to 2 percent and 2 percent respectively).
- 1988 eighth graders who attended Catholic and other private high schools were more likely not to have children by 1994 than those who attended public sector high schools (Table 3-10) (96 percent and 96 percent to 85 percent).
- 1988 eighth graders from academic high school programs were more likely not to have children by 1994 than those from vocational and other high school programs (Table 3-10) (92 percent to 79 percent and 72 percent respectively).
- 1988 eighth graders who expected to complete some college after high school, earn a bachelor's degree, or earn a graduate degree were more likely not to have children by 1994 than those who expected in 1992 to have an education of high school or less (Table 3-10) (81 percent, 92 percent and 94 percent to 64 percent).
- 1988 eighth graders with one, or two or more, 1988 at risk of school failure factors were less likely to have no children by 1994 than those with no risk factors (Table 3-10) (84 percent and 70 percent to 91 percent, respectively).

- 1988 eighth grade women were more likely than 1988 eighth grade men to have children 48 months of age or older by 1994 (Table 3-11) (19 percent to 7 percent).

**Table 3-7 Percentage of 1988 eighth graders by marital status in 1994, by selected background characteristics**

	<b>Single, never married</b>	<b>Married</b>	<b>Divorced, separated, widowed</b>	<b>In marriage-like relationship</b>
Total	82.6	9.3	1.3	6.9
<b>Sex</b>				
Male	87.6	6.0	1.1	5.3
Female	77.5	12.6	1.5	8.5
<b>Socioeconomic status (1992)</b>				
Lowest quartile	72.6	13.9	2.9	10.6
Middle two quartiles	82.5	10.1	1.0	6.4
Highest quartile	92.6	3.6	0.3	3.5
<b>Children</b>				
None	89.6	5.0	0.4	5.0
One or more	45.5	31.8	6.1	16.6
<b>Race/ethnicity</b>				
Asian or Pacific Islander	90.7	4.2	0.5	4.6
Hispanic regardless of race	74.8	14.2	1.4	9.6
Black not of Hispanic origin	89.3	3.2	0.3	7.2
White not of Hispanic origin	82.4	9.7	1.5	6.4
<b>Education level of father as of 1992</b>				
High school or less	76.3	12.9	2.0	8.8
Trade school after high school	85.3	7.4	1.5	5.8
College after high school	86.3	8.8	0.6	4.3
Finished college	91.4	4.7	0.4	3.5
Graduate degree	94.9	2.4	0.1	2.6
<b>Education level of mother as of 1992</b>				
High school or less	77.3	12.3	2.1	8.3
Trade school after high school	87.2	6.8	0.9	5.2
College after high school	86.4	6.6	0.3	6.7
Finished college	92.4	3.9	0.2	3.6
Graduate degree	92.7	3.7	0.6	3.0

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.



**Table 3-8 Percentage of 1988 eighth graders by marital status in 1994, by selected secondary education characteristics**

	<b>Single, never married</b>	<b>Married</b>	<b>Divorced, separated, widowed</b>	<b>In marriage-like relationship</b>
Total	82.6	9.3	1.3	6.9
<b>High school sector</b>				
Public	83.3	9.0	1.2	6.5
Catholic	95.6	1.7	0.0	2.7
Other private	91.9	7.3	0.2	0.6
<b>Last high school program type</b>				
Academic	88.5	6.6	0.5	4.4
Vocational	74.8	15.1	0.9	9.1
Other	73.7	12.8	3.0	10.5
<b>Test quartile (1992)</b>				
Lowest quartile	76.6	13.4	1.3	8.8
Middle two quartiles	84.0	8.2	1.5	6.3
Highest quartile	94.2	2.9	0.3	2.6
<b>High school status (1994)</b>				
Graduate	87.2	7.1	0.5	5.2
Dropout	57.1	23.4	5.6	13.9
GED or equivalent	64.6	16.3	5.2	14.0
<b>Highest level of education expected in 1992</b>				
High school or less	62.0	19.8	5.0	13.3
Trade/vocational	74.7	14.1	1.4	9.8
Some college	76.3	12.4	1.6	9.6
Finish college	90.0	5.1	0.6	4.3
Graduate degree	92.2	4.2	0.4	3.2
<b>At risk of school failure factors (1988)</b>				
None	87.1	7.5	0.7	4.8
One	80.6	10.6	1.0	7.8
Two or more	73.6	12.5	3.5	10.4

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 3-9 Percentage of 1988 eighth graders with none, one, or two or more children by 1994, by selected background characteristics**

	<b>None</b>	<b>One</b>	<b>Two or more</b>
Total	84.1	11.9	4.0
<b>Sex</b>			
Male	90.1	8.3	1.6
Female	78.1	15.6	6.3
<b>Socioeconomic status (1992)</b>			
Lowest quartile	70.5	21.0	8.5
Middle two quartiles	85.2	11.6	3.2
Highest quartile	95.8	3.2	1.0
<b>Race/ethnicity</b>			
Asian or Pacific Islander	92.7	5.3	2.0
Hispanic regardless of race	73.7	18.9	7.5
Black not of Hispanic origin	70.8	20.2	9.0
White not of Hispanic origin	88.2	9.3	2.4
<b>Education level of father as of 1992</b>			
High school or less	79.9	15.4	4.7
Trade school after high school	89.1	8.5	2.4
College after high school	89.9	9.5	0.7
Finished college	93.2	5.0	1.8
Graduate degree	97.1	2.4	0.5
<b>Education level of mother as of 1992</b>			
High school or less	80.1	15.1	4.8
Trade school after high school	88.8	9.5	1.6
College after high school	91.9	6.3	1.8
Finished college	94.8	4.1	1.1
Graduate degree	93.6	3.9	2.5
<b>Current marital status</b>			
Single never married	91.3	6.7	2.1
Married	45.6	39.6	14.8
Divorced/separated/widowed	25.9	55.8	18.4
In marriage-like relationship	61.5	29.3	9.2

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 3-10 Percentage of 1988 eighth graders with none, one, or two or more children by 1994, by selected secondary education characteristics**

	None	One	Two or more
Total	84.1	11.9	4.0
<b>High school sector</b>			
Public	85.1	11.5	3.4
Catholic	96.2	3.7	0.2
Other private	96.1	3.7	0.3
<b>Last high school program type</b>			
Academic	91.6	7.1	1.4
Vocational	78.7	15.9	5.4
Other	71.7	20.2	8.1
<b>Test quartile (1992)</b>			
Lowest quartile	75.0	18.3	6.7
Middle two quartiles	88.3	9.7	2.0
Highest quartile	97.6	2.3	0.1
<b>High school status (1994)</b>			
Graduate	90.8	8.0	1.2
Dropout	46.9	33.3	19.8
GED or equivalent	61.9	23.1	15.0
<b>Highest level of education expected in 1992</b>			
High school or less	63.8	23.4	12.7
Trade/vocational	72.9	19.4	7.7
Some college	80.9	14.8	4.3
Finish college	92.4	6.2	1.4
Graduate degree	93.6	5.7	0.8
<b>At risk of school failure factors (1988)</b>			
None	90.7	7.4	1.8
One	84.3	11.9	3.7
Two or more	69.5	22.3	8.2

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 3-11 Percentage of 1988 eighth graders with oldest children of different ages by 1994, by selected background characteristics**

	<b>Less than 12 months</b>	<b>12 months to 23 months</b>	<b>24 months to 47 months</b>	<b>48 months or older</b>
Total	16.5	32.4	35.7	15.4
<b>Sex</b>				
Male	18.9	42.9	30.8	7.4
Female	15.4	27.8	37.9	18.9
<b>Socioeconomic status (1992)</b>				
Lowest quartile	15.6	32.5	35.5	16.3
Middle two quartiles	16.3	33.8	37.7	12.2
Highest quartile	23.2	24.2	33.0	19.6
<b>Race/ethnicity</b>				
Asian or Pacific Islander	15.9	34.8	30.1	19.2
Hispanic regardless of race	24.0	25.5	30.4	20.1
Black not of Hispanic origin	13.7	28.9	35.7	21.7
White not of Hispanic origin	15.6	36.6	37.0	10.7
<b>Current marital status</b>				
Single never married	15.4	30.9	36.3	17.5
Married	20.8	29.6	38.8	10.8
Divorced/separated/widowed	5.4	37.2	39.6	17.8
In marriage-like relationship	15.5	40.4	26.5	17.6

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

**Table 3-12 Percentage of 1988 eighth graders with oldest children of different ages by 1994, by selected secondary and postsecondary education characteristics**

	Less than 12 months	12 months to 23 months	24 months to 47 months	48 months or older
Total	16.5	32.4	35.7	15.4
<b>High school sector</b>				
Public	17.9	34.3	35.8	11.9
Catholic	22.9	51.6	21.9	3.6
Other private	low n	low n	low n	low n
<b>Last high school program type</b>				
Academic	22.9	37.3	28.4	11.4
Vocational	19.0	30.4	34.2	16.4
Other	13.1	30.3	40.8	15.8
<b>Test quartile (1992)</b>				
Lowest quartile	16.5	30.7	38.5	14.4
Middle two quartiles	18.1	39.1	32.2	10.6
Highest quartile	35.4	50.8	12.4	1.3
<b>High school status (1994)</b>				
Graduate	23.9	38.4	31.3	6.3
Dropout	11.8	25.2	40.0	23.0
GED or equivalent	8.0	25.6	36.4	30.0
<b>Highest level of education expected in 1992</b>				
High school or less	11.3	32.1	40.6	16.0
Trade/vocational	13.9	24.8	38.8	22.6
Some college	15.1	30.9	41.5	12.4
Finish college	26.4	32.9	34.0	6.8
Graduate degree	30.7	36.8	24.9	7.6
<b>First postsecondary education intensity and timing</b>				
Full-time before 9/92	27.6	31.2	30.7	10.5
Part-time before 9/92	29.4	19.2	41.5	9.9
Full-time 9/92 - 8/93	26.9	29.9	32.0	11.2
Part-time 9/92 - 8/93	23.0	38.9	31.2	6.9
Full-time after 8/93	12.6	44.9	27.6	14.9
Part-time after 8/93	14.4	31.0	34.3	20.4
<b>Valid postsecondary education institutions attended</b>				
None	13.4	32.8	36.9	16.8
One	24.9	31.2	32.8	11.1
Two or more	25.2	32.5	30.3	12.0
<b>Still enrolled in first institution</b>				
Not still enrolled	27.3	28.5	32.3	11.9
Still enrolled	19.4	38.0	32.8	9.8
<b>Attendance spells at first postsecondary institution</b>				
Never attended	13.4	32.8	36.9	16.9
Attended once	27.3	30.2	30.7	11.9
Attended twice	7.5	41.1	45.0	6.4
Attended three or more times	low n	low n	low n	low n
<b>At risk of school failure factors (1988)</b>				
None	20.8	33.2	34.8	11.2
One	18.5	34.0	35.8	11.7
Two or more	14.5	32.0	36.4	17.1

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

Note: "low n" indicates too few cases for reliable estimate.

## Dependent Support

- 1988 eighth grade Asians/Pacific Islanders and whites were less likely to provide annual support for another person in 1994 than Hispanics or blacks (Table 3-13) (3 percent and 4 percent to 11 percent and 12 percent, respectively).
- 1988 eighth graders in the lowest socioeconomic quartile were more likely to provide annual support for another person in 1994 than those in the middle two or highest socioeconomic quartiles (Table 3-13) (11 percent to 6 percent and 2 percent respectively).
- 1988 eighth grade men provided more annual support for another person in 1994 than did 1988 eighth grade women (Table 3-13) (\$147 to \$83).

**Table 3-13 Percentage of 1988 eighth graders reporting in 1994 contributing to dependents' support, and average yearly amounts contributed to dependents' support, by selected background characteristics**

	Percentage contributing to dependents' support	Average yearly amount of support provided<a>
Total	5.9	\$115
<b>Sex</b>		
Male	6.9	147
Female	5.0	83
<b>Socioeconomic status (1992)</b>		
Lowest quartile	10.7	191
Middle two quartiles	5.6	121
Highest quartile	2.1	38
<b>Children</b>		
None	4.7	89
One or more	12.6	260
<b>Race/ethnicity</b>		
Asian or Pacific Islander	3.4	44
Hispanic regardless of race	11.3	266
Black not of Hispanic origin	11.7	173
White not of Hispanic origin	4.1	86
<b>Education level of father as of 1992</b>		
High school or less	7.2	143
Trade school after high school	6.1	101
College after high school	2.8	58
Finished college	2.2	62
Graduate degree	3.9	67
<b>Education level of mother as of 1992</b>		
High school or less	7.2	146
Trade school after high school	5.0	69
College after high school	3.2	100
Finished college	2.6	47
Graduate degree	3.6	66

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

<a> Estimates are averages of all respondents in a given subgroup, including those providing no support (\$0).

## Section 4

### Values, Leisure Time Activities, Volunteer Activities, and Voting Patterns

#### Values

- A higher percentage of 1988 eighth grade men than women reported in 1994 that having lots of money was very important (Table 4-1) (43 percent to 34 percent).
- 1988 eighth graders who attended public high schools were more likely to report in 1994 that having lots of money was very important than those who attended Catholic or other private high schools (Table 4-1) (39 percent to 32 percent and 18 percent respectively).
- A higher percentage of 1988 eighth graders who attended Catholic high schools than those who attended public high schools reported in 1994 that having strong friendships was very important (Table 4-1) (92 percent compared to 86 percent).
- A greater percentage of 1988 eighth graders in the lowest socioeconomic quartile than those in the middle two or highest 1992 socioeconomic quartiles reported in 1994 that having lots of money was very important (Table 4-1) (50 percent compared to 39 percent and 26 percent respectively).
- 1988 eighth graders in the lowest socioeconomic quartile were more likely to report in 1994 that providing their children with better opportunities was very important than those in the middle two or highest socioeconomic quartiles (Table 4-1) (96 percent and 93 percent to 84 percent).
- A higher percentage of 1988 eighth grade blacks than Asians/Pacific Islanders, Hispanics, or whites reported in 1994 that having lots of money was very important (Table 4-1) (58 percent to 41 percent, 44 percent, and 33 percent respectively).
- 1988 eighth grade whites and Asians/Pacific Islanders were more likely than Hispanics or blacks to report in 1994 that having strong friendships was very important (Table 4-1) (91 percent and 87 percent compared to 76 percent and 64 percent respectively).
- 1988 eighth graders who were high school graduates by 1994 were more likely to report in 1994 that having strong friendships was very important than those who were dropouts or who had a GED or equivalent by 1994 (Table 4-1) (88 percent to 72 percent and 80 percent respectively).
- A higher percentage of 1988 eighth grade men than women reported working on hobbies (59 percent to 47 percent) or participating in sports (63 percent to 34 percent) at least once a week on average in 1994 (Table 4-2).

**Table 4-1 Percentage of 1988 eighth graders reporting in 1994 that various values are "very important," by selected background, secondary education, and postsecondary education characteristics**

	Professional employment success	Having lots of money	Having strong friendships	Providing one's children greater opportunity	Being able to find steady work
Total	89.7	38.4	85.5	91.3	89.6
<b>Sex</b>					
Male	89.7	43.0	86.7	90.8	88.9
Female	89.8	33.7	84.2	91.7	90.3
<b>High school sector</b>					
Public	89.9	39.0	85.7	91.7	90.1
Catholic	89.3	32.5	92.2	88.5	88.5
Other private	87.0	18.2	91.8	79.2	83.8
<b>Last high school program type</b>					
Academic	90.3	33.7	88.1	89.8	89.5
Vocational	93.2	48.6	81.4	93.9	93.1
Other	87.5	44.6	82.2	93.2	89.6
<b>Type of first institution</b>					
Private for-profit	95.0	42.9	79.8	95.6	95.3
Private not-for-profit less than 4-yr	90.7	29.3	87.6	93.4	95.2
Public less than 2-year	89.6	32.7	86.8	95.3	61.7
Public 2-year	91.0	37.7	86.6	91.8	90.4
Private not-for-profit 4-year	88.8	22.1	91.6	84.2	87.6
Public 4-year	91.0	27.1	90.9	87.2	88.8
<b>Socioeconomic status (1992)</b>					
Lowest quartile	89.7	50.0	77.9	95.6	92.2
Middle two quartiles	90.4	38.6	86.0	92.9	90.2
Highest quartile	88.4	25.9	92.5	83.8	86.2
<b>Race/ethnicity</b>					
Asian or Pacific Islander	87.2	40.6	86.6	93.3	84.6
Hispanic regardless of race	92.1	43.8	76.1	96.0	91.6
Black not of Hispanic origin	93.4	57.9	64.2	97.1	91.4
White not of Hispanic origin	88.8	33.3	91.2	89.3	89.3
<b>High school status (1994)</b>					
Graduate	90.6	35.1	87.6	90.2	89.9
Dropout	81.3	55.1	72.4	95.6	84.9
GED or equivalent	90.5	48.0	80.3	95.6	87.9
<b>Highest level of education expected in 1992</b>					
High school or less	85.9	51.5	77.5	95.8	86.3
Trade/vocational	89.8	48.6	82.2	95.0	92.6
Some college	90.7	44.5	84.9	94.1	91.4
Finish college	89.3	31.3	88.3	88.9	88.4
Graduate degree	92.0	30.1	89.3	88.3	89.8

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95



## Leisure Time Activities

- A greater percentage of 1988 eighth grade women than men reported reading for pleasure (71 percent to 66 percent) or spending time on religious activities (42 percent to 35 percent) at least once a week on average in 1994 (Table 4-2).
- A higher percentage of 1988 eighth grade women than men reported spending time talking to or doing things with parents in 1994 (Table 4-2) (84 percent to 78 percent).
- 1988 eighth graders who attended Catholic and other private high schools were more likely to report spending time on religious activities in 1994 than those who attended public high schools (Table 4-2) (47 percent and 54 percent to 38 percent respectively).
- 1988 eighth graders who attended a private not-for-profit four-year postsecondary institution as their first postsecondary institution were more likely to report spending time on religious activities in 1994 than those who attended private for-profit, public two-year, or public four-year postsecondary institutions (Table 4-2) (50 percent to 34 percent, 41 percent, and 43 percent respectively).
- A higher percentage of 1988 eighth grade blacks than whites reported reading for pleasure in 1994 (Table 4-2) (74 percent to 67 percent).
- 1988 eighth graders who were high school graduates or who had obtained a GED by 1994 were more likely to report reading for pleasure in 1994 than those who were dropouts (Table 4-2) (69 and 77 percent to 58 percent).
- 1988 eighth graders who, in 1992, expected to complete some college or to finish college or earn a graduate degree were more likely to report reading for pleasure at least once a week on average in 1994 than those who expected to complete high school or less (Table 4-2) (70 percent, 69 percent and 72 percent to 61 percent respectively).

**Table 4-2 Percentage of 1988 eighth graders participating in 1994 in various activities at least once a week on average, by selected demographic, secondary education, and postsecondary education characteristics**

	<b>Working on hobbies</b>	<b>Participating in sports</b>	<b>Reading for pleasure</b>	<b>Religious activities</b>	<b>Talking to or doing things with parents</b>
Total	52.9	48.7	68.4	38.3	80.8
<b>Sex</b>					
Male	59.0	63.1	65.8	34.9	78.1
Female	46.8	33.9	71.1	41.8	83.6
<b>High school sector</b>					
Public	53.1	48.3	68.0	38.0	80.9
Catholic	54.9	55.1	69.3	47.2	82.9
Other private	52.9	52.5	76.3	53.6	89.3
<b>Last high school program type</b>					
Academic	53.6	52.1	69.2	41.9	83.5
Vocational	53.5	46.5	63.6	33.8	80.8
Other	52.3	43.1	66.8	32.7	76.6
<b>Type of first institution</b>					
Private for-profit	47.7	35.4	75.2	34.3	78.0
Private not-for-profit less than 4-yr	54.2	42.8	55.1	40.9	79.1
Public less than 2-year	41.3	57.8	74.0	38.4	59.0
Public 2-year	53.6	51.3	70.4	40.8	83.9
Private not-for-profit 4-year	53.1	52.6	69.8	50.4	84.3
Public 4-year	55.3	55.0	68.9	42.7	83.1
<b>Socioeconomic status (1992)</b>					
Lowest quartile	48.5	42.5	65.6	33.4	75.9
Middle two quartiles	53.2	47.8	68.3	37.7	81.5
Highest quartile	57.2	55.7	71.6	44.7	84.1
<b>Race/ethnicity</b>					
Asian or Pacific Islander	54.0	54.7	69.1	40.0	80.7
Hispanic regardless of race	47.1	49.6	72.0	38.4	80.7
Black not of Hispanic origin	42.5	45.7	74.3	47.1	77.4
White not of Hispanic origin	55.8	48.7	67.0	36.6	81.7
<b>High school status (1994)</b>					
Graduate	53.8	50.6	68.8	41.1	82.7
Dropout	43.3	34.9	57.7	19.7	67.2
GED or equivalent	54.6	47.0	76.8	34.5	76.1
<b>Highest level of education expected in 1992</b>					
High school or less	47.9	38.7	61.1	28.1	73.0
Trade/vocational	52.4	41.7	64.5	34.9	85.7
Some college	55.4	47.9	69.5	35.5	82.3
Finish college	53.5	52.2	69.4	42.4	80.3
Graduate degree	53.2	53.6	71.8	45.4	83.4

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

## Volunteer activities

Although in nearly all subgroups the majority of 1988 eighth graders reported in 1994 that they had not done any volunteer work, there were a number of differences in the degree of lack of volunteerism.

- 1988 eighth graders who participated in academic high school programs were less likely to report no volunteer work as of 1994 than those who participated in vocational or other high school programs (Table 4-3) (60 percent to 76 percent and 72 percent respectively).
- 1988 eighth graders who attended private not-for-profit four-year and public four-year institutions as their first postsecondary education institutions were less likely to report having done no volunteer work as of 1994 than those from private for-profit postsecondary education institutions (Table 4-3) (42 percent and 52 percent to 76 percent respectively).
- 1988 eighth graders in the middle two and highest socioeconomic quartiles were less likely to report not doing any volunteer work as of 1994 than those in the lowest 1992 socioeconomic quartile (Table 4-3) (68 percent and 48 percent to 77 percent).
- 1988 eighth graders who were high school graduates or had a GED or equivalent by 1994 were less likely to report having done no volunteer work as of 1994 than those who were dropouts (Table 4-3) (62 percent and 74 percent to 87 percent respectively).
- 1988 eighth graders who, in 1992, expected to finish college or earn a graduate degree were less likely to report not having volunteered in any organizations as of 1994 than those who expected to complete high school or less or to go to trade school (Table 4-3) (60 percent and 50 percent to 82 percent and 79 percent, respectively).

**Table 4-3 Percentage of 1988 eighth graders reporting in 1994 the number of organizations to which they volunteered time, by selected demographic, secondary education, and postsecondary education characteristics**

	None	One	Two	Three	Four or more
Total	65.3	23.6	6.8	2.8	1.5
<b>Sex</b>					
Male	65.0	24.5	6.1	3.0	1.4
Female	65.5	22.7	7.5	2.7	1.6
<b>High school sector</b>					
Public	65.4	23.5	6.9	2.8	1.4
Catholic	54.1	28.6	10.0	5.3	2.0
Other private	52.0	32.4	6.7	5.8	3.1
<b>Last high school program type</b>					
Academic	60.2	26.0	8.5	3.3	1.9
Vocational	75.7	19.6	2.6	1.6	0.4
Other	72.3	20.2	4.4	2.3	0.8
<b>Type of first institution</b>					
Private for-profit	76.3	19.1	2.7	1.6	0.2
Private not-for-profit less than 4-yr	56.9	29.1	10.8	2.0	1.1
Public less than 2-year	58.8	38.4	0.0	0.0	2.8
Public 2-year	66.3	22.6	7.1	2.5	1.5
Private not-for-profit 4-year	41.5	33.8	14.9	6.2	3.5
Public 4-year	51.8	31.2	10.0	4.7	2.3
<b>Socioeconomic status (1992)</b>					
Lowest quartile	77.3	16.9	4.1	1.4	0.3
Middle two quartiles	68.1	22.6	5.2	2.8	1.2
Highest quartile	48.3	31.9	12.4	4.4	3.0
<b>Race/ethnicity</b>					
Asian or Pacific Islander	66.2	21.9	6.8	3.4	1.6
Hispanic regardless of race	71.6	19.2	7.0	1.4	0.8
Black not of Hispanic origin	66.8	23.2	5.5	3.5	1.0
White not of Hispanic origin	63.8	24.7	7.0	2.9	1.6
<b>High school status (1994)</b>					
Graduate	61.7	25.3	7.9	3.3	1.7
Dropout	87.3	11.3	0.9	0.3	0.3
GED or equivalent	74.3	21.1	3.2	1.1	0.3
<b>Highest level of education expected in 1992</b>					
High school or less	82.3	14.5	2.0	0.7	0.6
Trade/vocational	79.4	17.1	2.5	0.7	0.3
Some college	74.4	19.1	4.3	1.6	0.6
Finish college	60.3	25.9	8.9	3.4	1.5
Graduate degree	49.8	31.6	10.6	5.2	2.9

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

Note: Rows may not sum to 100 percent due to rounding error.

## Voting Patterns

- 1988 eighth grade men were more likely than 1988 eighth grade women to report being registered to vote as of 1994 (Table 4-4) (71 percent to 65 percent).
- A greater percentage of 1988 eighth graders who attended Catholic high schools reported being registered to vote in 1994 than those who attended public high schools (Table 4-4) (78 percent to 69 percent respectively).
- A higher percentage of 1988 eighth graders who attended public four-year postsecondary education institutions than those who attended private for-profit institutions reported voting in their last local or state election (Table 4-4) (40 percent to 26 percent).
- 1988 eighth graders in the middle two and highest 1992 socioeconomic quartiles were more likely to report being registered to vote as of 1994, voting in the 1992 presidential election, and voting in their last local or state election than those in the lowest 1992 quartile (Table 4-4) (68 percent and 79 percent to 57 percent respectively for voter registration comparisons; 47 percent and 61 percent to 27 percent for 1992 presidential election voting comparisons; and 32 percent and 38 percent to 20 percent for last local or state election voting comparisons).
- 1988 eighth grade blacks and whites were more likely to report being registered to vote as of 1994 than Asians/Pacific Islanders (Table 4-4) (66 percent and 72 percent to 48 percent respectively).
- 1988 eighth grade blacks and whites were more likely to report voting in the 1992 presidential election than Asians/Pacific Islanders or Hispanics (Table 4-4) (38 percent and 51 percent to 27 percent and 29 percent).
- 1988 eighth graders who were high school graduates by 1994 were more likely to report being registered to vote as of 1994, voting in the 1992 presidential election, and voting in their last local or state election than those who were dropouts or had a GED or equivalent in 1994 (Table 4-4) (72 percent to 49 percent and 56 percent respectively for voter registration comparisons; 51 percent to 17 percent and 30 percent respectively for 1992 presidential election voting comparisons; and 34 percent to 10 percent and 23 percent respectively for last local or state election voting comparisons).

**Table 4-4 Percentage of 1988 eighth graders who, in 1994, were registered to vote, voted in the 1992 presidential election, or voted in the last local election, by selected demographic, secondary education, and postsecondary education characteristics**

	<b>Registered to vote</b>	<b>Voted in 1992 presidential election</b>	<b>Voted last year in local or state election</b>
Total	68.1	45.5	30.6
<b>Sex</b>			
Male	71.1	45.4	30.5
Female	64.9	45.5	30.7
<b>High school sector</b>			
Public	69.0	46.5	31.6
Catholic	78.2	56.8	39.5
Other private	66.7	49.8	28.0
<b>Last high school program type</b>			
Academic	73.5	53.0	35.9
Vocational	65.0	37.1	25.5
Other	58.6	34.0	22.5
<b>Type of first institution</b>			
Private for-profit	62.7	36.3	26.5
Private not-for-profit less than 4-yr	62.0	31.8	20.0
Public less than 2-year	72.2	53.5	18.9
Public 2-year	72.5	52.9	36.5
Private not-for-profit 4-year	76.5	57.0	36.2
Public 4-year	80.0	59.8	39.5
<b>Socioeconomic status (1992)</b>			
Lowest quartile	56.9	27.2	20.1
Middle two quartiles	68.2	46.7	32.3
Highest quartile	78.6	60.9	37.7
<b>Race/ethnicity</b>			
Asian or Pacific Islander	48.2	26.8	19.7
Hispanic regardless of race	56.1	29.4	22.6
Black not of Hispanic origin	66.4	37.8	28.7
White not of Hispanic origin	71.5	50.8	33.0
<b>High school status (1994)</b>			
Graduate	72.3	50.7	34.2
Dropout	48.8	17.1	9.9
GED or equivalent	55.8	30.5	23.0
<b>Highest level of education expected in 1992</b>			
High school or less	53.4	26.1	16.8
Trade/vocational	59.5	34.1	25.1
Some college	61.7	39.3	27.4
Finish college	74.7	53.8	34.3
Graduate degree	77.6	59.3	39.0

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

## **Appendices**

## **Appendix A: Technical Notes**



## **Appendix A**

### **Technical Notes**

#### **The National Education Longitudinal Study of 1988: Overview**

The major features of the National Education Longitudinal Study of 1988 (NELS:88) include the integration of student, dropout, parent, teacher, and school studies; initial concentration on a 1988 eighth grade student cohort to be followed over a period of ten years; the inclusion of supplementary components to support analyses of geographically or demographically distinct subgroups; and design linkages to previous longitudinal studies and other current studies.

The Base Year of NELS:88 represented the first stage of a major longitudinal effort designed to provide trend data about critical transitions experienced by students as they leave elementary school and progress through high school and into postsecondary institutions or the work force. This study of the 1988 eighth grade cohort collected data about educational processes and outcomes pertaining to student learning, predictors of dropping out, and school effects on students' access to programs and equal opportunity to learn.

The First Follow-up in 1990 provided the first opportunity for longitudinal measurement of the 1988 baseline sample. It also provided a comparison point to high school sophomores 10 years before, as studied in HS&B. (The NELS:88 sample was freshened in the First Follow-up to represent the tenth grade class of 1990.) The study captured the population of early dropouts (those who leave school between the end of eighth grade and the end of tenth grade), while monitoring the transition of the student population into secondary schooling.

The Second Follow-up took place in 1992, when most sample members entered the second term of their senior year. The Second Follow-up provides a "capstone" measurement of learning in the course of secondary school, and also collects information that will facilitate investigation of the transition into the labor force and postsecondary education after high school. (Freshening the NELS:88 sample to represent the twelfth grade class of 1992 makes trend comparisons with the senior cohorts that were studied in NLS-72 and HS&B possible.) In addition to surveying the students who were in school during the First Follow-up, the NELS:88 Second Follow-up resurveyed students who were identified as dropouts in 1990, and identified and surveyed those additional students who left school after the First Follow-up.

The Third Follow-up took place in the spring of 1994, when most sample members had been out of high school for two years. The 1994 data collection was designed to meet four general requirements for information about American education. These can be characterized as looking backward within the cohort(s) to understand the impact of prior experiences on current circumstances, looking ahead to provide a basis for understanding cohort members' future experiences, looking within the cohort at a single point in time to compare the outcomes and experiences of different social groups, and looking across cohorts by comparing the experiences of the NELS:88 cohort(s) with cohorts separated by one or two decades. Major content areas for the Third Follow-up questionnaire were: education histories; work experience histories; work related training; family formation; opinions and other experiences; occurrence or nonoccurrence of significant life events; and income. The NELS:88 fourth follow-up is slated for 2000.

#### **Sample Weighting**

The general purpose of weighting survey data is to compensate for unequal probabilities of selection and to adjust for the effects of nonresponse. Weights are often calculated in several steps. In the first step, unadjusted weights are calculated as the inverse of the probabilities of selection, taking into account all stages of the sample selection process. In the second step, these initial weights are adjusted to compensate for unit nonresponse; such nonresponse adjustments are typically carried out separately within multiple weighting cells. These steps were followed in creating the NELS:88 Third Follow-up weights.

In order to maintain consistency in weights across the various waves and across the various weights within wave, multidimensional raking was also applied when creating NELS:88 weights. In the Third Follow-up, raking

was performed with respect to base year school characteristics, race, sex, and status in each of the rounds.

The estimates in this report for the 1988 eighth grade cohort were produced using the 1994 questionnaire weight subsetted for 1988 eighth grade sample members (F3QWTG8).

### **Survey Standard Errors**

Because the NELS:88 sample design involved stratification, the disproportionate sampling of certain strata, and clustered (i.e. multi-stage) probability sampling, the resulting statistics are more variable than they would have been had they been based on data from a simple random sample of the same size.

The calculation of exact standard errors for survey estimates can be difficult and expensive. Frequently used statistical analysis packages such as SPSS (Statistical Program for the Social Sciences) or SAS (Statistical Analysis System) do not adjust for complex sampling designs of the type used in NELS:88 in the calculation of standard errors. Several procedures are available for calculating precise estimates of sampling errors for complex samples. Procedures such as Taylor Series approximations, Balanced Repeated Replication (BRR), and Jackknife Repeated Replication (JRR) produce similar results.<2> Consequently, it is largely a matter of convenience which approach is taken. For NELS:88, NORC used the Taylor Series procedure to calculate the standard errors. The standard errors for this report were calculated using the Data Analysis System (DAS) developed by NCES. Table A-1, which shows the standard errors for table 4 in the essay, provides an example of the standard errors calculated by the DAS and used in the analyses for this report.

**Table A-1 Standard errors for percentage of 1988 eighth graders in 1992 tested achievement quartile groups, by various characteristics**

	Lowest quartile	Middle two quartiles	Highest quartile
Total	0.74	0.71	0.75
<b>Sex</b>			
Male	1.06	1.04	1.00
Female	0.88	0.97	0.92
<b>Race/ethnicity</b>			
Asian/Pacific Islander	2.86	2.97	2.70
Hispanic	2.06	2.00	1.22
Black	2.35	2.33	1.15
White	0.73	0.84	0.87
<b>Socioeconomic status (1992)</b>			
Lowest quartile	1.68	1.64	0.58
Middle two quartiles	0.84	0.88	0.77
Highest quartile	1.11	1.35	1.44

Source: NCES, National Education Longitudinal Study: 1988-1994 9/25/95

### Data Analysis System

The estimates presented in this report were produced using the NCES Data Analysis System (DAS) for the NELS:88 Third Follow-up. The DAS software makes it possible for users to specify and generate their own tables from the NELS:88 data. With the DAS, users can recreate or expand upon the tables presented in this report. In addition to the table estimates, the DAS calculates appropriate standard errors and weighted sample sizes for the estimates. If the number of valid cases is too small to produce an estimate, the DAS prints the message "low n" instead of the estimate.

In addition to the tables, the DAS will also produce a correlation matrix of selected variables that can be used in linear regression models, and the design effects (DEFT) for all the parameter estimates in the correlation matrix. Since statistical procedures generally compute regression coefficients based on simple random sample assumptions, the standard errors must be adjusted with the design effects to take into account the complex sampling procedures used in the NELS:88 surveys. For more information about the NELS:88 Third Follow-up DAS, contact:

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 NCES Longitudinal Studies Branch  
 555 New Jersey Ave., N.W.  
 Washington, D.C., 20208-5652  
 (202) 219-1365  
 Internet address: ADAMICO@INET.ED.GOV

## Statistical Procedures

Comparisons that have been drawn in the text of this report have been tested for statistical significance to ensure that the differences are larger than those that might be expected due to sampling variation. The statistical comparisons in this report were based on the *t* statistic. Generally, whether the statistical test is considered significant or not is determined by calculating a *t* value for the difference between a pair of means or proportions and comparing this value to published tables of values at certain critical levels, called "alpha levels." The alpha level is an *a priori* statement of the probability that a difference exists in fact rather than by chance.

To guard against errors of inference based upon multiple comparisons, the Bonferroni procedure<sup><4></sup> to adjust significance tests for multiple contrasts was used. This method corrects the significance (or alpha) level for the total number of contrasts made with a particular classification variable. For each classification variable, there are  $(K*[K-1])/2$  possible contrasts (or nonredundant pairwise comparisons), where *K* is the number of categories. For example, if a classification variable such as race has five categories, *k*=5 and there are  $(5*4)/2=10$  possible comparisons between the categories. The Bonferroni procedure divides the alpha-level for a single *t*-test (in this case, 0.05) by the number of possible pairwise comparisons (10) to derive a new alpha corrected for the fact that multiple contrasts are being made. For all of the tables in this report, the Bonferroni adjustment is applied on a variable by variable basis, adjusting for the number of possible comparisons among the subgroups defined by a single row variable.

The *t* statistic between estimates from various subgroups presented in the tables can be computed by using the following formula:

$$t = (X1-X2)/SQRT(SE1^2+SE2^2)$$

where *X1* and *X2* are the estimates to be compared and *SE1* and *SE2* are their corresponding standard errors.

## Nonresponse Bias Analysis

Comparisons were made between subgroups defined on the basis of whether the respondent had complete data for the critical variables used in this report. The purpose of this analysis is to assess whether there is a significantly greater proportion of missing cases in a particular subgroup which might account for apparent between group differences.

A case was classified as "valid" for a given variable if the respondent had an in-scope response code (including "don't know"), and as "missing" if the response code corresponded to "missing" or "refused." Respondents classified as "legitimate skip" for a given variable were excluded from the analysis of that variable. The distribution of valid and missing cases was broken down by sex, race/ethnicity, socioeconomic status, school type, and 1994 diploma status.

The nonresponse bias analysis was conducted for 15 critical variables used in the Descriptive Summary Report and was based on all NELS:88/94 respondents. The complete results can be found in Section 5.6 of the NELS:88/94 Methodology Report.

The results shown in Table A-2 below illustrate this analysis. The analysis is accomplished by comparing the percentage "missing" to the percentage "valid" for a given subgroup. For example, for months unemployed in 1993 (UNEMPL93), public school students constitute a greater percentage of the missing group (97.5 compared to 91.1). The same is true for low SES respondents (41.7 percent compared to 24.5 percent) and for dropouts (20.8 percent compared to 7.3 percent). A higher percentage of valid respondents is accounted for by Catholic school students and students of "other private" schools (this pattern was observed for a several of the variables in the nonresponse bias analysis); the same was true for whites, respondents with diplomas, and high SES respondents. None of the other comparisons in this table are statistically significant. The differences observed in the nonresponse bias analysis in, for example, 1992 high school sector, may indicate that differences in unemployment between subgroups defined on high school sector may be due, at least in part, to differential response rates.

**Table A-2 Bias analysis for months unemployed in 1993**

	Percent valid	Standard error for valid	Percent missing	Standard error for missing	t-value<a>
Total	99.1	0.11	0.9	0.11	
<b>Sex</b>					
Male	50.6	0.63	55.9	5.78	-0.90
Female	49.4	0.63	44.1	5.78	0.90
<b>Race/ethnicity</b>					
Asian/Pacific Islander	3.9	0.30	3.7	1.27	0.20
Hispanic	11.3	0.83	14.3	3.47	-0.83
Black	13.6	0.81	28.3	5.65	-2.58
White	69.7	1.18	50.7	5.99	3.12
<b>High school sector</b>					
Public	91.1	0.64	97.5	1.09	-5.10
Catholic	5.1	0.40	1.8	0.96	3.13
Other private	3.8	0.50	0.6	0.50	4.51
<b>High school diploma status (1994)</b>					
High school diploma	81.1	0.66	58.4	5.62	4.01
GED or equivalent	6.3	0.41	9.4	2.45	-1.24
Working toward diploma	5.3	0.31	11.5	4.32	-1.41
Dropout	7.3	0.43	20.8	4.61	-2.92
<b>Socioeconomic status (1992)</b>					
Lowest quartile	24.5	0.77	41.7	5.82	-2.93
Middle two quartiles	50.3	0.75	46.8	5.93	0.58
Highest quartile	25.2	0.91	11.5	3.84	3.47

Source: NCES, National Education Longitudinal Study: 1988-1994

<a> This t-value compares the percent valid to the percent missing for a given row variable.

## Endnotes

- <1> The process referred to here as "freshening" added students who were not in the base year sampling frame, either because they were not in the country or because they were not in eighth grade in the spring term of 1988. The 1990 freshening process provided a representative sample of students enrolled in tenth grade in the spring of 1990. The 1992 freshening process provided a representative sample of students enrolled in twelfth grade in the spring of 1992. Section 3.3.3 of Ingels et al. (*NELS:88 Second Follow-up Student Component Data File Users' Manual*) provides a detailed description of the freshening process.
- <2> Frankel, M.R., *Inference from Survey Samples: An Empirical Investigation* (Ann Arbor: Institute for Social Research, 1971).
- <3> The NELS:88 sample is not a simple random sample, and techniques for estimating standard errors that are appropriate for simple random samples will not produce accurate standard errors for these data. The DAS takes into account the complex sampling procedures and calculates standard errors that are appropriate for such samples. The method for computing sampling errors used by the DAS involves approximating the estimator by the linear terms of a Taylor series expansion. This procedure is typically referred to as the Taylor series method.
- <4> For detailed discussion, see, for example, Hays, W.L. (1988). *Statistics*. (4th ed.) New York: Holt, Rinehart, Winston.

## **Appendix B: Glossary**

## Glossary

This glossary describes the variables used in this report. The items were taken directly from the National Education Longitudinal Study: 1988-1994 Data Analysis System (DAS), a NCES software application that generates tables directly from the data files.

The variables and definitions are divided into five categories: demographic and status variables, postsecondary education variables, labor force experience variables, family experience variables, and civic participation, values, and personal time variables.

### Personal Characteristics

#### *Sex (F3SEX)*

Female  
Male

#### *Race/ethnicity (F3RACE)*

Asian or Pacific Islander	A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or Pacific Islands. This includes people from China, Japan, Korea, the Philippine Islands, Samoa, India, and Vietnam.
Hispanic regardless of race	A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
Black not of Hispanic origin	A person having origins in any of the black racial groups of Africa, except those of Hispanic origin.
White not of Hispanic origin	A person having origins in any of the original peoples of Europe, North Africa, or the Middle East (except those of Hispanic origin).

#### *Current marital status (F3MARST)*

Single, never married	Respondent had never been married.
Married	Respondent was married at the time of the interview.
Divorced/separated/widowed	Respondent had been married but was either divorced or separated, or the spouse had died.
In marriage-like relationship	Respondent reported living with a partner but not being married.

#### *Children (NUMCHILD)*

None	No children born to the respondent
One or more	At least one child born to the respondent



*Socioeconomic status in 1992 (F2SESIC)*

The socioeconomic status (SES) index is a composite of five equally weighted, standardized components: father's education, mother's education, family income, father's occupation, and household items. The terms high, middle two, and low SES refer to the upper, middle two, and lower quartiles of the weighted SES composite index distribution.

Lowest quartile	Students in the first through 24th percentile
Middle two quartiles	Students whose percentile rank ranged from 25 to 74 percent.
Highest quartile	Students whose percentile rank ranged from 75 to 99 percent.

*Financial support for others (AMTSUPRT)*

Respondents were asked if they contributed to anyone else's support, such as grandparents, aunts or other relatives, regardless of whether they currently lived with that relative. Respondents were also asked to estimate this contribution annually.

No	No financial support for others
Yes	Financial support for at least one other.

*Alcohol consumption during lifetime in 1992 (F2S81A)*

Respondents were asked in 1992 to report their lifetime consumption amount for alcohol.

- No occasions
- One or two occasions
- Three to nineteen occasions
- Twenty or more occasions

*Cocaine or crack use during lifetime in 1992 (F2S84A)*

Respondents were asked in 1992 to report their lifetime consumption amount for cocaine.

- No occasions
- One or two occasions
- Three to nineteen occasions
- Twenty or more occasions

**Family characteristics**

*At risk of school failure factors in 1988 (BYATRISK)*

This variable measures how many of the "at risk of school failure" factors were present for the sample members in 1988. The factors include: parent is single, parent has no high school diploma, limited English proficiency, income less than \$15,000, sibling dropped out of high school, and home alone more than three hours a day.

- |             |                                  |
|-------------|----------------------------------|
| None        | No risk factors                  |
| One         | One risk factor present          |
| Two or more | Two or more risk factors present |

*Education level of father as of 1992 (F2N8A)*

- |                                |   |
|--------------------------------|---|
| High school or less            | The highest level of education completed by the father was a high school diploma or equivalent or less. |
| Trade school after high school | Father attended trade school after high school  |
| College after high school      | Father attended college after high school.  |
| Finished college               | Father attained a college degree.   |
| Graduate degree                | Father attained a graduate degree.  |
| Do not know                    | Respondent did not know father's educational background.  |

*Education level of Mother as of 1992 (F2N8B)*

- |                                |   |
|--------------------------------|---|
| High school or less            | The highest level of education completed by the mother was a high school diploma or equivalent or less. |
| Trade school after high school | Mother attended trade school after high school.   |
| College after high school      | Mother attended college after high school.  |
| Finished college               | Mother attained a college degree.   |
| Graduate degree                | Mother attained a graduate degree.  |
| Do not know                    | Respondent did not know mother's educational background.  |

**Education Variables**

*Last high school program type (F3HSPROG)*

Three types of programs are distinguished: academic, vocational, and "other." An academic program is designed to prepare students for continued study at a four-year college or university. A vocational program is designed to prepare students for employment in one or more semi-skilled, skilled, or technical occupations. Programs classified as "other" are designed to provide students with the understanding and competence to function effectively in society and usually represent a mixture of academic and vocational components. Also included in this classification are personal use programs which provide students with general skills in areas such as health, religion, and military science. For the purposes of NELS:88/94, the last two categories have been combined into a "vocational/other" category.

The variable F3HSPROG (Last high school program type) was derived from the 1992 transcript data when available. Otherwise, the self-reported high school program type was used.

Academic	Academic program type
Vocational/Other	Vocational or "other" program type

*High school sector (F2SCHTYP)*

Public	An educational institution whose programs and activities are operated by publicly elected or appointed school officials and which is supported primarily by public funds.
Catholic	A private school over which a Roman Catholic church group exercises some control or provides some form of subsidy. Catholic schools for the most part include those operated or supported by: a parish, a group of parishes, a diocese, or a Catholic religious order.
Other private	An educational institution controlled by a private individual(s) or by a nongovernmental agency, usually supported primarily by other than public funds, and operated by other than publicly elected or appointed officials.

*1994 High school status (F3DIPLOM)*

1994 Graduate	Students who received formal recognition for the successful completion of a prescribed program of studies before the 1994 data collection.
Dropout	Students are not in school and are not graduates.
GED or equivalent	Students who obtained certification of high school equivalency by meeting state requirements and passing an approved exam, which is intended to provide an appraisal of the person's achievement or performance in the broad subject matter areas usually required for high school graduation.
Enrolled in high school	Students who have not yet completed a high school diploma, GED, or equivalent, and were actively enrolled in high school.
Working towards equivalency	Students who have not yet completed a high school diploma, GED, or equivalent, and were actively engaged in the pursuit of a GED or equivalent certificate.

*1992 Test quartile (F22XCEN)*

The source for this variable was the composite variable consisting of math and reading NELS Second Follow-up test scores. To create the derived variable, a ranking was created by first calculating a weighted frequency distribution of test composite variables. Next, cutoff points were determined and numbered sequentially from 1 to ninety-nine. The first cutoff point defined the lowest 1.5 percent of the population. Each subsequent cutoff point defined an additional 1 percent. The final cutoff point (assigned the value of 99) determined the last 1.5 percent of the population.

For the purposes of this report, centile values were converted to quartiles. This set of cutoffs was intended to produce an approximately symmetric division of the sample, with 50 percent in the middle grouping and 25 percent in the upper and lower tails of the distribution. The actual breakdown deviates from this intention for two reasons. First, the underlying centile scores are expressed as integer values. Thus, any regrouping into quartiles will only be approximate. Second, the centile ranking was constructed using the Second Follow-up questionnaire weight. Thus, analyses using the Third Follow-up sample and weight will also produce a degree of asymmetry when quartiles are defined. Nonetheless, the observed deviation was not dramatic, resulting in a lower quartile that is slightly more exclusive (23.4 percent) and an upper quartile that is slightly more inclusive (26.5 percent).

Lowest quartile	Students whose percentile rank ranged from 1 to 24 percent.
Middle two quartiles	Students whose percentile rank ranged from 25 to 74 percent.
Highest quartile	Students whose percentile rank ranged from 75 to 99 percent.

*Type of First Institution (F3SEC2A1)*

Private for profit	A private for-profit institution is a postsecondary institution that is privately owned and operated as a profit-making enterprise. Includes career colleges and proprietary institutions.
Private not-for-profit less than 4-year	A private not-for-profit institution offering a less-than-four-year degree and controlled by an independent governing board and incorporated under section 501(c)(3) of the Internal Revenue Code.
Public less than 2-year	A public less-than-two-year (vocational-technical) postsecondary institution is supported primarily by public funds and operated by publicly elected or appointed officials who control the school's program and activities.
Public 2-year	A public institution offering a two- to three-year degree (i.e., associate's degree).
Private not-for-profit 4-year	A private not-for-profit college or university offering bachelor's degree or higher.
Public 4-year	A public college or university offering a bachelor's degree or higher.

*First postsecondary education intensity and timing (PSEBEGST)*

This variable was constructed from respondents answers about their level of enrollment when they began their postsecondary studies at their first institution.

- Full-time before 9/92
- Part-time before 9/92
- Full-time 9/92-8/93
- Part-time 9/92-8/93
- Full-time after 8/93
- Part-time after 8/93

*Valid postsecondary education institutions attended (F3PSENUM)*

This variable counts the number of postsecondary institutions named by the respondents excluding military training programs.

- None
- One
- Two or more

*Highest level of education expected in 1988 (BYS45)*

*Highest level of education expected in 1992 (F2ASPIRE)*

*Highest level of education expected in 1994 (EDEXPECT)*

This set of variables was coded as follows:

High school or less Student expected to complete high school or less.

Trade/vocational Student expected to complete trade or vocational school.

Some college Student expected to complete some college.

Finish college Student expected to attain a bachelor's degree.

Graduate degree Student expected to attain a graduate degree.

Do not know Student was unsure of expectations.

However, for the purposes of the essay on access and choice, the categories were recoded (lumped) as follows:

High school or less Student expected to complete high school or less.

Trade/vocational Student expected to complete trade or vocational school.

Some college Student expected to complete some college.

Bachelor's or more Student expected to attain at least a bachelor's degree.

## Employment Variables

### *Labor force status in 1993 (LABFOR93)*

Traditional postsecondary education student	Respondent was a student in a postsecondary institution during the traditional school months (i.e., not including the summer months).
Part-time student	Respondent was a student not employed during part but not all of the school year and was not employed during the year.
Primarily postsecondary education student, also employed	Respondent was both a student during part of the school year and employed during the year but indicated that he or she was primarily a student.
Primarily employed, also student	Respondent was both a student during part of the school year and employed during the year but indicated that he or she was primarily employed.
Employed six months or more	Respondent was employed for at least six months and not a student during the year.
Employed one to five months	Respondent was employed for at least one and less than six months and not a student during the year.
Unemployed	Respondent was not a student and unemployed or out of the work force throughout the year.
Out of work force	Respondent was not a student and out of the labor force (i.e., never unemployed) throughout the year. This category includes homemakers and discouraged workers who are not looking for work.

To define populations for analysis in section 2 of the table compendium, the above categories were combined as follows:

Employed in 1993	Includes respondents in the categories: primarily employed, also student; employed six months or more; and employed one to five months.
In labor force in 1993	Includes respondents in the categories: primarily employed, also student; employed six months or more; employed one to five months; and unemployed.

*Industry of longest held 1993 job (INDCODE2)*

To arrive at these categories, respondents' verbatim answers were coded during the interview using abbreviated industry codes.

Agriculture or forestry  
Mining  
Construction  
Manufacture of durable goods  
Manufacture of nondurable goods  
Transport or communication or utility  
Wholesale trade  
Retail trade  
Finance or insurance or real estate  
Business and repair services  
Personal services  
Entertainment or recreation  
Professional and related services  
Public administration  
Military

*Total earnings from jobs in 1993 (TOTLEAR2)*

Respondents were asked how much they earned from all jobs they held between January and December 1993.

None	Respondent had no income in 1993.
Lowest quartile	Respondent's reported income percentile rank ranged from 1 to 24 percent.
Middle two quartiles	Respondent's reported income percentile rank ranged from 25 to 75 percent.
Highest quartile	Respondent's reported income percentile rank ranged from 76-99 percent.

**Postsecondary Education Variables**

*Number of applications to postsecondary institutions (NUMAPL)*

Zero	Student applied to no postsecondary education institutions.
One	Student applied to one postsecondary education institution.
Two or more	Student applied to two or more postsecondary education institutions.



*Importance of college expenses (F2S59A)*  
*Importance of financial aid (F2S59B)*  
*Importance of attending college and living at home (F2S59F)*  
*Importance of low crime environment (F2S59I)*  
*Importance of college reputation (F2S59L)*

For the preceding five variables, students were asked to rate each for how important a consideration it was in choosing a postsecondary institution. Response categories included "not important," "somewhat important," and "very important." For the purposes of this report these ratings were collapsed into "very important" and "less than very important."

Very Important                      Student responded this factor was very important in choosing a postsecondary institution.

Less than very important      Student responded this factor was "somewhat important" or "not important" in choosing a postsecondary institution.

*Number of postsecondary institutions attended (NUMATND1)*

This variable was derived from respondents' answers about attendance spells at their first postsecondary education institution. If no attendance spells were reported for this "first institution," the respondent was coded as never having attended a postsecondary institution. If there was at least one attendance spell, then the respondent did attend a postsecondary institution at least once. Note that this variable does not index the duration of the attendance spell(s), nor does it index the number of institutions a respondent attended.

No postsecondary education      No attendance spells at first PSE institution

One postsecondary institution      One or more attendance spells at first PSE

*In state at first postsecondary institution (PSEFIRIO)*

In state                                  Student attended first postsecondary institution in home state.

Different state                      Student attended first postsecondary institution outside of home state.

*Still at first institution (F3STILL)*

This variable was derived from respondents' answers about start and end dates at first postsecondary institution.

Not still enrolled in first institution  
 Still enrolled in first institution

*Enrollment status (ENRLSTA1)*

Full-time                      Student was enrolled in postsecondary institution full-time.

Half-time                      Student was enrolled in postsecondary institution half-time.

Less than half-time      Student was enrolled in postsecondary institution less than half-time.

**Labor Force Experience Variables**

*Number of jobs held in 1993 (NUMJOBS2)*

Respondents who indicated they were employed in 1993 were asked to enumerate the number of jobs they had held. For the tables presented in this report, means were calculated.

*Months unemployed in 1993 (UNEMPL93)*

Respondents who indicated they were unemployed in 1993 were asked to enumerate the number of months they were unemployed. For certain tables presented in this report, means were calculated.

*1994 expectations for job at age 30 (OCCFUTCD)*

Respondents were asked to describe their job expectations at age 30 and their responses were recoded into the following occupation codes.

- Clerical
- Craftsman
- Farmer or farm manager
- Laborer
- Manager/administrator
- Military
- Skilled operative
- Professional
- Proprietor
- Protective service
- Sales
- School teacher
- Service
- Technical
- Homemaker/not working outside home
- Do not know

### *Expected income at age 30 (EXPTINCM)*

Respondents were asked what income they expected to earn by age 30. For the tables presented in this report, averages were calculated.

### **Employer Provided Benefits and Training Opportunities Variables**

For each of the following, respondents were asked whether the job they held the longest in 1993 offered the indicated benefit or training opportunity (response categories for all, Yes/no).

*Medical benefits (EMPBMED)*  
*Dental benefits (EMPBDENT)*  
*Life insurance (EMPBLIFE)*  
*Sick days with pay (EMPBSICK)*  
*Paid vacation (EMPBVAC)*  
*Paid maternity or paternity leave (EMPBLEAV)*  
*Unpaid maternity or paternity leave (UNPDLEAV)*  
*Pension plan (EMPBPENS)*  
*Child care assistance (EMPBCHLD)*  
*Unpaid leave to care for others (UNPADOTH)*  
*On-site formal training received (EMPTRAN1)*  
*Informal on-the-job training received (EMPTRAN2)*  
*Off-site formal training received (EMPTRAN3)*  
*Employer-provided tuition assistance received (EMPTRAN4)*

*Total weeks training was attended in 1993 (NUMWKSTN)*

Respondents were asked to count the total number of weeks they spent in training in 1993.

*Hours per week training was attended in 1993 (HRSPWKTR)*

If respondents attended training in 1993, they were asked to report the average number of hours per week they spent in this training.

### **Employee Satisfaction Variables**

Respondents were asked to indicate their satisfaction with the following variables using the following response categories: very satisfied, somewhat satisfied, not satisfied.

*Pay and benefits (PAYFRNGE)*  
*Importance (IMPRTCHA)*  
*Working conditions (WRKCNDT)*  
*Opportunity for advancement (OPROMOT)*  
*Opportunity to use education (OUSTRAIN)*  
*Job security (JOBSECTY)*  
*Opportunities for education (FURTHED)*

## Family Characteristics Variables

### *Age of first child (DOBCHLD1)*

This variable was derived from the respondents' answers about the month and year their first child was born.

- Less than 12 months
- From 12 months to 23 months
- From 24 months to 47 months
- 48 months or older

## Sexual Experience Variables

### *First sexual intercourse (FIRSTSEX)*

Respondents were asked about their first sexual intercourse. The categories were derived from questions about year, month, and age.

- Date unknown                      Respondents indicated they did not know the date of their first sexual intercourse.
- Never                                      Respondents indicated they had never engaged in sexual intercourse.
- Before high school      Respondents whose first sexual intercourse occurred before they enrolled in high school.
- During high school      Respondents whose first sexual intercourse occurred while they were enrolled in high school.
- After high school      Respondents whose first sexual intercourse occurred after attending high school.

### *Use of birth control during first sexual intercourse (USEBIRCN)*

Respondents who had sexual intercourse by the time of the 1994 interview were asked whether they used birth control during their first sexual intercourse to prevent pregnancy or sexually transmitted disease.

- Did not use birth control      Respondent reported not using birth control during first sexual intercourse.
- Did use birth control                      Respondent reported using birth control during first sexual intercourse.

### *Use of birth control during last sexual intercourse (BCIMI)*

Respondents who had sexual intercourse by the time of the 1994 interview and were not married were asked whether they used birth control during their last sexual intercourse to prevent pregnancy or sexually transmitted disease.

- Did not use birth control      Respondent reported not using birth control during last sexual intercourse.
- Did use birth control                      Respondent reported using birth control during last sexual intercourse.

## Civic Participation Variables

### *Number of volunteer organizations (F3VOLUNT)*

Respondents were given examples of volunteer organizations and the number of organizations at which the respondents indicated having volunteered over the past year was coded.

