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Statistics in Brief

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The Relationship Between the Parental and Marital Experiences of 1988 Eighth-Grade Girls and High School Completion as of 1994

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The relationship between teenage childbearing and young women's educational and occupational attainment has been well established. In general, young women who give birth as teenagers are less likely to complete high school than women who delay childbearing until their 20s (Mott and Marsiglio 1985), regardless of a teenage mother's marital status (Teti and Lamb 1989). This Statistics in Brief describes the parental and marital experiences of the female members of the 1988 eighth-grade cohort (those females who were eighth-graders in 1988) as of 1994; it also describes their high school completion rates, as well as the timing of first births and first marriages in relation to June 1992, when most of this cohort should have completed high school. The National Education Longitudinal Study of 1988 (NELS:88), a nationally representative sample of 1988 eighth-graders who were followed up 2 years later in 1990 and again in 1992 and 1994, provides an opportunity to consider how motherhood and marriage were related to the educational attainment of the 1988 eighth-grade females. Findings include the following:

- By June of 1992, when this cohort of female students was scheduled to complete high school, 11 percent had given birth to at least one child and 5 percent had been married at least once (table 2).
- Being an unwed mother before scheduled graduation was more detrimental to eventual high school completion than getting married before graduation—58 percent of females who had a child before June 1992 but never married had completed by 1994, compared with 84 percent who had married before scheduled graduation but did not have children (table 3).
- Approximately 95 percent of females who were neither married nor had children by 1994 (2 years after scheduled graduation) had completed high school by 1994 (table 3).

Overall Rates of Childbearing and Marriage of 1988 Eighth-Graders by 1994

Table 1 displays the parental and marital experiences of female members of the eighth-grade class of 1988. By 1994 (when the average age of this cohort was 20 years old), 22 percent of all 1988 eighth-grade females had given birth to at least one child, and 14 percent had been married at least once. Furthermore, 11 percent of all 1988 eighth-grade females had their first child before June 1992, when this cohort of eighth-graders was scheduled to complete high school. In contrast, 5 percent had been married at least once by June of 1992. About 7 percent had children before June of 1992 and had not married by 1994, while less than 1 percent married before June 1992 and not had any children before 1994. About 3 percent married and had children before June of 1992. Some 38 percent of females who had a child by 1994 were also married by 1994. (38 percent or 8.3/21.8 in table 1).

One advantage of NELS:88 over previous longitudinal studies are the relatively large samples of Asians and Hispanics. Past research on this topic has generally been confined to racial-ethnic comparisons between blacks and whites; however, interesting patterns among racial-ethnic groups emerged from these data. The samples of non-white racial-ethnic groups are still too small to give reliable estimates for combined marriage and childbearing separately for each group. Therefore, the following analysis examines the characteristics of marriage and childbearing separately for these groups. For example, table 2 displays the parental and marital experiences of female members of the eighth-grade class of 1988 by various demographic characteristics. Asian eighth-grade females

were least likely among all racial-ethnic groups to have had a child by 1994, with 9 percent having had at least one child (table 2). Moreover, white eighth-grade females were less likely than their Hispanic and black counterparts to have had a child (17 percent compared with 34 and 39 percent, respectively).

Examining first marriages, however, reveals a different pattern. By 1994, 7 percent or fewer of both Asian and black 1988 eighth-grade females had been married at least once, compared with 20 percent of Hispanics and 15 percent of whites.

The likelihood of 1988 eighth-grade females having at least one child or marrying at least once by 1994 was also related to family socioeconomic status (SES). Ninety-three percent of females from families with high SES had not given birth to a child by 1994, compared with 81 percent from middle SES families and 63 percent from low SES families. Likewise, 94 percent of females from high SES backgrounds had never married, compared with 85 percent of those with middle SES and 79 percent with low SES.

Table 2 also reveals differences in childbearing and marriage by urbanicity and region. Females from rural areas were more likely to have had a child than suburban, and rural females were more likely than others to have been married at least once. Finally, females from the Northeast were less likely to have had a child or to have been married by 1994 than those who were from any other region while southern 1988 eighth-grade females were most likely to have been married.

Timing of Childbearing and Marriage

While overall rates of childbearing and marriage are worth noting, early childbearing and marriage are perhaps of more interest when examining high school completion. Figures 1 and 2 show the timing of parenthood and marriage relative to on-time progression through high school. Table 2 also displays the proportions of females who had given birth to their first child or had married for the first time before or after June 1992, when this cohort was expected to complete high school (also represented by the vertical lines in figures 1 and 2). Hispanic and black females were more likely to have had at least one child before June of 1992 than whites and Asian females. The same pattern held for females from low SES families compared with their middle and high SES counterparts (table 2). Moreover, 9 percent of females from low SES families had married for the first time before June 1992. Also, females from rural areas, as well as females from the South, were more likely to have married before the time they were expected to complete high school.

High School Completion Rates

As stated above, previous research has shown that teenagers, regardless of marital status, who have children are less likely to complete high school than those who postpone childbearing until adulthood. The data in table 3 reveal that the same was true for the female members of the eighth-grade cohort of 1988. Among all those who had given birth to their first child before June 1992, 54 percent had completed high school as of 1994. Females who had a child after June 1992 were more likely to have completed high school (74 percent). The same pattern held for first marriages: 48 percent of females who had married before

June 1992 had completed high school compared with 83 percent who had married after high school. However, most of this difference reflects the fact that 65 percent of those who married before June 1992 also had a child before June 1992 (65 percent or 3.0/4.6 in table 1) and 40 percent of these females who had married and had a birth before June 1992 had completed high school by 1994. However, this percentage is not statistically different than the rate for those who had a child but did not marry before June 1992, perhaps reflecting the relatively small sample size of such females.

In contrast, 95 percent of females who were neither married or had children by 1994 had completed high school (by earning a diploma or an alternative credential). Having a child before scheduled graduation was much more detrimental to eventual completion than getting married before graduation—58 percent of females who had a child before June 1992 but never married had completed by 1994, compared with 84 percent who had married before scheduled graduation but did not have children. Also, for those females who had a child by 1994, there was not a significant difference between females who did not marry and those that did before 1994. (66.1 percent vs 60.3)

While in table 4 there were no differences in the proportions of eighth-grade females who had completed high school as of 1994 by urbanicity and only a small difference between females in the South compared with females in the Northeast, the proportions did vary by race-ethnicity. For example, among all 1988 eighth-grade females, Hispanics were less likely than Asians and whites to have completed high school by 1994 (78 percent compared with 93 and 90 percent, respectively). Blacks were also less likely to have completed high school than whites (84 percent compared with 90 percent). While

this pattern remained for those who did not marry as of 1994, racial–ethnic differences in high school completion rates disappeared among those who did not have any children as of 1994.

There was also a direct relationship between high school completion rates and SES for all 1988 eighth-grade females. Although this relationship remained for those with no children, the differences were reduced.

The high school completion rates for whites and blacks who had a child before June 1992 did not differ significantly. But other racial–ethnic and socioeconomic variation in completion rates persisted among those who had given birth to their first child before June 1992. For example, for those who had a child by June 1992, 37 percent of Hispanic females completed high school, compared with 57 percent of white and 63 percent of black females. While two-thirds of females from middle SES families completed high school by 1994, 44 percent of females from low SES families did so. Finally, the high school completion rates among Hispanics, blacks, and whites who had married at least once by 1994 did not differ significantly, regardless of when they had married.

Conclusion

This report examined the relationship between the family formation patterns of females in the 1988 eighth-grade class and their high school completion rates as of 1994. The analysis revealed that the majority of the female members of this cohort had not begun to form their own families either by having a child or getting married by 1994. However, the racial–ethnic analysis revealed significant differences among groups. In particular, the results show that black and Hispanic females are more likely than their

white and Asian counterparts to begin their families at young ages. More specifically, 39 percent of black females and 34 percent of Hispanic females had given birth to their first child by 1994, a time when the majority of this cohort was approximately 20 years old. Black and Hispanic females were also more likely to have had their first child before June 1992, when the majority of this cohort was scheduled to complete high school. Given past research showing the strong association between early family formation, female-headed households, and poverty, these results may suggest later disadvantages for this portion of black and Hispanic female members of the 1988 eighth-grade class.

The analysis of the relationship between timing of first births and first marriages and high school completion also revealed racial–ethnic patterns. While racial–ethnic differences in high school completion rates are well known and were confirmed in the analysis of all 1988 eighth-grade females, the differences disappeared among those who had not had any children as of 1994. Black and Hispanic females who had not had any children as of 1994 were just as likely to complete high school as white and Asian females. However, among those females who had given birth to a child before June 1992, 37 percent of Hispanics and 44 percent of those from low socioeconomic backgrounds completed high school. Future research should examine whether these students became pregnant after they dropped out or whether they dropped out following their pregnancies. Furthermore, the results of this report confirm past research showing that females who postpone childbearing and marriage until they reach their early 20s are more likely to attain their high school diploma.

References

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Mott, F. and Marsiglio, W. "Early Childbearing and Completion of High School." *Family Planning Perspectives*, 17 (5) (1985): 234-237.

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Appendix: Technical Notes for NELS:88

The purpose of the National Education Longitudinal Study of 1988 is to collect trend data on students, dropouts, parents, teachers, and schools. The 1988 sample consisted of more than 24,000 eighth-grade students and more than 1,000 eighth-grade schools. For a detailed description of NELS:88, see Ingels et al. (1994).

Analysis sample

The results of this report can be generalized to the female members of the eighth-grade cohort of 1988. These students were identified with the variable **F3SEX**, and the analysis was performed using a final unweighted sample of 7,286. Of this total, 1,012 (312 prior to June 1992) had given birth and 1,399 (683 prior to June 1992) had been married by the spring of 1994. In addition, 600 (221 prior to June 1992) had both given birth and were married by the spring of 1994. Although included in the totals, American Indians/Alaskan Natives were excluded from the racial-ethnic analysis because the sample size was too small for

reliable estimates. Data were weighted with **F3QWTG8**.

Variables Used in the Analysis

The student background variables used in this analysis include **F3RACE** (student racial-ethnic identification); **G8URBN** (urbanicity); **G8REGON** (region); and **BYSESQ** (family SES). To produce three categories of SES, the two middle quartiles of **BYSESQ** were collapsed into one category to be identified as "Middle SES."

The variable **F3CHLLDT** was used to identify those students who had given birth to at least one child. This derived variable contains the date of birth for the respondent's first child. It also identifies those who had at least one child, but the child's birthdate was unknown. Finally, it identifies those who did not have any children. A respondent was considered to have had at least one child if she had a valid birthdate for this child, or if she was identified as having a child, but the birthdate was missing. To understand first marriage patterns, the variable **F3MARDT** was used. For the purpose of this report, respondents were considered to have been married at least once if they had a valid marriage date, or if they were identified as having been married, but the date of marriage was missing.

High school completion status was measured with the variable **F3DIPLOM**. For the purpose of this report, "Received GED" and "Received Certificate" were combined with "Received a Diploma" into one category to describe those who had completed high school as of 1994.

Statistical procedures

All comparisons discussed in the text of this report have been tested for statistical

significance to ensure that the differences did not occur by chance. For all multiple comparisons, the Bonferroni procedure was used.

The SUDAAN program was used to calculate all standard errors in order to adjust for the effects of the complex survey design of NELS:88.

Acknowledgments

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Table 1.—Percentage of 1988 eighth-grade females who had given birth to a child or had been married at least once as of 1994, by timing of event

First child	Total	First marriage			
		None by 1994	By 1994	Before June 1992	After June 1992
Total	100.0	85.9	14.1	4.6	9.5
None by 1994	78.2	72.4	5.8	0.6	5.2
By 1994	21.8	13.5	8.3	4.1	4.3
Before June 1992	11.2	7.1	4.1	3.0	1.1
After June 1992	10.6	6.4	4.2	1.0	3.2

NOTE: Details may not sum to totals due to rounding. Percentages for those having married or had children before or after June 1992 are for those with non-missing dates for these events.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.

Table 2.—Percentage of 1988 eighth-grade females who had given birth to a child or had been married at least once as of 1994, by timing of event and various background characteristics

Background characteristics	First child				First marriage			
	None by 1994	By 1994	Before June 1992	After June 1992	None by 1994	By 1994	Before June 1992	After June 1992
Total	78.2	21.8	11.2	10.6	85.9	14.1	4.6	9.5
Socioeconomic status								
Low	63.4	36.6	18.6	18.0	79.3	20.7	9.2	11.5
Middle	80.6	19.4	9.2	10.1	85.1	14.9	4.1	10.8
High	93.0	7.0	3.5	3.6	94.4	5.6	0.5	5.1
Race-ethnicity ¹								
Asian/Pacific Islander	91.0	9.0	4.8	4.2	93.5	6.5	1.1	5.4
Hispanic	66.4	33.6	17.3	16.3	79.8	20.2	6.7	13.5
Black, non-Hispanic	61.4	38.6	24.1	14.6	95.2	4.8	0.8	4.0
White, non-Hispanic	83.1	16.9	7.8	9.1	85.0	15.0	5.1	9.9
Urbanicity ²								
Urban	78.5	21.5	10.8	10.7	90.0	10.0	2.4	7.6
Suburban	82.4	17.6	8.3	9.3	87.6	12.4	3.7	8.7
Rural	76.0	24.0	12.1	11.9	80.3	19.7	7.2	12.4
Region ²								
Northeast	88.4	11.6	5.2	6.4	94.4	5.6	1.4	4.3
Midwest	79.4	20.6	9.6	10.9	87.5	12.5	3.8	8.7
South	74.1	25.9	13.8	12.2	79.1	20.9	7.4	13.5
West	80.2	19.8	9.1	10.7	88.2	11.8	3.0	8.7

¹Due to small sample sizes, American Indian/Alaskan Native students are not shown separately, but are included in the total.

²Details-for urbanicity and region may be inconsistent with the totals due to missing data on these variables for a portion of the eighth-grade cohort. These 1988 eighth-grade students were originally deemed ineligible in the base year data collection, but based on the first follow-up survey were deemed eligible and added to the eighth-grade cohort sample. See S. Ingels and Quinn, P., *Sample Exclusion in NELS:88*, U.S. Department of Education, National Center for Education Statistics, May 1996. NCES 96-723.

NOTE: Percentages for those having married or had children before or after June 1992 are for those with non-missing dates for these events.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.

Table 3.—High school completion rates as of 1994 for 1988 eighth-grade females by childbearing and marital status, by timing of event

First child	Total	First marriage			
		None by 1994	By 1994	Before June 1992	After June 1992
Total	87.6	90.2	71.8	48.3	83.2
None by 1994	94.3	94.7	88.4	83.8	88.8
By 1994	63.9	66.1	60.3	43.4	76.3
Before June 1992	54.1	57.9	47.4	39.6	70.5
After June 1992	74.1	75.2	72.5	54.7	78.2

NOTE: Percentages for those having married or had children before or after June 1992 are for those with non-missing dates for these events.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.

Table 4.—High school completion rates as of 1994 for 1988 eighth-grade females by childbearing and marital status, by timing of event and various background characteristics

Background characteristics	Total	First child				First marriage			
		None by 1994	By 1994	Before June 1992	After June 1992	None by 1994	By 1994	Before June 1992	After June 1992
Total	87.6	94.2	63.9	54.2	74.2	90.2	71.8	48.3	83.2
Socioeconomic status									
Low	75.8	87.0	56.6	44.0	69.6	79.4	62.0	45.6	75.1
Middle	91.3	95.8	73.1	66.4	79.2	93.6	77.7	54.7	86.5
High	97.8	98.2	92.0	—	89.4	98.3	88.5	—	90.2
Race-ethnicity ¹									
Asian/Pacific Islander	93.3	96.2	64.2	—	—	93.4	—	—	—
Hispanic	77.6	89.6	53.9	37.2	71.5	79.7	69.2	43.0	82.2
Black, non-Hispanic	83.8	93.0	70.1	63.0	81.8	84.1	76.4	—	87.2
White, non-Hispanic	90.0	94.9	65.8	56.7	73.6	93.2	71.7	51.0	82.4
Urbanicity ²									
Urban	89.7	95.0	71.3	63.7	79.0	91.3	74.6	41.2	85.3
Suburban	89.3	94.4	65.3	56.2	73.5	91.6	72.8	49.3	82.9
Rural	88.2	95.1	66.6	57.0	76.2	92.1	72.5	53.9	83.4
Region ²									
Northeast	91.9	95.0	68.6	52.0	82.1	93.3	68.1	—	73.8
Midwest	90.1	94.5	74.2	69.4	78.4	92.0	77.3	57.2	86.1
South	86.8	94.6	64.9	55.4	75.6	91.2	70.4	46.6	83.6
West	88.7	95.1	62.7	55.2	69.0	90.2	77.6	56.5	84.9

¹ Due to small sample sizes, American Indian/Alaskan Native students are not shown separately, but are included in the total.

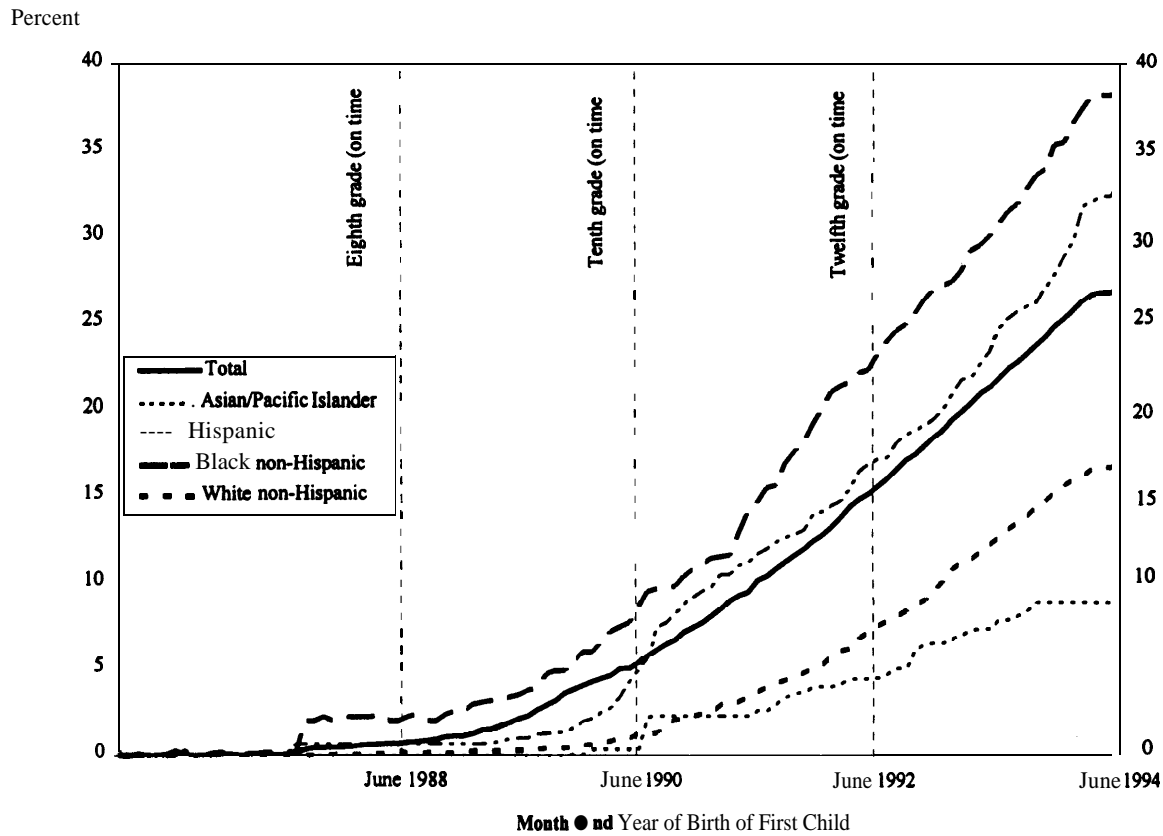
² Details for urbanicity and region may be inconsistent with the totals due to missing data on these variables for a portion of the eighth-grade cohort. These 1988 eighth-grade students were originally deemed ineligible in the base year data collection, but based on the first follow-up survey were deemed eligible and added to the eighth-grade cohort sample. See S. Ingels and Quinn, P., *Sample Exclusion in NELS:88*, U.S. Department of Education, National Center for Education Statistics, May 1996. NCES 96-723.

—Sample size too small for a reliable estimate.

NOTE: Percentages for those having married or had children before or after June 1992 are for those with non-missing dates for these events.

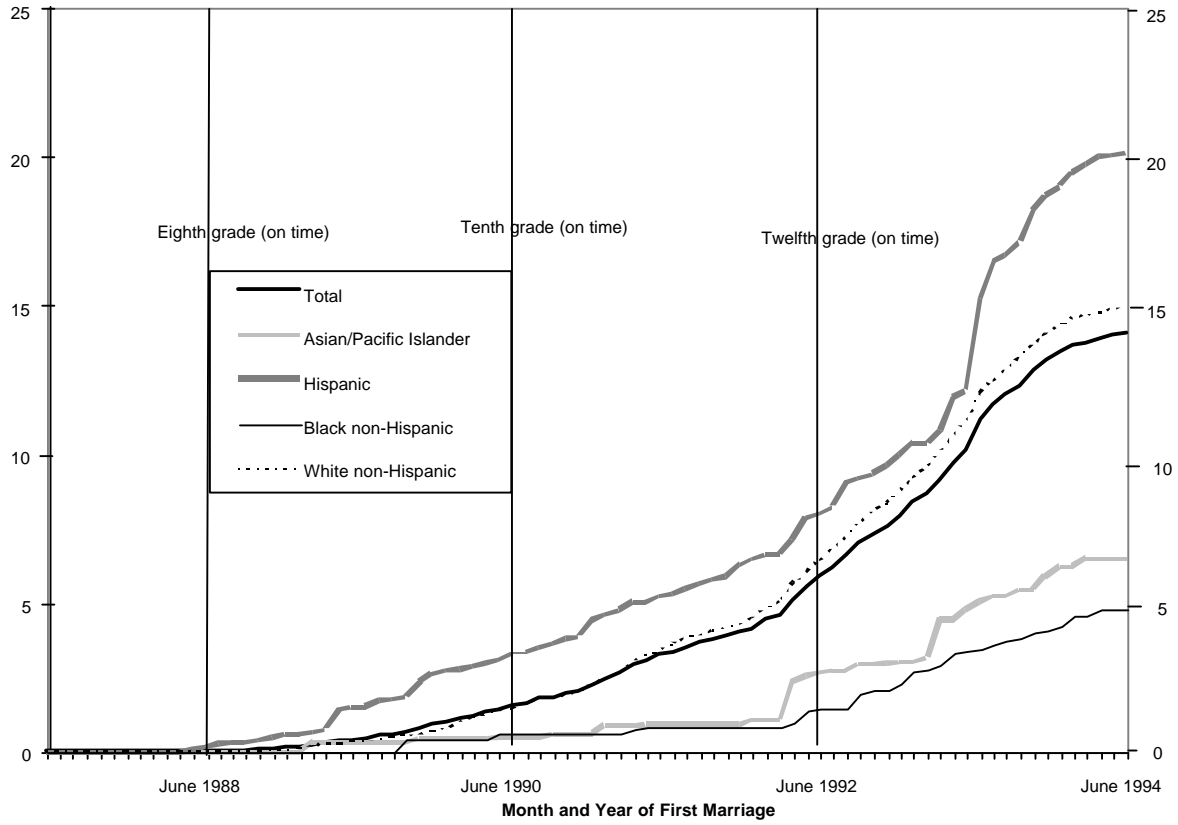
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.

Figure 1.—Cumulative percentage of 1988 eighth-grade females who had given birth to a child by June 1994, by date of first birth, by race-ethnicity



NOTE: Percentages for those having married or who had children are for those with non-missing dates for these events.
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.

Figure 2.—Cumulative percentage of 1988 eighth-grade females who had been married by June 1994, by date of first marriage, by race-ethnicity



NOTE: Percentages for those having married or who had children are for those with non-missing dates for these events.
 SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.

Table A.—Standard errors for table 1—Percentage of 1988 eighth-grade females who had given birth to a child or had been married at least once as of 1994, by timing of event

First child	Total	First marriage			
		None by 1994	By 1994	Before June 1992	After June 1992
Total	—	0.66	0.66	0.36	0.51
None by 1994	0.86	0.92	0.39	0.10	0.37
By 1994	0.86	0.92	0.49	0.34	0.34
Before June 1992	0.71	0.66	0.34	0.29	0.15
After June 1992	0.55	0.43	0.34	0.16	0.30

— Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.

Table B.—Standard errors for table 2—Percentage of 1988 eighth-grade females who had given birth to a child or had been married at least once as of 1994, by timing of event and various background characteristics

Background characteristics	First child				First marriage			
	None by 1994	By 1994	Before June 1992	After June 1992	None by 1994	By 1994	Before June 1992	After June 1992
Total	0.85	0.85	0.71	0.55	0.65	0.65	0.36	0.50
Socioeconomic status								
Low	1.58	1.58	1.33	1.29	1.30	1.30	0.87	0.95
Middle	1.13	1.13	0.97	0.80	0.90	0.90	0.50	0.77
High	1.37	1.37	1.24	0.62	0.87	0.87	0.16	0.80
Race-ethnicity								
Asian/Pacific Islander	2.72	2.72	2.10	1.40	2.01	2.01	0.49	2.01
Hispanic	2.66	2.66	2.29	1.86	2.16	2.16	1.14	1.98
Black, non-Hispanic	2.85	2.85	2.74	1.78	0.91	0.91	0.43	0.80
White, non-Hispanic	0.88	0.88	0.71	0.60	0.76	0.76	0.44	0.56
Urbanicity								
Urban	1.62	1.62	1.31	1.13	1.22	1.22	0.47	1.08
Suburban	1.41	1.41	1.20	0.80	0.96	0.96	0.55	0.72
Rural	1.25	1.25	0.94	1.04	1.26	1.26	0.77	0.97
Region								
Northeast	1.24	1.24	0.93	1.05	0.80	0.80	0.41	0.72
Midwest	1.83	1.83	1.63	1.12	1.21	1.21	0.71	1.00
South	1.37	1.37	1.19	1.03	1.20	1.20	0.72	0.96
West	1.71	1.71	1.29	1.26	1.46	1.46	0.72	1.21

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.

Table C.—Standard errors for table 3—High school completion rates as of 1994 for 1988 eighth-grade females by childbearing and marital status, by timing of event

First child	Total	First marriage			
		None by 1994	By 1994	Before June 1992	After June 1992
Total	0.67	0.66	2.08	3.50	2.12
None by 1994	0.56	0.58	2.30	6.22	2.48
By 1994	1.97	2.56	2.84	3.78	3.44
Before June 1992	2.13	2.94	3.73	7.25	4.30
After June 1992	3.15	4.28	3.86	4.25	5.54

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.

Table D.—Standard errors for table 4— High school completion rates as of 1994 for 1988 eighth-grade females by childbearing and marital status, by timing of event and various background characteristics

Background characteristics	First child					First marriage			
	Total	None by 1994	By 1994	Before June 1992	After June 1992	None by 1994	By 1994	Before June 1992	After June 1992
Total	0.61	0.61	1.96	3.14	2.31	0.61	2.08	3.50	2.12
Socioeconomic status									
Low	1.57	1.62	2.61	3.67	3.43	1.67	3.41	4.58	4.11
Middle	0.78	0.70	2.74	4.60	3.43	0.76	2.79	6.01	2.70
High	0.65	0.66	3.12	—	5.43	0.61	5.27	—	5.60
Race-ethnicity									
Asian/Pacific Islander	3.18	3.00	12.91	—	—	3.40	—	—	—
Hispanic	2.49	1.94	4.99	5.52	5.81	2.63	4.67	6.78	5.05
Black, non-Hispanic	2.12	2.45	3.96	5.66	5.20	2.18	8.20	—	4.64
White, non-Hispanic	0.70	0.58	2.61	4.60	3.00	0.60	2.48	4.19	2.59
Urbanicity									
Urban	1.09	1.98	3.17	5.21	4.21	1.11	4.88	8.56	4.53
Suburban	1.01	0.91	3.67	7.18	3.75	1.04	3.71	6.57	3.39
Rural	1.01	0.77	2.78	4.01	3.71	0.87	2.91	4.66	3.40
Region									
Northeast	1.18	1.16	5.03	9.18	5.38	1.17	7.38	—	8.21
Midwest	1.28	1.31	3.59	6.72	3.86	1.30	4.40	9.90	3.29
South	1.00	0.77	2.82	4.50	3.61	0.97	2.93	4.27	3.39
West	1.41	0.89	4.39	6.21	5.80	1.41	4.26	9.67	3.87

—Sample size too small for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First, Second, and Third Follow-up Files, 1994.