The Marital Behavior of Single Mothers in Comparative Perspective

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Extended abstract

The dramatic increase in non-marital births in the United States has been well-documented. The percent of births to unmarried mothers has doubled since 1980, and now accounts for nearly 40% of all births. In 2006, 1.6 million mothers had children out of wedlock, a number that has tripled in the last twenty five years (Martin et al. 2009). Much of this increase has been concentrated among minority and low-income populations: Wu (2008) estimates that 61% of black women born between 1965 and 1969 will have a non-marital birth, up from 25% for black women born prior to 1925.

What has received far less attention, however, is how the marital behavior of unmarried mothers has changed over time, and how transitions into marriage may vary by race, ethnicity and socioeconomic status. Suggestive evidence that there has been a shift in the marital behavior of single mothers comes from Ellwood and Jencks (2004), who find that there has been an increase in the proportion of women marrying with a child who is at least three years old. Other research has also indicated that relative to women who do not experience a nonmarital birth, women with a nonmarital birth are less likely to marry (Bennett, Bloom and Miller 1995; Graefe and Lichter 2002) and that women of color are less likely to marry than are white women following a birth (Carlson, McLanahan and England 2004; Manning 1993). But no study to date followed cohorts of single mothers as they transition to marriage, or used survival analysis techniques to examine the marital behavior of single mothers more systematically.

The aim of this study is address this gap in the literature by analyzing the marital transitions of nearly 20,000 unmarried mothers, who gave birth between 1940 and 2004. Data come from six waves of the Survey of Income and Program Participation (SIPP), a nationally representative sample of the non-institutionalized population in the US. The study compares how marital transitions have changed across time, both by mother's birth year and her child's birth

year. Transitions are further classified according to the mother's race and ethnicity and her educational attainment. I also compare the relative odds for a second non-marital birth versus a marriage.

This study is motivated by evidence that suggests that marriage and childbearing are becoming increasingly disconnected, both temporally and theoretically. In part because of the emergence of norms that sanction sexual intimacy and childbearing outside of marriage (Cherlin et al. 2008; Thornton and Young-DeMarco 2001), the once strong connection between marriage and fertility has been weakened considerably (Ellwood and Jencks 2004). Couples who desire to have children, or who face an unplanned pregnancy they do not wish to abort, no longer face a strong normative "deadline" for legally tying the knot. Attitudes affirming the decoupling of marriage from childbearing has been found in several qualitative studies, which report that individuals view marriage and fertility as distinct processes, with differing motivations and expectations (Edin and Kefalas 2005; Gibson-Davis, Edin and McLanahan 2005).

Another motivation for this study is to inform the discussion regarding the potentially negative effects of one parent families on child development. To date, we know little about the duration of the exposure, as we do not know how long children born to an unmarried mother can expect to remain in a single parent family. Duration may affect child development in two ways: first, shorter exposures to single parent families may be preferred over longer exposures; and second, the passage of time increases the likelihood that the mother marries someone other than the biological father.

Data

Data come from the 1991, 1992, 1993, 1996, 2001, and 2004 panels of the Survey of Income and Program Participation (SIPP). The SIPP is a longitudinal sample of the noninstitutionalized civilian population, designed to provide policy makers and researchers with extensive information about individuals' economic well-being (individuals are interviewed three times a year at four-month intervals over a multiyear period). Once every panel, the SIPP asks a special module on marriage and fertility. Women in the panel are asked about their marital and fertility histories (men are not asked about their fertility), including the date of their first marriage, date of their first divorce, the date of their first birth, and the date of their last birth (if individuals had more than two births, only the first and second births were recorded). Basic demographic data, such as race, ethnicity, education, and mother's age at the time of marriages and births are also collected.

In order to construct the sample, I compared year of first marriage to year of first birth. The SIPP did not report the month of birth or of marriage, so a birth was classified as non-marital if it occurred in the prior calendar year to a marriage. A birth that occurred in the same year as a marriage was classified as marital. To measure a women's relative educational attainment, I compared her level of education to the educational attainment of women born within five years of the woman's birth date (educational attainment was calculated over all individuals, not just those with a non-martial birth). I then divided the sample into those who were in the bottom educational third (for her cohort), the middle educational third, and the top educational third. The sample was restricted to women who were at least 14 when they had a non-marital birth, and were either non-Hispanic white, non-Hispanic black, or native born Hispanic (Hispanics were limited to those born in the United States to limit the influence that

increased immigration would have on marriage behaviors). This resulted in total sample of 18,806 non-marital births (93% of all non-marital births observed).

I use life table analyses and Cox regression to estimate the time between a first birth and a first marriage. Women enter into the risk pool at the time when they first give birth, and are observed until they either marry or are censored by the end of the observation period. An additional set of models used multinomial logistic regression to compare the odds of having a second birth relative to getting married or staying single. Regressions include the year of the child's births (divided into five ranges: 1940-1959 (omitted category), 1960-1969, 1970-1979, 1980-1989, and 1990-2004), the age of the mother at the time of the birth (14-19 (omitted category), 20-24, 25-29, 30-34, 35 and above), the mother's individual educational attainment (no high school diploma (omitted category), high school diploma, some college, or college graduate), and a dichotomous indicator for panel membership. Models that are not broken down into racial and ethnic groups also include controls for race and ethnicity.

Descriptive statistics of the sample are presented in Table 1, divided by the year of the child's birth. As the top portion of the table indicates, the number of births that are non-marital has increased over time, ranging from 15% for births that occurred prior to 1959 to 27% for births that occurred after 1990. And as the bottom portion of the panel indicates, the sample is becoming less negatively selected as time passes: women with the most recent births, compared to the women with the earliest births, were decreasingly likely to have dropped out of high school or have been a teenager when gave birth. They were also much less likely experience a second non-marital birth, but this most likely reflects the fact that they were observed for a much shorter amount of time.

Results

Table 2 presents the cumulative proportion of single mothers who marry within 20 years of a birth, by racial and ethnic group. Two time periods are presented: those who gave birth prior to 1960 (referred to as the early period) and those who gave birth after 1980 (the late period).

As the table indicates, the majority of single mothers married, and for all groups except blacks, there was relatively little change in the proportion of marriages between the early and late time periods. For whites, the proportion of mothers in the early period who married within 20 years was 91%; by the late period, this percentage was 87%. Rates of marriage among native-born Hispanics were comparable to those of whites, though slightly lower. Blacks showed a large decline (30%) in the marriage rate, but still, a majority of mothers who gave birth after 1980 married (54.4%).

Interestingly, though, while the majority of mothers do marry, results indicate a noticeable decline in the number of marriages that happen within a few years of the child's birth. For example, for whites who gave birth prior to 1960, nearly 64% had married by the time the child was five. For whites who gave birth after 1980, only 47% had married within the same time frame, a 27% decline. For native-born Hispanics, the percentage of mothers who married within five years of a child's birth declined by 36%, from 54% to 35%. And for blacks, where the overall decline in marriage is greatest, the decline in early marriages is steepest as well: the marriage rate for mothers within five years of the child's birth had fallen in half, from 46% to 21%. In fact, the decline in marriage for blacks is evident immediately after the birth, as only 5% black mothers in the late period marry in the first year of the child's life, compared to 15% in the early period.

Another way to view this increased delay between first marriage and first birth is to look at how old the "average" child is before her mother marries. These results are presented in Table 3, which presents the median survival time between first birth and first marriage, by birth cohort, for whites, blacks, and native born Hispanics. According to the table, the median time for whites between birth and marriage has increased from four years for births before 1960 to six years for births from 1970 onward; for native born Hispanics, it has increased from 5 to 10 and then drops to 8 years. The increase is again most noticeable for blacks, where the median survival time is 7 years for births before 1960, and increases to 21 years for births that occur between 1980 and 1989. A median survival time for black births that occur after 1990 could not be calculated because more than 50% of mothers remain unmarried.

To see how relative educational attainment affects marriage probabilities, Figures 1 and 2 compares the cumulative proportion of mothers who marry, by race, for those in the bottom educational third (Figure 1) and top educational third (Figure 2) (results for Hispanics are not presented, but are similar to those for whites). The figures compare marriages that occur within 20 years for births that happened before 1960 to those that happened after 1980.

Looking across the two figures, the evidence suggests that the decline in marriage among single mothers is larger by racial group than it is by education. Relatively little decline in the probabilities of marriage exist for whites, regardless of their educational status. For blacks, though, noticeable declines exist for both educational groups (though they are substantially larger for those with less education; see Figure 1). As was indicated by the previous results, the line depicting marriage probabilities for blacks (and for whites) is noticeably flatter for births occurring after 1980, again indicating an increasing likelihood that black mothers are delaying marriages until several years after the birth.

Table 4 presents Cox regressions on marriage, by race and ethnicity and by relative educational attainment (there were too few Hispanics to divide the sample into low and high educational groups). Coefficients are presented as odds ratios. Models also include controls for mother's individual educational attainment and panel membership (results not shown).

Not surprisingly, when considering marriage probabilities by the year of the child's birth, blacks showed the largest decline in marriage odds. For the full black sample, when compared to mothers who gave birth before 1960, mothers who gave birth after 1990 had odds of marriage that were 60% lower (OR = .40, $p < .001$). Both low and high education blacks showed declines in marriage odds, though the decline was particularly great for blacks in the bottom educational third (OR = .31, $p < .001$). White and native-born Hispanics had relatively modest declines in marriage odds (OR = .78 for white, $p < .001$, and OR = .71 for Hispanics, $p < .05$). And in contrast to blacks, the decrease in marriage for whites was driven almost exclusively by less well educated mothers, whose marriage odds were 38% lower for births occurring after 1990 relative to births occurring before 1960.

The table also indicates that being younger when a mother gives birth does not necessarily increase the odds that she will marry. With the exception of whites in the bottom educational third (and 20-24 year old black mothers), age of mother at the time of the birth was not significantly related to marriage odds. For less well educated whites, mothers who gave birth after the age of 20 were generally less likely to marry than were mothers who gave birth as a teenager.

Table 5 presents the results of the multinomial logistic regression, which compares the odds of having a second non-marital birth relative to remaining unmarried (Panel A) and the

odds of having a second non-marital birth relative to getting married (Panel B). Coefficients are presented as Relative Risk Ratios (RRR).

With the exception of Hispanics, all groups were less likely to have a second non-marital birth, relative to remaining single (Panel A). As compared to mothers who gave birth prior to 1960, white mothers who gave birth after 1990 had odds that were 50% lower; for black mothers, odds had decreased by 63%. This decrease in odds was evident across educational groups, though results were much less pronounced for blacks in the top educational third. When the odds of having a second non-marital birth were compared to the odds of getting married (Panel B), all groups were much more likely to have a second out-of-wedlock birth. This decline was particularly noticeable for less well-educated blacks. Relative to having a second out-of-wedlock birth, the odds of a marriage occurring for mothers who gave birth after 1990 were 93% lower than were odds for someone who gave birth prior to 1960.

Discussion

This study addresses a gap in the literature by analyzing the marital transitions of unmarried mothers. Using data from a nationally representative sample of births that spans six decades, I find that the overall likelihood of marriage for unmarried mothers has decreased, though this varies substantially by race, ethnicity, and educational attainment. Over the study time period, whites show relatively little decline in the likelihood of marrying within 20 years of birth, but the odds of whites marrying within five years of a birth have declined by nearly a third. Much of the decline in white births is driven by women with less education, as white women in the bottom educational third who gave birth after 1990 were 12% less likely to marry than were

white women who gave birth prior to 1960. Results for native-born Hispanics are similar to those for whites, with fewer marriages occurring immediately after the birth of a child.

In contrast to the relative modest declines in marriage for whites and Hispanics, results indicated large declines in the marriage likelihood of blacks. When comparing births that occurred prior to 1960 to those that occurred after 1980, nearly one-third fewer black women have married within 20 years. Like Whites and Hispanics, much of this decline occurs because of an increased delay between first birth and first marriage: blacks giving birth before 1960 were three times more likely to marry by the child's first birth than were blacks giving birth after 1980. In part because of this delay, the median survival time between a first marriage and a first birth has tripled from 7 to 21 years. Furthermore, this decline in marriage among blacks is not limited to women with less education. The odds of marriage for a high educated black woman who gave birth after 1990, relative to a high educated black women giving birth before 1960, decreased by 45%. Nevertheless, the largest declines in marriage for any group examined were for black women in the bottom educational third. The odds of a less well educated black women marrying decreased over the study's time frame by 70%.

Though all groups were less likely to have a second non-marital birth as compared to women giving birth forty years ago, all groups were also less likely to marry relative to having a second non-marital birth. Again, less well educated blacks had the largest declines. As compared to black women who had their first non-marital birth prior to 1960, black women who gave birth after 1980 were 93% more likely to have a second non-marital birth as opposed to getting married.

It is important to note, though, even though marriage rates have declined, most unmarried mothers will marry. It is not, then, that mothers who give birth out-of-wedlock are eschewing marriage; more accurately, they are delaying marriage (Ellwood and Jencks 2004). For many mothers, particularly African Americans, many years will pass between a first birth and a first marriage. These results therefore underscore the theoretical separation that has been found in several qualitative studies of low income couples, in which individuals indicate that births and marriage have become separate processes, governed by different motivations and expectations (Edin and Kefalas 2005; Gibson-Davis et al. 2005). They also call into question traditional theoretical models of family formation (e.g., Becker 1981), in which it is assumed that fertility follows from marriage. And perhaps most importantly, they highlight how the experiences of children born into single parent homes have changed over time. Most likely, today's children born to unmarried mothers will be several years old before a marriage occurs, and given the fragility of many non-marital unions (Manning 2004), it seems likely that many of these unions will involve a step-parent. The effect of such unions on a child's well-being remains a matter of dispute, but it is clear that fewer children born to an unmarried mother will experience a rapid transition into a two-parent household.

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Table 1
Descriptive Statistics of Births, by Year of Unmarried Birth, SIPP Panels 1991, 1992, 1993, 1996, 2001, and 2004 (n = *76,928* all births; n = *19,875* non-marital births)

	1940-1959	1960-1969	1970-1979	1980-1990	1990-2004
All births					
% non-marital	14.8	16.9	21.4	25.6	27.1
Unweighted n	*7,829*	*15,282*	*16,055*	*16,962*	*16,889*
Non-marital births					
Race/ethnicity (%)					
White	55.8	52.2	48.4	50.4	48.3
Black	32.1	35.2	34.6	31.3	29.9
Hispanic	12.1	12.6	16.9	18.4	21.8
Other race/ethnicity	43.5	27.6	23.6	21.6	22.8
No high school diploma (%)	43.6	27.8	23.3	21.5	22.5
Age					
At birth of child	18.0	18.7	19.0	20.2	20.7
At marriage	25.1	25.4	26.2	26.0	24.7
At interview date	57.5	49.4	41.9	34.2	26.5
% teen births	67.6	63.5	62.5	51.3	50.1
% 2nd non-marital birth	94.7	89.3	83.5	77.0	42.6
Unweighted n	*1,201*	*2,756*	*3,787*	*5,021*	*6,041*

All statistics are weighted to be nationally representative.

Table 2
Cumulative Proportion of Unmarried Mothers who Marry, by Year of Child's Birth

	Years Since Birth								
	1	2	3	4	5	10	15	20	Unweighted *n*
Non-Hispanic White									
Early: 1940 - 1959	20.6	33.6	47.8	57.3	63.7	82.5	88.9	91.0	*641*
Late: 1980 - 2004	13.9	24.3	32.5	39.9	46.5	70.4	81.1	87.0	*5505*
Non-Hispanic Black									
Early: 1940 - 1959	15.3	24.5	33.7	39.4	45.8	64.7	72.3	77.8	*417*
Late: 1980 - 2004	5.0	8.4	13.2	17.2	21.1	37.2	48.5	54.4	*3497*
	2.054			0.6					
Native born Hispanic									
Early: 1940 - 1959	9.1	18.0	30.0	43.9	54.2	72.8	84.1	88.5	*85*
Late: 1980 - 2004	9.5	16.4	25.2	30.3	34.7	55.2	68.3	75.6	*956*

Table 3
Median Survival Time Until Marriage, by Race and Ethnicity and Year of Birth of Child

	White	Black	Hispanic[a]
1940-1959	4	7	5
1960-1969	4	7	8
1970-1979	6	12	9
1980-1990	6	21	10
1990-2004	6	.[b]	8

[a]Only includes native-born Hispanics

[b]Median survival time not calulable because more than 50% of cases remained unmarried.

Figure 1: Cumulative Hazard of Marriage For Women in Bottom Educational Third, by Race

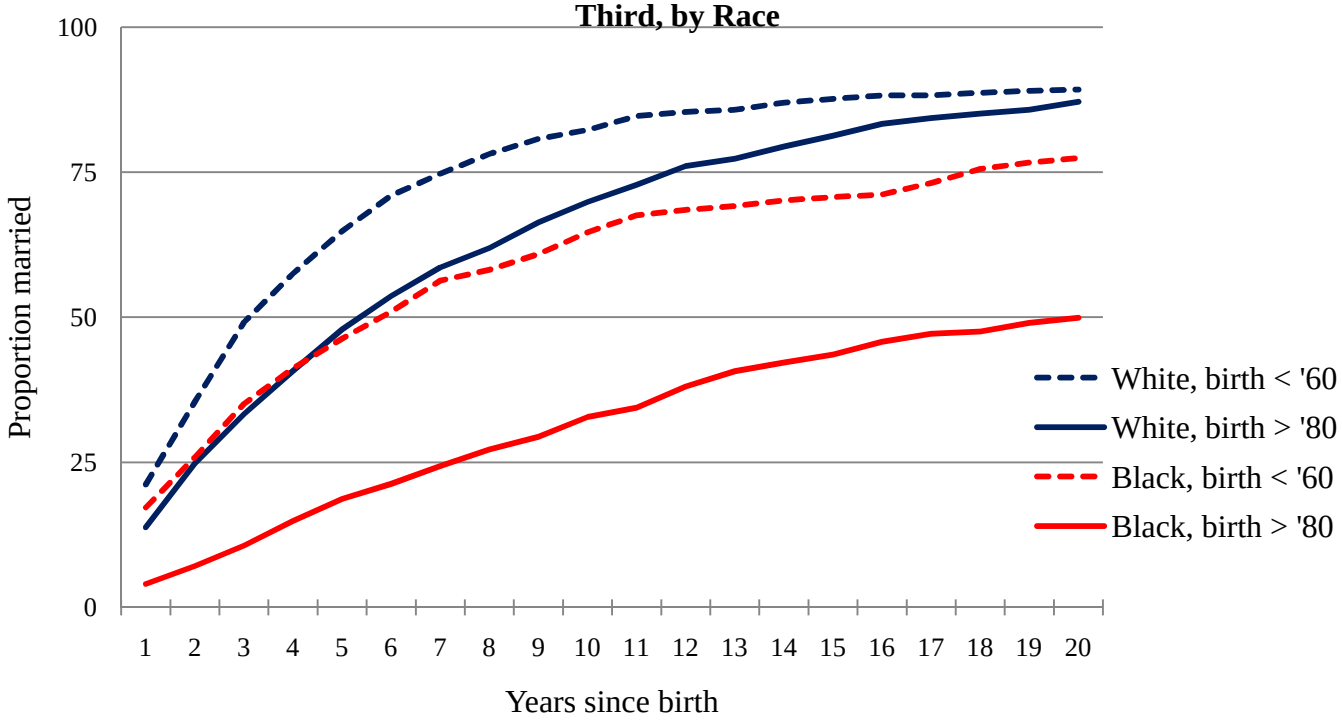

Figure 2: Cumulative Hazard of Marriage For Women in Top Educational Third, by Race

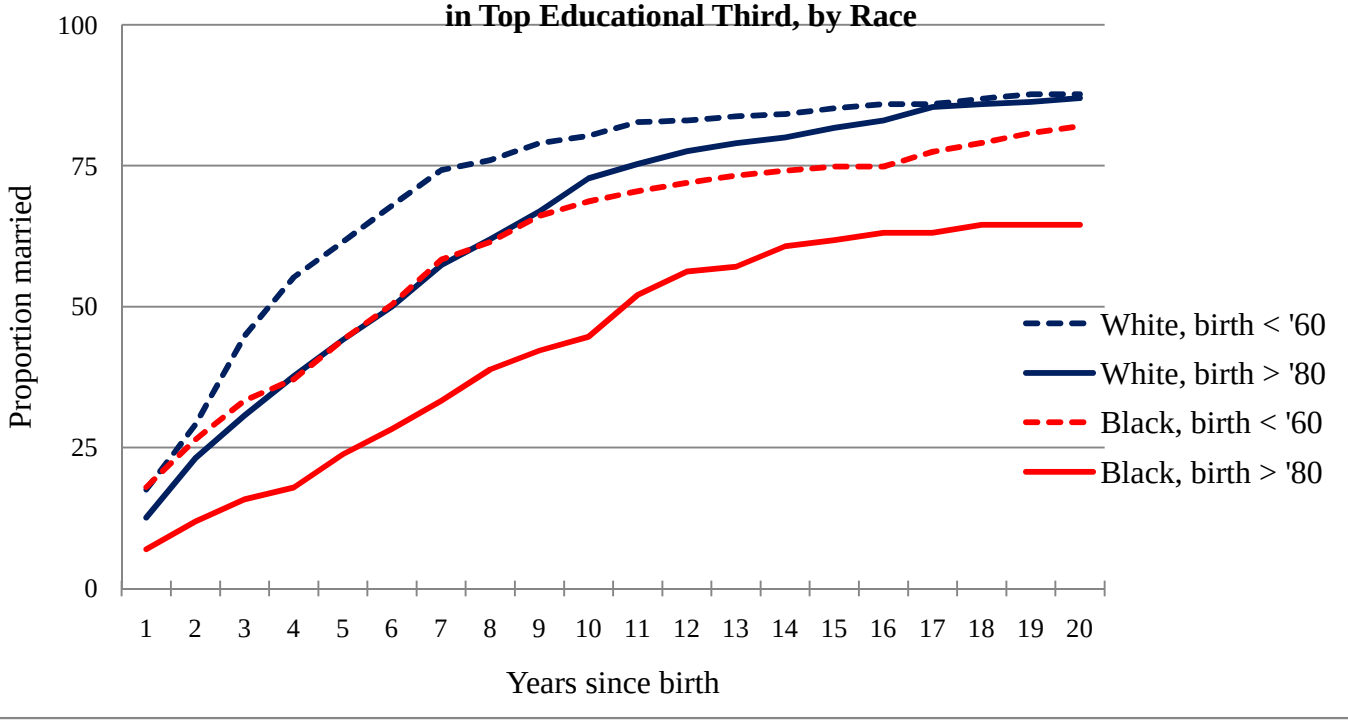

Table 4
Hazard Ratios From Cox Proportional Regression for Marriage, by Race and Ethnicity and Educational Level

	Non-Hispanic White			Non-Hispanic Black			Hispanic[a]
	Full	Low ed[b]	High ed[c]	Full	Low ed[b]	High ed[c]	Full
Year of child's birth							
< 1960 (ref)	--	--	--	--	--	--	--
1960-1969	.96	.96	.92	.82**	.71**	.82	.68*
1970-1979	.79***	.77**	.74**	.60***	.54***	.56**	.67*
1980-1990	.77***	.77**	.87	.48***	.43***	.53***	.65**
1990-2004	.78***	.72***	1.01	.40***	.31***	.54**	.71*
Age range of mother							
14-19 (ref)	--	--	--	--	--	--	
20-24	.87***	.82***	1.01	.84***	.83**	.84	.93
25-29	.84***	.78***	1.00	.87	.82	1.00	.79
30-34	.74***	.68**	.86	.79	.79	.62	1.10
> 35	.82	1.19	.83	.61	.24	.84	1.61
Unweighted *N*	9,284	4,755	1,801	6,396	3,458	879	
Person-years	58,636	28,753	13,221	64,364	36,974	8,119	

*p ≤ .05 **p ≤ .01; ***p ≤ .001

[a]Only includes native born Hispanics

[b]Low ed: Mother's educational attainment is in bottom third of educational distribution for her birth cohort.

[c]High ed: Mother's educational attainment is in top third of educational distribution for her birth cohort.

Low ed and high ed sample sizes will not equal full sample sizes as the full sample size includes women in the middle of the educational distribution.

All models control for mother's educational status and cohort.

Table 5
Relative Risk Ratios (RRR) from Multinomial Logit, Second Non-Marital Birth vs. Remaining Unmarried or Getting Married, by Race and Ethnicity and Educational Level

Panel A: Relative to remaining single

	Non-Hispanic White			Non-Hispanic Black			Hispanic[a]
	Full	Low ed[b]	High ed[c]	Full	Low ed[b]	High ed[c]	Full
Year of child's birth							
< 1960 (ref)	--	--	--	--	--	--	--
1960-1969	.82*	.85	.85	.78	.79	.77	1.14
1970-1979	.87	.93	.70	.91	.81	.85	1.40
1980-1990	.74**	.57***	.39***	.63**	.45***	.98	.93
1990-2004	.50***	.39***	.21***	.37***	.29***	.60*	.63

Panel B: Relative to marrying

	Non-Hispanic White			Non-Hispanic Black			Hispanic[a]
	Full	Low ed[b]	High ed[c]	Full	Low ed[b]	High ed[c]	Full
Year of child's birth							
< 1960 (ref)	--	--	--	--	--	--	--
1960-1969	.95	.70**	.69	.89	.59**	.81	.93
1970-1979	.85	.53***	.55	.82	.42***	.75	.83
1980-1990	.67***	.22***	.26***	.55***	.15***	.83	.49*
1990-2004	.43***	.13***	.16***	.28***	.07***	.57*	.33**

Unweighted *N*	9,284	4,755	1,801	6,396	3,458	879	1,629
Person-years	96884	41858	27019	51378	27866	7879	12802

*p ≤ .05 **p ≤ .01; ***p ≤ .001

[a]Only includes native born Hispanics

[b]Low ed: Mother's educational attainment is in bottom third of educational distribution for her birth cohort.

[c]High ed: Mother's educational attainment is in top third of educational distribution for her birth cohort.

Low ed and high ed sample sizes will not equal full sample sizes as the full sample size includes women in the middle of the educational distribution.

All models control for age of mother at birth, mother's educational status, and cohort.