MOTHERS' UNION FORMATION FOLLOWING A NONMARITAL BIRTH: DOES MOTHER KNOW BEST?*

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ABSTRACT

This paper uses data from the Fragile Families and Child Wellbeing Study to examine mothers' union formation patterns following a nonmarital birth. The results indicate that five years post-birth, nearly two-fifths of unmarried (at birth) mothers are romantically involved with the focal child's father, about 30% are involved in a new romantic relationship, and 30% are not in any romantic relationship. Mothers' age, race/ethnicity, nativity status, birth parity, baseline relationship status, and trust of men are significantly associated with relationship status in the years following a nonmarital birth. Repartnering appears to be associated with upward mobility for mothers in terms of their partners' human capital and pro-social behavior. These findings are consistent with Edin and Kefalas' (2005) argument that unmarried mothers continue to search for 'good partners' after their children are born, and that many of these women are successful in their searches.

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Dramatic changes in U.S. family demography over the past half century have led to an increasing proportion of births occurring to unmarried women—37 percent of all births today occur outside of marriage, up from five percent in 1960 (Hamilton, Martin, and Ventura 2006; Ventura and Bachrach 2000). Whereas in the past, most women married and then had children, today many women are having children first and then continuing their search for a suitable partner (Bumpass 1990; Ellwood and Jencks 2004). This shift in the order of family formation patterns has been driven by declines in earnings and employment for low-skilled adults, particularly men (Wilson 1996), by increasing normative acceptance of single motherhood (Axinn and Thornton 2000), and by higher expectations about what is required for a successful marriage (Cherlin 2004). The growth in nonmarital childbearing, however, does not necessarily indicate a rejection of the institution of marriage. The symbolic value of marriage remains high, as most unwed parents believe that marriage is important and desirable, and many aspire to marry in the future (Cherlin 2004; Edin and Kefalas 2005; Gibson-Davis, Edin, and McLanahan 2005). Rather, the growth in nonmarital childbearing appears to signal a shift in the sequencing of family events, at least for those of lower socioeconomic status.

The new pattern of union formation after a nonmarital birth has led to a variety of family forms among women. While some mothers remain in stable cohabiting relationships or move into stable marriages with their child's biological father, others break up and remain in single-mother families, and still others break up and form households with new partners. Previous research provides little information about this process, other than the knowledge that unwed mothers' decisions about union formation and union dissolution lead to a good deal of instability

in family life and often result in greater complexity in family relationships and living arrangements (Osborne and McLanahan 2007, Carlson and Furstenberg 2006). The consequences of this instability and increasing complexity for children and their parents are unclear. On the one hand, a growing body of research suggests that partnership changes (including entrances as well as exits) are associated with increases in maternal stress and reductions in children's wellbeing (Cooper et al. 2007; Fomby and Cherlin 2007; Osborne and McLanahan 2007; Wu and Thomson 2001). On the other hand, if mothers are choosing to repartner with "higher-quality" men (especially men with whom they can establish stable, positive unions), then short-term instability may ultimately result in more household resources and higher-quality parenting, both of which could translate into positive long-term outcomes for children. Finally, whereas living in a stable single-mother family may protect mothers from the stresses that arise from union disruption, it may also increase material hardship and financial stress which are known to negatively affect wellbeing.

Understanding this increasingly complex family formation process is important to sociologists both because the family is one of society's most basic institutions and retains significant responsibility for the rearing and socialization of children, and because family structure plays an important role in stratification processes in the United States. The new family formation patterns described above are disproportionately concentrated among minority families and those with relatively low levels of educational attainment. Insofar as the changes in family formation after a nonmarital birth have negative consequences for parents and their children, such patterns are likely to exacerbate socioeconomic inequality and undermine children's intergenerational mobility (Martin 2006; McLanahan 2004).

This paper uses data from the Fragile Families and Child Wellbeing Study to examine union formation processes among unwed mothers during the first five years following a nonmarital birth. We focus on union formation among mothers in particular because most children born to unwed parents live with their mothers throughout their early childhood years, and mothers' union formation patterns are likely to have particularly important consequences for children. We address the following three research questions: (1) What types of romantic relationships are mothers in one, three and five years after a nonmarital birth?; (2) What factors predict mothers' relationship status following a nonmarital birth?; and (3) When mothers do form new relationships, how do the characteristics of their new partners compare with those of the focal child's biological father? More specifically, do mothers repartner with men of higher or lower 'quality' (based on both socioeconomic and social-psychological capacities)?

THEORETICAL PERSPECTIVES

Our analysis of mothers' union formation following a nonmarital birth is guided by marital search theory, which draws heavily on micro-economics' job search theory and provides a useful framework for thinking about the mate selection process following a nonmarital birth. Search theory, generally, is a way of explaining the process by which individuals choose among multiple options in the absence of perfect information about these options. George Stigler (1961, 1962) and J.J. McCall (1970) were two of the first economists to apply search theory to the field of labor economics, using this theory to describe the processes of searching for jobs and competitive prices in the marketplace. While information is crucial to rational decision making in both cases, obtaining such information involves costs (both the direct costs involved in obtaining the information and the indirect costs—sometimes referred to as opportunity costs—involved in

delaying a decision in favor of continued searching). Increasing information and knowledge accumulated by job (and bargain) seekers over time will normally result in better choices. This improvement in the outcome (e.g., the job accepted), however, is counterbalanced by the time and costs incurred through the search process. Given the costs associated with searching, job seekers are not likely to keep searching until they have found the best job possible. Rather, job seekers have a "reservation wage," or a minimum acceptable wage for the kind of job they would be willing to take. The rational decision, in this process, is to keep searching until one has found a job that meets or surpasses one's reservation wage.

In recent decades, scholars have expanded the application of job search theory to include non-economic processes such as marriage (Becker, Landes and Michael 1977; England and Farkas 1986; Oppenheimer 1988). According to marital search theory, just as job seekers bring certain skills and experiences with them to the labor market and just as they have a reservation wage, "mate seekers" have qualities that make them more or less attractive on the marriage market and minimum standards regarding the characteristics of partners with whom they would be willing to form a union. Although continuing to search for a suitable mate has costs, making the wrong choice may be even more costly. The benefits to searching will be higher when the union is expected to last a long time, when uncertainty about the characteristics (especially economic characteristics) of prospective partners is high, and when the standards for a suitable mate are high. The costs of searching are likely to vary across individuals, based on the importance they place on being married (the opportunity costs of continued searching will be higher for those who strongly prefer to be married), and their own weighing of the costs of a prolonged search versus the potential benefits of making a better ultimate match (England and Farkas 1986). Oppenheimer (1988) employs marital search theory as a way of explaining delays

in the timing of marriage. Longer transitions to adulthood and greater uncertainty in the labor market result in less available information about prospective partners—if earnings potential is an important indicator of partner quality, then it is difficult to make a decision about a prospective partner before that partner has begun (or at least chosen) his or her ultimate career path. This increasing uncertainty results in delays in marriage. Oppenheimer also argues that cohabitation is a way of dealing with uncertainty in the marriage market insofar as it provides some of the benefits of marriage but is less costly in the event of failure; living together may also provide an opportunity for couples to evaluate their compatibility for marriage (Oppenheimer 1988; 2000).

Ethnographic work by Edin and her colleagues (Edin and Kefalas 2005; Gibson-Davis et al. 2005) underscores the salience of marital search theory for understanding the mate selection process following a nonmarital birth. According to this work, despite having had a child outside of marriage, unmarried mothers place a high value on marriage and view divorce as a serious failure. Moreover, mothers hold high standards for the men they view as suitable marriage partners and are unwilling to settle for a low-quality man, even if he is the father of their child (Gibson-Davis et al. 2005).

At the same, time, the economic opportunities of men who father children outside marriage—and who are the likely partners of unmarried mothers—have declined substantially during the past three decades due to changes in macroeconomic factors that have reduced the demand for less-skilled workers (Blank 1997; Wilson 1987). Thus, while the standard for a successful marriage has remained constant among women, the ability of their prospective partners to support a family has become increasingly uncertain. Oppenheimer argues that young men's declining wages and deteriorating labor market position are likely related to delays in marriage for both men and women (Oppenheimer 1988). In sum, mothers continue to search for

a suitable marriage partner after they have children, but they do not marry unless they find a man who meets their high standards. The result is delays in marriage and multiple partnership changes over time. This continued search process is facilitated by increasing normative acceptance of single motherhood, which reduces the opportunity costs involved in prolonging the search for a suitable spouse. Consistent with Oppenheimer's theory about cohabitation as a testing ground for marriage, Edin and Kefalas (2005) find that the standards for cohabitation are lower than those for marriage and that mothers may cohabit while they 'wait and see' if a man is ready for marriage.

Hypotheses

Marital search theory points to several hypotheses regarding union formation following a nonmarital birth. First, this theoretical perspective predicts that union instability will be relatively common in the years after a nonmarital birth, as mothers continue to search for a suitable partner. It also tells us that as mothers gain more information about the biological fathers of their children (and greater maturity themselves), some will marry the father, and others will end their relationships. New partnerships will begin, and some of these new partnerships will transition to marriage. Theory also suggests that cohabiting relationships will be more prevalent than marriages, since the standards for cohabitation are lower. Thus, we expect to find evidence of substantial union instability in the first five years after a nonmarital birth and higher rates of cohabitation than marriage.

Second, theory also provides some guidance regarding which mothers will be the most likely to remain with their child's biological father or to repartner with a new man, rather than live alone. With respect to the labor market, Mortensen (1988) argues that younger, less

experienced workers will typically experience more transitions in employers than will older workers, who are more likely to have already found a "good match" for their skills and interests; similarly, older mothers can be expected to experience fewer relationship transitions and to be more likely to remain with the child's biological father, since such mothers will generally have already experienced more partnerships and, presumably, learned from these experiences. We might also expect that more advantaged mothers will be more likely to remain with their child's biological father rather than be single, since the characteristics of such mothers likely enabled them to make a relatively good match the first time around.

While marital search theory clearly predicts that mother's age and desirable attributes will be positively related to their chances of remaining with the child's biological father rather than living alone, theory provides conflicting predictions regarding which mothers will be more likely to form partnerships with a new man rather than remain single, conditional on having broken up with the biological father. On the one hand, positive characteristics, such as youthfulness and economic independence, are likely to make mothers more attractive to potential mates, suggesting that mothers with these characteristics might be more likely than other mothers to repartner if and when their relationship with the biological father ends. On the other hand, the same characteristics that make these mothers appealing on the relationship market may encourage them to 'hold out' and continue searching for a suitable partner (i.e., remain single for a longer period of time in the hopes of finding a high-quality man). How these competing forces play out in the marriage (or cohabitation) market is an empirical question.

Finally, marital search theory suggests that mothers who repartner after a nonmarital birth will do so with men of higher quality than their original partners, especially for mothers who marry (as compared to cohabit); the quality of cohabiting partners may also improve with

repartnering, but in general, improvement in partner quality will be more discernible as the commitment required to enter a relationship type increases. The quality of men with whom women are partnered should improve over time, both because as mothers age, they learn more about how to select a suitable partner, and because as men age, they may mature and become more economically and socially attractive as partners. We might also expect some mothers to remain single rather than settle for a man of low quality. For all these reasons, we would expect mothers who repartner to do so with higher quality men over time.

EMPIRICAL EVIDENCE

Mothers' relationship status after a nonmarital birth

Surprisingly few studies have examined mothers' relationship status following a nonmarital birth. Research based on the National Survey of Family Growth indicates that between 40 and 50 percent of unmarried mothers are living with the biological father of their child at birth (Bumpass and Lu 2000, McLanahan et al. 2001). Researchers have also found that just under a third of women who have a first birth outside marriage have married within five years of the birth (Lichter and Graefe 2001), and that 47 percent of previously-married mothers who had their first birth prior to marriage have entered a cohabiting union within five years of marital separation (Bramlett and Mosher 2002). Although these estimates are useful in giving us an idea of the prevalence of new partnerships after a nonmarital birth, they are limited insofar as they are unable to distinguish with certainty between mothers who repartner with the child's biological father versus mothers who repartner with another man.[1] Additionally, these studies are

[1] Some scholars (e.g., Lichter and Graefe 2001) have attempted to circumvent this problem by excluding marriages that occur within six months of a child's birth, presuming that such marriages are to the child's biological father. This approach, however, is unlikely to exclude all marriages to the child's biological father.

based on retrospective reports over a reasonably long time period and thus may fail to capture short-lived unions.

Predictors of mothers' relationship status after a nonmarital birth

Several studies have examined the factors that predict whether an unmarried mother will marry or cohabit after a nonmarital birth. With one exception, all of these studies have either focused specifically on union formation with the child's biological father or have not distinguished between unions formed with the biological father and other men. Using the Fragile Families data, Carlson, McLanahan and England (2004) found that educational attainment, being white or Hispanic (versus black), and growing up in an intact family are positively associated with both marriage and cohabitation with the biological father about one year after a nonmarital birth; pro-marriage attitudes and trust in the opposite sex are also associated with marriage but not cohabitation. Harknett and McLanahan (2004) conducted similar analyses but over a longer timeframe (and including geographic characteristics); they found that minority women are less likely than white women to marry the biological father and that men's economic potential increases the likelihood of marriage.

A third study using Canadian data on union formation over a longer time period found that mothers with young children born outside of coresident unions are more likely to enter marital or cohabiting unions than mothers with older children, but this study did not distinguish between union formation with the child's biological father versus another man (Le Bourdais, Desrosiers, and Laplante 1995). We found only one study that explicitly examined the factors predicting union formation with a new partner following a nonmarital birth. Using data from the Panel Study of Income Dynamics, Lundberg and Rose (2003) found that being white, being less

than age 25, having at least 12 years of education, and the child being male (marginally significant) are all positively associated with marriage to a new partner after a nonmarital birth.

How does the quality of mothers' new partners compare with that of the biological father?

Most research comparing the characteristics of biological fathers and new partners is cross-sectional and therefore examines differences *between* mothers in the characteristics of their partners. This literature generally finds that married biological fathers have higher socioeconomic capacities than mothers' new partners (married and cohabiting men not biologically related to the focal child), although such differences are not always statistically significant. Married biological fathers have higher levels of education (on average) than mothers' married new partners (but not than cohabiting new partners), and married biological fathers work more hours per week than do new partners (Hofferth 2006; Hofferth and Anderson 2003). Married biological fathers also have significantly higher earnings than mothers' new partners (Hofferth 2006). One study suggests that, by some measures, unmarried biological fathers living with their children's mothers may be more disadvantaged than mothers' new partners: Hofferth (2006) finds that, without controlling for any other factors, unwed biological fathers have lower levels of education than do both married biological fathers and mothers' new married and cohabiting partners. A recent study using retrospective data reported by mothers in mid-life who had had a nonmarital birth found that mothers in higher-order relationships had partners with slightly higher levels of education than mothers who had had fewer relationships (Graefe and Lichter 2007).

Unfortunately, this research does not tell us very much about how current partners compare with former partners of the *same* mother. It is possible that differences observed

between biological fathers and new partners or between subsequent partners could be due to factors that select mothers and their partners into these two groups. For example, researchers have argued that some, but not all, of the marriage market disadvantage experienced by mothers following a nonmarital birth is due to their own characteristics (selection) as opposed to the birth itself (Graefe and Lichter 2007; Qian, Lichter, and Mellott 2005). Therefore, comparing across groups of mothers may not shed much light on the repartnering decisions and processes for individual mothers over time.

Ideally, comparisons of partner quality should be made between the former and current partners *of the same mother* over time. Very few studies, however, have had adequate data to conduct such comparisons. Our review identified only three studies that conducted such longitudinal analyses. All three studies used data from the 1970s (Dean and Gurak 1978; Jacobs and Furstenberg 1986; Mueller and Pope 1980). Two studies (Jacobs and Furstenberg 1986; Mueller and Pope 1980) compared the socioeconomic status (occupation and education) of women's first and second husbands, with neither study finding strong evidence for the second husband being consistently different from the first. The third study (Dean and Gurak 1978) compared levels of marital homogamy (in terms of age, education, and religious identification) in women's first and second marriages and found that women who had been married twice experienced low levels of homogamy in both marriages.

The current study takes advantage of new longitudinal data available from the Fragile Families and Child Wellbeing Study to examine the prevalence of various partner relationships following a nonmarital birth (including marriage and cohabitation), the predictors of mothers being in particular relationship types, and the relative quality of mothers' new partners compared to the child's biological father among those who break up and repartner within five years of a

nonmarital birth. Our research advances knowledge in these three areas by using prospective data to examine the family formation behaviors of unwed mothers during the first five years after a nonmarital birth, by distinguishing between unwed mothers' relationships with their child's biological father and with new partners, by separately considering mothers who are cohabiting and mothers who are married, and by comparing the quality of the same mother's current and former partners over time.

DATA AND METHODS

The Fragile Families and Child Wellbeing Study follows a birth cohort of nearly 5,000 children from birth through age five. Parents are interviewed at birth and again when the child is about one, three, and five years old. The study includes a large over-sample of births to unmarried parents. Sampling occurred in three stages: cities, hospitals within cities, and births within hospitals. A national sample, consisting of 16 cities, was selected randomly from a stratified sample of 77 cities with populations of 200,000 or more. Four additional cities were added to the sample in response to foundation interest and funding. Baseline interviews with new parents were conducted between the spring of 1998 and the fall of 2000. When weights are used, the data are representative of all births in large U.S. cities—with populations of 200,000 or more—and births within these cities. (For a more detailed account of the study design, see Reichman et al. 2001.) The analyses reported in this paper are based on the sample of nonmarital births, and use all four waves of data.

The baseline survey included 3,712 unmarried mothers who were interviewed in-person within 48 hours of the focal child's birth. Eighty-seven percent of eligible unmarried mothers completed the baseline survey. Appendix A provides descriptive statistics for the baseline

sample of unwed mothers. Approximately 5% of the baseline sample was not interviewed at any of the three follow-up waves, and slightly more than one-quarter of the baseline sample was missing at least one of the follow-up interviews. Mothers who were foreign-born, who had less than a high school diploma, whose child was born at a low or very low birth weight, who drank during pregnancy, who did not receive public assistance, and who were not of the same racial/ethnic group as the biological father were more likely than others to attrite at some point over the five years following a nonmarital birth. We discuss the implications of attrition for our results in the Discussion section. Mothers who were missing on one or more explanatory variables were deleted from the analyses. Because the explanatory variables varied across analyses, the proportion of potential cases omitted in this way varied from 7-10% of the sample.

Measures

Mothers' partnership status is measure at each wave and includes whether she is married, cohabiting or romantically involved with a man. Although most of the analyses presented in the paper focus on married and cohabiting new partners, we also present overall prevalence figures in Table 1. We focus on married and cohabiting partners because coresident relationships are more likely than non-resident relationships to have a significant impact on mothers and their children and to be of relatively long duration.

Partner quality is measured using mothers' reports and includes age, race/ethnicity, education, employment status, work-limiting physical or mental health conditions, problems with relationships due to drugs/alcohol, incarceration history, and violence toward the mother.[2] With a few exceptions, these characteristics are measured contemporaneously using mothers' reports at

[2] Biological fathers and new partners are considered to be "not violent" if the mother reported that they never slapped, kicked, or hit the mother with a fist or an object that could have hurt her. At baseline, mothers are asked whether the biological father ever hit or slapped her when he was angry.

each wave: mothers were only asked about biological fathers' age and education at the time of the baseline interview (with no follow-up information). We adjust mothers' reports of biological fathers' age to account for the time between the baseline and subsequent interviews at each of the follow-up waves, but since we have no updated information about education, we use mothers' baseline report of education for biological fathers across later waves. Also, mothers were not asked about biological fathers' incarceration history at baseline, so we use mothers' one-year reports. Information about current partners' race/ethnicity, education, problems with drugs/alcohol, and work-limiting health conditions was not collected during the one-year survey, so these variables are only available for new partners at three and five years. While mothers were not asked about new partners' age and employment status during the one-year interview, this information is available from the household roster for approximately three-fourths of the mothers who reported living with a new partner at that wave. Mothers reported about all new partners' violent behaviors and incarceration history at the one-year survey.

To account for characteristics that are likely to be associated with selection into nonmarital childbearing as well as partnership changes, we use a rich set of control variables that measure mothers' characteristics at baseline, including mother's race/ethnicity, nativity status, education, whether she lived with both biological parents at age 15, whether the focal child is the first birth, her relationship with the biological father at the time of the birth, whether she reported drinking or smoking during pregnancy, whether she reported herself as being in fair or poor health, whether she received public assistance in the year prior to the birth, whether she and the biological father are of the same race/ethnicity, whether the focal child is male, whether the focal child was born at a low or very low birth weight, and several items measuring mother's relationship attitudes.

Race/ethnicity is specified as non-Hispanic white or other, non-Hispanic black, and Hispanic. Mothers' age, coded in years, is based on their baseline reports and updated across waves (except in Table 2, for which mother's baseline age is used in all models). Education is specified as less than high school/GED, high school diploma, and some college or more. The biological parents' relationship status at the time of the birth is defined as cohabiting, romantically involved but not coresident, and not romantically involved. Mothers are considered to have received public assistance in the past year if they reported receiving income from public assistance, welfare or food stamps in the previous 12 months. Mothers' relationship attitudes are assessed using indicators of whether mothers agreed/strongly agreed with the following three statements: "A mother living alone can bring up her child as well as a married couple;" "It is better for children if their parents are married;" and "Men cannot be trusted to be faithful." Response choices range from 1 (strongly disagree) to 4 (strongly agree); since these variables represent different constructs (and are not highly correlated), we include them separately.

Analytic Strategy

We begin by describing the prevalence of romantic relationships among unwed (at birth) mothers at the time of the child's birth and one, three and five years later. We exclude from the sample unwed mothers who were not living with their child at least half-time at the follow-up surveys or who did not provide a valid report about their current relationship status.[3] For this analysis, we use national sampling weights so that our results can be generalized to the population of nonmarital births in large urban areas between 1998 and 2000.[4]

[3] Between 2 and 3% of mothers do not live with their child, and between 2 and 3% of mothers have missing data on the relationship variable at each post-baseline wave. All mothers provided valid reports about their current relationship status at the time of the baseline survey.

[4] The unweighted sample (used in all subsequent analyses in the paper with the exception of Table 5) is slightly less likely to be in romantic relationships with the biological father and slightly more likely to be in relationships with

Next, we use multinomial logistic regression to estimate the factors that predict mothers' relationship status following a nonmarital birth. The multinomial logit model assumes that the log odds of each response follow a linear pattern; this model is analogous to simultaneously estimating binary logit models for all comparisons among the outcome categories. As shown in Equation 1 below, the log odds of a given mother *i* living with the biological father (outcome *j*=1) relative to living alone (outcome *k*), and the log odds of a mother living with a new partner (outcome *j*=2) relative to living alone (outcome *k*), are predicted by a constant (α_j) and a series of parameter estimates (β_j) for mother-specific covariates in vector **X** plus an error term ε:

$$\log \frac{P(j_i)}{P(k_i)} = \alpha_j + \beta_j \mathbf{X}_i + \varepsilon, \quad [1].$$

Next, we focus specifically on the group of mothers who form coresident relationships with new partners in the years following a nonmarital birth, and we examine how the characteristics of new partners compare with those of the biological fathers. For this analysis, we use a pooled dataset in which individual mothers can contribute up to four observations (i.e., time of birth, one year, three years and five years). We begin by comparing the characteristics of all biological fathers at the baseline interview with those of mothers who were coresiding with a new partner at subsequent waves, and then we limit the sample to mothers who coresided with the biological fathers in order to have the same 'standard' (coresidence) for both types of partners; nonresident biological fathers typically have worse social and economic characteristics than resident biological fathers.

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new partners at the three follow-up surveys. We do not weight our multivariate models in order to retain all available cases, since we control for the key variables for which the weights adjust (i.e., age, race, and education).

After presenting descriptive statistics comparing biological fathers and mothers' new partners, we estimate a series of random effects logistic regression models using an indicator variable to represent whether the mother's current partner is a new partner as compared to the biological father. Random effects models capture variation both between subjects and within subjects over time, where individual differences are considered as random disturbances drawn from a probability distribution of such effects. Thus, with random-effects models, one intends to draw conclusions about the population from which the observed units are drawn, instead of about the units themselves (Greene 2003; Snijders 2005).

Our specific model is shown in Equation 2 below, and predicts the log odds of a mother's current partner having a positive value (coded as 1) for the quality measure of interest (outcome m_1) relative to a negative value (coded as 0) for the quality measure of interest (outcome m_2). The focus of the model is on the coefficient for NP (β_1), which is a dichotomous variable indicating whether the partner at time t is a new partner (NP=1) or the child's biological father (NP=0). The model also includes a constant term (β_0), a vector of covariates ($\mathbf{X}_{it}$), the individual effect (υ_{0i}), and an error term (ε_{it}).

$$\log \frac{P(m_1)}{P(m_2)} = \beta_0 + \beta_1 NP_{it} + \beta_2 \mathbf{X}_{it} + \upsilon_{0i} + \varepsilon_{it}, \quad [2]$$

Because the sample for this analysis is limited to mothers who repartnered after the child's birth, the coefficient for partner type (β_1) represents the difference in quality between the new partner and the biological father among mothers who change partners. A positive coefficient indicates that the new partner is better than the biological father in a particular 'quality' domain (i.e., has a value of 1 versus 0), and a negative coefficient indicates that the partner has a worse value than

the biological father for a particular measure of quality. The six dichotomous partner quality indicators include the partner's having no incarceration history, currently working, having at least a high school diploma, having no problem with drugs/alcohol, having no physical or mental health limitations, and not being violent toward the mother. All models control for current partner's age, and mother's age (essentially an indicator of time elapsed since the child's birth), race/ethnicity, education, and fertility history. The estimates obtained from this model can only be generalized to the population of mothers who repartner during the five years following a nonmarital birth. Since there may be selection into this pool of mothers, the results cannot be generalized to all unmarried mothers.

Finally, we evaluate how the union formation process after a nonmarital birth plays out at the aggregate level. To do so, we present descriptive information on the average partner quality for mothers who are living with a man (either the child's biological father or a new partner) at each wave of the survey. We evaluate the six quality measures described above, as well as age and race/ethnicity (to observe changing demographics). These estimates are weighted in order to be nationally representative of all mothers who live with a partner in the five years subsequent to a nonmarital birth.

RESULTS

Prevalence of new partnerships following a nonmarital birth

Our first research question concerns the prevalence of mothers' romantic relationships in the years following a nonmarital birth (weighted by national sampling weights). The first row of Table 1 shows that fully 82% of unwed mothers are romantically involved with their child's biological father at the time of the focal child's birth; 51% are cohabiting, and 31% are

romantically involved but living separately. The proportion of mothers reporting romantic involvement with the child's biological father decreases considerably over time. By one year, 60% of mothers are romantically involved with the father, declining to 47% by year 3 and to 39% by year 5. Most of the latter are either married (16%) or cohabiting (21%); only 3% are romantically involved and living apart.

As we would expect, as the proportion of mothers involved with the baby's biological father declines, the proportion involved with new partners rises. One year after the birth, only 12% of unwed mothers report being in a romantic relationship with a man other than the biological father; this proportion increases to 22% at three years, and to 31% at five years. Mothers who form romantic relationships with new partners are more likely to be in non-resident or cohabiting relationships than married; about 5% of unwed mothers are married to a new partner five years post-birth, compared to 17% cohabiting and 9% romantically involved but living apart.

We also find that some mothers are not romantically involved with either the child's biological father or a new male partner. The proportion of mothers falling into this group increases considerably between baseline (when it is approximately 18%)[5] and one year post-birth (when it is 28%), and remains relatively stable at around 30% of all unwed mothers at three and five years.

It is important to note that the four waves of interviews provide snapshots of mothers' relationships at a particular point in time, rather than exhaustive relationship histories. Mothers were not asked in all waves to report about other romantic relationships that may have begun and

[5] Because mothers were not asked at the baseline interview to report about relationships with new partners, some of the mothers included in this category at the time of birth could have already been in relationships with new partners. Information from the household roster at baseline suggests that between 3 and 20% of the 18% of mothers not romantically involved with the biological father could be living with a new male partner (representing only 0.5% to 3.6% of the full sample).

ended between survey waves. Thus, these proportions may underestimate the true prevalence of new partnerships following a nonmarital birth. Our estimates (not shown) from questions in the five-year interview, however, indicate that the mean duration of coresident relationships with new partners is more than two years, and that less than three percent of mothers not living with the child's biological father have lived with more than one new partner in the previous two years.

Factors predicting mothers' relationship status following a nonmarital birth

Our second research question concerns the factors that significantly predict mothers' partnership choices in the years after a nonmarital birth. Table 2 presents coefficients from multinomial logistic regression models predicting whether mothers are in a coresident relationship with their child's biological father or a coresident relationship with a new partner, versus not being in a coresident relationship with any man (reference category). The results suggest that while mothers' age is not significantly associated with mothers' chances of coresiding with the child's biological father, it is significantly associated with the chances of living with a new partner (as opposed to remaining single). Being white or Hispanic (versus black) is associated with being in a coresident relationships with the child's biological father, and being white (versus black) is associated with being in a coresident relationship with a new partner three and five years after a nonmarital birth. Having been born in the United States reduces the chances of coresiding with the biological father at all post-birth waves (and the difference appears to increase over time) but is not related to living with a new partner.

Mother's educational attainment is not consistently associated with being in a coresident relationship with either the biological father or another man, relative to being single, although the direction of the effects suggests that education is positively related to staying with the biological father. Having a first birth is negativity associated with coresidence with both a biological father

and another man. Not surprisingly, mothers' relationship status at birth is strongly associated with subsequent partnership status. Not living with the biological father at birth is associated with a lower chance of cohabiting in subsequent waves (though the strength of the association seems to decline across years), and not being romantically involved is associated with a greater chance of living with another man. Finally, mothers' distrust of men reduces the chances of coresiding with the biological father in the years following a nonmarital birth. These findings are consistent with prior research suggesting that mothers' age, race/ethnicity, and trust of the opposite gender are related to their chances of remaining with their child's father and repartnering with new men (Carlson et al. 2004, Harknett and McLanahan 2004, Lundberg and Rose 2003).

Comparing the quality of mothers' current and former partners

We turn next to our final research question, which considers how the characteristics of mothers' new partners compare to the characteristics of the biological fathers (i.e., the mothers' former partners) for the subset of mothers who repartnered after the child's birth. As shown in Table 3, among all mothers who will later live with a new partner (Columns 1 and 2), we find that new partners are more highly educated, more likely to be working, more likely to be free of substance problems, less likely to have been in jail, and less likely to be violent, compared to the biological fathers. When we limit the comparison to only those mothers who were living with the biological father at the time of birth (i.e. apply the same 'standard' of coresidence to both the biological father and new partner, Columns 3 and 4), our findings persist: on average, mothers'

new partners have considerably more favorable economic and social-psychological capacities than the biological fathers with whom they had the focal children.[6]

Table 4 moves from bivariate to multivariate comparisons and presents results from separate random effects regressions models predicting each of our six male quality outcomes using the pooled sample; the coefficients indicate that living with a new partner (versus the biological father) is associated with high partner quality. As noted earlier, because the sample is limited to mothers who have repartnered, this indicator is essentially a measure of whether *changing* partners is associated with positive partner quality *for mothers who change partners*. Confirming the descriptive results in Table 3, we find that living with a new partner is associated with more education, more employment, fewer substance problems, less incarceration, and less violence. The next two columns repeat these analyses for mothers who are in cohabiting relationships (Column 2) and married relationships (Column 3) one, three, or five years after the birth. The results are largely similar to the combined estimates in Column 1: where significant differences are found, mothers' new partners have more advantageous characteristics than the biological fathers.

As noted earlier, comparing *all* of the biological fathers at baseline with mothers' *coresident* new partners in later waves might bias the results toward finding that current partners' characteristics are better, since the characteristics of cohabiting biological fathers are generally better than those of nonresident biological fathers. In the last column of Table 4, we limit the sample to mothers who coresided with the biological father before later coresiding with a new partner. Interestingly, the association between having a new partner and high partner quality becomes weaker for only two of the quality measures (compare column 4 with column 1)–

[6] While mothers' current partners (new partners) are older, on average, than their former partners (the biological fathers) at the time they were together, this is likely due to the fact that the mother herself was older at the time she repartnered.

substance problems and violence. This finding suggests that mothers are less likely to live with a biological father who is violent or has a substance problem. In summary, when we compare the characteristics of mothers' new and former coresident partners, we consistently find that new partners compare favorably to biological fathers, especially with respect to incarceration, employment status, and education.

The estimates presented in Table 4 suggest that the union formation process following a nonmarital birth may lead to an increase in the quality of mothers' coresident partners at the aggregate level. To investigate this idea, Table 5 reports the average quality of mothers' coresident partners across each wave (weighted by national sampling weights). We find evidence for aggregate-level improvement in partners' education, incarceration history and, to some extent, employment. At year five, coresident partners are much more likely to have a high school degree and somewhat more likely to have attended college than they are at baseline. They also are less likely to report having been in jail. For employment, we see a decline in partner quality between baseline and year one, and then an improvement between years one and five. Problems with substance abuse and violence are very low and do not change over time.

Insofar as unwed mothers maintain a 'high bar' in their search for a spouse (Gibson-Davis et al. 2005), in addition to expecting partner quality to improve over time, we might also expect that some mothers would become discouraged and therefore 'drop out' of the marriage market. Our findings suggest that this does not seem to be the case, at least not during the five years following a nonmarital birth. The proportion of mothers who are living with a partner increases between birth and year one (51% to 57%) and then remains stable. Future waves of data will provide important additional information for determining if mothers 'drop out' of the relationship market in subsequent years.

DISCUSSION AND CONCLUSION

This paper provides new evidence about mothers' union formation patterns in the first five years following a nonmarital birth. As suggested by marital search theory and previous empirical research, instability and repartnering are common among unmarried mothers during this period. Five years after an unwed birth in the late 1990s, about 30% of mothers are romantically involved with a new partner, and 70% of these mothers are married to or cohabiting with such men. Approximately two-fifths of mothers with unmarried births are still romantically involved with their child's biological father five years later (16% are married), and a final group of mothers (30%) are not in any type of romantic relationship five years following a nonmarital birth. To our knowledge, these findings represent the first estimates of the prevalence of mothers' partnerships for a recent cohort of nonmarital births.

Our results are consistent with theoretical predictions about the predictors of mothers' partnership status after a nonmarital birth. Marital search theory suggests that older and more advantaged mothers will be more likely than other mothers to be living with their child's biological father. Although we do not find age to be related to coresidence with the biological father, we do find evidence that advantaged mothers are more likely to remain with the biological father: white non-Hispanic mothers are more likely than black mothers to coreside with the biological father in the years after a nonmarital birth, and—while not always statistically significant—the direction of the coefficients suggests that mothers with more education are also more likely than those with less than a high school diploma to live with the biological father. We also find that parents' baseline relationship status is highly predictive of whether the biological parents coreside in the years following a nonmarital birth. Since we know from previous research

that relatively advantaged mothers are more likely to be in committed relationships at the time of the child's birth, this association may capture some of the effect of mothers' positive attributes on their chances of remaining with the biological father (as these mothers may have made better, longer-term matches to begin with).

Marital search theory provides less clear predictions regarding which maternal characteristics will be associated with mothers' chances of coresiding with a new partner as opposed to living alone. The positive attributes that might make mothers attractive to potential partners might also enable them to prolong their search for a suitable mate. Our results provide tentative support for the notion that mothers' positive characteristics are associated with higher levels of repartnering—younger mothers and white mothers are more likely than others to repartner rather than live alone. On the other hand, our finding that mothers with a first birth are less likely than those with higher order births to repartner may also suggest that mothers who have only one child (and may therefore see themselves as less "in need" of a partner) may choose to search longer for a new mate.

In addition to allowing us to test our theoretically-driven hypotheses, our results in Table 2 confirm and extend findings from previous empirical research about the predictors of mothers' union formation patterns in the years after a nonmarital birth. Consistent with this research about the predictors of parents remaining together one year after a nonmarital birth (Carlson et al. 2004), we find that white and Hispanic mothers, mothers who were romantically involved with the biological father at the time of the birth, and mothers who believe that men can be trusted to be faithful are more likely than other mothers to be living with their child's biological father in subsequent years. Similarly, our findings are consistent with research on new partnerships, which suggests that older women are less likely to repartner (Bramlett and Mosher 2002; Lundberg and

Rose 2003; Wu and Schimmele 2005), and that non-Hispanic black women are less likely than non-Hispanic white women to form new unions (Bramlett and Mosher 2002; Smock 2000). Although some previous research about repartnering among divorced mothers (Buckle, Gallup and Rodd 1996) finds that the number of children at the time of divorce is negatively associated with women's chances of remarrying, we find that mothers who have more than one child are more likely both to have repartnered; the difference in repartnering may reflect the much older age of divorced women with multiple children, compared to unmarried women with more than one child.

Our final hypothesis suggests that mothers who repartner after a nonmarital birth 'trade up' in terms of partner quality. We find strong support for this hypothesis. Our analyses suggest that when they repartner, unmarried mothers are—for the most part—quite careful in choosing their new mates. These findings are consistent with Edin and Kefalas' (2005) argument that low-SES mothers continue to search for high-quality partners after they start having children. For a substantial portion of mothers, this search appears to pay off; new partners often have characteristics that are better than those of the focal children's biological fathers, suggesting that mothers' union formation decisions post-birth are advantageous for themselves and their children. These results are descriptive insofar as they tell us what is happening for mothers who are choosing to repartner and cannot be generalized to all unmarried mothers.

The within-mother findings correspond with between-mother comparisons conducted by Hofferth (2006), who finds that unwed biological fathers who are cohabiting with their children's mothers have lower levels of education than mothers' new partners (though married biological fathers have higher levels of SES than all three of the other groups). They also are consistent with between-mother findings by Graefe and Lichter (2007) who show that the educational

attainment of the mid-life partners of unmarried mothers is positively associated with relationship parity.

Although the results presented here represent a step forward in our understanding of the partnership patterns of mothers following nonmarital births, the analyses suffer from at least three limitations. First, our information about mothers' relationships is limited to four discrete points in time, and thus the relationships we observe are likely to be those that are relatively long in duration. To the extent that relationship duration is associated with better partners' characteristics, we may be picking up only the 'best' of mothers' new relationships following a nonmarital birth, and we may overestimate the quality of mothers' current partners overall. Second, because mothers' current partners were not interviewed, we must use mothers' reports about partners' characteristics. The fact that mothers' reports about both biological fathers and new partners were recorded at the time mothers were romantically involved (except in the case of some mothers who had ended their relationships before the birth) helps minimize the bias inherent in relaying on mothers' reports; however, it does not solve the problem. Third, we lack information about the rank ordering of new partnerships which would further illuminate the process by which mothers 'improve' in partner quality over time.

Finally, sample attrition is always a concern when using longitudinal data. As mentioned previously, slightly more than one-quarter of the unmarried mothers in the baseline survey were missing in at least one of the subsequent waves. This attrition could lead to bias in our regression estimates in Table 2 if the relationship between the covariates and the outcome variables differ for mothers who attrite (Fitzgerald, Gottschalk and Moffitt 1998). Although it is impossible to know with certainty whether this is the case, sensitivity analyses suggest that attrition does not substantially bias our regression estimates. In Appendix B, we present results from multinomial

logistic regression models predicting mothers' relationship status one year following the birth. We use the same set of covariates as we used in Table 2 (all measured at baseline). The first column in the Appendix table includes the full sample of mothers—the sample used in Table 2. The second column excludes mothers who were missing from the three year survey, the third column excludes mothers who were missing from the five-year survey, and the fourth column excludes mothers who were missing at either the three or five-year survey. By comparing across columns, we can get an idea of how sensitive the coefficients are to attrition. If the coefficients do not change very much, attrition is not likely to be a serious problem. We find that the vast majority of the coefficients are remarkably consistent across these columns. The only coefficient for which there is notable change across samples is mother's nativity—the relationship between nativity and partnership status becomes stronger when we exclude attritors from the sample. Apparently, foreign-born mothers who remain in the sample are more likely to be coresiding with the biological father (versus remaining single) than are those who later attrite.

Although attrition only biases regression coefficients if the attrition is correlated with both covariates and the outcome, selective attrition by itself (e.g., attrition being more common among disadvantaged groups) can affect descriptive sample characteristics. This problem could have potentially important implications for our comparison of the average characteristics of biological fathers and mothers' new partners in Table 3. For example, if the most disadvantaged mothers are the most likely to drop out of the sample and also the most likely to repartner with men with less favorable characteristics, then not including these mothers in the sample could positively bias our estimates of partners' characteristics. It could also affect our estimates in Table 5. While, again, it is impossible to determine with certainty whether this is the case, in Appendix C we conduct sensitivity analyses to assess the likelihood that attrition has led to bias

in our estimates of partners' characteristics. The first two columns in the Appendix table are the same as the first two columns in Table 3. The second two columns compare the characteristics of the biological fathers and mothers' new partners among mothers who moved in with a new partner and then attrited, and the final two columns compare the characteristics of the biological fathers and new partners among mothers who attrited and then re-entered the survey and moved in with a new partner. These results suggest that the mothers who attrite do not seem to be repartnering with men with less favorable characteristics (relative to the biological father) than the sample that remains. Thus, while still a possibility (since we do not have information about mothers who attrite and then repartner without reentering or those who attrite and repartner at the same time), it is unlikely that our finding that the characteristics of new partners are better, on average, than those of the biological fathers is driven by attrition bias.

The results reported here have important implications for our understanding of union formation processes following a nonmarital birth and the consequences of these processes for children. Whereas family instability is typically seen as deleterious for child and adolescent wellbeing (Fomby and Cherlin 2007; Osborne and McLanahan 2007), the fact that many mothers are 'trading up' in terms of father quality suggests that family instability may have benefits as well as costs. Indeed, for some mothers (and children), the stress associated with union disruption may be more than offset by the security associated with finding a new partner (and 'social father' for their child) with more human capital and fewer psychosocial problems. Thus, when faced with the prospect of rearing a child outside of marriage, mothers may indeed "know best" with respect to securing the best possible environment for children in a typically disadvantaged circumstance. Future research can identify which mothers are likely to gain the most from the search process, the extent to which new partners adopt the father role toward the

mother's children, and the extent to which improvement in father quality is associated with greater union stability over time.

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Table 1. Mothers' romantic relationships following a nonmarital birth[a]

	Baseline	One year	Three years	Five years
Romantically involved with bio. father (BF)	**81.9**	**60.1**	**47.4**	**39.4**
Percent married to BF	0.0	10.9	15.3	16.3
Percent cohabiting with BF	51.2	41.5	28.9	20.6
Percent romantic, not coresident with BF	30.6	7.7	3.2	2.5
Romantically involved with a new partner (NP)	NA	**11.8**	**21.5**	**30.6**
Percent married to NP	NA	1.1	1.2	4.8
Percent cohabiting with NP	NA	3.5	11.0	16.6
Percent romantic, not coresident with NP	NA	7.1	9.4	9.2
Percent with no male romantic partner	**18.1[b]**	**28.2**	**31.1**	**30.0**
Total	**100.0**	**100.0**	**100.0**	**100.0**
Unweighted N	3,710	3,234	3,113	3,037
Weighted N	2,366	2,073	1,978	1,926

Notes: NA: Not available. Percentages are weighted by national sampling weights.

[a]The sample includes all unwed mothers living with the focal child at least half-time.

[b]Since mothers were not asked about romantic relationships with new partners at baseline, some of the women included in this category could be in romantic relationships with new partners. Information from the household roster at baseline suggests that between 3 and 20% of the 18% of mothers not romantically involved with the biological father could be living with a new male partner.

Table 2. Coefficients from multinomial logits predicting mother's coresidence with the child's biological father or a new partner (versus neither) 1, 3 and 5 years following a nonmarital birth

	Married/cohabiting bio. father			Married/cohabiting new partner		
	1 yr	3 yrs	5 yrs	1 yr	3 yrs	5 yrs
Mother's age	-0.01	0.00	-0.01	-0.09 **	-0.10 **	-0.07 **
Mother's race/ethnicity (Black non-Hispanic omitted)						
White and other, non-Hispanic	0.45 **	0.56 **	0.59 **	0.18	0.53 **	0.33 *
Hispanic	0.44 **	0.66 **	0.67 **	-0.14	-0.25	0.20
Mother born in the U.S.	-0.41 *	-0.61 **	-0.92 **	0.06	-0.36	-0.22
Mother lived with both biological parents at age 15	0.18 ^	0.13	0.16	-0.07	-0.07	0.11
Mother's educational attainment (<HS/GED omitted)						
HS diploma	0.20 ^	0.14	0.26 *	0.09	-0.02	0.11
Some college or more	0.12	0.07	0.19	-0.16	-0.33	-0.07
Child is male	-0.06	0.04	0.04	-0.02	0.06	0.13
Child was born at low/very low birthweight	-0.01	0.04	-0.16	0.11	-0.13	0.03
Child is mother's first	-0.32 **	-0.12	-0.26 *	-0.75 **	-0.34 *	-0.39 **
Bio. parents' relationship at baseline (cohabiting omitted)						
Romantically involved, not coresident	-1.42 **	-1.07 **	-0.94 **	-0.17	-0.31 *	-0.22 ^
Not romantically involved	-3.25 **	-2.63 **	-2.05 **	0.59 **	0.29 ^	0.34 *
Mother reported drinking during pregnancy	-0.27 ^	-0.16	-0.11	-0.15	0.00	-0.08
Mother reported smoking during pregnancy	0.03	-0.04	0.13	0.31	0.10	0.08
Mother received public assistance in previous year	-0.09	-0.16 ^	-0.08	0.24	-0.08	0.07
Mother and biological father of same race/ethnicity	0.14	0.24 ^	0.18	-0.30	0.13	-0.11
Mother self-reports as being in fair/poor health	-0.11	-0.13	-0.11	-0.05	-0.05	-0.37 ^
Mother's relationship attitudes						
Single moms can raise children as well as two parents	-0.40 **	-0.24 ^	-0.25	0.19	0.10	-0.03
Children are better off w/married parents	0.15	0.09	-0.01	-0.11	0.02	-0.06
Men cannot be trusted to be faithful	-0.40 **	-0.24 *	-0.26 *	-0.02	0.02	-0.15
N	2919	2812	2736	2919	2812	2736

Note: The sample is limited to mothers who were living with the focal child at least half-time. All covariates were measured at the time of the child's birth. ** p<0.01; * p<0.05; ^ p<0.10 two-tailed.

Table 3. Characteristics of mothers' new and former partners 1, 3 and 5 years after nonmarital birth [a]

	All BL mothers who later live with a new partner		Cohab. at BL mothers who later live with a new partner	
	(1)	(2)	(3)	(4)
	BF	NP	BF	NP
Partner's mean age[b]	**25.4**	**28.6**	**26.2**	**28.8**
Partner's race				
Non-Hispanic white and other	14.5	15.9	20.9	20.2
Non-Hispanic black	62.2	62.9	50.5	56.0
Hispanic	23.4	21.3	28.6	23.8
Partner's education (BL for BFs for all yrs)				
Less than high school/GED	**48.9**	**12.9**	**51.2**	**11.4**
High school diploma	**32.6**	**63.4**	**31.6**	**63.7**
Some college or more	**18.5**	**23.7**	**17.2**	**24.9**
Partner working	**72.3**	**82.1**	**78.0**	**86.1**
Partner has no limitations	92.1	92.9	90.3	93.5
Partner has no drug/alcohol problems	**91.4**	**98.6**	**94.7**	**98.2**
Partner never in jail (1 yr for BL BFs)	**54.7**	**78.9**	**60.6**	**80.5**
Partner not violent toward mother	**94.5**	**99.0**	97.2	98.7
Total number of mothers[c]	788	788	277	277

Notes: BF = biological father; NP = new partner. BL = baseline interview. Estimates are unweighted. Statistically significant differences ($p<.05$) between biological fathers and new partners are in bold.

[a] The sample is pooled across waves and is limited to mothers who were all in coresident relationships with new partners at one, three or five years, and thus have values for both biological fathers' and new partners' characteristics in the pooled dataset. A small number of mothers who lived with a new partner and then subsequently lived with the biological father are excluded.

[b] While mothers' new partners are older, on average, than their former partners (the biological fathers), this is likely due to the fact that the mother was partnered with the new partner after the biological father, and the biological father's age was taken from the time that the mother was with him.

[c] This row presents the total number of unique mothers in each column. Each mother could contribute up to four observations in the pooled dataset. The sample size for specific comparisons varies across outcomes.

Table 4. Coefficients from random effects logit models predicting the quality of mother's coresident partner, among mothers who have repartnered with new men[a]

	All mothers at baseline, compared with:			Cohab. at BL mothers, compared with:
	All cores. partners at 1, 3 & 5 yrs	Cohab. partners at 1, 3 & 5 yrs	Married partners at 1, 3 & 5 yrs	All cores. partners at 1, 3 & 5 yrs
At least HS diploma	2.7 **	3.1 **	1.0 *	3.6 **
Number of unique cases	734	625	164	260
Currently working	0.5 **	0.6 **	0.6 *	0.6 *
Number of unique cases	744	632	167	260
No health limitations	0.3	0.4	0.1	0.6 ^
Number of unique cases	748	636	167	260
No drug/alc. problems	2.0 **	1.8 **	3.4 **	1.1 ^
Number of unique cases	748	636	167	260
No incarceration history	1.4 **	1.6 **	0.8 *	1.4 **
Number of unique cases	745	634	166	259
Not violent toward mother	1.8 **	1.9 **	2.3 **	0.8
Number of unique cases	751	639	168	260

Notes: Models are unweighted. ** p<0.01; * p<0.05; ^ p<0.10 two-tailed

[a] The coefficients presented are for a dummy variable indicating that the mother's current partner is a new partner vs. the child's biological father. Each coefficient represents a separate model, and all models control for current partner's age and mother's age, race, education, and fertility history. The sample for all models is pooled across waves and is limited to mothers living with the focal child at least half-time who were in a coresident relationship with a new partner at one, three or five years, and thus have values for both biological fathers' and new partners' characteristics in the pooled dataset. Each mother could contribute up to four observations, and the N's shown indicate the unique number of mothers in each model.

Table 5. Aggregate characteristics of mothers' coresident partners after a nonmarital birth

	Baseline[a]	One year	Three years	Five years
% of all unwed moms who are cores.	51.2	57.1	56.4	58.3
Partner's mean age	27.90	28.27	29.56	31.26
Partner's race				
Non-Hispanic white and other	19.8	NA	19.6	17.8
Non-Hispanic black	33.9	NA	40.4	42.0
Hispanic	46.2	NA	40.1	40.2
Partner's education (BL for BFs for all years)				
Less than high school/GED	45.3	NA	39.6	35.0
High school diploma	33.4	NA	39.1	40.9
Some college or more	21.2	NA	21.3	24.1
Partner working	85.0	81.9	81.5	85.7
Partner has no limitations	94.0	NA	90.8	94.5
Partner has no drug/alcohol problems	96.1	NA	97.4	97.3
Partner never in jail (1 yr for BL BFs)	69.6	73.2	67.6	74.9
Partner not violent toward mother	96.8	96.8	96.5	96.6
Weighted N[b]	1199	1205	1125	1057

Notes: NA indicates that the question was not asked about new partners in the one year survey. Percentages are weighted by national sampling weights.

[a] All of the mothers' coresident partners at baseline (at the time of the birth) are the children's biological fathers. One, three and five years after the birth, mothers' current coresident partners could be either the child's biological father or a new partner.

[b] This row presents the total number of mothers in each column. The sample size varies across characteristics.

Appendix A. Sample Description: Mothers with Unwed Births

Mother's mean baseline age	23.98
Mother's baseline education	
Less than high school/GED	46.4
High school diploma	27.7
Some college or more	26.0
Mother's race/ethnicity	
Non-Hispanic white and other	17.3
Non-Hispanic black	54.9
Hispanic	27.9
Mother born in U.S.	86.3
Child is male	52.7
Child is mother's first	39.3
N	3,710

Note: Estimates are unweighted

Appendix B. Impact of attrition on mlogits predicting coresidence with bio. father or new partner (vs. neither) at 1 year

	Total sample	Minus 3-yr attr.	Minus 5-yr attr.	Minus 3 & 5-yr attr.
Married/cohabiting biological father				
Mother's age	-0.01	-0.01	-0.01	-0.01
Mother's race/ethnicity (Black non-Hispanic omitted)				
White and other, non-Hispanic	0.45 **	0.50 **	0.41 **	0.43 **
Hispanic	0.44 **	0.46 **	0.41 **	0.42 **
Mother born in the U.S.	-0.41 *	-0.43 *	-0.53 **	-0.51 **
Mother lived with both bio. parents at age 15	0.18 ^	0.18 ^	0.14	0.15
Mother's educational attainment (<HS/GED omitted)				
HS diploma	0.20 ^	0.18	0.22 ^	0.20
Some college or more	0.12	0.09	0.09	0.09
Child is male	-0.06	-0.01	-0.07	-0.02
Child was born at low/very low birthweight	-0.01	-0.02	0.03	0.00
Child is mother's first	-0.32 **	-0.26 *	-0.26 *	-0.23 *
Bio. parents' relationship at baseline (cohabiting omitted)				
Romantically involved, not coresident	-1.42 **	-1.37 **	-1.44 **	-1.40 **
Not romantically involved	-3.25 **	-3.32 **	-3.21 **	-3.31 **
Mother reported drinking during pregnancy	-0.27 ^	-0.26	-0.34 *	-0.32 ^
Mother reported smoking during pregnancy	0.03	0.04	0.06	0.07
Mother received public assistance in previous year	-0.09	-0.04	-0.02	0.00
Mother and biological father of same race/ethnicity	0.14	0.12	0.24	0.21
Mother self-reports as being in fair/poor health	-0.11	-0.08	-0.06	-0.06
Mother's relationship attitudes				
Single moms can raise children as well as 2 parents	-0.40 **	-0.35 **	-0.34 *	-0.30 *
Children are better off w/married parents	0.15	0.19 ^	0.15	0.19 ^
Men cannot be trusted to be faithful	-0.40 **	-0.37 **	-0.44 **	-0.42 **
Married/cohabiting new partner				
Mother's age	-0.09 **	-0.08 **	-0.09 **	-0.08 **
Mother's race/ethnicity (Black non-Hispanic omitted)				
White and other, non-Hispanic	0.18	0.19	0.17	0.16
Hispanic	-0.14	-0.15	-0.27	-0.31
Mother born in the U.S.	0.06	0.76	-0.29	0.48
Mother lived with both bio. parents at age 15	-0.07	-0.13	-0.09	-0.12
Mother's educational attainment (<HS/GED omitted)				
HS diploma	0.09	0.13	0.13	0.11
Some college or more	-0.16	-0.19	-0.15	-0.23
Child is male	-0.02	-0.10	0.01	-0.07
Child was born at low/very low birthweight	0.11	0.15	-0.12	-0.14
Child is mother's first	-0.75 **	-0.74 **	-0.77 **	-0.77 **
Bio. parents' relationship at baseline (cohabiting omitted)				
Romantically involved, not coresident	-0.17	-0.15	-0.25	-0.21
Not romantically involved	0.59 **	0.64 **	0.61 **	0.67 **
Mother reported drinking during pregnancy	-0.15	-0.24	0.01	-0.09
Mother reported smoking during pregnancy	0.31	0.41 ^	0.26	0.35
Mother received public assistance in previous year	0.24	0.16	0.29	0.20
Mother and biological father of same race/ethnicity	-0.30	-0.29	-0.24	-0.28
Mother self-reports as being in fair/poor health	-0.05	0.03	-0.12	-0.07
Mother's relationship attitudes				
Single moms can raise children as well as 2 parents	0.19	0.17	0.09	0.16
Children are better off w/married parents	-0.11	-0.10	-0.18	-0.18
Men cannot be trusted to be faithful	-0.02	0.00	-0.07	-0.09
N	**2919**	**2680**	**2593**	**2453**

** p<0.01; * p<0.05; ^ p<0.10 two-tailed

Appendix C. Impact of attrition on the characteristics of mothers' new and former partners 1, 3 and 5 years after nonmarital birth[a]

	All BL mothers who later live with a new partner		Live w/new partner & then attrite (and do not return)		Attrite, then re-enter & live w/new partner	
	(1)	(2)	(1)	(2)	(1)	(2)
	BF	NP	BF	NP	BF	NP
Partner's mean age	25.4	28.6	23.6	27.0	26.2	30.0
Partner's race						
Non-Hispanic white and other	14.5	15.9	23.8	20.0	14.0	14.0
Non-Hispanic black	62.2	62.9	52.4	63.3	54.8	64.0
Hispanic	23.4	21.3	23.8	16.7	31.2	22.1
Partner's education (BL for BFs for all yrs)						
Less than high school/GED	48.9	12.9	77.8	13.3	44.6	14.5
High school diploma	32.6	63.4	13.9	56.7	37.4	69.9
Some college or more	18.5	23.7	8.3	30.0	18.1	15.7
Partner working	72.3	82.1	54.1	79.0	66.2	83.2
Partner has no limitations	92.1	92.9	90.2	96.8	92.2	84.9
Partner has no drug/alcohol problems	91.4	98.6	82.5	100.0	93.4	100.0
Partner never in jail (1 yr for BL BFs)	54.7	78.9	44.4	75.0	47.5	76.6
Partner not violent toward mother	94.5	99.0	92.7	100.0	95.7	100.0
Total number of mothers[b]	788	788	35	35	78	78

[a] The sample is pooled across waves and is limited to mothers who were all in coresident relationships with new partners at one, three or five years, and thus have values for both biological fathers' and new partners' characteristics in the pooled dataset.

[b] This row represents the unique number of mothers in each column. Each mother could contribute up to four observations in the pooled dataset. The sample size for specific comparisons varies across outcomes.