MULTI-PARTNERED FERTILITY AMONG AMERICAN MEN

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Abstract

Using the 2002 National Survey of Family Growth (NSFG), which interviewed men for the first time, we document the prevalence and correlates of sequential parenthood with different partners (multi-partnered fertility) among a representative sample of American men. Nearly 8% of American men aged 15-44 have children with more than one partner, with sharp differences by age, race/ethnicity, and income - over one-third of poor black men aged 35-44 have children with 2 or more mothers, and 16% have children with 3 or more mothers. Multi-partnered fertility is strongly related to prior birth characteristics; men not in a coresidential union at the last birth and who never lived with their most recently born child are more likely to have a birth with a new partner. Results also suggest it is becoming more prevalent, as younger cohorts transition to a new partner birth more quickly and at a higher rate than older cohorts.

Keywords: multi-partnered fertility, men

Introduction

The past few decades have witnessed tremendous changes in family structure, and a major change has been the dissolution of the traditional links between marriage, childbearing, and childrearing. As the centrality of marriage has eroded, people have increasingly had children outside of marriage while continuing to experience high rates of divorce in marital unions with children. One consequence of these changes has been the increased risk of having children with different partners, an emerging phenomenon known as *multi-partnered fertility*. Little is known about this issue, though, especially among men, yet the implications of multi-partnered fertility for men, their children, and their future relationships may be significant and are of interest to social demographers, family sociologists, and policy makers.

Background

The shift away from marriage, both as a lifelong partnership and as a locus of childbearing and childrearing, is well-documented, though much of the discussion of the "decline" of marriage has focused on women. As with women, men have been delaying marriage. Since 1950, the median age at first marriage among men has risen about five years, to 27.4 (U.S. Census 2005a). The proportion of divorced men has also risen dramatically: in 1950, less than 2% of men were divorced, but by 2004, over 8% of men were divorced (U.S. Census 2005b). Thus, men are spending more time outside of marriage, and although direct information on men's fertility behavior has been difficult to obtain, it is clear more fertility is taking place outside of marriage, as evidenced by the rise in nonmarital fertility from 4% in 1940 to nearly 36% today (Hamilton, Ventura, Martin, and Sutton 2005; Ventura and Bachrach 2000). Part of the rise in nonmarital fertility is due, of course, to the rise of cohabiting unions and births within

them (Raley 2001), but cohabiting unions are less stable than marriages (Bumpass and Lu 2000). Together, exposure to having births with multiple partners is increasing.

The decline of marital childbearing and continued high rates of divorce and the resulting exposure to multi-partnered fertility pose potential problems for both children and adults. For children, concern over men's multi-partnered fertility lies in the fact that men usually do not live with their children if their relationship with the mother is no longer intact. Union instability, of course, is the key here, and since nonmarital childbearing and union dissolution is selective of disadvantaged populations, these men may have few resources to give their children even in the best of circumstances (Nelson 2004). As such, men with children by multiple mothers and who are parenting across multiple households likely face even greater obstacles in investing both time and financial resources in their children. From the large body of research on divorce, remarriage, and stepfamilies, we know that children who do not live with their fathers are significantly disadvantaged. Children in single-parent households fare worse than those with both biological parents (McLanahan and Sandefur 1994), and stepfathers do not replace fathers in terms of relationship quality or involvement with children (Cherlin 1992). About 74% of nonresidential fathers do not pay child support at all (Garfinkel, McLanahan, and Hanson 1998), and it is estimated that over 90% of low-income men do not pay any child support (Sorensen and Zibman 2001). Moreover, there is evidence that once men no longer live with their children, their involvement with their biological children declines (Manning and Smock 1999), especially if they have children with a new partner (Manning and Smock 2000). It is likely, too, that children will have poor relationships with their paternal kin if they rarely see their father, reinforcing the matrilineal tilt of many single-parent households. Thus, many low-income children with scarce

resources are likely to be even more deprived of their father's attention and support when men must balance economic and social demands across different households.

Not only are children potentially disadvantaged, though, by not living with their fathers; research has increasingly recognized the benefits of fatherhood for men themselves. Most work on fatherhood, though primarily done on more normative fathering experiences, finds that the experience is positive (Eggebeen 2002). However, it seems that it is not biological fatherhood itself that provides benefits; rather, it is paternal involvement. For instance, fathers have more social connections and are less likely to have bouts of unemployment, but this is only true for men who live with their children (Eggebeen and Knoester 2001). To the extent that multi-partnered fertility means men are not living with some or all of their children, they will not reap as much of the benefits of fatherhood from children in whom they have invested emotional and material supports. This has the consequence of disconnecting men from their families even when they have children, potentially depriving them of the benefits of companionship and possibly material support later in life.

Men's future relationships and the quality of their partners can also be affected. The presence of both coresidential and non-coresidential children can affect men's ability to form subsequent relationships, since new partners may be reluctant to take on stepmother roles, and involvement with children (especially across multiple households) can create a strain in time and resources available to new unions (and potentially to new children). Non-involvement also sends a message to new partners about dependability, though only if they know about prior children. To date, evidence of the effect of children from prior relationships on men's union formation is mixed. Some find that nonresident children actually encourage cohabitation (Stewart, Manning, and Smock 2003), others find a negative influence on union formation (Clarkberg, Stolzenberg,

and Waite 1995; Bernhardt and Goldscheider 1998; Clarkberg 1999; Sweeney 1997a, 1997b), and still others find no relationship (Becker, Landes, and Michael 1977; Lampard and Peggs 1999), though no studies have yet focused explicitly on men's multi-partnered fertility.

Although it is unclear how men's multi-partnered fertility may impact their ability to form future relationships, it seems likely that the types of mates they attract may be affected. In particular, men who have children from prior relationships likely form relationships with women who have children from prior relationships, creating high levels of family complexity. Although family complexity is not new, since it occurs when two divorced parents marry each other, the rise of nonmarital fertility and informal unions may make stepparent roles particularly ambiguous. High levels of family complexity might make new unions particularly unstable, especially if multi-partnered fertility diverts time and resources to not one but two or more outside households; conversely, new relationships may draw time and resources away from nonresidential children. There is growing evidence that paternal claims from previous families are a source of jealousy and conflict between men and their new partners. (Furstenberg 1995; Edin and Kefalas, 2005). Family complexity might increase even more if the couple has a child together, as there is sometimes a tendency for couples with children from prior relationships to have a child together to "cement" their new relationship (Ganong & Coleman 1994). This structural "solution" may, in fact, create more rather than less friction within the family as children from current and previous partners compete for limited resources.

Previous Research

Unfortunately, there is very little published information on multi-partnered fertility, partly due to data constraints, and none of it focuses specifically on men. In general, men's family formation patterns have received little attention (Greene and Biddlecom 2000; Forste

2002) owing to the lack of demographic data. Most surveys focus on women, as men tend to underreport their fertility, especially for nonmarital births and noncoresidential children (Lerman 1993; Bachu 1996; Rendall, Clark, Peters, Ranjit, and Verropoulou 1999). Moreover, the complex nature of multi-partnered fertility requires partner information for all births, but most childbearing histories are collected by dates rather than within relationships. This methodology requires matching between dates of birth and dates of relationships to determine which partner the respondent had the child with, but since relationship data usually only includes coresidential unions, it leaves us with no information for births outside of coresidential unions

Most of what we do know about multi-partnered fertility comes from the Fragile Families and Child Wellbeing Study (Fragile Families), a representative sample of unmarried births in major cities. Although Fragile Families is a landmark survey for the study of nonmarital fertility, estimates about men's fertility are potentially biased, since most of the estimates rely on the mother's reporting of their partner's multi-partnered fertility due to the lower response rates among men, especially those who were not living with the mother. The Fragile Families studies, along with one other study, show that being black, unmarried (especially at first birth), having an early first birth (but being older overall, reflecting a longer span of exposure to fertility), and, for men, having incarceration experience are associated with multi-partnered fertility (Mincy 2002; Carlson and Furstenberg 2006; Guzzo and Furstenberg 2005). Consistent with these findings, a study of welfare administrative data in Wisconsin in the late 1990s found that about three-fourths of recipients either had children with more than one partner themselves, or the father of their child did. Significantly, the more women with whom a man had children, the more likely he was to have a formal child support order but the less per child he was able to pay (Meyer, Cancian, and Cook 2004). A few other studies using Fragile Families data show that multi-partnered

fertility has detrimental effects on other aspects of family formation, linking it to decreased odds of cohabiting or marrying their partner after having a nonmarital birth together (Mincy and Huang 2001; Mincy and Huang 2002; Harknett and McLanahan 2005; Waller and McLanahan 2005) and decreased odds of father-child contact (Mincy and Huang 2002). Together, the studies on lower-income families suggest that the children of men with multi-partnered fertility may face disadvantages in terms of the time spent with their fathers and the amount of financial support received and that men may face difficulties in their own relationships. Because of data limitations, however, none of these studies have explicitly focused on men or based their findings on a nationally representative sample. This paper seeks to contribute to the growing body of work in multi-partnered fertility research by examining the prevalence and correlates of multi-partnered fertility among American men.

Data and Methodology

Cycle 6 (2002) of the National Survey of Family Growth (NSFG), released in early 2005, provides a unique and unprecedented opportunity to study the prevalence and correlates of male multi-partnered fertility as well as discovering how multi-partnered fertility affects men's subsequent relationship, childbearing, and childrearing behaviors. The NSFG is a nationally representative, household-based cross-sectional survey of Americans aged 15-44. Past cycles of the data have interviewed only women, but the most recent wave included men for the first time. The inclusion of men presents a major advance, not just for the study of multi-partnered fertility, but for the study of men's fertility and family formation in general.

The NSFG includes 7,643 women and 4,928 men aged 15-44. While the women's fertility histories are collected in the traditional manner, in a separate module by dates of all births, men's fertility experiences are situated within relationships. That is, in gathering

information about men's current and prior partners (current spouse/partner, last three sexual partners, up to three former wives, and the first premarital cohabiting partner), men are asked whether they had any children with each partner. In addition, men are then asked if they had any children that have not yet been discussed and whether these children are with the same woman. About one-third of the sample (1,731) had at least one birth, and just over-fifth (1,035) had two or more births, a necessary condition for multi-partnered fertility. Of those with two or more births, less than one-third (303) had children by at least two partners.

Methodology

Our approach is first to document the prevalence of overall fertility among the sample of males in the NSFG. We produce the prevalence of first births, higher parity births, and multi-partnered births by the number of partners, examining variation by socioeconomic characteristics. Converting the analytical sample to person-years, we then use survival analysis to examine how the risk of having a birth with a new partner has changed over time and how it varies by race and ethnicity. Finally, we use Cox proportional hazard models, which incorporate time-varying measures of men's fertility and relationship experiences, to model the risk of having a first birth, a higher parity birth, and a birth with a new partner (i.e., multi-partnered fertility). This approach is appropriate because multi-partnered fertility is a process – it is predicated on not only becoming a father but having at least two or more children and experiencing the demise of one union and the formation of another. In particular, this approach lets us understand who, among first-time fathers, goes on to have another birth and who goes on to have another birth with a new partner. The use of time-varying measures allows for characteristics of prior births (age, relationship status, paternity establishment, and the like) to influence the characteristics of subsequent births. Individuals enter the risk set for first births at

age 12 (the earliest age at first birth) and leave at the time of a first birth or are censored at the time of interview. Because we are analyzing person-years, men enter the risk set for a higher parity birth and a new partner birth the same year they experience their first birth, since 46 men experienced their first and second births in the same calendar year. For the higher parity birth analysis, men leave the risk set at the time of a second birth or are censored at interview, but for the new partner birth, they do not leave until they experience a birth with a new partner or at the time of interview, which means they may experience other births with the same partner in the interim.

The analysis also contains socioeconomic and demographic variables which may affect the likelihood of having a first birth, a higher parity birth, and a birth with a new partner. Age, race/ethnicity (excluding those in the "other" category), and whether the respondent was foreign born are included. Although prior waves of the NSFG included detailed education histories, the current wave does not contain information other than the date of high school graduation or the receipt of a GED, so it is not possible to situate men's fertility in relation to their educational experiences after the receipt of a high school diploma or GED. Because current educational achievement and work experiences might be endogenous to fertility (though this is probably less the case for men than for women) and because current situations do not necessarily reflect conditions at birth (which would likely affect paternity establishment strongly), the respondent's own socioeconomic status is not included[1]. Rather, to control for socioeconomic background, we include family background characteristics: mother's age at first birth (measured dichotomously as whether the first birth occurred younger than 18), mother's education, and family structure at age 14. It is expected that more disadvantaged individuals, on the whole, will

[1] The respondent's own socioeconomic status, including education and income, is included in the descriptive statistics for a comparison of SES between men with and without multi-partnered fertility.

be more likely to have a new partner birth. Religiosity is also included, measured as frequency of religious service attendance, since religious individuals tend to be more family-oriented, so it is expected that they would be more likely to have a child but less likely to experience multi-partnered fertility.

We expect characteristics of prior births to be strongly related to the likelihood of a higher parity birth and a birth with a new partner. For the higher parity birth, these characteristics refer to the first birth, but for multi-partnered fertility, these characteristics are time-varying, changing with each birth until a new partner birth occurs. We include controls which index the prior birth to a time period, since we expect that, all else being equal, the risk of having a birth with a new partner increases over time. We control for years since last birth, and in the model for new partner births, we also include a control for parity. As we expect that men who were very young at their last birth (under 20) are more likely to have a birth with a new partner, since early relationships are generally less stable, a dichotomous variable indicating whether the man was less than 20 years old at last birth is included. We also control for relationship status at last birth. Men in a coresidential relationship, especially a marriage, are more likely to have a higher parity birth but are, of course, less likely to have a birth with another partner.

Finally, we also include three other characteristics of a prior birth: whether the father learned of the child after the birth, whether the child never lived with the father, and whether the father failed to establish paternity. Coresidence with the child and paternity establishment are only available for children 18 and under who were still alive and were not adopted or living in foster care; to maximize sample size, we include these measures only in the last model. It is expected that men who learned of the child after the birth, who never lived with the child, and

who did not establish paternity are more likely to experience multi-partnered fertility. The NSFG also contains information on timing, wantedness, and happiness for each pregnancy, but unfortunately these questions are only asked of births in the five years prior to the interview, and using these questions produces sample sizes too small for analysis.

Our data analysis constructs a series of statistical models to take account of correlates which may be potential determinants of multi-partnered fertility. Model 1 includes only age, race/ethnicity, and immigrant status. Model 2 adds in family background and religiosity. Model 3 adds in the prior birth characteristics that are available for all births, while Model 4 adds the two prior birth characteristics that are only available for children 18 and younger, child coresidence and paternity establishment, resulting in a slightly smaller sample size in Model 4. Our multivariate analyses exclude men for whom dates of birth or partnership information is not available as well as men in the "other" racial category or who are missing information on one or more of the independent variables. These restrictions produce a sample size of 4,612 for first births (with 1,618 first births) and 1,615 for higher parity births (955 second births) and new partner births (280 new partner births); sample size is smaller for Model 4. We present hazard ratios, which are the exponentiated values of the coefficients and represent the percentage increase or decrease in the hazard of having a first birth, a higher parity birth, or a new partner birth during the interval relative to having no birth.

Results

Prevalence

Table 1 displays the overall weighted prevalence of fertility behaviors, by parity and multi-partner status[2]. Less than half of American men between the ages of 15 and 44 have had at least one child while less than a third have had two or more children. About 8% of men have

[2] Men in the "other" racial/ethnic category are included in prevalence and descriptive statistics.

children by at least two different women, and 1.5% have had children with three or more mothers. These numbers, of course, hide wide disparities by age, race/ethnicity, and poverty.

– Table 1 here –

As expected, fertility is higher among older men; while less than 10% of men aged 15-24 have children, three-quarters of men aged 35-44 have children. Similarly, although multi-partnered fertility is rare among young men, it is dramatically higher for men between the ages of 35 to 44: by these ages, 16% have children with at least two mothers, and 3% have children with three or more women. Fertility is higher among Hispanic men than other groups, although they do not have a higher prevalence of multi-partnered fertility than other groups. Consistent with prior research, multi-partnered fertility is highest among African-Americans (Carlson and Furstenberg 2006; Guzzo and Furstenberg 2006); nearly 16% of black men have children with two or more women, and 5% have children with three or more women. There are also differences in fertility by poverty level; more men with incomes less than 150% of the 2001 poverty level are fathers, and the prevalence of multi-partnered fertility is almost twice as high among poor than nonpoor men. This suggests that it is the men who are least able to afford obligations to multiple households who are most likely to have them, though of course having obligations does not necessarily translate into meeting them.

When age, race/ethnicity, and poverty level are examined together in the final row of Table 1, striking differences in the prevalence of overall fertility and multi-partnered fertility are evident. Poor Hispanic men enter parenthood much earlier than other groups: over a fourth of poor Hispanic men aged 15-24 are fathers compared to less than 10% of poor non-Hispanic white and black men. By 35-44, entrance into parenthood does not differ substantially by race/ethnicity among men with incomes 150% or less of the 2001 poverty level, though

Hispanics have higher levels of fertility, especially compared to whites (about half of Hispanics have three or more children compared to less than a third of non-Hispanic whites). At the early ages, poor Hispanics continue to exhibit distinct fertility patterns in terms of multi-partnered fertility, with 3% of young Hispanic men having children with at least two different women. Among poor men aged 25-34, though, more African Americans (nearly one-third) have children by two or more women than Hispanics (16%), but about 4% of both African Americans and Hispanics have children with 3 or more women. Finally, looking at the oldest group, the differences by race among poorer men are quite sharp. Multi-partnered fertility is actually lowest among poor Hispanic men in this age group (less than 20%). About one-fourth of poor non-Hispanic white men have multi-partnered fertility, though most of this occurs with just two partners. Over a third of poor black men aged 35-44 have children with two or more women, and 16% have children by three or more mothers. Combined with the likely financial difficulties of supporting children in different households, these impoverished men are likely to face huge obstacles in keeping up with the emotional and financial obligations to their offspring spread across several households.

Descriptive Statistics

Table 2 displays weighted descriptive statistics for men with and without multi-partnered fertility. The table includes some socioeconomic characteristics not included in multivariate models due to concerns about endogeneity but provided here to give us insight into the characteristics of men who have children with two or more women. As is already evident, men with multi-partnered fertility are more disadvantaged. Multiple-partner fathers are over-represented among racial and ethnic minorities and are less likely to come from an intact family. Their mothers have lower levels of education and are more likely to have had an early birth.

They themselves have lower levels of education and are disproportionately poor; over one-third of men with multi-partnered fertility have incomes 150% or below the 2001 poverty line.

– Table 2 here –

Even when compared just to fathers, those with children by multiple mothers are different than their counterparts, as shown in Table 3. Not surprisingly, they have more children, perhaps because of starting their fertility at an earlier age. They are much less likely to have been living with the mother when their first child was born. Multiple-partner fathers are also more likely to report that they learned of the child after birth, were less likely to have lived with the child, and less likely to have established paternity. When men become multi-partnered fathers, only half of them are married, with the rest equally split between cohabitation and no coresidential relationship, and the majority of men enter multi-partner parenthood with only their second birth. Together, these characteristics suggest that men with multi-partnered fertility might result from lack of planning, and hence these men might be less involved fathers than those who enter parenthood in a more deliberate fashion.

– Table 3 here –

Multivariate Analyses

Figures 1 and 2 show the survival curves for multi-partnered fertility, representing the cumulative probability of a man not having a child with a new partner, with exposure beginning after a first birth, based on duration specific life-table survival probabilities. Figure 1, which shows the survival curve by race/ethnicity, confirms the descriptive results and measures of prevalence. After a first birth, African Americans transition at a higher rate and more quickly to a birth with a new partner than either Hispanics or whites. Hispanics also transition at a higher

rate and more quickly to multi-partnered fertility than whites but generally are closer to whites than blacks.

– Figure 1 here –

Figure 2, which shows the survival curve by cohort (current ages 15-24, 25-34, and 35-44), suggests that transitions to multi-partnered fertility are occurring more quickly in more recent cohorts. Although the survival curve for the youngest cohort is affected by the small proportion of fathers and censoring at the time of the interview, it is apparent that after a first birth, this cohort is transitioning to a birth with a new partner at a much higher rate and much more quickly than prior cohorts. Moreover, it seems that each successive cohort transitions to a new partner birth at a higher rate and more quickly than its predecessor, though we would need more cohorts to be sure of this. However, if multi-partnered fertility is higher in more recent cohorts, it is likely that the youngest cohort here will have a higher prevalence of multi-partnered fertility when it reaches ages 35-44 than the current 35-44 year-olds exhibit and that we will continue to see a rising prevalence of men who have children with multiple mothers.

– Figure 2 here –

Results from Cox Proportional Hazard models are presented in Table 4, which shows three sets of analyses: first births, higher parity (second-order) births, and new partner births. These models exclude men in the "other" racial/ethnic group. The first set of models, looking at first births, shows that socioeconomic and demographic characteristics are strongly predictive of men's first births, as expected. The older men are, the more likely they are to have a child. Hispanics and African-Americans have a higher risk of fertility, as do foreign born men, and these associations are relatively unchanged by the inclusion of other characteristics. The risk of fertility is higher among those who did not grow up with both biological parents; since our

sample is fairly young, this likely reflects earlier childbearing among this group and delayed childbearing among those with intact families rather than childlessness among men from intact families. Lower levels of education (both the men's and their mother's) are also positively associated with fertility, as is having a mother with an early first birth. More religious men are also more likely to have children, consistent with the pro-family norms of most religions.

– Table 4 here –

Moving on to the higher parity models, we see a very different story. Once entrance into parenthood is taken into consideration, much less distinguishes who goes on to have a second birth. In the baseline model, only Hispanics are marginally more likely to have a second birth than whites; in the presence of controls in the subsequent models, being Hispanic loses statistical significance. Foreign born men are also marginally more likely to have a second birth, but this, too, loses significance in most of the subsequent models. In Model 2, only a few socioeconomic characteristics prove important; men whose mothers are well-educated are less likely to have a second birth, while more religious men are more likely to have a second birth.

The inclusion of first birth characteristics slightly affects some sociodemographic and economic variables. Though being Hispanic remains insignificant, African Americans have a marginally higher risk of having a second birth than whites once controlling for first birth characteristics. The negative effect of maternal education is weakened. The increased risk of higher parity births among those with more religious service attendance remains fairly unchanged by first birth characteristics. Among the first birth characteristics themselves, men whose first birth occurred between 1974-84 are less likely to have a second birth than men whose first birth occurred between 1995-2002. This seems counterintuitive, given declines and delays in childbearing, and is largely due to the inclusion of a control for years since last birth. Men are

more likely have another child as the time since last birth increases; without this variable, men whose first birth occurred in the earlier time periods have a higher risk of having a second birth (though only significant for the 1985-1994 period) than men whose birth occurred in 1995-2002 (not shown). Years since last birth also negates the effect of age at first birth; though it is insignificant here, in a model not shown, the risk of having a second birth is 1.387 times that of men who were under age 20 at their first birth. As expected, the risk of having a second birth is higher among married men, though not among cohabiting men, which is interesting considering that cohabitors have higher coital frequency than married people do (Bachrach 1987; Rao and DeMaris 1995). This suggests that although exposure to fertility might be higher among cohabiting couples, men do not consider it equivalent to marriage as locus to build and raise a family. In a model not shown here, where married at first birth is the omitted category, cohabiting men have a significantly lower risk of having a second birth than married men.

Model 4 adds two more measures of first birth characteristics, which are available only for men whose first child is 18 or younger, still alive, and not adopted or in foster care. In this model, being African American loses its marginally significant higher risk of a second birth, while being foreign born becomes marginally significant. The positive relationship between religiosity and higher parity births is weakened somewhat as well. Prior birth period and year since first birth remain important predictors, as does marital status. Although coresidence with the child and learning of the child after the birth are unrelated to the hazard of having a second child, paternity establishment is important: men who did not establish paternity with their first child have a lower risk of having a second child. This might represent a conscious avoidance of subsequent births among men who have no intentions of being an active parent, or it may be a warning signal to potential mates about these men's probable role in sharing parental

responsibilities, though this would be the case only if potential partners are aware of the failure to establish paternity.

Finally, the last set of models focuses on multi-partnered fertility. The baseline model confirms the descriptive statistics and prevalence measures: racial and ethnic minorities, especially African Americans, have a higher hazard of a birth with a new partner. The addition of socioeconomic background characteristics in Model 2 weakens the relationship between being Hispanic and having a new partner birth but does little to the higher risk among African Americans. Men who were not living with both biological parents at age 14 are more likely have multi-partnered fertility, though this is only significant for "other" family category (which is most likely comprised of single parent families). As expected, higher levels of maternal education decrease the risk of a new partner birth, and more religious men are also less likely to have a birth with a new partner.

Models 3 and 4 include measures of the prior birth characteristics. Unlike the higher parity models, birth characteristics here can refer to any birth and are time-varying, though for most men these are characteristics of the first birth (since three-fourths of men experience multi-partnered fertility with their second birth). In this model, the inclusion of prior birth characteristics dramatically changes the relationship between racial/ethnic minority status and the hazard of having a new partner birth. Here, neither Hispanics nor African Americans are at an increased risk of having a birth with a new partner. We interpret this to mean that it is the circumstances in which these groups enter parenthood that produces their increased risk of multi-partnered fertility, namely that the birth occurs early and to parents who have not developed a strong commitment to their relationship. At the same time, we observe that the inclusion of prior birth characteristics does little to affect the potential influence of other significant

background conditions; men with higher maternal education and who are more religious remain less likely to have a birth with a new partner.

The prior birth characteristics themselves are strongly related to the likelihood of a new partner birth. Consistent with findings presented earlier in the survival curves, multi-partnered fertility has become more common over time. Men whose prior birth occurred during the earlier time periods are less likely to have a birth with a new partner than men whose birth was in the latest time period; in analyses not shown, men whose birth was in the 1974-1984 cohort are also significantly less likely to have a new partner birth than a man whose last birth was in 1985-1994. The time elapsed since the last birth is also important, as each year increases the likelihood that men will have a birth with a new partner, reflecting the role that time has on union dissolution. Men with higher parities are also more likely to have a child with a new partner. Unexpectedly, men whose last birth occurred as a teenager are no more likely to have a new partner birth than men who were older at their last birth. However, in models not shown here, this is largely a result of controlling for time since last birth; in the absence of this variable, men whose last birth occurred when they were under age 20 have nearly three times the hazard of having a new partner birth. Relationship status at last birth is also a key factor in whether men have a birth with a new partner. As expected, men who were in a coresidential union at their last birth are much less likely to have a birth with a new partner than men who were not living with the mother of their last child, and men who were cohabiting are much more likely to experience multi-partnered fertility than those who were married (not shown).

Model 4, which adds in two measures of paternal involvement, also shows that, to some extent, part of cohabitors' decreased risk of having a birth with a new partner is related to child coresidence. Men who never lived with their child have over twice the hazard of having a new

partner birth, and with this control, cohabitors are no less likely to have a new partner birth than men who did not live with the mother of their child, though cohabitors are still more likely to have a new partner birth than men who were married (not shown). Paternity establishment and the timing of learning about a child do not affect whether a man has a new partner birth.

In models not shown here, where we explored the relationship context of a new partner birth, relatively little explained whether a new partner birth occurred in a marital union. As might be expected, men who were married at their last birth are more likely to be married at the time of new partner birth but only marginally so. African Americans are significantly more likely to be unmarried than married at the time of a new partner birth, as are those whose mother had a first birth as a teenager. Finally, as the time since last birth increases, men are less likely to have a new partner birth in a marital union.

Conclusion

The research gives us a first glimpse of how prevalent multi-partnered fertility is among men, which men have children by multiple partners, and what characteristics influence multi-partnered fertility. The issue of multi-partnered fertility has received little empirical attention, since until recently there were no data sources that allowed adequate examination of the issue. Researchers have really only begun to examine how common multi-partnered fertility is; how it relates to other family behaviors remains to be seen. Because this research is the first to document multi-partnered fertility among men in a nationally representative sample, we had no firm expectations of how prevalent this behavior was. Nonetheless, we find the overall prevalence – 16% of men aged 35-44 have children with at least two women – to be quite striking. Moreover, the sharp differences by race/ethnicity and poverty, though anticipated, are particularly troubling in view of the potential adverse consequences for contact and support

between fathers and their children. Among poor men aged 35-44, one-fifth of Hispanic men, one-fourth of non-Hispanic white men, and over one-third of non-Hispanic black men have children with multiple partners. Perhaps most alarming is the finding that one out of six poor black men 34-45 have children with three or more different women.

What is even more troubling is that, unfortunately, these numbers are likely to be underestimates, for two reasons. First, despite the innovative technique to measuring men's fertility used by the NSFG, it is still likely that some men did not report their nonresidential children, either purposely or because they did not know of them (Sorensen and Zibman 2001). Second, standard household-based survey techniques undercount low-income men, who are most likely to experience multi-partnered fertility. Low-income men are disproportionately enlisted in the military and imprisoned, and they are often loosely attached to households (Sans-Abiodun and Sanchez 2003). For these reasons, Hernandez and Brandon (2002) estimate that 5-10% of non-Hispanic white men, 15-25% of Hispanic men, and 20-40% of non-Hispanic black men aged 20-39 are missing from household-based surveys like the NSFG.

Our descriptive results are consistent with the correlates from the Fragile Families study (Carlson and Furstenberg 2006), which shows that socioeconomic disadvantage is common among those with multi-partnered fertility. However, unlike the Fragile Families study, which is a snapshot of nonmarital births, we are able to trace the process of multi-partnered fertility since we know information about each birth. This approach reveals that although the prevalence of multi-partnered fertility is higher among racial and ethnic minorities and disadvantaged groups, this is largely due to the very different conditions in which these groups enter parenthood and the subsequent effects on their family and fertility behaviors. As with earlier research on multi-partnered fertility among young women (Guzzo and Furstenberg 2005), this work suggests that

there is nothing inherent about minorities, particularly African Americans, that leads to multi-partnered fertility. Rather, since they are more likely to have their first child under less than ideal circumstances, their early relationships are unstable and thus increase the risk that any future births are with a new partner.

Until now, we did not have good information from a nationally representative sample of men regarding their fertility experiences, but the results here suggest that multi-partnered fertility could play an integral role in men's own relationships and their paternal involvement. With the federal government planning to pour a billion dollars into marriage promotion among unmarried parents in the next few years, it is vital to understand why unmarried parents do not marry in the first place. One overlooked, but potentially important reason, may be that many parents have children from prior relationships, creating both economic and emotional barriers to establishing a new union. In particular, men with children from prior relationships likely establish relationships with women who also have children from previous relationships, creating competing demands for generating emotional and material support for children that they do not share in common. Research on stepfamilies has revealed this complex family form creates barriers to establishing stability in new unions. There is every to suspect that the problems would extend and perhaps be exacerbated when parenthood occurs outside the context of marriage. Yet it remains to be seen in future work whether in fact multi-partnered fertility undermines men's future relationships.

Multi-partnered fertility almost certainly plays a role in paternal involvement and child support. The issue of child support is compounded by the fact that it appears that those least able to afford multiple children are those most likely to have children across households, so they have less funds to distribute to each child and may feel overwhelmed with their parenting

responsibilities and focus on their most recent child (Waller 2002). There is also increasing recognition that fathers play an important and distinct role in childrearing (Sigle-Rushton and McLanahan 2004), and it appears that men who children by multiple women spend less time with their children (Mincy and Huang 2002). If multi-partnered fertility does not represent a complete abandonment of children from earlier relationships, it still impedes men's abilities to be actively involved with their children. With only a finite amount of time available, men may be stretching themselves thin when trying to parent children across households, especially if they are in a new relationship with new children and/or the partner's children.

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Figure 1. Predicted Survival Curve for Multi-Partnered Fertility, by Race/Ethnicity

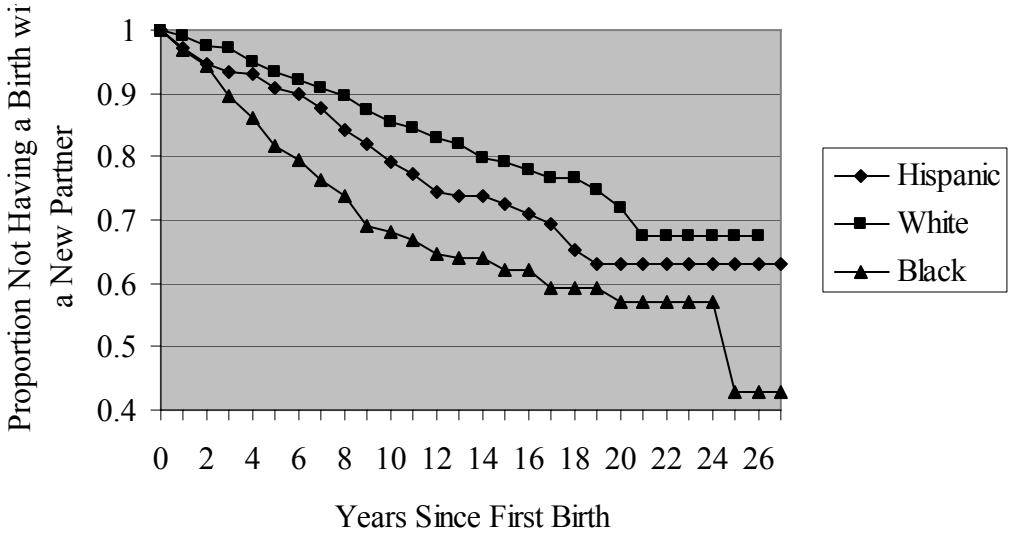

Figure 2. Predicted Survival Curve for Multi-Partnered Fertility, by Cohort

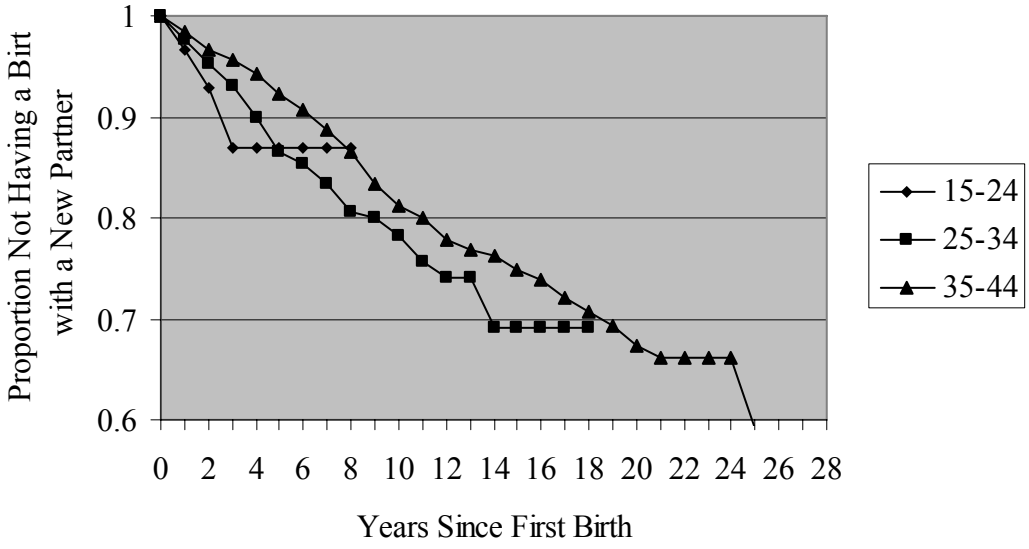

Table 1. Prevalence of Fertility by Parity and Number of Partners (weighted)					
	Had at least one birth	Had 2 or more births	Had 3 or more births	Had births with 2 or more partners	Had births with 3 or more partners
All Men	46.7%	29.5%	13.4%	7.9%	1.5%
Age					
15-24	9.5%	3.1%	0.8%	0.8%	0.1%
25-34	54.4%	30.5%	11.4%	6.9%	1.1%
35-44	74.3%	53.0%	27.2%	16.2%	3.1%
Race/Ethnicity					
Hispanic	55.5%	38.2%	20.5%	9.5%	2.2%
White	44.3%	27.1%	10.8%	6.0%	0.8%
Black	48.7%	31.1%	15.2%	15.5%	4.9%
Other	44.7%	30.3%	19.0%	10.0%	0.1%
Poverty level					
150% or less than poverty level	51.6%	37.6%	20.1%	12.2%	2.0%
Above 150% of poverty level	45.2%	27.0%	11.5%	6.7%	1.3%
Income 150% or less of the poverty level, by Race and Age					
15-24					
Hispanic	26.8%	9.8%	5.0%	3.2%	0.0%
White	9.8%	4.8%	0.0%	0.8%	0.0%
Black	8.4%	6.2%	2.1%	0.8%	0.5%
Other	11.6%	9.7%	0.0%	0.0%	0.0%
25-34					
Hispanic	78.4%	56.6%	28.8%	16.2%	4.0%
White	72.5%	51.4%	22.0%	5.4%	0.8%
Black	68.3%	39.7%	17.9%	31.2%	4.4%
Other	74.4%	64.7%	42.9%	11.8%	0.0%
35-44					
Hispanic	85.9%	74.9%	50.8%	19.8%	0.6%
White	80.6%	63.9%	31.2%	27.2%	2.4%
Black	81.9%	64.6%	43.6%	36.6%	16.3%
Other	86.1%	55.6%	46.9%	20.8%	0.0%

[a] Poverty defined as respondent's combined family income in 2001 divided by weighted average threshold income of families whose head of household was under 65, for a family of the size of respondent's family, based on the 2001 poverty levels defined by the US Census Bureau

Table 2. Sociodemographic Descriptives for all NSFG Men and for Men with Multi-Partnered Fertility (weighted)		
	All men	***Men with multi-partnered fertility***
Age	29.2 yrs***	37.0 yrs
Race/ethnicity		
Hispanic	16.4***	20.0
Non-Hispanic Black	10.9***	23.3
Non-Hispanic White	66.7***	49.1
Other	5.9***	7.6
Foreign born	15.5	14.5
Family status at 14		
Both biological parents	74.9*	63.1
Two-parent stepfamily	8.6*	12.1
Other	16.5*	24.8
Mother's education		
Less than HS	20.2***	30.8
HS/GED	37.1***	47.1
Some college	21.4***	15.1
College or higher	21.3***	7.0
Mother's age at 1st birth		
<18 years	12.2***	17.5
18-19 years	17.4***	30.3
20-24 years	41.6***	43.3
25-29 years	20.0***	5.7
30 or older	7.8***	2.0
No mother figure	1.1***	1.2
Freq of religious service attendance at 14		
More than weekly	8.9	6.8
Weekly	18.9	20.1
1-3 times per month	15.8	19.5
Less than once a month	27.9	20.5
Never	28.5	33.2
Education		
Less than HS	22.8**	24.1
HS/GED	30.4**	44.6
Some college	26.2**	25.3
College or higher	20.6**	6.0
Income 150% or more below 2001 poverty level[a]	21.8***	35.1

May not total 100% due to rounding.

* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$ significant difference b/w men w/ and w/out multi-partnered fertility

[a] Poverty defined as respondent's combined family income in 2001 divided by weighted average threshold income of families whose head of household was under 65, for a family of the size of respondent's family, based on the 2001 poverty levels defined by the US Census Bureau

Table 3. Fertility Characteristics of All NSFG Men and Men with Multi-Partnered Fertility (weighted)		
	All men	***Men with multi-partnered fertility***
Number of children		
All men		
0	58.0	
1	18.6	
2	15.3	
3	5.7	
4+	2.4	
Fathers		
1	44.2***	0.0
2	36.5***	25.5
3	13.5***	38.6
4	4.4***	20.7
5	0.9***	10.1
6+	0.4***	5.0
Fathers		
Age at 1st birth	26.3 yrs***	21.9 yrs
Relationship at 1st birth		
Not living together	11.6***	41.1
Cohabiting	19.6***	19.0
Married	68.8***	39.9
Learn of 1st child after the birth	1.2***	6.7
Never lived with 1st child	2.4***	17.9
Never established paternity of 1st child	2.3***	8.3
Partner with whom had a new birth		
2		76.9
3		17.2
4		2.4
5		3.5
Relationship status of new partner birth		
No coresidential union		24.1
Cohabitation		26.7
Marriage		49.2

May not total 100% due to rounding.
* p≤0.05 ** p≤0.01 *** p≤0.001 significant difference b/w men w/ and w/out multi-partnered fertility

Table 4. Hazard Ratios from Cox Proportional Regression for First Births, Higher Parity Births, and New Partner Births										
	First births		Higher parity births				New partner births			
	Model 1	Model 2	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model	Model 4
Age	1.117 ***	1.090***	0.995	0.992	0.941	0.942***	0.979#	0.988	0.903***	0.896***
Race										
White	--	--	--	--	--	--	--	--	--	--
Hispanic	1.942***	1.759***	1.174#	1.097	1.154	1.162	1.496*	1.362#	0.946	0.948
Black	1.669***	1.488***	1.117	1.091	1.198#	1.148	2.398***	2.319***	1.236	1.107
Foreign born	1.180*	1.143#	1.162#	1.080	1.137	1.216#	0.859	0.871	0.962	1.030
Family status at 14										
Both biological parents		--		--	--	--		--	--	--
Two parent stepfamily		1.604***		0.856	0.844	0.859		1.248	1.195	1.161
Other		1.172*		0.956	0.969	1.026		1.386*	1.345*	1.420*
Have HS diploma/GED		0.489***		0.966	0.934	0.953		1.218	0.817	1.003
Mother's education										
Less than HS		1.176*		1.062	1.074	1.016		0.967	1.096	0.894
HS		--		--	--	--		--	--	--
Some college		0.735***		0.765**	0.825#	0.878		0.701#	0.624*	0.620*
College		0.661***		0.799*	0.952	0.976		0.496***	0.618*	0.603#
Mother's age at 1st birth <18		1.150*		0.956	0.959	1.007		0.959	0.946	0.966
Religiosity										
More than weekly		1.166		1.427**	1.332*	1.219		0.847	0.902	0.881
Weekly		1.350***		1.143	1.170	1.132		0.634*	0.691#	0.764
1-3 times month		1.459***		1.312**	1.317**	1.333**		0.838	0.685*	0.928
Less than once a month		1.102		1.138	1.168#	1.123		0.817	0.935	0.977
Never		--			--	--		--	--	--
Prior birth characteristics										
Prior birth period										
1974-1984					0.399***	0.403***			0.032***	0.015***
1985-1994					1.109	0.996			0.470***	0.254***
1995-2002					--	--			--	--
Years since last birth					1.139***	1.145***			1.324***	1.403***
Parity					n/a	n/a			2.081***	2.033***
Under age 20					0.943	0.822			0.949	0.763
Relationship status										
Not coresiding					--	--			--	--
Cohabiting					1.017	0.925			0.541***	0.713
Married					1.556***	1.529***			0.287***	0.393***
Learned of child after the birth					0.904	0.902			1.325	0.903
Never lived with child						0.882				2.205**
Never established paternity						0.587*				0.819
N	4612	4612	1615	1615	1615	1472	1615	1615	1615	1472
Failures	1618	1618	955	955	955	854	280	280	280	214
Person-years	65830	65830	9092	9092	9092	7840	14482	14482	14482	13073
-2 log likelihood	25465.768	25234.134	13412.645	13387.000	13228.111	11684.725	4040.709	4011.777	3681.621	2781.693
# p≤0.1 * p≤0.05 ** p≤0.01 *** p≤0.001										