

## Factors Associated With Multiple-Partner Fertility Among Fathers

*This article uses a sample of 1,731 fathers aged 16 – 45 from the 2002 National Survey of Family Growth to identify factors associated with multiple-partner fertility. Almost one third of fathers who reported multiple-partner fertility did so across a series of nonmarital relationships, and nonmarital-only multiple-partner fertility has been increasing across recent cohorts of men. Being older, having a first sexual experience or a first child at a young age, and fathering a child outside of marriage or cohabitation are associated with greater odds of multiple-partner fertility, whereas having additional children with the first birth mother is associated with reduced odds. Black, Hispanic, and young fathers have especially high odds of experiencing multiple-partner fertility across a series of nonmarital relationships.*

High rates of divorce in the United States, combined with long-term increases in childbearing outside of marriage, have led to the occurrence of “multiple-partner fertility,” or having biological children with more than one partner. It is

important to better understand factors associated with multiple-partner fertility among fathers in particular because fathers are more likely than mothers to live apart from children by previous partners, and they alter their economic support and time commitments to their nonresident children when they father a child in a new relationship (Carlson & Furstenberg, 2005). Multiple-partner fertility occurs both within and outside of marriage; however, until recently, limited data have been available to differentiate multiple-partner fertility by men’s relationships with the mothers of their children.

In general, having children from a previous union reduces the prospects that parents will marry (Mincy, 2002; Stewart, Manning, & Smock, 2003; Upchurch, Lillard, & Panis, 2001). Couples in which the father (but not the mother) already had children with a previous partner are less likely to marry or live together following the birth of a child (Carlson, McLanahan, & England, 2004). Moreover, having children with multiple partners is often a source of tension in a couple’s relationship following a new child’s birth (Carlson & Furstenberg, 2005). Multiple-partner fertility also has important consequences for children. When men father children with more than one woman, they are faced with competing demands on their time and resources across households, which may lead to “swapping” their commitment from children that they had in a previous relationship to children with whom they are currently living (Manning & Smock, 2000).

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Swapping reduces social and economic investments in nonresident children as fathers take on new parenting roles (Manning & Smock; Meyer, Cancian, & Cook, 2005).

Having children in multiple households also reduces fathers' visitation with their nonresident children (Carlson & Furstenberg, 2005), and low levels of contact are associated with reduced psychological well-being and lower academic achievement among children, as well as with greater behavioral problems (Bronte-Tinkew, Moore, Capps, & Zaff, 2006; Harris, Furstenberg, & Marmer, 1998). Families without a resident father are also likely to experience uneven or inconsistent parenting, which can have negative consequences for children (Carlson & Furstenberg; McLanahan & Tietler, 1999).

This paper contributes to a small body of previous research by using nationally representative data to provide a descriptive portrait of the prevalence and correlates of multiple-partner fertility among fathers, which may provide information on target populations for intervention. A better understanding of the relationship context of multiple-partner fertility also has implications for child support enforcement and marriage promotion programs targeted to improving outcomes among children born to unmarried parents. We also examine how the relationship composition of multiple-partner fertility has changed across cohorts. We use data from the National Survey of Family Growth (NSFG), 2002, which is uniquely set up to examine male fertility histories. To counteract the underreporting of male fertility (particularly nonmarital fertility) (Rendall, Clarke, Peters, Ranjit, & Verropolou, 1999), males in the NSFG report full fertility histories in the context of their relationships with women and their children (National Center for Health Statistics, 2004).

Our analyses incorporate a life course approach, which provides a framework for assessing factors associated with fathering children with multiple women. One principle of a life course perspective is that life transitions, such as going on to have a child with another partner, can be understood only within the context of the social relationships in which a person is involved (Elder, 1998). Therefore, we posit that multiple-partner fertility is influenced not only by individual characteristics, but also by childhood family environments and by adult relationships with partners. A life course approach also emphasizes that individuals bring a history of experiences to their decision making and examines how the tim-

ing and sequencing of life events, as well as the cohort of birth, may be associated with life outcomes such as multiple-partner fertility.

*Family and Individual Factors  
Associated With  
Multiple-Partner Fertility*

A life course approach emphasizes the role of family and individual histories in decision making. Based on this framework, we posit that men who grow up in families and communities where biological fathers rarely reside with their children are less likely to maintain a commitment to the mothers of their own children and thus have a heightened risk of experiencing multiple-partner fertility. Living in a nonintact family in childhood is linked to nonmarital childbearing, poorer relationship quality, and a higher risk of dissolution of both marital and cohabiting unions in adulthood, thus, drawing attention to intergenerational trends in patterns of family formation (Bradbury, Fincham, & Beach, 2000; Kamp Dush, Cohan, & Amato, 2003; McLanahan & Bumpass, 1988). Single mothers often work full-time and have limited ability to monitor their adolescents' activities, which is linked to early risky sexual experiences among teens (Jacobson & Crockett, 2000; Miller, Benson, & Galbraith, 2001). One study also found that growing up with two biological parents was associated with reduced odds of multiple-partner fertility among urban parents (Carlson & Furstenberg, 2005).

Men growing up in communities with large concentrations of Blacks and single-mother families may receive limited socialization or preparation for becoming stable partners and residential fathers (Furstenberg, 1995). Cohabiting and marital unions are especially unstable among Blacks (Manning, Smock, & Majudmar, 2004), whereas marriages are more stable among Hispanics, especially Hispanic immigrants (Bean, Berg, & Van Hook, 1996). Studies of racial/ethnic differences in multiple-partner fertility are limited; however, one study found Black parents had greater odds than White parents of multiple-partner fertility in an urban sample (Carlson & Furstenberg, 2006), but another study of males found no association between race/ethnicity and multiple-partner fertility after controlling for characteristics of the first birth partner (Guzzo & Furstenberg, 2007a). Other research has found that immigrants had lower odds of multiple-partner fertility than did men and women who were born in the United States (Carlson & Furstenberg, 2005).

Racial/ethnic differences may reflect, in part, differences in socioeconomic status. Anderson's "player hypothesis" suggests that multiple-partner fertility may be especially prevalent in disadvantaged communities. According to this hypothesis, men from low-income families face a lack of family-sustaining jobs and economic security, which denies many the possibility of forming economically self-reliant families (Anderson, 1999). Thus sex and hence fertility with multiple women may reaffirm masculine identities among men from economically disadvantaged communities (Furstenberg, 1995). Family socioeconomic status, including lower parental education and experiences of poverty, has been linked to greater odds of multiple-partner fertility (Guzzo & Furstenberg, 2007b). Having a parent who had a child during the teen years is also associated with family instability and socioeconomic disadvantage, which are linked with fragile unions in the second generation (Haveman, Wolfe, & Peterson, 1997) and thus potentially greater odds of multiple-partner fertility.

Age is an important life course factor associated with multiple-partner fertility, because older men have a longer "exposure" period in which to move in and out of relationships (Guzzo & Furstenberg, 2007a). In addition, a life course perspective emphasizes links between life transitions and highlights that the timing of one transition may influence the likelihood and timing of a subsequent transition. For example, an earlier transition to sexual experience is associated with a greater risk of an unplanned pregnancy (Kirby, Lepore, & Ryan, 2005), which has been linked to greater odds of multiple-partner fertility (Guzzo & Furstenberg, 2007b). Our literature review suggests the following hypotheses:

*Family and Individual Hypothesis:* Growing up in a family structure without two biological parents, lower parental education, being Black, having a mother who was a teen at her first birth, lower parental monitoring, and engaging in sex at an early age will be associated with greater odds of multiple-partner fertility.

#### *Characteristics of First Births and Multiple-Partner Fertility*

Men's sense of themselves as fathers develops across their life course (Marsiglio, Hutchinson, & Cohan, 2001), and their previous experiences as fathers may shape their attitudes and decisions

about fathering a child with a new partner. We posit that men with relatively weak attachments to a first birth mother will be more likely to have children within a new relationship, with marital or cohabitation status at first birth providing an indicator of commitment to the relationship. Some studies have found that men who were married at the time that their first child was born have reduced odds of having a child with a new partner than unmarried fathers, and young women who were cohabiting at first birth have lower odds of multiple-partner fertility than those outside of a cohabiting relationship (Carlson & Furstenberg, 2006; Guzzo & Furstenberg, 2007a, 2007b).

An early *timing* of a first birth may also be associated with a higher risk of multiple-partner fertility. A young age at the time of a marital or cohabiting union is associated with higher rates of union dissolution (Lehrer, 2006; Manning, 2004) and of subsequent repartnering (Wu & Schimmele, 2005), and a study of urban women also found that a very young age at first birth is linked to greater odds of multiple-partner fertility (Carlson & Furstenberg, 2006). In addition, having a greater number of children with a specific partner is associated with greater union stability (Wu, 1995). Moreover, fathers who had multiple children with the same woman reported higher quality relationships than either couples having their first child or couples in which one parent had children with another partner (Carlson & Furstenberg, 2005).

*First Birth Hypothesis:* A young age at first birth and a first birth outside of a marital or cohabiting union will be associated with greater odds of multiple-partner fertility, whereas having more than one child with the first birth mother will be linked with reduced odds.

#### *Relationship Context of Multiple-Partner Fertility*

The premise of recent work is that the majority of men experiencing multiple-partner fertility do so within uncommitted nonmarital relationships. However, men may also experience multiple-partner fertility through remarriage and childbearing after divorcing the mother of a previous child. Because rates of nonmarital childbearing are higher among low-income populations, racial and ethnic minorities, and younger individuals (Martinez, Chandra, Abma, Jones, & Mosher, 2006), we expect to see a greater risk of nonmarital multiple-partner fertility among these populations.

Relationship Context Hypothesis: Fathers who are racial/ethnic minorities and who grew up in family structures other than two biological parents and with a young age at first birth will face increased odds of multiple-partner fertility exclusively outside of marriage, compared with multiple-partner fertility within at least one marital relationship.

### *Cohort Trends in Multiple-Partner Fertility*

The life course concept of *cohort* is a useful approach for studying lives during times of social change (Riley, 1986), such as during periods of increased nonmarital childbearing. A cohort approach adds an understanding of the unique experiences of individuals born during the same time period and experiencing a unique segment of history. Several trends in family formation are potentially linked to increases in multiple-partner fertility across cohorts. First, increases in nonmarital fertility are associated with lower levels of fathers' attachment to their children and the mothers of their children (Guzzo & Furstenberg, 2007a) and thus may be linked to increases in multiple-partner fertility. Second, marriages have become less stable over time (Manning et al., 2004), whereas the likelihood of repartnering following a divorce is greater among individuals born in more recent cohorts (De Jong Gierveld, 2004). Third, a growing proportion of births occur to unmarried cohabiting couples, which are less stable than marriages (Bumpass & Lu, 2000; Sigle-Rushton & McLanahan, 2002) and may contribute to trends in multiple-partner fertility. Limited research has examined cohort trends in multiple-partner fertility, but one recent study found a faster transition to a subsequent birth with another partner in more recent cohorts of men (Guzzo & Furstenberg, 2007a).

Cohort Hypothesis: Men in more recent cohorts will be at a greater risk of multiple-partner fertility, particularly that which occurs across a series of nonmarital relationships.

## METHOD

### *Data and Sample*

We used data from the 2002 NSFG male file for analyses of multiple-partner fertility. The survey,

conducted by the National Center for Health Statistics, allowed us to extend research on multiple-partner fertility among males by providing information on a nationally representative sample of males aged 15–45 who reported detailed fertility histories in the context of relationships. The survey allows us to assess family, individual, and first birth factors associated with multiple-partner fertility, examine differences in the relationship context of multiple-partner fertility, and examine retrospective cohort information on the prevalence of multiple-partner fertility. The NSFG was administered to 4,928 males in the United States, with oversamples of Hispanics, Blacks, and teenagers. The 2002 NSFG collected men's fertility histories in the context of their relationships with different women in order to provide accurate histories. Fertility histories were specifically linked to current and previous partners, including current or former spouses, recent partners, cohabiting partners, and other partners (National Center for Health Statistics, 2004).

For analyses of multiple-partner fertility among fathers, we removed 3,197 (65%) males who had not fathered a biological child. We use two samples for analyses. The first (full) sample includes 1,731 fathers aged 16–45 at the time of the interview. For analyses of cohort differences in multiple-partner fertility, we excluded 773 fathers (an additional 16% of the full sample of men) who did not have a birth before age 30, for a subsample of 958 fathers aged 30 or older at the time of the interview. We chose an age 30 age cutoff in order to provide information on early experiences of multiple-partner fertility and to provide adequate sample sizes for cohort comparisons.

### *Measures*

We examine two dependent variables. The first is a two-category variable, comparing those who experienced multiple-partner fertility with those who fathered children with only one woman. The second dependent variable specifies the type of multiple-partner fertility by marital status, comparing men who fathered children with only one woman whether or not married (single-partner fertility), men who fathered children with multiple women only within nonmarital relationships (nonmarital multiple-partner fertility), and men who experienced multiple-partner fertility and were married to at least one of the mothers of their children, including men who only

fathered children within marriage and men who fathered at least one child within marriage and at least one child outside marriage (multiple-partner fertility with at least one marital birth). We combine men with marital-only multiple-partner fertility and men who experienced multiple-partner fertility within at least one marital relationship and at least one nonmarital relationship because of the small sample of men who experienced marital-only multiple-partner fertility. For the analyses of the subsample of men aged 30 or older, we created the two dependent variables for births that occurred before age 30.

We include measures of individual, family background, and sexual history characteristics, as well as characteristics of men's first birth. Individual characteristics include age at interview date, race/ethnicity, and native-born or foreign-born status. Five-year cohorts compare the prevalence of multiple-partner fertility by age 30 among men born between 1957 and 1962 (aged 40 – 45) with those born between 1963 and 1967 (aged 35 – 39) and between 1968 and 1972 (aged 30 – 34). Family background characteristics include whether the respondent's parents were married at his birth, and family structure at age 14, comparing those who grew up with two biological or adoptive parents with those who grew up with one biological and one adoptive or step-parent, a single biological parent, or without either biological parent (e.g., with a grandparent, other relative, or in foster care). We include measures of the number of siblings who were born to the respondent's mother and mother's labor force status when the respondent was between the ages of 5 and 15, highest parental education, whether the respondent's mother had her first child before age 20, and sexual history measures including the respondent's age when he first had sex. Characteristics of the first birth include the respondent's age when his first child was born, marital/cohabitation status with the mother of his first child, and the number of children that he fathered with this woman.

#### *Analytic Methods*

Bivariate chi-square and *t* test models compare factors associated with categories of our dependent variables. For multivariate analyses, we use logistic regression to examine the odds of fathering children with more than one woman relative to having children with only one woman. Using logistic regression analysis, we

test the first hypothesis by examining family and individual factors associated with the odds of experiencing multiple-partner fertility. To test the second hypothesis, we also examine men's sexual history and first birth characteristics and their association with the odds of multiple-partner fertility. Next, we use multinomial logistic regression analyses to test the third hypothesis by comparing men who experienced multiple-partner fertility within nonmarital-only relationships with those who did so in at least one marital relationship and with men who fathered children with only one woman. To test cohort differences in multiple-partner fertility (the fourth hypothesis), we conducted logistic and multinomial logistic analyses of multiple-partner fertility among men aged 30 and older. All analyses are weighted and run in Stata to control for the complex sampling design of the NSFG.

## RESULTS

### *Full Sample Analyses — Bivariate Results*

Table 1 shows individual, family background, sexual history, and first birth characteristics for the full sample of fathers. The first set of columns displays these characteristics by type of fatherhood (comparing multiple-partner fertility with single-partner fertility). A total of 316 fathers had births with multiple partners, accounting for 17% of the full sample. Additional analyses (not shown here) eliminating very young fathers from the sample indicate that 18% of fathers aged 25 – 45 experienced multiple-partner fertility. Table 1 also includes information on the type of relationships in which multiple-partner fertility occurred. Among fathers who experienced multiple-partner fertility, 29% had all births outside of marriage, and the remaining 71% had at least one birth in a marital relationship (including 25% in marital-only relationships and 46% in at least one marital relationship and at least one nonmarital relationship).

Bivariate findings in Table 1 indicate that men who experienced multiple-partner fertility were more likely than men who had children with only one mother to be older at the interview date and to be Black, and they were less likely to be born to married parents or to live with two biological or adoptive parents at age 14 than other fathers. Men who fathered children with multiple women had, on average, more siblings, were more likely

Table 1. Individual, Family, Sexual, and Birth History Characteristics by Fatherhood Status Among All Fathers and Those With Multiple Partner Births

	All Fathers			Multiple Partner Births			
	Total Sample %	Multiple-Partner Fertility	Single-Partner Fertility	Only Nonmarital Births	At Least One Marital Birth		
Individual characteristics							
Average current age	35.0	37.0	34.6	***	34.3	38.0	***
Race/ethnicity (%)				***			***
Hispanic	19.8	19.7	19.8		26.2	17.1	
Non-Hispanic White	62.0	49.6	64.6		17.6	62.9	
Non-Hispanic Black	12.4	22.7	10.2		46.8	12.7	
Non-Hispanic other	5.8	7.9	5.3		9.4	7.3	
Foreign born (%)	18.2	14.6	18.9		19.0	12.8	
Family background							
Parents married at R's birth (%)	89.9	83.7	91.2	**	75.4	87.1	
Family structure at age 14 (%)				*			
Two biological/adoptive parents	74.2	63.7	76.4		54.9	67.4	
One biological parent and one adoptive/step parent	9.0	11.9	8.4		8.1	13.5	
Single biological parent	10.7	14.6	9.8		24.3	10.6	
Other	6.1	9.8	5.4		12.7	8.5	
Average number of siblings	2.8	3.1	2.7	*	3.1	3.1	
Mother worked full time when R ages 5 – 15 (%)	42.5	47.2	41.5		63.3	40.6	*
Parent education (%)							
HS or less	56.7	64.1	55.1		69.4	62.0	
Some college or more	43.3	35.9	44.9		30.6	38.0	
Mother was a teen at first birth (%)	38.7	49.0	36.5*		45.7	50.4	
Sexual history							
Average age at first sex	17.0	15.5	17.3	***	15.1	15.6	
First birth characteristics							
Average age at first birth	25.1	21.6	25.8	***	21.6	21.6	
Marital/cohabitation status at first birth (%)				***			
Married	63.6	40.4	68.5		—	—	
Cohabiting	19.5	19.2	19.6		—	—	
Neither	16.9	40.4	12.0		—	—	
Average number of children with first mother	1.8	1.6	1.8	**	1.7	1.5	
N	1,731	316	1,415		128	188	
Weighted %	100	17	83		29	71	

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

to have a mother who was a teen at her first birth and had their first sexual experience and their first birth at a much younger age than did other fathers. In fact, more than one third of men who experienced multiple-partner fertility had their first birth before age 20 (36%), compared with 11% of other fathers. Moreover, men who experienced multiple-partner fertility were less likely to be

married at the birth of their first child and had fewer children with the mother of their first child, compared with other fathers.

The last two columns of Table 1 compare characteristics of two groups of fathers who experienced multiple-partner fertility: those who had only nonmarital births and those who had at least one marital birth. These analyses indicate that

fathers who had only nonmarital multiple-partner births tended to be younger and to be Black or Hispanic compared with those who had at least one marital birth. In addition, fathers with only nonmarital multiple-partner births were more likely to have had a mother who worked full time during their childhood.

Table 2 shows odds ratios from logistic regression models predicting multiple-partner fertility among fathers. Model 1, which includes individual and family background characteristics, shows that an older age, Hispanic or Black race/ethnicity, and growing up in an "other" family structure at age 14 are associated with greater odds of multiple-partner fertility. In contrast, being born outside of the United States is associated with lower odds of fathering children with more than one woman.

Model 2 includes additional controls for age at first sex and first birth characteristics. Results show that race/ethnicity, foreign-born status, and family structure were no longer significant after including characteristics of first sex and first birth. Current age is the only remaining significant finding from Model 1. In addition, Model 2 indicates that fathers who were neither married nor cohabiting with the mother of their first child at the time of that child's birth had more than three times the odds of fathering children with more than one woman. Men who were older at first sex and at first birth and who had a greater number of children with a first mother had reduced odds of multiple-partner fertility.

Table 3 shows odds ratios from multinomial logistic regression models predicting a three-level dependent variable comparing nonmarital-only multiple-partner fertility and multiple-partner fertility with at least one marital birth with single-partner fertility. Although current age, age at first sex, and first birth characteristics distinguish between either type of multiple-partner fertility and single-partner fertility, only age and race/ethnicity differentiate marital and nonmarital fertility. For example, Column 1 analyses indicate an older age is associated with greater odds that the father was married to at least one of the mothers, whereas being Hispanic or Black is associated with more than three or seven times the odds, respectively, of experiencing nonmarital-only multiple-partner fertility versus multiple-partner fertility with at least one marital birth.

Results in Column 2 show that fathers who were older, Hispanic or Black, who lived with a single biological parent at age 14, and whose

Table 2. Odds Ratios for Logistic Regression of Having Births to Multiple Partners Among Fathers Aged 15 to 45 Years Old

	Multiple-Partner Fertility	
	Model 1	Model 2
Individual characteristics	1.09***	1.17***
Current age (16 – 45)		
Race/ethnicity		
Hispanic	1.59*	1.30
Non-Hispanic White/ non-Hispanic other	(1.00)	(1.00)
Non-Hispanic Black	2.19**	1.23
Foreign born	0.55*	0.96
Family background		
Parents married at R's birth	0.63	0.75
Family structure at age 14		
Two biological/ adoptive parents	(1.00)	(1.00)
One biological parent and one adoptive/stepparent	1.65	1.07
Single biological parent	1.71	1.42
Other	1.91*	1.40
Number of siblings	1.14	1.13
Mother worked full time during R's childhood	1.23	1.21
R's parent completed some college or more	0.90	1.16
Mother was a teen at first birth	1.40	1.11
Sexual history		
Age at first sex	—	0.88**
First birth characteristics		
Age at first birth	—	0.82***
Marital/cohabitation status at first birth		
Married	—	(1.00)
Cohabiting	—	1.17
Neither	—	3.68***
Number of children with first mother	—	0.54**
N	1,731	1,731
F(df)	6.42 (12)***	9.57 (17)***

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

mother worked full time during childhood had greater odds of nonmarital-only multiple-partner fertility than fathering children with just one woman whereas an older age at first sex, older age at first birth, and having a greater number of children with the woman who gave birth to the respondent's first child were associated with lower odds.

Table 3. *Relative Risk Ratios by Multinomial Logistic Regression of Having Births to Multiple Partners by Type of Multiple-Partner Fertility (MPF)*

	Nonmarital Only MPF vs. MPF With at Least 1 Marital Birth	Nonmarital Only MPF vs. Single-Partner Fertility	MPF With at Least 1 Marital Birth vs. Single-Partner Fertility
Individual characteristics			
Current age	0.92**	1.09***	1.18***
Race/ethnicity			
Hispanic	3.23**	3.16**	0.98
Non-Hispanic White/ non-Hispanic other	(1.00)	(1.00)	(1.00)
Non-Hispanic Black	7.19***	5.85***	0.81
Foreign born	0.96	0.86	0.90
Family background			
Parents married at R's birth	0.84	0.62	0.74
Family structure at age 14			
Two biological/adoptive parents	(1.00)	(1.00)	(1.00)
One biological parent and one adoptive/stepparent	0.72	0.74	1.03
Single biological parent	1.85	2.20*	1.18
Other	1.24	1.64	1.32
Number of siblings	0.98	1.14	1.16
Mother worked full time during R's childhood	1.85	1.82*	0.98
R's parent completed some college or more	0.84	0.97	1.15
Mother was a teen at first birth	0.70	0.86	1.22
Sexual history			
Age at first sex	1.01	0.89*	0.88*
First birth characteristics			
Age at first birth	1.05	0.83**	0.79***
Number of children with first mother	1.29	0.61**	0.47**
<i>N</i>		1,731	
<i>F(df)</i>		9.49 (30)***	

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Column 3 shows the odds of experiencing multiple-partner fertility in at least one marital relationship compared with experiencing single-partner fertility. Fathers who were older had increased odds of experiencing multiple-partner fertility with at least one marital birth than fathering children with only one partner. Similar to findings in Column 2, older age at first sex and at first birth and a greater number of children with the first mother were also associated with reduced odds of multiple-partner fertility with at least one marital birth. However, unlike predictors of nonmarital-only multiple-partner fertility, race/ethnicity and family structure were not significantly associated with multiple-partner fertility that included at least one marital birth compared with single-partner fertility.

Table 4 presents odds ratios from logistic and multinomial logistic multivariate analyses of multiple-partner fertility, among fathers aged 30 and older. These models show that whereas nonmarital-only multiple-partner fertility increased across cohorts, multiple-partner fertility in at least one married relationship has decreased, leading to an overall decrease in multiple-partner fertility. Column 2 shows odds ratios from a logistic regression model comparing multiple-partner fertility with single-partner fertility. Without controls in the model (Model 1), fathers in the 1963 – 1967 cohort had lower odds of multiple-partner fertility, compared with the 1957 – 1962 cohort, a finding that persists net of both sociodemographic and sexual and first

Table 4. Odds Ratios for Logistic Regression of Having Births by Multiple Partners and Relative Risk Ratios for Multinomial Logistic Regression of Having Births to Multiple Partners by Type of Multiple-Partner Fertility (MPF)

	MPF vs. Single-Partner Fertility	Nonmarital Only MPF vs. MPF With at Least 1 Marital Birth	Nonmarital Only MPF vs. Single-Partner Fertility	MPF With at Least 1 Marital Birth vs. Single Partner Fertility
Model 1 <sup>a</sup>				
1957 – 1962	(1.00)	(1.00)	(1.00)	(1.00)
1963 – 1967	0.44**	6.76**	1.90	0.28***
1968 – 1972	0.59	6.90**	2.60*	0.38*
<i>N</i> <sup>b</sup>	958		956	
<i>F(df)</i>	3.85 (2)*		4.81 (4)***	
Model 2 <sup>c</sup>				
1957 – 1962	(1.00)	(1.00)	(1.00)	(1.00)
1963 – 1967	0.40**	5.83**	1.60	0.27***
1968 – 1972	0.55	5.40**	2.06	0.39*
<i>N</i> <sup>b</sup>	958		956	
<i>F(df)</i>	7.32 (7)***		5.15 (14)***	
Model 3 <sup>d</sup>				
1957 – 1962	(1.00)	(1.00)	(1.00)	(1.00)
1963 – 1967	0.42**	4.65**	1.54	0.33**
1968 – 1972	0.53	5.08**	2.06	0.41*
<i>N</i> <sup>b</sup>	958		956	
<i>F(df)</i>	9.71 (12)***		6.64 (20)***	

<sup>a</sup>Cohort effects before controls. <sup>b</sup>Sample sizes do not match because 2 respondents were missing on marital status at birth.

<sup>c</sup>Cohort effects net of sociodemographic controls. Controls include age, race/ethnicity, foreign born, family structure, number of siblings, and parental education. <sup>d</sup>Cohort effects net of sociodemographic and sexual history controls and characteristics of first birth. Controls include sociodemographic controls as well as age at first sex, age at first birth, number of children with first mother, and — for comparisons of multiple-partner fertility and single-parent fertility only — marital status at first birth.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

birth characteristics (Models 2 and 3). Note that in Models 2 and 3, the most recent cohort of fathers (born in 1968 – 1972) also had marginally lower odds of multiple-partner fertility than those born in the earliest cohort ( $p < .10$ ).

Columns 3 – 5 show odds ratios from multinomial regression models, with categories similar to those in Table 3. Column 3 compares nonmarital-only multiple-partner fertility with multiple-partner fertility with at least one marital birth. Before and after sociodemographic controls and sexual history and first birth controls, fathers in the 1963 – 1967 cohort and the 1968 – 1972 cohort have greater odds of nonmarital-only multiple-partner fertility. Column 4 shows that, before controls, fathers born in the 1968 – 1972 cohort have greater odds than those in the earliest cohort of nonmarital-only multiple-partner fertility relative to single-partner fertility. This finding is attenuated once controls are added to the model. Finally, Column 5 analyses indicate that, before and after all controls, fathers born in the

1963 – 1967 and 1968 – 1972 cohorts both have lower odds than men in the 1957 – 1962 cohort of multiple-partner fertility with at least one marital birth relative to single-partner fertility.

## DISCUSSION

### Limitations

Although this study extends the small research literature on factors associated with multiple-partner fertility, it has some limitations. First, because of underreporting of fertility among unmarried fathers (Rendall et al., 1999), our estimates of multiple-partner fertility — particularly nonmarital-only multiple-partner fertility — may be low. In addition, the NSFG sampling framework excludes incarcerated populations, which have higher rates of multiple-partner fertility (Carlson & Furstenberg, 2006). Second, because of our interest in the relationship context of multiple-partner fertility, we conduct analyses

of whether men have experienced multiple-partner fertility at any time before the survey date, when they were aged 15 to 45. To the extent that men with higher socioeconomic status delay fertility, we may especially underreport multiple-partner fertility to more advantaged populations. Third, ideally we would differentiate the relationship context of multiple-partner fertility that occurs within (a) only marital relationships from (b) only nonmarital relationships, and (c) across marital and nonmarital relationships. But this level of differentiation was not available with the current sample. Specifically, because multiple-partner fertility is still a relatively rare occurrence, our analyses included only a small sample of men experiencing multiple-partner fertility, and standard errors were high in some models. However, these weaknesses are offset by the strengths of the NSFG data file for examining fertility experiences among fathers, including information that allows us to differentiate fertility with more than one partner and the type of relationships within which multiple-partner fertility occurs.

#### *Prevalence and Relationship Context of Multiple-Partner Fertility*

Our analyses indicate that 17% of fathers aged 16 – 45 and 18% of fathers aged 25 – 45 have had children with more than one woman, and these estimates are comparable to recent analyses of the same data (Guzzo & Furstenberg, 2007a). However, our estimates are likely to be low because of underreporting of fertility among fathers, especially of nonmarital births (Rendall et al., 1999), because the NSFG excludes incarcerated populations and because many of the men aged 15 to 45 in the NSFG had not yet completed their fertility histories. For example, we found that men who were older at the time of the survey had greater odds of multiple-partner fertility, reflecting the longer period of time in which these men have to potentially end a relationship with a first birth partner and have children in a new relationship.

Separate analyses indicate that men who reported multiple-partner fertility fathered more than one in four (28%) of the children reported by fathers in the NSFG data file (Logan, Manlove, Ikramullah, & Cottingham, 2006). Thus, a substantial proportion of children have been fathered by men who have also had children with other women. Children who are born under these circumstances — particularly those who live apart from their fathers — receive less financial

and social support from their fathers than other children (Manning & Smock, 2000; Meyer et al., 2005). This reduced support places these children at risk for behavioral problems and low academic achievement (Bronte-Tinkew et al., 2006) and may contribute to intergenerational trends in disadvantage.

Our analyses extend previous research by examining the types of relationships within which multiple-partner fertility occurs. We found that almost one third of the men who had children with more than one partner did so only in nonmarital relationships, which may be a low estimate because of underreporting of nonmarital fertility (Rendall et al., 1999). The children of these men are at a particular financial risk because they are least likely to have ever lived with their fathers (Carlson & Furstenberg, 2005). Alternatively, almost half of the multiple-partner fertility reported by this sample occurred across both nonmarital and marital relationships, and one quarter occurred solely in marital relationships, showing that many men who experienced multiple-partner fertility were married to at least one (if not all) of their children's mothers. Nonresident children of these fathers also face reduced economic well-being and reduced time commitments from their fathers (Carlson & Furstenberg, 2005).

Men with children from a previous relationship are less likely to marry the mother of a subsequent child, which has implications for the success of marriage promotion programs. These programs must recognize the unique difficulties for men who have children from previous relationships. In particular, limited economic opportunities in combination with financial obligations to previous children are cited as barriers to marriage promotion among unmarried fathers (Gibson-Davis, Edin, & McLanahan, 2005). Men who have experienced multiple-partner fertility are also less likely to pay child support (Manning & Smock, 2000). Even though qualitative research suggests that unmarried men with children from different partners try to provide support to their children (Furstenberg, 1995; Marsiglio et al., 2001) many are economically disadvantaged and have few resources available to meet financial and time commitments to nonresident children (Guzzo & Furstenberg, 2007a).

#### *Family and Individual Factors Associated With Multiple-Partner Fertility*

As hypothesized, living arrangements in men's families of origin were associated with

multiple-partner fertility. Men who lived in households without either biological parent at age 14 (e.g., living with a grandparent, other relative, or in foster care) had increased odds of multiple-partner fertility, and this association operated through characteristics of first sexual relationships, first births, and birth partners. In addition, men who grew up with a single biological parent (generally with a single mother) had increased odds of nonmarital-only multiple-partner fertility relative to single-partner fertility. These findings support other research linking family structure with multiple-partner fertility (Carlson & Furstenberg, 2005) and suggest that boys' early family experiences may influence their ability to form stable relationships in adulthood (McLanahan & Bumpass, 1988). Intergenerational trends in family instability that may lead to multiple-partner fertility could result from role modeling, increased family turbulence, or reduced parental supervision in single-parent families (Wu & Martinson, 1993). For example, we found men whose mothers worked full-time during their childhood had increased odds of nonmarital-only multiple-partner fertility, possibly because of reduced parental monitoring of risky behaviors in these households (Jacobson & Crockett, 2000).

As hypothesized, racial and ethnic minorities had greater odds of multiple-partner fertility. However, our analyses suggest that the positive association between Hispanic and Black race/ethnicity and multiple-partner fertility may stem, in part, from an earlier age at first sex and first birth among Blacks and Latinos, as well the greater likelihood among Blacks of having a first child outside of marriage (Martin et al., 2006). Black and Hispanic men and those who grew up in single-parent families also had greater odds of nonmarital-only multiple-partner fertility, which supports Anderson's "player hypothesis" and suggests that the lack of financial opportunities in disadvantaged and minority communities may lead to high levels of uncommitted sexual relationships (Anderson, 1999).

Alternatively, we found that men who were born outside of the United States had reduced odds of multiple-partner fertility, supporting some previous research (Carlson & Furstenberg, 2005). This association was also attenuated after controlling for characteristics of sexual and birth partners, possibly due to higher rates of marital births among some immigrant populations (Raley, Durden, & Wildsmith, 2004). Alternatively,

instability in residential patterns among recent immigrants may reduce the odds of subsequent union formation and fatherhood within a new relationship (Carter, 2000).

#### *First Birth Context and Multiple-Partner Fertility*

As hypothesized, an earlier age at first sex and earlier age at the birth of a first child were both associated with greater odds of multiple-partner fertility, which supports previous research (Carlson & Furstenberg, 2006). To the extent that pregnancy prevention programs are effective at helping men delay sex and parenthood, they may indirectly reduce the incidence of multiple-partner fertility. However, future research should examine whether the association between early sex and early births and multiple-partner fertility may be endogenous.

Our findings also support our hypothesis that men's attachment to the mother of their *first* child has implications for their risk of experiencing multiple-partner fertility. Specifically, men whose first birth occurred outside of a union had more than three times the odds of multiple-partner fertility than men who were married to that mother, and additional analyses not shown here indicate that men whose birth occurred outside of a union had greater odds of multiple-partner fertility than men whose first birth occurred within a cohabiting relationship, which supports other research (Guzzo & Furstenberg, 2007a, 2007b). Thus, programs that can help remove barriers to union formation among unmarried parents who would like to marry may also help to reduce multiple-partner fertility. Alternatively, men who fathered additional children with the mother of their first child — which also indicates a stronger attachment to the birth mother (Carlson & Furstenberg, 2005) — had reduced odds of multiple-partner fertility.

#### *Cohort Differences in Multiple-Partner Fertility*

As hypothesized, we found cohort differences in multiple-partner fertility. We found a counterintuitive decline in multiple-partner fertility between the 1957 – 1962 cohort and more recent cohorts, which was driven by declines in multiple-partner fertility in one or more marital relationships. This decline is in contrast to one study's finding of faster transitions to multiple-partner fertility in

recent cohorts (Guzzo & Furstenberg, 2007a). The difference in findings in these two studies may be because of, in part, cohort increases in the age at first marriage and first birth (Mathews & Hamilton, 2002), which reduce the “exposure time” to having a subsequent birth with another partner before age 30. Declines in multiple-partner fertility within at least one marital relationship also reflects historical declines in the likelihood that a first birth will occur within marriage (Martin et al., 2006).

Declines in multiple-partner fertility within at least one marital relationship were counterbalanced by an increase in nonmarital-only multiple-partner fertility, and multivariate models indicated that this compositional trend remained, even after controlling for characteristics of sexual history and the first birth. Thus, continued increases in nonmarital fertility, as well as increases in marital dissolution may lead to an increasing prevalence of multiple-partner fertility across a series of unmarried relationships into the future, potentially fostering intergenerational trends in disadvantage and in disconnected families.

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