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# PARENTING IN VAIN?: STEPFATHER INFLUENCES ON EARLY TRANSITIONS TO PARENTHOOD

Rachel Dunifon
Policy Analysis and Management
Cornell University

Julie H. Carmalt
Policy Analysis and Management
Cornell University

Kara Joyner
Department of Sociology &
Center for Family and Demographic Research

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**Rachel Dunifon**
Associate Professor
Policy Analysis and Management
Cornell University
248 MVR Hall
Ithaca, NY 14853
(607) 255-6535
red26@cornell.edu

**Julie H. Carmalt**
Doctoral Candidate
Policy Analysis and Management
Cornell University
122 MVR Hall
Ithaca, NY 14853
(607) 255-2580
jhc48@cornell.edu

**Kara Joyner**
Associate Professor
Sociology Department
Associate Director
Center for Family and Demographic Research
Bowling Green State University
Bowling Green, OH 43403
419-372-7166 (voice)
419-372-8306 (fax)
kjoyner@bgnet.bgsu.edu (e-mail)

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## Abstract

Using data from the National Longitudinal Survey of Youth 1997 (NLSY97), we examine the influence of resident fathers' parenting style on early transitions to parenthood (before age 20 for girls, before age 22 for boys). Results differ by gender and for those living with biological vs. step-fathers. For girls, having an uninvolved mother was associated with an increased risk of early parenthood, but the parenting style of their fathers was unrelated to this risk. For boys, there were few effects of maternal parenting style on early parenthood. However, fathers' parenting style played a role, but in very different ways depending on family type. Having an authoritarian (harsh and not warm) father was associated with an increased risk of early parenthood for boys living with their biological fathers. In contrast, having an uninvolved or permissive step-father father was associated with a *decreased* risk in early fertility.

## PARENTING IN VAIN?: STEPFATHER INFLUENCES ON EARLY TRANSITIONS TO PARENTHOOD

Early parenthood continues to be an issue of concern to scholars, policy makers, and the general public due in part to its changing circumstances (Furstenberg 2003). In spite of the fact that teen birth rates have generally declined in recent decades, the percent of such births occurring to never married girls has grown dramatically, increasing from 14.8 to 78.7 percent between 1960 and 2000 (Ventura, Mathews, & Hamilton 2001). In fact, much of the growth in nonmaritals birth has been concentrated among teen women (Morgan and Rindfuss 1999). Early parenthood also remains a concern because of its potential association with negative outcomes for parents and children (Haveman, Wolfe, and Pence 2001; however, as reviewed below, some research suggests that these associations may be over-stated.

A large body of research has sought to understand the predictors of early parenthood. Among other factors, these studies point to a role for family structure in the transition to early parenthood. For example, boys and girls are more likely to experience early parenthood if, during adolescence, they live with a stepfather rather than two biological parents (McLanahan & Bumpass 1988; Michael & Tuma 1985; Hynes et al 2008). Several explanations for stepfather influences on early parenthood highlight the fact that stepfathers are, on average, less involved than biological fathers in their children's lives (Cavanagh, Crissey, & Raley 2008), as evidenced by their lower levels of support and supervision (Hofferth & Anderson 2003; Thomson, McLanahan, & Curtin 1992). However, no previous studies have directly tested the hypothesis that step-fathers' parenting influences the transition to early parenthood. The goal of this paper is to fill this gap.

Scholars studying child well-being more broadly are increasingly emphasizing the variability of children's circumstances and outcomes within different family structures (Amato 1994). This shift in emphasis has coincided with the promotion of policies that encourage father involvement (Settersten 2005). While father involvement initiatives assume that fathers have the potential to shape important life course transitions for children, research is only beginning to examine associations between father involvement and early adulthood outcomes. Studies evaluating the influence of father involvement in childhood and adolescence have focused almost exclusively on delinquent activities or behavior problems (for an exception see Harris, Furstenberg, & Marmer 1998).

Using data from the National Longitudinal Survey of Youth 1997 (NLSY97), we focus our analyses on a sample of youth living with biological mothers in two-parent married households. Following this sample into young adulthood, we examine whether youth living with stepfathers are more likely than their counterparts living with both biological parents to experience early parenthood. We also examine whether the parenting style of resident fathers (both biological and step) is associated with early transitions to parenthood. In examining these associations, we make several contributions to the literature on family structure, family processes and child well-being. First, we examine the influence on early parenthood of living with a step-father. Second, we consider how parenting style mediates this relationship, including measures of both mothers' and fathers' parenting style. Third, we examine the influence of parenting style on early parenthood for both boys and girls; most previous work has focused solely on girls, and very few studies compare boys and girls in the same study. Finally, this study extends the existing body of research linking family structure, family processes and child well-being by

considering a dimension of child well-being that has been understudied to date, but is of high policy importance—early parenthood.

## BACKGROUND

In 2006 there were 41.9 births per 1000 U.S. girls under the age of 20 (or 441,832 births); while this represented a 3% increase compared to the 2005 birthrate, it is still 32% lower than the peak rate of 61.8 in 1991. Despite this overall pattern of decline in recent years, the U.S. teen birth rate remains higher than in any other developed country. A vast majority (84%) of teen births occurred outside of marriage in 2006. Teen births were highest among Hispanic girls (83 out of 1000 girls under the age of 20 having a birth), followed by non-Hispanic blacks (64 out of 1000) and then whites (27 out of 1000; Child Trends, 2008).

We first review the literature on the consequences of early childbearing. We next examine the predictors of early childbearing, with a particular focus on the role of living arrangements and parenting behaviors. Then, to speculate about stepfather influences on early parenthood, we review studies concerning father involvement and its influence on child well-being, examining in particular the role of step- vs. biological fathers.

### *Consequences of Early Childbearing*

A large body of literature has examined the consequences of early childbearing, for the parents themselves as well as their children. Almost all of this literature has focused on the consequences of teen childbearing for girls, rather than boys. As noted by Coley and Chase-Lansdale (1998), having a teen birth could disrupt the developmental goals and processes of adolescence (peer relations, schooling, dating, etc), and overall girls who give birth as teenagers achieve less education, are more likely to receive public assistance, are more likely to be poor, and are less likely to get married, than those who did not have a teen birth.

In order to truly understand the consequences of early childbearing, however, one must ask what would happen if the same youth who had children as teenagers postponed childbearing to later ages (Geronimus, 1997). Answering this question is complicated by the fact that youth who experience early childbearing differ from those who do not in a variety of ways.

One way researchers have addressed this issue is by comparing the outcomes for sisters, one of whom had a birth as a teen and one who did not. Doing so allows one to control for all factors shared between siblings, such as neighborhood and school characteristics, family economic status, parental characteristics and behaviors (to the extent that they are consistent across siblings), and the like, and provides a more robust analysis of the consequences of early childbearing than that of studies that are not able to measure or control for such things. Results from such sibling analyses suggest that the generally-held belief that teenage childbearing has negative consequences for women's later income, welfare use, education, marital status and employment may be over-stated (Geronimus and Korenman, 1992). In another sibling study, Hoffman, Foster and Furstenberg (1993) find that comparing outcomes between sisters results in lower estimates of the costs of early childbearing, but evidence remains that early childbearing is associated with lower rates of high school completion and worse economic outcomes.

Others have compared outcomes for women who gave birth as teens to those who got pregnant as teens, but later miscarried (Hotz, Mullen and Sanders, 1997). Results again suggest that the perceived costs of early childbearing may be overstated; in fact, Hotz, Mullen and Sanders (1997) find that women who had an early birth have *higher* earnings and work hours later in life, compared to their peers who miscarried as teens.

Grogger and Bronars (1993) estimated the effect on women of an unplanned teenage birth by comparing outcomes of young women who gave birth to twins to those who had a

singleton birth, using 1970 and 1980 Census data. Results from their analyses again suggest that the negative effects of teenage childbearing are likely smaller than those indicated by cross-sectional estimates. However, results showed having a child as a teenager was associated with reduced rates of high school graduation and later employment (but only among African-American women), and higher rates of poverty and welfare use. While an unplanned teen birth was not associated with marriage for white women, it was associated with increased marital disruption (but not a decrease in the likelihood of marrying in the first place) for black women.

Hofferth, Reid and Mott (2001) compare OLS to sibling models when investigating the effect of teenage childbearing on women's educational attainment. They find that comparing between siblings reduces, but does not eliminate, the negative association between teenage childbearing and education; in particular sibling models suggest that teenage mothers are less likely to complete college than their sisters who did not have a teen birth.

Less is known about the consequences of early childbearing for the *children* born to teenaged parents, and the research that does exist often does not utilize the more rigorous methods detailed above (Coley and Chase-Lansdale, 1998). Generally, children of teen mothers tend to show greater behavior problems in the preschool years, as well as greater delinquency and less success in school in adolescence, than those born to older mothers; however it is possible that a great deal of these associations are due to factors related to the selection into teenage parenthood, rather than the consequence of early parenthood (reviewed in Coley and Chase-Lansdale, 1998). Levine, Pollack and Comfort (2001) control for an extensive set of background characteristics and find that children whose mothers gave birth as a teen fare the same as other children in terms of academic outcomes, such as test scores. However, children of teen moms are more likely than other children to have sex before the age of 16, to fight at school,

and to miss school. In later analyses, which employed both the sibling and miscarriage methods discussed above, these results became insignificant (Levine, Emery, and Pollack, 2007).

Geronimus, Korenman and Hillemeier (1994) investigate the intergenerational consequences of early childbearing by comparing outcomes of cousins—one born to a woman who had a teen birth, the other born to her sister who did not. The authors find no differences in outcomes of these groups of young children when looking at test scores, measures of the home environment or children's behavior problems, suggesting little evidence of a negative effect on young children born to teenaged mothers.

*Predictors of Early Parenthood*

Several studies seeking to understand the predictors of early childbearing have focused on family structure and divorce as key factors. These studies offer several explanations for why divorce and remarriage increase the risk of early parenthood; many of these explanations highlight the parenting contexts of adolescents in non-intact families (those not living with both biological parents; McLanahan & Sandefur 1994).

According to a socialization argument, youth whose parents divorce, in contrast to their counterparts living with two biological parents, are likely to see their parents date or cohabit; this exposure presumably accelerates their involvement in romantic and sexual relationships (Cavanagh, Crissey, & Raley 2008). A social control argument suggests that divorced parents are less able to effectively supervise and monitor the activities of children, to the extent the resident parent is more time-constrained and the nonresident parent is absent from the household; consequently, children of divorced parents have, on average, greater opportunity to become romantically and sexually involved than their counterparts from intact families (McLanahan & Bumpass, 1988). Many (but not all) studies find evidence that adolescents living with

stepparents are worse off than their counterparts living with both biological parents on a diverse set of indicators of well-being (Brown 2004; Sigle-Rushton and McLanahan 2002). An increasingly evoked argument, but one more ambiguous in terms of mechanisms, is that divorce and remarriage are major stressors that disrupt the lives of parents and children alike. For instance, the departure of a biological parent may reduce children's confidence that they can rely on parents for support (Martinson & Wu 1993; Wu 1996), which in turn may lead them rely more on peers and romantic partners for achieving developmental tasks (e.g., the formation of an identity).

In the absence of direct measures of family processes, studies typically use several detailed measures of respondents' family structure history to evaluate these different arguments. For instance, instability and change is measured by counting the number of changes in the household structure. The findings of these studies generally suggest that the instability and change argument best explains the negative influences on children of divorce and remarriage (Cavanagh, Crissey, & Raley 2008; Wu & Martinson, 1993; Wu 1996). Of course, these studies beg the question of what mechanism explains the effects of household changes. Studies with a broader emphasis on child well-being hint that father involvement and parenting behaviors may explain some part of this association between family structure, family change and adolescent outcomes.

Several studies have directly examined the predictors of early childbearing and the events that lead to it, focusing on children's living arrangements. Most such studies have focused on girls. Moore and Chase-Lansdale (2001) examined the family- and neighborhood-based predictors of early sexual behavior among African-American teenaged girls living in low-income neighborhoods in Chicago. Cross-sectional results suggested that children living with married

mothers were less likely to have had sexual intercourse and less likely to have been pregnant. This held true regardless of whether the mother was married to the girl's biological father vs. a step father. On the other hand, girls whose mothers were living with a cohabiting partner were more likely to have had sex. Additionally, girls who reported having a better mother-daughter relationship were less likely to have had sex. Finally, results showed that girls whose mother had gone through a divorce were more likely to both have had sex and gotten pregnant.

Ellis et al. (2003) examine the influence of father absence on girls' early sexual activity and pregnancy, finding that the absence of a birth father had a robust association with these outcomes, particularly if it occurred earlier in a girl's life (at or before the age of 5). The presence of step-fathers was not taken into account.

Very little research has examined the causes of teen parenthood for young men, and even fewer have examined the influence of parenting behaviors on teenage fatherhood. Using data from a sample of urban youth from Rochester, NY collected in the mid-1990s, Thornberry, Smith and Howard (1997) find that African-American and Hispanic young men were more likely to become teen fathers; other factors included parents' age at first birth, parental education, parents' expectations that the youth would attend college, and the youths' reading ability. Measures of family social support were not predictive of early fatherhood, nor were measures of parent-child relationship quality. Jaffee et al. (2001), using a longitudinal sample from New Zealand, found that being born to a teenaged mother, and living with a single parent were associated with the likelihood of boys' becoming fathers at an early age (by the age of 26); no associations were found for measure of parenting (combined across both mothers and fathers) or the parent/child relationship quality. However, this study did not measure father involvement specifically. Finally, Ku, Sunenstein, and Peck (1993) uses data from the National Survey of

American Males (NSAM) to examine predictors of sexual behaviors and fatherhood, finding that age, race and ethnicity were the strongest predictors of sexual behavior.

The majority of studies on the predictors of early childbearing have focused on girls, with a handful of studies examining boys. Very few studies have examined the predictors of early parenthood for both boys and girls, allowing one to examine the possibility of gender differences in these associations (for exceptions see Rindfuss, Morgan and Swicegood, 1988; Michael and Tuma, 1985). In a recent study, Hynes et al. (2008) examine demographic predictors of early parenthood for both men and women across various datasets and found that in most, but not all, of their analyses, growing up with a single parent is associated with an increased risk of having an early birth.

*Father Involvement and Child Outcomes*

Despite the potential importance of parenting and family processes, noted above, studies of early births rarely include measures of the parenting received by adolescents as key predictors (for exceptions see Hogan & Kitagawa 1985; Kahn & Anderson 1992). Studies concerning the influence of parenting practices on behaviors that lead to early parenthood, like studies considering other adolescent outcomes, have typically focused on the influence of mothers, or have combined survey items to create a single variable capturing the parenting of both mothers and fathers (e.g., Longmore, Manning, & Giordano 2001; Miller, Norton, Curtis, Hill, Schvaneveldt, & Young 1997; Manlove, Terry-Humen, Papillo, et al. 2002; Demuth & Brown 2004; Pearson, Muller, & Frisco 2006). Few studies have examined the independent influence of fathers' parenting style on early parenthood or the behaviors that lead to it (for an exception see Menning, Holtzman, & Kapinus 2007).

A small but growing number of studies are examining the influence of father involvement on different indicators of child well-being, and its role in explaining family structure differences in these indicators. Studies demonstrate that involvement on the part of biological fathers is significantly associated with several indicators of well-being among children from intact families (Bronte-Tinkew, Moore, & Carrano 2006; Harris, Furstenberg, & Marmer 1998; Hofferth, 2006; Amato & Rivera, 1999), but has a weaker (sometimes insignificant) association for children not residing with fathers (Carlson 2006; Hawkins, Amato, & King 2007; Amato & Gilbreth, 1999).

As reviewed in Lamb (2000), parental involvement has typically been measured by researchers along three dimensions—engagement (direct interactions with the child), accessibility (being near, but not necessarily interacting directly with the child), and responsibility (making arrangements for the child's daily activities). The types of engagement, or direct interactions, parents have with children are often referred to as parenting style. One of the most consistently used measures of parenting style is a four-fold typology developed by Baumrind (1971; 1991). This typology is based on cross-classifications of two global dimensions of parenting: demandingness (e.g., strictness/permissiveness) and responsiveness (e.g., warmth and support). Studies use these dimensions to identify four specific parenting styles: uninvolved (permissive not supportive), authoritarian (strict and not very or somewhat supportive), permissive (permissive and very supportive), and authoritative (strict and very supportive). While much of the work on parenting styles and child well-being has focused solely on mothers, a meta-analysis by Amato and Gilbreth (1999) found that fathers' authoritative parenting was associated with improved academic outcomes and reduced behavior problems for children. Unlike findings of studies focusing on the parenting style of mothers, which tend to show that youth living with uninvolved mothers are the worst off, a recent study focusing on

intact families finds that youth with authoritarian fathers are the worst off in terms of adolescent risk behaviors, while youth with authoritative fathers fare the best (Bronte-Tinkew, Moore, & Carrano 2006).

Few studies have explicitly compared the influence on children of biological and stepfather parenting practices. Some of these studies focus on adolescents who have both a living nonresident biological father and a resident stepfather. Some find that close relationships with resident stepfathers are more strongly and consistently associated with adolescent outcomes than close relationships with nonresident biological fathers (King 2006; White & Gilbreth 2001; Yuan & Hamilton 2006). However, in a recent article using Fragile Families Data, Bzostek (2008) finds that involvement (reading, playing and warmth on the part of fathers) of resident step-fathers and of resident biological fathers are equally beneficial for young children (who were three years of age). Another study comparing the influence of stepfathers vs. resident biological fathers on child well-being fails to find any difference in their influence, yet this study combines children ages five to eighteen in its analyses (Amato & Rivera 1999). In contrast, several studies have compared levels of involvement for biological fathers and stepfathers who reside with their children. These studies suggest that stepfathers differ from biological fathers on most measures of parenting, with stepfathers being less involved; however, these differences are reduced when characteristics of fathers are taken into account (Hofferth & Anderson 2003; Hofferth, 2006).

Studies draw from a variety of perspectives to explain differences in parenting received by youth living with a stepfather. The instability and change arguments, alluded to earlier, suggest that newlywed parents may be too stressed or distracted to effectively parent, because they are adjusting to their new situation (Coleman, Ganong, and Fine 2000). The “incomplete

institution" argument emphasizes that the institution of the family fails to offer any clear blueprint for roles and relationships for families of remarriage (Cherlin 1978; Cherlin & Fursternberg 1994). This could potentially create conflict between nonresident fathers, biological mothers, and stepfathers as they negotiate their potentially ambiguous roles. A social capital perspective emphasizes that step fathers may have obligations to children from other relationships that reduce the time and energy they are able to devote to stepchildren (Coleman, Ganong, & Fine 2000). Similarly, nonresident biological fathers often have responsibilities in their new relationships that limit their involvement with their biological children (Manning, Smock & Stewart 2003). Finally, an evolutionary perspective assumes that stepfathers have less incentive to invest time and money in stepchildren because they lack a biological stake in these investments (Hofferth & Anderson 2003; Hofferth, 2006).

These explanations suggest that the parenting practices of resident fathers may play a key role in accounting for the findings, described above, that children living in step-families are more likely to experience an early birth. Given the ambiguity surrounding the role of stepfathers, we might also expect the parenting practices of stepfathers to be less influential than those of biological fathers. As several studies suggest, stepfathers often find it difficult to parent effectively due to resistance on the part of biological mothers and stepchildren (Coleman, Ganong, & Fine 2000; MacDonald & DeMaris 2002). Children's receptiveness to the parenting style of stepfathers is found to differ according to their age at the time of remarriage and the age at which they are observed, with adolescence being particularly problematic (Hetherington 1993). Studies also suggest that stepfather involvement is more critical for boys than for girls, at least in terms of adolescents' disposition toward having sex (Menning, Holtzman, & Kapinus 2007).

Of course, associations between family structure, father involvement, and child outcomes could reflect the selection of parents in different arrangements or their economic circumstances. To rule out the possibility of selection, studies control for several characteristics of mothers and fathers, including maternal depression. Another approach is to compare the outcomes of siblings in blended families who vary with respect to their biological relationship to the father. Some (but not all) of the sibling studies suggest that children living with stepfathers are worse off in terms of parenting received and their own outcomes, even after adjusting for selection factors (Case, Lin & McLanahan 2001; Gennetian 2005; Ginther & Pollak 2004; Hofferth 2006).

Thus, the research reviewed above suggests that fathers' parenting behaviors may play a key role in young men and women's transitions to parenthood. Additionally, the role that fathers play may differ depending on their biological relationship to the youth. These relationships may also differ by the gender of the child. The goal of this study is to expand our understanding of family influences on early parenthood by focusing on the parenting styles of fathers, contrasting between the influences of biological vs. step fathers, and examining differences for boys vs. girls.

## METHODS

### *Data*

Data for this study came from the National Longitudinal Survey of Youth 1997 (NLSY97), a nationally representative sample of 8,984 non-institutionalized youths ages 12 – 16 as of December 31, 1996. Round one of the survey took place in 1997 and follow-up surveys have been conducted annually since the initial interview. For the present study, we used ten rounds of data (1997 – 2006). The NLSY97 dataset is especially appropriate for this study because the survey contains specific measures of parenting style for mothers and fathers, as well

as information about parent and youth demographic information and youth fertility. In round one of the survey, both the youth and the parent (usually the mother) were interviewed. We used round one data from both youth and parents to construct our measures of parenting style, family structure, and family background and control variables. Youth-reported fertility behavior from subsequent interview rounds was used to determine whether the youth transitioned to early parenthood during the period under study.

*Analytic Sample*

We restricted our sample to youths living in two-parent households in 1997 ($N$ = 5,464).[1] We defined two-parent households as households consisting of one biological mother and either one biological father or one stepfather, to whom the mother was married. Our measures of parenting style pertain only to residential parents. We excluded (left truncated) 48 cases (35 women and 13 men) who reported an early first birth prior to round one due to lack of prior information about parenting style. Including these cases would have raised concerns about causal ordering of parenting style and youth fertility behavior. Given the small number of births before age 15, we began the period of risk for an early first birth at age 15. This restriction excluded 40 additional cases. Our final analytic sample contains 5,376 youth (2,561women and 2,815 men).

*Measures*

Age at First Birth. The dependent variable in this study, which is discussed in greater detail below, is based on the youth's age upon first transition to parenthood. At each wave, all respondents were asked if they had ever given birth to or fathered any children. For each live birth, the survey recorded the birth date of the child. Age at first birth was determined by

1 Eight youth with invalid household identification numbers were deleted prior to this step.

subtracting the respondent's date of birth in continuous months from the birth date of his or her first child in continuous months and dividing the value by 12.

*Independent Variables*

Parenting style. Four types of parenting style, adapted by Moore et al. (1999) for the NLSY97, were identified for both mothers and fathers based on cross-classifications of two global dimensions of parenting: demandingness (e.g., strictness/permissiveness) and responsiveness (e.g., warmth and support). Youth reported parental responsiveness using the question, "When you think about how s/he acts towards you, in general, would you say that s/he is very supportive, somewhat supportive, or not very supportive?" Responses of *not very supportive* or *somewhat supportive* were recoded 0 and considered nonresponsive and responses of *very supportive* were coded 1 and considered responsive. Youth reported parental strictness/permissiveness using the question, "In general, would you say that s/he is permissive or strict about making sure you did what you were supposed to do?" Responses of *strict* on the strict/permissive item were recoded 1 and are considered demanding and responses of *permissive* were coded 0 and considered nondemanding. These two dichotomous variables were then combined to create a four-fold typology of parenting style: **uninvolved** (*permissive* and *not very* or *somewhat supportive*), **authoritarian** (*strict* and *not very* or *somewhat supportive*), **permissive** (*permissive* and *very supportive*), and **authoritative** (*strict* and *very supportive*). See Moore et al., (1999) for more information about the construction of this variable and its validity using these data.

Family background and control variables. Our household-level covariates included a dummy variable that equaled 1 if the youth was living with a biological father (as opposed to a stepfather), a measure of parent-reported pre-tax household income from all sources in 1996 (in

logged dollars), a dummy variable that equaled 1if household income was missing, three measures of household composition (number of adults in the household, number of children in the household age 6 – 17, and number of children in the household under age 6), and a number ranging from 0 to 2 that indicated the number of youth-reported parental structure changes experienced, based on who the youth was living with at ages 2, 6, and 12. Since comprehensive data on the total number of household structure changes is not available, this measure underestimates the number of changes that the youth has experienced. We also controlled for several maternal characteristics. We included two dummy variables to measure maternal education (mother has less than a high school education and mother has some college or a college degree, the referent was mother has a high school diploma), an indicator that equaled 1 if mother was employed in round one, a continuous measure of maternal weekly work hours in 1996 (range was 0 to 90)[2], and an indicator that equaled 1 if the mother herself reported an early first birth (her first child was born before she was age 20). We also controlled for maternal depression which consisted of the following four items: (a) In uncertain times, I usually expect the best, (b), I rarely count on good things happening to me, (c), I'm always optimistic about my future, and (d) I hardly ever expect things to go my way. Response options ranged from 1 (strongly disagree) to 4 (strongly agree). After reverse coding two items, the responses were summed to create an index that ranged from 4 16 with higher scores indicating greater feelings of depression (alpha = .504).

Our child-level covariates include a set of age-at-risk dummy variables (age 16 to age 19 for women and age 16 to age 21 for men, age 15 is the referent) which allows the hazard of experiencing an early first birth to vary with time. We also included a numeric variable measuring the length of time in years from round 1 (when parenting style was measured) to

2 We top coded one response of 168 hours at 90 hours (the next highest response value).

either (a) the round in which the youth experienced an early first birth, or (b) the round censored if the youth did not experience the event. This variable is intended to capture the potential declining influence of parenting style on the risk of the birth event over time. Finally, we included a variable that equals 1 if the youth was foreign born, and dummy variables identifying youth race-ethnicity based on self-reports: non-Hispanic white (the referent; includes Asian), non-Hispanic black, and Hispanic (any race). Each of these measures was reported in round one and was entered as a time-constant regressor in the analyses. For descriptive purposes only (see Table 1 below) we also report the mean age of each youth in years at round 1.

Additionally, in order to control for prior levels of youth behavior, we include an index of youth delinquency and an index of youth substance abuse, each taken at round 1. The delinquency index consists of 10 items asking whether the youth had ever: run away, carried a gun, belonged to a gang, damaged property on purpose, stolen something, committed other property crimes, attached someone, sold drugs, or been arrested. Each item is given a score of 0 for no, and 1 for yes, and all items are summed to create a scale ranging from 0-10. The substance abuse index is based on 3 items asking whether the youth had: smoked a cigarette, had a drink, or used marijuana. Again, items are given a score of 0 for no, and 1 for yes, and all items are summed to create a scale ranging from 0-3 (Child Trends, 1999).

*Missing Data*

We addressed missing data using multiple imputation (MI) techniques that impute missing values according to Rubin's (1987) multiple imputation process. First, each missing value was replaced with a set of 5 plausible values that reflect the uncertainty about the missingness of the data. Second, the 5 multiply imputed data sets were then analyzed using standard logistic regression procedures for complete data. Third, we obtained our point

estimates by averaging the 5 sets of imputed results (Acock, 2005; Allison, 2002). We applied a Markov chain Monte Carlo (MCMC) method which is appropriate for data with an arbitrary missing pattern (Yuan, 2000) and may be robust to departures from the multivariate normality when amounts of missing data are small (Yuan, 2000). When used correctly, MI produces unbiased standard errors (Acock, 2005; Allison, 2002). Analyses were conducted using PROC MI and PROC MIANALYZE procedures in SAS 9.1. MI was applied in all our multivariate analyses.

*Analytic Strategy*

We used discrete-time event history logistic regression methods for non-repeated events to calculate the risk of experiencing early parenthood (Allison, 1984, 1995). The dependent variable was the hazard rate, which was the probability that individual *i* experienced the event (an early first birth; before age 20 for girls and before age 22 for boys) at time *t*, granted the individual was still at risk at that time. For each round that an individual was at risk, a separate observation was created resulting in a set of person-year observations. Once a youth experienced the event, s/he was no longer included in the risk set. Youth who did not experience early parenthood were considered right-censored and contributed the maximum of nine person-years. The risk period began at age 15 and ended at age 20 for women and age 22 for men (to account for the fact that men become fathers at later ages than women become mothers). We excluded youth who experienced the event before round one.

For each person-year, the dependent variable was coded 1 if the youth reported transitioning to early parenthood (e.g., a birth to a woman age 15 – 19 or to a man age 15 – 21) or was otherwise coded 0. All independent variables were assigned the values they took on in round one. Although some of our key independent variables are measured repeatedly over time,

including parenting style and family structure, we utilize only the 1997 round 1. This is because we want to standardize everything at a single point in time at which we are able to capture both family structure and parenting style of the resident parents. Additionally, in order to examine the influence of parenting on early birth, we want to be able to capture parenting behaviors that took place before an early birth occurred; utilizing later measures of parenting style runs the risk of capturing changes in parenting style that occurred after a birth (or behaviors preceding a birth) took place.

We have examined the extent to which family structure changed over time for the youth in our sample. A full 65% of youth in our sample who lived with both biological parents at round 1 did not experience a change in family structure from round 1 through the period of our study; 40% of those living with a biological mother and step father did not experience a change. As noted below, as a robustness check, we performed some analyses limiting our sample to youth who did not experience a change in family structure.

All the person-years of data were pooled into a single sample and logit models were estimated using the method of maximum likelihood. All models were weighted to account for complex sampling and survey attrition. Finally, we employed robust standard errors (White, 1980) and corrections for household-level clustering[3].

We analyzed the influence of parenting style on early parenthood separately for men and women. Within each sex, we analyzed the effect of parenting style (a) for all father types (youth living with a biological mother and either a biological father or a stepfather), (b) for youth living with a biological mother and a biological father ("biodad families"), and (c) for youth living with a biological mother and a stepfather ("stepdad families"). We ran four models for each of these

3 Because our sample consists of repeated measures of children, we also performed analyses clustering at the individual level; results were substantively similar to those presented below.

three family types. In model 1, we estimated baseline models that included only the household- and individual-level covariates for youth. In model 2, we added paternal parenting style to the baseline models to examine the influence of fathers' parenting style on the likelihood of an early birth. In model 3, we added maternal parenting style[4]. Finally, in model 4, we added the round 1 controls for youth delinquency and substance abuse, in order to control for the fact that youth behavior could have an influence on parenting style. In the models that included both father types, we included a dummy variable that was coded 1 if the paternal parenting style corresponded to a biological father, and coded 0 if the paternal parenting style corresponded to a stepfather. Because of concern about the potential collinearity of maternal and paternal parenting, we performed collinearity diagnostics and found that multicollinearity was not a substantial problem. Tolerance scores and variance inflation factors were never below .40 or above 2.50, respectively, indicating they are not problematic (Allison, 1999).

## RESULTS

### *Descriptive Characteristics*

Descriptive statistics for men and women in our sample are shown in Table 1. Looking at the numbers for "all families", that is, regardless of whether the youth was living with a biological or step-father, we found that 12% of women and 12% of men experienced an early first birth; that is, a birth before the age of 20 for women and a birth before the age of 22 for men. Regardless of sex or biological status of the father, the most common parenting style reported by respondents for mothers and fathers was authoritative, and the second most common style was permissive. The share of respondents with uninvolved or authoritarian parents was considerably smaller. Women were significantly less likely than men to report having

4 We also performed analyses that included only maternal parenting style, without that of fathers included, but these did not differ from the models that included both maternal and paternal style at the same time.

authoritative mothers, were significantly more likely than men to report having uninvolved and having authoritarian mothers, and they were also more likely to report having authoritarian fathers.

[Table 1 about here]

Table 1 also reports the descriptive statistics of men and women by father type. Results show that youth living with a stepfather were most than twice as likely to have reported an early first birth compared to their counterparts living with a biological father. Among women, 10% of those living with a mother and biological father had an early birth, compared to 21% of those living with a mother and step-father. For men, these numbers are 10% and 24%, respectively.

The parenting style of both mothers and fathers also differed depending on whether the youth lived with a biological father vs. a stepfather. Among women, a significantly greater percent of women reported having an authoritarian mother if they lived with a stepfather than with a biological father. Women were also significantly more likely to report having an authoritative father and were significantly less likely to report having uninvolved or authoritarian fathers if he was her biological, rather than step, father. Among men, the percent reporting authoritarian mothers also differed significantly as a function of father type, with more authoritarian mothers in the step-father families. Men were also significantly more likely to report having an authoritative father or a permissive father if they were living with a biological father as opposed to a stepfather, whereas they were more likely to report having an uninvolved or authoritarian father if they lived with a step father, rather than with a biological father.

Several additional significant differences across father type are worth noting here. First, maternal work hours are great in step-father households. A greater percent of Black youth are living in a stepfather household than in biological father households; the opposite is true for

Hispanic youth. Additionally, step-father households are more likely to consist of children under the age of 6. As would be expected, children in step-father households have experienced more family structure changes than those living with both biological parents. Additionally, the percent of youth with mothers who, themselves, experienced an early first birth is nearly double in step families compared to biological families. Finally, youth delinquency and substance use are greater in step-parent households.

Other differences by household type only hold for certain genders. Maternal education is higher for young women who are living with biological fathers rather than stepfathers, whereas household income is higher for young men who are living with biological fathers rather than stepfathers. Foreign born young women are less likely to be living with a stepfather. Finally, young men's parents have less supportive relationships in biological, vs. step-parent households. Since many of these variables are found to be associated with early transitions to parenthood, models that exclude them are likely to overstate the effects of stepfather influences on early parenthood.

*Parenting Style and Early First Birth*

Table 2 reports the odds ratios from logistic regression estimates of the association between a young woman's parents' parenting style and her likelihood of transitioning to an early first birth. Odd ratios are first reported for women in all families (those consisting of a biological mother and either a biological or stepfather) and then separately by father type (biodad families vs. stepdad families). The results for four different models are reported. Model 1 is the baseline model that contains only the family background and control variables. Model 2 adds paternal parenting style dummies. Model 3 adds the maternal parenting style. Model 4 adds the two measures of youth behavior taken at round 1.

[Table 2 about here]

Among all families, Model 1 shows that the odds of experiencing an early first birth increase with age at risk. Model 1 also shows that both Black and Hispanic women, compared to White women, are significantly more likely to report an early first birth; specifically, Black women have 54% higher odds (i.e., [1.54 – 1]*[100] = 54) of having an early birth, while Hispanic women have 40% higher odds. Maternal education is also a significant predictor of early first birth. Compared to women whose mothers had a high school diploma, women whose mothers have less than a high school more than twice as likely to have an early first birth whereas women whose mother have some college or more are significantly less likely to do so. Compared to women whose mothers were not employed in 1997, women whose mothers were employed in 1997 are 40% less likely to experience an early first birth; however, more hours of maternal employment are associated with a small increase in the likelihood of having an early first birth (each additional weekly hour increases the likelihood of a birth by 2%). Higher household income (in logged dollars) is associated with lower odds of reporting an early first birth. Women whose own mothers report an early first birth are significantly more likely to experience an early first birth themselves; such women had almost twice (i.e., 1.84) the odds of an early birth. Finally, women living with a biological father are almost 30% less likely to experience an early birth. In spite of the fact these analyses are restricted to youth living with biological mothers in married two-parent families, the patterns are consistent with those of previous studies concerning teen childbearing (Hynes et al. 2008).

Model 2 (for women in all family types) shows that, compared to women with authoritative fathers, those with authoritarian fathers are 50% more likely to have an early birth. This coefficient becomes insignificant in Model 3, when mothers' parenting style is added; here

we see that women whose mothers are uninvolved or authoritarian are more likely to have a birth, compared to those whose mothers are authoritative. Finally, Model 4 includes the prior measures of youth behavior. We see that including these measures reduces the influence of authoritarian parenting to insignificance, while having an uninvolved mother remains a significant predictor of an increased likelihood of having an early birth. Finally, we see that girls who exhibited delinquent behaviors in round 1 were more likely to have an early birth, with each additional behavior associated with a 16% increase in the odds of an early birth. The inclusion of the parenting style measures in this model does not substantially change the coefficients shown in Model 1, including that for whether the youth lives with a biological father (though this coefficient dropped to a $p < .10$ significance level), suggesting that parenting style does not mediate the influence of demographic characteristics on the odds of early first birth. None of the other coefficients from Model 1 change with the inclusion of the parenting style measures in the model.

In models restricted to women living with their mothers and biological fathers only (Biodad families) the results are similar to those reported above. However, in these models, probably due to the lower sample size, none of the measures of maternal or paternal parenting style are significant predictors of early birth once youth prior behaviors are controlled in the final model.

A very different pattern of results emerges in the last set of columns pertaining to women living with their mothers and a stepfather (stepdad families). With a few exceptions, many of the variables have weaker effects for the sample of women living with a stepfather, as indicated by the significance levels; for example, race and ethnicity are not predictive of an early birth among these women. Unlike the sample for all families and women living with a biological father, none

of the parenting style measures of fathers is significantly associated with an early first birth. Similar to the findings for the other groups, though, results suggest that having an uninvolved mother, relative to an authoritative mother, is associated with significantly higher odds of experiencing an early first birth. Specifically, after controlling for both mother's and stepfather's parenting style (Model 4), having an uninvolved mother is associated with 103% higher odds of experiencing an early first birth, compared to women living with authoritative mothers. Additional models (results not shown) of all families that add interaction terms between all variables and having a biological father reveal that, with the exception of mother's education level and having an authoritarian father, the effects generally fail to differ significantly across these two groups of women.

Table 3 reports analogous results for men. The first columns present results for the full sample of men. Here, unlike the results for women, Hispanic ethnicity is not significantly associated with the likelihood of fathering a child at an early age. Also unlike the results for women, we see a significant (at the $p < .10$ level) and negative association between being foreign-born and fathering a child early and we see a significant association between the number of adults and youth in the household and fathering a child early; having more adults in the household is associated with lower odds of having an early birth, whereas having more children in the household is associated with higher odds of having an early birth. As shown with women, men with less educated mothers are significantly more likely to father a child early, and those whose own mothers had an early birth are significantly more likely to do so. Men living with a biological father are significantly less likely to experience this event. Looking at the next three columns for the full sample, we see that men living with authoritarian fathers are more likely to father a child early; however, this does not hold up in the final models. Men with uninvolved

mothers are also more likely to father a child early. These results parallel those found for women. We also see that exhibiting delinquent behaviors in round 1 was associated with an increased risk of fathering a child early.

[Table 3 about here]

The next set of columns presents results for men living with their biological fathers. Here, we see similar patterns of associations between demographic characteristics and the odds of fathering a child early as those in the full sample. Looking at Model 2 we see that compared to men living with authoritative fathers, men living with uninvolved fathers are significantly more likely to experience an early first birth, as are those living with authoritarian fathers. However, after controlling for mother's parenting style (Model 3), the influence of having an authoritarian father is no longer significant; having an uninvolved father remains a significant predictor. Looking at Model 3, we see that none of the measures of maternal parenting style are significant predictors of men's early transition to parenthood. Finally, in Model 4, delinquent behavior is significantly associated with an increased likelihood of fathering a child early. Having an authoritarian father remains significantly associated with in increased risk of early fatherhood.

Results for men living with stepfathers are shown in the final set of columns in Table 3. Here, and unlike the previous columns, being foreign-born and having a less-educated mother are not significantly associated with the likelihood of fathering a child early. In Model 2 we see that, for youth living with step fathers, having a permissive stepfather is associated with a 56% *decrease* in the odds of early-fatherhood and having an uninvolved stepfather is associated with a 66% *decrease*; the odds ratio for uninvolved father is significantly different in the fully interacted models that the odds ratio found for biological fathers in the previous columns. These

significant associations persist even after controlling for mothers' parenting style in Model 3 and youth behaviors in Model 4. As with the other groups of men, we see no significant associations between mothers' parenting style and the transition to early fatherhood. As before, we see that delinquency in round 1 is associated with an increased risk of early fatherhood; interestingly, substance use is associated with a decreased risk. Other effects that significantly differed by father type (in saturated models, not shown, that added interaction terms between all variables and having a biological father) include the effects of being black, the number adults in the household, and the number of mother's work hours.

*Robustness Tests*

We conducted some sensitivity tests to examine the robustness of our findings. First, in order to examine whether parenting style is really picking up aspects of the quality of the parents' relationship, we added to our final models a parent-reported measure of the parents' marital relationship. It is possible that mothers' and fathers' parenting behaviors is a function of the overall quality of their relationship, and that any effects of parenting we pick up in our analysis are actually due to the parents' relationship quality. A set of six questions was asked of the youth's responding parent (usually the youth's mother) about her spouse. Questions included: "How often is he or she fair and willing to compromise when you have a disagreement?" and "How often does he or she express affection or love for you?" Responses ranged from 0 (*never*) to 4 (*always*) and were summed to create an index of marital supportiveness that ranged from 0 to 24 with higher scores indicating a more positive marital relationship. (Additional information about this measure is reported in Moore, et al., (1999)). Results were robust to the inclusion of this variable.

We also performed some analyses separately for black and white youth; however, most results did not differ by race, leading us to focus on gender-specific models instead (sample sizes preclude examining models by race, family structure, and gender).

Another robustness check examined whether the influence of resident step-fathers differs depending on whether the child has contact with his or her nonresident biological fathers. It is possible, for example, that having an uninvolved stepfather is either neutral or even beneficial for youth, only if a nonresident biological father is available. To test this we performed analyses in which we controlled for whether, for youth living with a stepfather, the biological father was either deceased or the youth had no contact with that biological father in the past year; results were robust to the inclusion of this additional measure. We also interacted the measure of whether the biological father was deceased/no contact with the parenting measures, and again found that our results were robust. In other words, the influence of stepfather parenting style on early births does not seem to be confounded with, or vary by, the availability of the nonresident biological father.

Finally, as noted above, we classify youth based on their living arrangements at round 1. However, some youth changed living arrangements over the subsequent waves of the study. It is possible that the influence of parenting style may be different for these youth; for example, the influence on youth of a step-father who left the home after the first interview may be weaker than one who remained in the youth's household. To test this, we performed some analyses one a sample restricted to only those youth whose family living arrangement did not change over the course of the study. Even with this restricted sample, our overall pattern of results did not change.

**DISCUSSION**

The goal of this study was to examine the role of family process measures (specifically, parenting style) on the transition to parenthood for young men and women. A key innovation of this project is the focus on fathers' parenting styles, as well a consideration of how these processes operate differently in biological vs. stepfather families and across boys and girls. The results presented here highlight several main findings.

Overall, we find no evidence that the measures of parenting style account for the influence of socio-demographic characteristics on early parenthood. Thus, it appears that the influence of family structure, income and other measures on early fertility does not operate through parenting practices.

Instead, we find main effects of parenting style, but these effects differ by family structure and by gender. For girls, having an uninvolved mother is associated with an increased risk of early parenthood across all groups (although for girls living with their biological fathers, this association is no longer significant after controlling for youth prior behavior). The other measures of mothers parenting style (permissive and authoritarian) were not predictive of transitions to parenthood, compared to having an authoritative mother. In terms of fathers' parenting, having an authoritarian father was associated with early parenthood for girls, but only for those living with their biological fathers. Additionally, the influence of this measure did not remain significant after controlling for mothers' parenting style and youth behaviors, suggesting that perhaps this aspect of fathers' parenting is at least in part a response to girls' behaviors. For girls in step-father families, no measures of fathers' parenting style were associated with the transition to parenthood.

It is not clear why uninvolved parenting by mothers would be predictive of early births, while the other measures were not. More work is needed to better understand dynamics that

underlie uninvolved parenting—both in terms of precursors leading to such parenting, as well as the processes through which it may play out in the lives of young women. The overall pattern of results is consistent with the idea that resident step-fathers have a less strong influence on girls' behaviors than do biological resident fathers. As noted above, this could be due to a variety of factors, including a lack of clarity of what role step-fathers should play in terms of parenting, the fact that step-fathers may have children from previous relationships that demand their attention and time, or the selection of certain men into step-fathering situations. More work is needed to disentangle these possibilities. However, the influence of mothers' parenting behavior on girls early birth does not appear to differ in step vs. biological father families.

For boys, none of the measures of mothers' parenting style were associated with the likelihood of having an early birth, after controlling for youth behaviors. Even more striking differences of the influence of fathers' parenting style between step- and biological households emerged among boys. Having either a permissive or uninvolved step- father was associated with a *decreased* risk of early fertility. In contrast, having an authoritarian biological father was consistently associated with an increased risk of early fertility. We know of no other study that considers this issue, so a clear interpretation of this result as pertaining to stepfathers is difficult. It is possible that, in stepfather families, keeping a distance between stepfathers and young men living in those households is the most adaptive situation, perhaps as it may avoid conflict or unclear roles. It is also possible that boys with uninvolved stepfathers have a close relationship to their non-resident biological fathers. The NLSY97 contains information on the parenting styles of non-resident fathers and in future work we will examine the distribution of parenting styles across both step- and non-resident fathers.

Looking at some other results, we observe differences in the role of demographic characteristics in predicting early parenthood across family type. For all groups of girls, maternal education and household income are associated with early parenthood, and operate in the expected direction. However, several characteristics that one would expect to be associated with early parenthood only emerge as significant for girls living with their biological fathers, specifically, race and ethnicity, and mothers' early birth status. For girls living in step-families, these factors are not associated with early parenthood. For boys also, we again see that, among those living with a stepfather, fewer family-based factors are predictive of early birth. This finding of fewer overall effects for those living in step-families is unique in the literature, and therefore the explanation behind it is not clear. It is possible that something about living with a stepfather increases the likelihood of early parenthood for young men and women and that this one characteristic overwhelms the influence of other variables.

For boys and girls, delinquency, but not substance abuse, was a significant predictor of having an early birth. For boys, engaging in one additional delinquent activity was associated with a 12% increase in the odds of an early birth, and for girls the increase associated with an additional activity was 16%.

There are several limitations to this paper that should be noted. First, with data such as this, it is not possible to determine the direction of the influence of parenting behaviors on youth fertility. While this study attempts to approximate causality by measuring parenting behaviors prior to the time when a birth occurred, as well as controlling for a host of family and youth characteristics, including youth behaviors that might themselves influence parenting style, it is still likely that the relationship between parenting and youth sexual activity (and ultimately fertility) is more complex and dynamic than modeled here. It is also possible that unmeasured

variables influence both parenting style and youth fertility, thereby biasing our results. Future work will take advantage of the fact that we do have repeated measures of parenting style for some youth in our sample, and examine in more detail the ways in which parenting style and youth behaviors play out over time.

Because of our interest in both mothers' and fathers' parenting style, this study focused on youth living with married mothers, thereby limiting the generalizability of our findings. Future work could take advantage of the fact that some youth in the NLSY97 reported on parenting style for non-resident fathers; although there is a great deal of missing data on this measure, we could potentially use it to examine mothers' and fathers' parenting style among children who do not live with married mothers.

Finally, we rely on youth reports of parenting style. To the extent that youth with certain characteristics, or with certain experiences, both report their parents' style a specific way and are more likely to have an early birth, our results will be biased.

Overall, then, this paper examined the influence of family factors on the transition to early parenthood among young men and women. We found that mothers' and fathers' parenting styles do matter, but that the pattern of associations differs by family type and by gender. Perhaps the most intriguing findings have to do with the ways in which family processes play out very differently in step- vs. biological-father families. Future work will attempt to further understand these issues.

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Table 1

*Descriptive Characteristics (Means or Frequencies) for Women (N = 2,561) and Men (N = 2,815) Across Father Type*

| | Women | | | Men | | |
|---|---|---|---|---|---|---|
| | All Families | Biodad Families | Stepdad Families | All Families | Biodad Families | Stepdad Families |
| Early first birth, n (%) | 375 (0.12)* | 277 (0.10)$_a$ | 98 (0.21)$_a$ | 409 (0.12) | 302 (0.10)$_b$ | 107 (0.24)$_b$ |
| Sociodemographic characteristics | | | | | | |
| Age | 14.26 (1.47) | 14.24 (1.46) | 14.40 (1.51) | 14.28 (1.48) | 14.28 (1.48) | 14.22 (1.48) |
| Black | 0.10 | 0.09$_a$ | 0.14$_a$ | 0.09 | 0.08$_b$ | 0.15$_b$ |
| Hispanic | 0.12 | 0.12$_a$ | 0.10$_a$ | 0.13 | 0.13$_b$ | 0.11$_b$ |
| Foreign born | 0.05 | 0.06$_a$ | 0.02$_a$ | 0.06 | 0.06 | 0.05 |
| Mom less than high school | 0.14 | 0.13$_a$ | 0.21$_a$ | 0.14 | 0.14 | 0.19 |
| Mom some college or more | 0.47 | 0.49$_a$ | 0.39$_a$ | 0.46 | 0.47 | 0.40 |
| Mom employed | 0.71 | 0.70 | 0.73 | 0.70 | 0.70 | 0.70 |
| Log household income | 10.74 (1.44) | 10.75 (1.53) | 10.66 (0.84) | 10.69 (1.49) | 10.74$_b$ (1.48) | 10.37$_b$ (1.55) |
| Household income is missing | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.24 |
| Number of adults in the household | 2.31 (0.75) | 2.35$_a$ (0.78) | 2.11$_a$ (0.57) | 2.31 (0.74) | 2.34$_b$ (0.75) | 2.17$_b$ (0.65) |
| Number of children age 6-17 in the household | 2.17 (1.05) | 2.18 (1.06) | 2.14 (1.02) | 2.19 (1.04) | 2.17$_b$ (1.02) | 2.28$_b$ (1.11) |
| Number of children under age 6 in the household | 0.16 (0.50) | 0.24$_a$ (0.49) | 0.14$_a$ (0.55) | 0.17 (0.50) | 0.14$_b$ (0.46) | 0.34$_b$ (0.67) |
| Number of parental structure changes (0 - 2) | 0.13 (0.36) | 0.03$_a$ (0.19) | 0.65$_a$ (0.59) | 0.12 (0.36) | 0.05$_b$ (0.23) | 0.61$_b$ (0.61) |
| Mom had early first birth | 0.20 | 0.17$_a$ | 0.34$_a$ | 0.21 | 0.19$_b$ | 0.35$_b$ |
| Maternal depression (4 - 16) | 8.02 (1.98) | 8.00 (2.01) | 8.11 (1.86) | 8.08 (1.96) | 8.04 (1.97) | 8.28 (1.89) |
| Maternal work hours (0 - 90) | 28.73 (18.34) | 28.00$_a$ (18.26) | 32.43$_a$ (18.28) | 28.18 (18.16) | 27.78$_b$ (18.20) | 30.58$_b$ (17.77) |
| Dad is biological | 0.83 | 1.00 | 0.00 | 0.86 | 1.00 | 0.00 |
| Youth problem behavior | | | | | | |
| Youth delinquency index (0 - 10) | 0.77* (1.33) | 0.71$_a$ (1.26) | 1.12$_a$ (1.60) | 1.50 (1.83) | 1.40$_b$ (1.73) | 2.05$_b$ (2.24) |
| Youth substance use index (0 - 3) | 0.95* (1.09) | 0.88$_a$ (1.07) | 1.28$_a$ (1.17) | 1.00 (1.09) | 0.96$_b$ (1.08) | 1.22$_b$ (1.14) |
| Paternal parenting style | | | | | | |
| Dad is authoritative | 0.37* | 0.40$_a$ | 0.20$_a$ | 0.42 | 0.44$_b$ | 0.31$_b$ |
| Dad is permissive | 0.30 | 0.30 | 0.30 | 0.29 | 0.31$_b$ | 0.21$_b$ |
| Dad is uninvolved | 0.12 | 0.10$_a$ | 0.22$_a$ | 0.11 | 0.10$_b$ | 0.18$_b$ |
| Dad is authoritarian | 0.21* | 0.20$_a$ | 0.28$_a$ | 0.18 | 0.16$_b$ | 0.29$_b$ |
| Maternal parenting style | | | | | | |
| Mom is authoritative | 0.42* | 0.43 | 0.36 | 0.45 | 0.46 | 0.40 |
| Mom is permissive | 0.36 | 0.36 | 0.35 | 0.37 | 0.38 | 0.34 |
| Mom is uninvolved | 0.10* | 0.09 | 0.12 | 0.08 | 0.08 | 0.11 |
| Mom is authoritarian | 0.12* | 0.11$_a$ | 0.16$_a$ | 0.10 | 0.09$_b$ | 0.15$_b$ |
| *n* | 2,561 | 2,127 | 434 | 2,815 | 2,401 | 414 |

*Note:* All variables, except early first birth, come from wave I youth or parent reports. All values, except *n*, are weighted. Unweighted standard deviations are in parentheses for continuous independent variables. Early first birth is a first birth to women age 15-19 or a first birth to men age 15-21. Values in the same row that share a subscript differ across father type at $p < .05$.

*Difference between women and men is statistically significant at $p < .05$.

Table 2

*Association between Parenting Style and Young Women's Transition to Early First Birth: Odds Ratios from Logistic Regression Equations*

| | All Families (*N* = 12,172) | | | | Biodad Families (*N* = 10,137) | | | | Stepdad Families (*N* = 2,035) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Sociodemographic characteristics | | | | | | | | | | | | |
| Age at risk is 16 | 2.51 ** | 2.51 ** | 2.51 ** | 2.53 ** | 2.55 * | 2.55 * | 2.55 * | 2.57 * | 2.50 | 2.53 | 2.52 | 2.54 |
| Age at risk is 17 | 6.29 *** | 6.30 *** | 6.35 *** | 6.46 *** | 5.39 *** | 5.41 *** | 5.42 *** | 5.54 *** | 10.27 *** | 10.53 *** | 10.89 *** | 11.08 *** |
| Age at risk is 18 | 11.75 *** | 11.79 *** | 11.91 *** | 12.22 *** | 10.84 *** | 10.88 *** | 10.92 *** | 11.27 *** | 18.41 *** | 18.92 *** | 19.79 *** | 20.57 *** |
| Age at risk is 19 | 16.74 *** | 16.81 *** | 17.08 *** | 17.62 *** | 16.01 *** | 16.12 *** | 16.23 *** | 16.86 *** | 23.86 *** | 24.48 *** | 26.26 *** | 26.84 *** |
| Elapse | 0.62 *** | 0.62 *** | 0.62 *** | 0.64 *** | 0.63 *** | 0.62 *** | 0.62 *** | 0.65 *** | 0.56 *** | 0.56 *** | 0.55 *** | 0.55 *** |
| Black | 1.54 ** | 1.56 ** | 1.61 ** | 1.72 ** | 1.62 * | 1.59 * | 1.63 * | 1.74 ** | 1.34 | 1.32 | 1.41 | 1.45 *** |
| Hispanic | 1.40 * | 1.37 † | 1.38 † | 1.43 * | 1.59 ** | 1.54 * | 1.54 * | 1.59 * | 0.89 | 0.87 | 0.98 | 0.93 |
| Foreign born | 0.74 | 0.76 | 0.76 | 0.84 | 0.76 | 0.79 | 0.78 | 0.88 | 0.55 | 0.50 | 0.52 | 0.62 |
| Mom less than high school[1] | 2.17 *** | 2.19 *** | 2.19 *** | 2.09 *** | 1.70 ** | 1.73 ** | 1.69 * | 1.67 * | 3.77 *** | 3.78 *** | 4.03 *** | 3.66 *** |
| Mom some college or more[1] | 0.70 * | 0.72 † | 0.73 † | 0.72 † | 0.51 *** | 0.54 ** | 0.54 ** | 0.54 ** | 1.71 | 1.67 | 1.80 † | 1.73 |
| Mom employed | 0.60 ** | 0.60 ** | 0.63 * | 0.63 * | 0.68 † | 0.69 | 0.72 | 0.71 | 0.51 * | 0.53 † | 0.54 † | 0.56 † |
| Log household income | 0.90 ** | 0.90 ** | 0.90 ** | 0.90 ** | 0.93 * | 0.93 * | 0.93 * | 0.93 † | 0.64 † | 0.64 † | 0.64 † | 0.63 * |
| Household income is missing | 1.07 | 1.09 | 1.08 | 1.14 | 1.12 | 1.11 | 1.12 | 1.15 | 0.85 | 0.85 | 0.84 | 1.03 |
| Number of adults in the household | 0.95 | 0.96 | 0.95 | 0.94 | 0.98 | 0.99 | 0.99 | 0.97 | 0.95 | 0.92 | 0.94 | 0.97 |
| Number of children 6-17 | 1.07 | 1.07 † | 1.07 | 1.09 | 1.11 † | 1.11 | 1.12 † | 1.13 † | 0.99 | 0.99 | 0.97 | 0.99 |
| Number of children under age 6 | 1.19 † | 1.18 | 1.17 | 1.19 † | 1.09 | 1.10 | 1.09 | 1.12 | 1.27 | 1.29 | 1.19 | 1.17 |
| Number of household structure changes | 0.98 | 0.99 | 1.00 | 0.94 | 1.30 | 1.32 | 1.31 | 1.16 | 0.85 | 0.86 | 0.87 | 0.87 |
| Mom had early first birth | 1.84 *** | 1.83 *** | 1.83 *** | 1.77 *** | 1.49 *** | 2.00 *** | 1.11 *** | 1.97 *** | 1.47 | 1.44 | 1.38 | 1.28 |
| Maternal depression | 1.04 | 1.04 | 1.04 | 1.05 | 1.07 | 1.07 | 1.06 | 1.07 | 0.94 | 0.94 | 0.95 | 0.97 |
| Maternal work hours | 1.02 ** | 1.02 ** | 1.01 ** | 1.01 * | 1.18 ** | 1.02 * | 1.01 * | 1.01 * | 1.01 | 1.01 | 1.01 | 1.01 |
| Dad is biological | 0.69 * | 0.73 † | 0.72 † | 0.73 † | | | | | | | | |
| Paternal parenting style (ref. = authoritative) | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Dad is permissive | | 1.05 | 1.01 | 1.04 | | 1.18 | 1.12 | 1.15 | | 0.64 | 0.67 | 0.70 |
| Dad is uninvolved | | 1.29 | 1.02 | 0.90 | | 1.43 | 1.16 | 1.02 | | 0.74 | 0.53 | 0.49 |
| Dad is authoritarian[1] | | 1.50 * | 1.26 | 1.13 | | 1.80 ** | 1.55 * | 1.38 | | 0.72 | 0.56 | 0.53 |
| Maternal parenting style (ref. = authoritative) | | | 1.00 | 1.00 | | | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Mom is permissive | | | 1.06 | 0.99 | | | 1.10 | 1.00 | | | 0.89 | 0.85 |
| Mom is uninvolved | | | 1.81 ** | 1.54 * | | | 1.65 * | 1.39 | | | 2.32 * | 2.03 † |
| Mom is authoritarian | | | 1.41 † | 1.33 | | | 1.37 | 1.22 | | | 1.56 | 1.58 |
| Youth problem behavior | | | | | | | | | | | | |
| Substance use | | | | 1.07 | | | | 1.09 | | | | 0.94 |
| Delinquency | | | | 1.16 ** | | | | 1.17 ** | | | | 1.15 |
| $X^2$ | 539.4 | 545.5 | 550.3 | 543.58 | 422.1 | 432.5 | 435.2 | 418.46 | 137.5 | 148.9 | 151.4 | 155.6 |
| df | 21 | 24 | 27 | 29 | 20 | 23 | 26 | 28 | 20 | 23 | 26 | 28 |
| % reported early first birth by round 10 | 0.03 | | | | 0.03 | | | | 0.05 | | | |

*Note:* Odds ratios derived from discrete time logistic regression coefficients (OR = exp(β)) using person-year data and robust standard errors. All models are weighted to account for complex sampling and survey attrition and correct for family-level clustering.

[1]Coefficient is significantly different across father type in Model 4.

†p<.10; *p<.05; **p<.01; ***p<.001

Table 3

*Association between Parenting Style and Young Men's Transition to Early First Birth: Odds Ratios from Logistic Regression Equations*

| | All Families (*N* = 18,434) | | | | Biodad Families (*N* = 15,799) | | | | Stepdad Families (*N* = 2,635) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Sociodemographic characteristics | | | | | | | | | | | | |
| Age at risk is 16 | 7.66 ** | 7.66 ** | 7.85 ** | 7.75 ** | 12.55 *** | 13.00 *** | 12.94 *** | 12.44 *** | 2.85 | 2.85 | 2.96 | 2.98 |
| Age at risk is 17 | 17.83 *** | 18.34 *** | 18.47 *** | 18.43 *** | 23.57 *** | 24.39 *** | 24.34 *** | 23.43 *** | 12.73 * | 12.74 * | 13.50 * | 14.13 * |
| Age at risk is 18 | 50.25 *** | 52.14 *** | 52.61 *** | 52.30 *** | 65.76 *** | 68.24 *** | 68.10 *** | 65.10 *** | 38.28 ** | 39.65 *** | 42.06 *** | 41.55 *** |
| Age at risk is 19 | 104.17 *** | 107.99 *** | 108.96 *** | 108.20 *** | 137.55 *** | 142.88 *** | 142.59 *** | 137.69 *** | 78.96 *** | 83.26 *** | 88.85 *** | 92.67 *** |
| Age at risk is 20 | 123.10 *** | 127.87 *** | 129.41 *** | 130.19 *** | 159.17 *** | 165.84 *** | 166.00 *** | 161.90 *** | 100.58 *** | 110.28 *** | 118.04 *** | 127.61 *** |
| Age at risk is 21 | 142.74 *** | 148.71 *** | 150.81 *** | 153.39 *** | 179.83 *** | 187.73 *** | 187.73 *** | 184.56 *** | 129.93 *** | 143.45 *** | 156.80 *** | 174.16 *** |
| Elapse | 0.50 *** | 0.49 *** | 0.49 *** | 0.49 *** | 0.50 *** | 0.50 *** | 0.50 *** | 0.51 *** | 0.46 *** | 0.45 *** | 0.44 *** | 0.42 *** |
| Black[1] | 1.69 ** | 1.69 ** | 1.70 ** | 1.71 ** | 2.04 *** | 2.06 *** | 2.10 *** | 2.19 *** | 0.91 | 0.83 | 0.84 | 0.75 |
| Hispanic | 1.17 | 1.17 | 1.16 | 1.17 | 1.32 | 1.38 † | 1.36 | 1.32 | 0.69 | 0.70 | 0.68 | 0.76 |
| Foreign born | 0.65 † | 0.63 † | 0.63 † | 0.65 † | 0.62 † | 0.62 † | 0.62 † | 0.68 | 0.95 | 0.69 | 0.64 | 0.56 |
| Mom less than high school | 1.65 ** | 1.65 ** | 1.66 ** | 1.65 ** | 1.77 ** | 1.83 ** | 1.84 ** | 1.79 ** | 1.21 | 1.21 | 1.19 | 1.27 |
| Mom some college or more[1] | 0.77 † | 0.76 † | 0.77 † | 0.77 † | 0.86 | 0.84 | 0.86 | 0.84 | 0.59 † | 0.65 | 0.84 | 0.63 |
| Mom employed | 0.68 * | 0.69 * | 0.68 * | 0.67 * | 0.59 ** | 0.59 ** | 0.58 ** | 0.56 ** | 0.90 | 0.93 | 0.83 | 0.80 |
| Log household income | 0.89 ** | 0.89 ** | 0.89 ** | 0.88 ** | 0.90 * | 0.91 † | 0.91 † | 0.90 † | 0.87 * | 0.85 * | 0.84 * | 0.85 † |
| Household income is missing | 0.88 | 0.87 | 0.88 | 0.80 | 0.82 | 0.79 | 0.80 | 0.74 † | 0.96 | 0.98 | 0.90 | 0.81 |
| Number of adults in the household[1] | 0.82 * | 0.82 * | 0.82 * | 0.83 † | 0.91 | 0.91 | 0.90 | 0.94 | 0.56 ** | 0.55 ** | 0.54 ** | 0.53 ** |
| Number of children 6-17 | 1.16 ** | 1.16 ** | 1.16 ** | 1.16 ** | 1.20 ** | 1.21 ** | 1.20 ** | 1.21 ** | 1.04 | 1.06 | 1.08 | 1.09 |
| Number of children under age 6 | 1.22 † | 1.23 † | 1.24 † | 1.22 † | 1.20 | 1.22 | 1.22 | 1.19 | 1.16 | 1.27 | 1.26 | 1.23 |
| Number of household structure changes | 0.90 | 0.90 | 0.82 | 0.89 | 1.18 | 1.23 | 1.21 | 1.21 | 0.76 | 0.75 | 0.76 | 0.76 |
| Mom had early first birth | 1.85 *** | 1.88 *** | 1.85 *** | 1.87 *** | 1.92 *** | 1.91 *** | 1.90 *** | 1.92 *** | 1.94 * | 2.17 ** | 2.04 ** | 2.00 * |
| Maternal depression | 1.04 | 1.04 | 1.04 | 1.01 | 1.05 | 1.04 | 1.04 | 1.02 | 1.00 | 1.02 | 1.02 | 0.99 |
| Maternal work hours[1] | 1.01 ** | 1.01 ** | 1.01 ** | 1.01 ** | 1.02 *** | 1.02 *** | 1.02 *** | 1.02 *** | 1.00 | 1.00 | 1.00 | 1.00 |
| Dad is biological | 0.51 *** | 0.55 *** | 0.54 *** | 0.56 ** | | | | | | | | |
| Paternal parenting style (ref. = authoritative) | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Dad is permissive | | 0.84 | 0.77 | 0.78 | | 1.00 | 0.90 | 0.88 | | 0.44 † | 0.45 † | 0.44 † |
| Dad is uninvolved[1] | | 1.07 | 0.90 | 0.87 | | 1.60 * | 1.36 | 1.26 | | 0.43 * | 0.34 * | 0.33 * |
| Dad is authoritarian | | 1.46 * | 1.38 † | 1.34 | | 1.75 ** | 1.61 * | 1.45 † | | 0.97 | 1.05 | 1.06 |
| Maternal parenting style (ref. = authoritative) | | | 1.00 | 1.00 | | | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Mom is permissive | | | 1.17 | 1.15 | | | 1.21 | 1.22 | | | 0.94 | 0.94 |
| Mom is uninvolved | | | 1.20 * | 1.54 † | | | 1.50 | 1.45 | | | 1.79 | 1.79 |
| Mom is authoritarian | | | 0.97 | 0.91 | | | 1.12 | 1.06 | | | 0.50 | 0.51 |
| Youth problem behavior | | | | | | | | | | | | |
| Substance use | | | | 0.91 | | | | 0.95 | | | | 0.73 * |
| Delinquency | | | | 1.12 *** | | | | 1.16 *** | | | | 1.10 † |
| $X^2$ | 714.7 | 704.4 | 706.6 | 704.7 | 541.8 | 533.7 | 535.1 | 546.6 | 184.0 | 196.4 | 197.9 | 202.26 |
| df | 23 | 26 | 29 | 31 | 22 | 25 | 28 | 30 | 22 | 25 | 28 | 30 |
| % reported early first birth by round 10 | 0.02 | | | | 0.02 | | | | 0.04 | | | |

*Note:* Odds ratios derived from discrete time logistic regression coefficients (OR = exp(β)) using person-year data and robust standard errors. All models are weighted to account for complex sampling and survey attrition and correct for family-level clustering.

[1]Coefficient is significantly different across father type in Model 4.

†p<.10; *p<.05; **p<.01; ***p<.001