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Trajectories of Relationship Supportiveness after Childbirth: Does Marriage Matter?

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Abstract

Relationship quality for married couples typically declines after the birth of a (first) child, as parenthood brings new identities, stresses, and responsibilities for mothers and fathers. Yet, it is less clear whether nonmarital relationship quality follows a similar trajectory, particularly given the greater selectivity of nonmarital relationships that persist over time. This paper uses data from the Fragile Families and Child Wellbeing Study ($N=3,459$) with latent growth curve models to examine relationship quality (measured by mothers' perceived supportiveness about fathers) for married and unmarried couples over nine years after a child's birth. Findings suggest that marriage at birth is protective for relationship supportiveness over time, net of various individual characteristics associated with marriage, compared to all unmarried couples at birth; however, marriage does not differentiate supportiveness compared to the subset of unmarried couples who remain stably together. Also, unmarried couples who *get* married after the birth have more supportive relationships compared to all unmarried couples who do not marry—though less so when compared to couples who remain stably together.

Keywords

Relationship quality; supportiveness; marriage; transition to parenthood; Fragile Families and Child Wellbeing Study

1. Introduction

The transition to parenthood represents a major life event in which a couple must—both individually and together—negotiate extensive personal, familial, social, and often professional changes. Since the publication of LeMasters' article "Parenthood As Crisis" (LeMasters 1957), a vast literature has documented how having a baby changes the lives of

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married couples—typically, a decrease in positive interchange, an increase in conflict, and a decline in satisfaction (Belsky and Kelly 1994, Cowan and Cowan 1992, Glenn and McLanahan 1982, Gottman and Notarius 2000, Michaels and Goldberg 1988). This occurs because of the strains, stresses, and sources of conflict, as parents adjust to their new caregiving roles, responsibilities, and routines—and the gender differentiation therein—amidst depleted resources of time and energy (Cowan et al. 1985, Cowan and Cowan 1992). Some research has tempered the general findings about declining marital quality after childbirth, suggesting that such decline is not unique to the transition to parenthood but also a function of marital duration (McHale and Huston 1985, Umberson et al. 2005) and depends on various other individual and couple characteristics (Doss et al. 2009). In any case, it remains clear that childbirth represents a significant event in the lives of married couples and brings a decline in relationship quality for many.

Since the 1960s, a declining share of children has begun life with married parents, and fully 40% of all births now occur outside of marriage (Hamilton, Martin and Osterman 2016). At least in the U.S., unmarried parents are quite different from married parents – typically, unmarried parents are young, economically disadvantaged, and often have unstable relationships (McLanahan 2011). Although over four-fifths of unwed couples are in a romantic relationship at the time of a new baby’s birth, including half living together (McLanahan et al. 2003), only about one-third are living together five years later (McLanahan 2011). Yet, there has been limited attention to the trajectories in relationship quality for unmarried couples with children and whether/how such may differ from those of married couples (but see Howard and Brooks-Gunn 2009, for an exception). This topic is important because it sheds light on the nature of contemporary family roles and relationships outside of marriage—and also points to the ongoing place for marriage as a social institution that may (or may not) strengthen couple relationships and ultimately increase family stability and the wellbeing of children. Understanding whether and how marriage matters for couple relationships can also provide information salient to recent policy initiatives designed to strengthen relationships among unmarried parents which have, unfortunately, met with little success (Wood et al. 2012, Wood et al. 2014).

This paper uses data from the Fragile Families and Child Wellbeing Study to examine the level and change in couple relationship quality (measured by mothers’ reports of fathers’ supportiveness) over nine years subsequent to an urban birth in the late 1990s for couples who were in a romantic relationship at the time of birth. Using latent growth curve models, we explore how marriage matters for relationships among couples who were legally married, unmarried cohabiting, and dating (but living apart) at the time of birth in two ways: First, we examine whether nine-year trajectories in supportiveness differ by marital status at birth, and if so, whether any differences by marital status can be accounted for by individual or couple characteristics. As such, we extend Howard and Brooks-Gunn (2009) by following couples over a longer period of time, using a more detailed perceived supportiveness measure, and directly incorporating relationship stability in our multivariate estimates. Second, we analyze whether marriage *after* a nonmarital birth is associated with an increase in perceived supportiveness, compared to cohabiting couples (at birth) who do not marry; to our knowledge, this has not been done in prior work for unmarried parents after a birth. An innovation of our approach is to include all romantically-involved (at birth) couples in the

analyses (married, cohabiting, dating)—not just those who stayed together as in prior work. To the extent that marriage is associated with both relationship stability and relationship quality, limiting the analyses to only those couples who remain together could lead to biased estimates of the effect of marriage. By simultaneously accounting for relationship instability and relationship quality (supportiveness), we can more accurately estimate how marriage may shape trajectories of relationship quality.

2. Previous Research

2.1 Trajectories of relationship quality after childbirth

Life course theory highlights that lives are lived in a social context and that “linked lives” in the form of dyadic relationships affect individual well-being (and other relationships) over time; individuals experience trajectories, or long-term pathways in various domains, which can be altered by transitions, or discrete life changes or events (Elder 1994, Elder 1998). Among family ties, the marital relationship has historically been viewed as central to nuclear family dynamics (Cummings and O’Reilly 1997), is a key aspect of the adult life course (Umberson et al. 2005), and is linked to various domains of adult well-being (Proulx, Helms and Buehler 2007, Wickrama et al. 1997). As noted above, the trajectory of marital quality typically declines with the transition to parenthood (Belsky and Rovine 1990, Belsky and Hsieh 1998, Cowan and Cowan 1992, MacDermid, Huston and McHale 1990, Shapiro, Gottman and Carrère 2000), although not all couples become less satisfied with their marriages during this transition—there is significant variability (Belsky 1986, Belsky and Rovine 1990). In particular, the extent to which spouses can (re)negotiate their roles and protect their time together may help preserve marital quality (Dew and Wilcox 2011, MacDermid, Huston and McHale 1990).

We might expect even greater declines in relationship quality after childbirth for unmarried couples as compared to married couples. Marriage represents a significant legal and personal commitment between two persons and has historically been highly ‘institutionalized’ as the primary context for childrearing (Cherlin 2004, Cherlin 2005). The legal status, clearer norms and expectations about family roles and responsibilities (for both nuclear and extended families), as well as the “enforced intimacy” (Nock 1995) or “enforceable trust” (Cherlin 2004) within marriage, circumscribe the so-called ‘package deal’ in which partner and parent roles co-occur (Furstenberg and Cherlin 1991, Townsend 2002). Also, the nature of the marriage contract facilitates greater specialization (between market and household work) of husbands and wives, decreases uncertainty about the future, and encourages couple-specific investments, as compared to unmarried cohabitation where equality—but uncertainty—prevails (Brines and Joyner 1999, England and Farkas 1986). We might thus expect that the more ‘institutionalized’ nature of married relationships would help protect relationship quality from declining as much or as rapidly amidst the stresses of caring for a new child as compared to unmarried couples.

Most of the research about unmarried couples has focused on cohabiting couples, and we know little about couples who are romantically involved but living apart (which we refer to as ‘dating’ couples). Cross-sectional research comparing the quality of relationships for married and cohabiting couples in general (regardless of the presence of children) suggests

that cohabiting couples have lower-quality relationships than married couples: Cohabitors report lower levels of happiness and interpersonal commitment, and higher levels of conflict (Brown and Booth 1996, Nock 1995, Stanley, Whitton and Markman 2004, Wiik, Bernhardt and Noack 2009), although such differences are not observed between the sub-set of cohabitators with plans to marry versus married couples (Brown and Booth 1996, Brown 2004, Wiik, Bernhardt and Noack 2009). Some longitudinal research on change in relationship quality over time also suggests that levels of happiness and fairness are higher among married couples compared to cohabiting couples (generally—not just those with children) (Brown 2003, Skinner et al. 2002). Yet, married and cohabiting couples experience a similar pattern of relationship quality decline over time, and the presence of children is shown to diminish quality for both (Brown 2003).

There has been limited research comparing how the transition to parenthood affects couple relationship quality for unmarried versus married parents. While some research shows that becoming a parent has different effects on individual well-being for married versus unmarried parents (Nomaguchi and Milkie 2003)—and among unmarried parents, for cohabitators versus those who are single (Woo and Raley 2005), to our knowledge, only three studies have explicitly compared the level and change in relationship quality around the transition to parenthood for married versus cohabiting couples: Mortensen et al. (2012) found that among women in Norway, a similar decline in relationship quality was observed for married and cohabiting women over a two-year period during which they had a child, although married women reported higher initial relationship quality. Using the Fragile Families Study (as we do here), Howard and Brooks-Gunn (2009) found that while there was no difference in starting relationship quality for married versus cohabiting parents, cohabitators' relationship quality declined more quickly up to five years after a birth. Also, Kamp Dush et al. (2014) found that relationship quality declined more across the transition to parenthood for cohabiting fathers compared to married fathers, but no differences by marital status were observed for mothers.

2.2 Getting married and relationship quality after childbirth

Beyond the differences in how marital status at the time of a birth differentiates subsequent relationship quality trajectories, there is reason to believe that for unmarried couples, *getting* married after childbirth may be linked with improved couple relationship quality. This could reflect selection and/or causation. Certainly, cohabiting couples with the most positive relationships would be expected to select into marriage—although some evidence suggests that positive relationship quality deters separation but does not, in fact, predict marriage (Brown 2000). But marriage may also have a causal effect improving future relationship quality through precisely the elements of 'institutionalization' within marriage described above (Cherlin 2004, Cherlin 2005, Nock 1995). In other words, entering and living in the *state* of being married may improve relationship quality beyond whatever quality the same couple experienced as cohabitators.

Despite the significant interest in unmarried relationships (especially cohabitation), there has been only limited research using longitudinal data on how the transition to marriage affects couple relationship quality. Using data from the National Survey of Families and

Households (NSFH), Brown (2004) finds that cohabitators who get married report more happiness in their relationship, more effective conflict resolution, fewer disagreements, and lower levels of instability, compared to cohabitators who do not marry; at the same time, this research finds that cohabitators who plan to marry have relationships that do not differ from those who actually married, suggesting that marriage itself may not have a causal effect. Also using the NSFH, an unpublished paper by Musick and Bumpass (2006) found that cohabitators' getting married was associated with spending more time together, fewer heated fights, and less favorable attitudes toward separation, with no differences in global quality or frequency of disagreements; unfortunately, the published version of this paper (Musick and Bumpass 2012) dropped the relationship quality outcomes. Neither of these studies is focused on couples with children, despite the now large number of children being raised by cohabiting parents. Given the importance of parents' relationship quality for children's well-being (Heinrich et al. 2010), it is important to understand the extent to which getting married may enhance couples' relationship quality after a nonmarital birth. Our study builds on the prior literature about marriage and relationship quality by using a more detailed measure of relationship quality over a longer time period, by considering both prior and prospective marriage, and by jointly estimating relationship stability and quality in order to further identify the extent to which marriage differentiates couple relationship quality over time.

2.3 Connections between relationship stability and relationship quality

An important caveat in research on couples' relationship quality trajectories concerns the role of relationship stability. After couples break up, romantic relationship quality is no longer analytically relevant, an instance of a statistical problem known as 'truncation by death' (McConnell, Stuart and Devaney 2008, Zhang and Rubin 2003); in such situations, there is no true value on the dependent variable because individuals are no longer in the state in which such would be measured/relevant—but are not missing/censored. If the truncation is not random (i.e., the probability that the outcome data are observed is correlated with the outcome of interest), the resulting estimates are likely to be biased. In our case, if relationship quality is correlated with relationship stability, and we do not account for the underlying process of union dissolution, our estimates of marriage and relationship quality will be (downwardly) biased.

Prior research finds that relationship quality is indeed an important predictor of relationship stability; couples with high-quality relationships are more likely to stay together and less likely to break up (Amato and Hohmann-Marriott 2007, Gager and Sanchez 2003, Gibson-Davis, Edin and McLanahan 2005, Tach and Edin 2013). Furthermore, couples who stay together also differ from other couples on a variety of social and economic dimensions; they tend to be socioeconomically advantaged, religious, and have more traditional gender norms and higher levels of gender trust (Carlson, McLanahan and England 2004). Thus, by only incorporating information from the select sub-sample of couples that remain stable over time (i.e., those for whom there are contemporaneous reports of relationship quality), prior studies may have underestimated how couples' relationship quality trajectories change over time and generated biased estimates with respect to the predictors of relationship quality change. This is especially important when considering unmarried couples, since cohabiting or dating couples are much more likely to break up than married couples (Bumpass and Lu

2000, Osborne, Manning and Smock 2007). Thus, unmarried couples who stay together (whether they marry or not) represent a much more select group among all unmarried couples than do married couples who stay together among all married couples. To the extent that marriage has a causal effect that decreases the likelihood of breaking up in the first place (in addition to affecting relationship quality while together), comparing relationship quality between only married and unmarried couples that stay together over time may underestimate the true effect of marriage. Our study improves upon prior research by explicitly accounting for union dissolution in the analyses, providing a more accurate assessment of the association between marriage and relationship quality (supportiveness) trajectories.

3. The Present Study

Using data on urban births from the Fragile Families and Child Wellbeing Study, this paper examines the level and change in relationship supportiveness after a focal child's birth for 3,459 couples that were married, cohabiting or dating at the time of the birth. While we cannot address how supportiveness changes over the transition to parenthood per se (since we have no pre-birth measure of supportiveness), we are able to observe patterns of change from just after the birth over the next nine years to address the following two research questions: First, do trajectories of relationship supportiveness after childbirth differ by marital status at the time of birth? Second, for unmarried couples at birth, does *getting* married after the birth change (or reflect change in) relationship supportiveness? Drawing on the extant literature, we expect that marriage will be protective against the decline in supportiveness subsequent to a birth, and we expect that getting married will be linked to higher supportiveness compared to all unmarried couples—but will not differentiate those who marry from unmarried couples who stay together.

4. Method

Data come from the Fragile Families and Child Wellbeing Study, a longitudinal survey designed to track the conditions and capabilities of unmarried parents—and a comparison group of married parents—and their children over time (Reichman et al. 2001). The study follows a cohort of 4,897 children and their parents in 20 large U.S. cities from birth (1998–2000) until the child is about nine years old. The survey over-samples unmarried parents and includes 3,710 nonmarital births and 1,187 marital births. When weighted, the data are representative of births to parents in cities of populations 200,000 or more. (As Reichman et al. [2001] note, the data may not be as representative of marital births, since hospitals with the most *nonmarital* births within cities were chosen for sampling purposes.) Mothers were interviewed in person at the hospital within 48 hours of the birth, and fathers were interviewed in person either in the hospital or were located as soon as possible thereafter. Follow-up interviews occurred by phone when the child was about 1, 3, 5 and 9 years old.

In this paper, we use data from the baseline through 9-year surveys. We use information reported by mothers and fathers on their own characteristics and mothers' reports about the supportiveness of the father over time. Of those asked to participate in the baseline survey, 87% of unmarried mothers and 82% of married mothers participated; among cases with a

completed baseline mother interview, 88% of married fathers and 75% of unmarried fathers were interviewed. Response rates for eligible mothers (i.e., had a completed baseline interview) remained high at each follow-up wave: 91%, 88%, 87%, and 76% at the 1-, 3-, 5- and 9-year surveys, respectively (with similar proportions of married and unmarried [at birth] mothers interviewed). Our full sample includes 3,459 couples in a romantic relationship at the time of the baby's birth (971 married, 1,438 cohabiting, and 1,050 dating couples) and who were interviewed at least twice after the baseline interview over the 9-year period. We also focus on the sub-set of 1,450 couples who were together at every wave in which they were observed over the 9-year period (735 married, 557 cohabiting, and 158 dating at birth).

4.1 Measures

4.1.1 Couple relationship quality (supportiveness)—The quality of the parents' relationship is measured by mothers' reports about the level of supportiveness in the couple relationship (represented by her perception of the father's behavior) at each survey wave; a strength of the data is that the same set of items are asked four times over an eight-year period from child age 1 to child age 9. We use mothers' reports in order to include a larger fraction of all couples, since fewer fathers were interviewed. Mothers are asked about the frequency that the father displays the following six types of behavior in the relationship: 1) "is fair and willing to compromise when [they] have a disagreement," 2) "expresses affection or love toward [her]," 3) "insults or criticizes [her] or [her] ideas" (coding reversed), 4) "encourages or helps [her] to do things that are important to [her]," 5) "listens to [her] when [she] needs someone to talk to," and 6) "really understands [her] hurts and joys." Response options are 1 (*never*), 2 (*sometimes*), and 3 (*often*). Again, recall that all of the measures are *after* the baby's birth, so we cannot test how the transition to parenthood affects supportiveness per se; rather, we can consider how supportiveness proceeds from a baby's birth over the subsequent 9 years.

The baseline survey only included the first 4 items; we use all 6 items at each post-birth wave to provide more information (but results do not change substantively if we limit the later waves to the 4 baseline items). For all five waves, factor analysis (with varimax rotation) yielded a single factor across items, so the items were averaged to obtain an overall supportiveness score, with higher scores indicating greater supportiveness; alpha reliabilities for baseline, 1 year, 3 years, 5 years, and 9 years are $\alpha = .57, .83, .87, .87$, and $.81$, respectively. (Supplementary analysis suggests that the lower alpha at baseline is partly due to a smaller number of items and partly due to the fact that the items are simply less correlated just after the birth than in later waves.)

4.1.2 Marital status and relationship stability—Our main independent variable of interest is couples' marital status at the birth of the focal child. We rely on mothers' report of her legal marital status with the father, and we differentiate cohabiting and dating unmarried parents. For unmarried couples, we also include a set of time-varying measures that indicate whether the couple got married (or moved in together) between interview waves (mother-reported). In order to account for relationship stability, we also tracked whether the mother and father remained in a married, cohabiting or dating relationship at each survey wave

(mother-reported), and we included this dummy variable as an auxiliary variable in the analysis.

4.1.3 Parents' characteristics—In order to eliminate spurious correlation in evaluating how marriage is linked to supportiveness, we control for a number of individual and couple characteristics associated with both marriage and supportiveness. All control variables are reported at the baseline survey unless indicated otherwise. With respect to demographic characteristics, education (Goldstein and Kenney 2001, Lichter et al. 1992), better physical health (Lillard and Panis 1996) and older age are associated with a greater likelihood of marriage (Lichter and Graefe 2001), while being African American (Lichter, LeClare and McLaughlin 1991) and having grown up without both biological parents present (South 2001) are associated with a reduced probability of marriage. We measure mothers' race/ethnicity with four categories: white non-Hispanic, black non-Hispanic (reference), Hispanic, and other non-Hispanic. A dummy variable indicates whether the father's race/ethnicity differs from the mother's. Educational attainment for both mothers and fathers is self-reported in four categories: less than high school (reference), high school degree, some college, and bachelor's degree or more (the latter two are combined in the regression models given the small number of unmarried parents with college education); we use mothers' report of fathers' education if the father is not interviewed. Each parent reports their age in years at the time of the baby's birth and whether they lived with both parents at age 15.

Mothers' report whether she thought about—or the father suggested—getting an abortion (to roughly proxy whether the birth was unplanned). Relationship duration is measured by how long the mother knew the father prior to the pregnancy (in years). Mothers also reported whether they were residing with their mother (the child's maternal grandmother) at the time of the birth. Regular employment for father and mother (separately) is defined as whether respondents were working at least 35 hours a week at the time of the survey for father and shortly before the birth of the focal child for mothers. Mothers' annual household income reflects the total income from all household members and is self-reported (adjusted to 2000 dollars). Cohabiting couples with plans to marry are more similar to married couples than those without such plans (Brown 2004); we measure plans to marry using a dummy variable for whether respondents indicate that they have “plans to marry” (or “plans to marry or move in together” for those living apart).

With respect to health and social-psychological characteristics, married parents are less likely to have substance problems, be in poor health, have been physically violent, or have been incarcerated than unmarried parents (DeKlyen et al. 2006, McLanahan 2009). Physical health is self-reported by mothers and fathers, ranging from 1 (*poor*) to 5 (*excellent*). We use mothers' reports about whether they or the father had a problem with substances that interfered with their work or personal relationships. Among parents with young children, being/getting married is associated with more favorable attitudes toward marriage and lower levels of distrust (by mothers but not fathers) of the opposite gender (McLanahan 2004), as well as greater religiosity (Lichter and Carmalt 2009, Wilcox and Wolfinger 2007). Traditional attitudes toward gender roles are measured by the average of two questions with four response choices ranging from 1 (*strongly disagree*) to 4 (*strongly agree*): 1) “The important decisions in the family should be made by the man of the house,” and 2) “It is

much better for everyone if the man earns the main living and the woman takes care of the home and family” ($r=.41$). Parents’ distrust of the opposite gender is represented by their responses to two statements: 1) “Men (women) cannot be trusted to be faithful,” and 2) “In a dating relationship, a man (woman) is largely out to take advantage of a woman (man).” Response choices range from 1 (*strongly disagree*) to 4 (*strongly agree*), and the two items are averaged into a single measure ($r=.47$). The frequency of religious attendance reflects how often mothers and fathers attend religious services, from 1 (*not at all*) to 5 (*once a week or more*). Mothers report at baseline whether the father was physically violent toward her (*sometimes* or *often* hits or slaps), and fathers report the same about mothers. Mothers reported at the 1-year survey whether the father had ever been in jail or prison.

Also, married mothers and fathers are less likely to have had children by more than one partner (Carlson and Furstenberg 2006). While the initial transition to parenthood likely yields the greatest change in the couple relationship, higher-order births also create new demands and affect the couple relationship (O’Brien and Peyton 2002); couples with a greater number of children are shown to experience a steeper decline in marital quality over time (Kurdek 1999). Couple fertility history reflects both the mother’s and the father’s previous childbearing, combined from several questions reported by mothers at the 1-year survey about whether they’ve had children together and/or with other partners. The information is combined into categories: couple first birth, couple had two or more previous children together and no children by other partners (reference), father only had one or more children by a previous partner, mother only had a child by a previous partner, and both parents had a child by a previous partner.

4.2 Missing data

As with all surveys, attrition and missing data are of concern. Of the 4,244 couples in the baseline survey (1,187 married, 1,783 cohabiting, and 1,274 dating), 683 mothers were not interviewed at least twice after the baseline interview. The majority of these cases were lost to attrition (rather than mothers who missed earlier waves being added back in). Couples lost to attrition are disproportionately Hispanic (but not white or black) and have lower maternal and paternal education, but otherwise do not significantly differ on the characteristics examined here (including initial supportiveness). For the full sample of 3,459 couples, the father-reported variables have between 12% and 14% missing. In the latent growth model estimation, full information maximum likelihood (FIML) is used to estimate missing values on all covariates; FIML estimates models that include all cases using available data and is shown to yield less biased and more efficient estimates than other common missing data treatments (Wothke 1998).

4.3 Analytic Strategy

To examine the relationship between marriage and mothers’ perceptions of relationship supportiveness over time, we use latent growth curve modeling. Growth curve models are particularly instructive for examining processes of change in couple relationships (Karney and Bradbury 1995), capturing both change within mothers’ reported relationship supportiveness and differences between mothers. For notational simplicity, we use the language of multilevel models to describe the analytic strategy. Latent growth curve models

and multilevel models are mathematically analogous when similar assumptions are used (Singer and Willett 2003). Latent growth curve models, however, reduce the two-level model into a one-level model and provide greater flexibility in estimation.

The model assumes that mothers' initial reports of relationship supportiveness and subsequent change in relationship supportiveness vary based on relationship status at the birth of the focal child. Within-mother differences, specified in a Level-1 model (analogous to a Y-measurement model), reflect the pattern of mothers' perceived relationship supportiveness trajectories. The level-1 equation is specified as:

$$Y_{ij} = \alpha_{0i} + \beta_{1i} TIME_{ij} + \varepsilon_{ij}, \quad (1)$$

where the intercept value (α) represents the level of relationship supportiveness at the initial (time-of-birth) interview for each mother i , and the slope (β) represents the mother's linear rate of change in relationship supportiveness over time j .

The Level-2 model (analogous to the structural model and X-measurement model) estimates between-mother differences in relationship supportiveness over time by allowing the random intercepts (α_i , initial relationship supportiveness) and slopes (β_i , change in relationship supportiveness over time) to vary as a function of time-invariant variables (X 's) that differ across mothers, such as relationship status at birth, race and ethnicity, and educational attainment at baseline. Thus, level-2 equations are as follows:

$$\alpha_{0i} = \alpha_{00} + \alpha_{01} RELSTAT_i + \alpha_{02} RACE_i + \alpha_{03} MEDUC_i + \dots + \alpha_{0k} X_i + \mu_{0i} \quad (2)$$

$$\beta_{1i} = \beta_{10} + \beta_{11} RELSTAT_i + \beta_{12} RACE_i + \beta_{13} MEDUC_i + \dots + \beta_{1k} X_i + v_{1i} \quad (3)$$

All latent growth models are estimated using Mplus software, version 7.1 (Muthén and Muthén 2012). Model fit is evaluated by the Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA); good fit is indicated by a CFI greater than .95 and an RMSEA less than .06 (Hu and Bentler 1999), although a CFI of .90 is also considered acceptable (Raykov and Marcoulides 2000).

We focus on marital status in two ways. First, we estimate a series of nested latent growth models to compare trajectories of relationship supportiveness between married, cohabiting, and dating (at birth) couples (Table 3), adding variables across models; this analysis sheds light on the selectivity of marriage and the extent to which marriage may differentiate relationship supportiveness over and above the characteristics of those who enter it. We start with a baseline model to evaluate overall differences in relationship supportiveness trajectories among married, cohabiting and dating mothers. The composite baseline model is expressed as:

$$Y_{ij} = \alpha_{00} + \alpha_{01} RELSTAT_i + \beta_{10} TIME_{ij} + \beta_{11} RELSTAT_i * TIME_{ij} + \varepsilon_{ij} + \mu_{0i} + \nu_{1i} \quad (4)$$

Control variables are then added in stages. In Model 2, we add characteristics assumed to be exogenous to marital status at birth—demographic, economic, and relationship history characteristics. Model 3 adds couple health, social-behavioral characteristics and fertility history that could potentially be endogenous to marriage.

Second, we compare relationship trajectories among couples who *get* married post birth to those who do not (Table 4). Here, we start with the full set of baseline covariates and then include time-varying measures of whether the couple got married between each of the survey waves. To incorporate these time-varying measures into the model, we modify Equation 1:

$$Y_{ij} = \alpha_0 + \beta_{1i} TIME_{ij} + \gamma_{2i} MARRY_{ij} + \varepsilon_{ij} \quad (5)$$

Including $\gamma_{2i} MARRY_{ij}$ which represents how getting married impacts relationship supportiveness at each time j for each individual i . In other words, this model examines deviations from the relationship supportiveness trajectory as a result of getting married. This analysis points to the potential benefits of marriage for unwed parents.

As noted earlier, in order to address selection into stable relationships and to provide upper and lower bounds on the true effect of marriage on relationship supportiveness, we conduct all analyses twice. First, we estimate our latent growth curve models using all romantic couples at birth while accounting for relationship (in)stability over time. We do this by including a set of auxiliary variables that capture couples' relationship instability (i.e., that measure the probability of relationship quality being missing due to relationship dissolution). This modeling technique allows us to account for interrelationships among marriage, relationship stability, and relationship quality (Enders 2010, Muthén and Muthén 1998–2012); the results are analogous to modeling the change in relationship supportiveness conditional on the probability of still being in a union. These results provide a more representative estimate (than models using only stable couples) of how marriage influences relationship supportiveness to the extent that couples with low supportiveness break up and are thus excluded from analyses using couples in stable relationships. Second, we re-estimate our latent growth curve models using only the sub-set of couples who remain in a romantic relationship over the 9 years subsequent to the focal child's birth. These estimates should be comparable to prior research on relationship supportiveness among stable couples, although to the extent that marital status influences relationship stability, these estimates will be (downwardly) biased due to truncation resulting from union dissolution; they thus represent a lower bound of how marriage is linked to relationship supportiveness. Differences between results for the full sample versus using only stable couples would suggest that marriage protects against relationship instability as well as declines in relationship supportiveness. Note that we explored other modeling techniques that would allow us to jointly estimate relationship survival and relationship quality over time, but these

became computationally complex and unstable when using categorical variables and/or FIML as our models require (Enders 2011)¹. Also, we estimated models assuming a non-linear supportiveness trajectory but found that any non-linearity was due to the accumulation of married couples with high relationship supportiveness in the sample over time. After accounting for the association between relationship instability and relationship status at birth, a linear model fit the data well.

5. Results

5.1 Sample Description

Table 1 shows detailed descriptive information about the full sample of married and unmarried parents, by relationship status at birth (weighted by national sampling weights). Compared to married mothers, both categories of unmarried parents are less advantaged in terms of their demographic, health and social-behavioral characteristics. Specifically, cohabiting and dating mothers and fathers are, on average, younger at the birth of their child, and are much less likely to have lived with both parents at age 15. Cohabiting and dating couples were more likely to have considered resolving the pregnancy via abortion, and they knew each other for fewer years before the pregnancy, as compared to married couples. Also, cohabiting and especially dating couples were much more likely to be living with the child's grandmother — nearly half of all dating couples. Dating fathers were less likely to be employed than either cohabiting or married fathers, but there were no significant differences in employment for mothers. Household income for cohabiting and dating couples was less than half of that for married couples. The proportion of couples with plans to marry did not vary between cohabitators and dating couples.

With respect to health and social-psychological characteristics, cohabiting and dating mothers (but not fathers) have lower self-rated health than married mothers, while cohabiting and dating fathers (but not mothers) are more likely to have a substance problem. Cohabiting and dating mothers and fathers report higher gender distrust—and lower religious attendance—compared to married parents. While there are no significant differences reported by mothers in fathers' physical violence, cohabiting and dating fathers report that mothers are more violent toward them than married mothers. Having a history of incarceration is much more common for cohabiting and especially dating fathers compared to married fathers. With respect to fertility history, there is no significant difference by relationship status in the prevalence of first birth, while unmarried parents were more likely to have had a child by a previous partner. Cohabiting couples were significantly more likely than dating couples to get married after the birth in every period, except 3-to-5 years.

Means on relationship supportiveness across survey waves from birth through 9 years are shown in Table 2. Overall, average supportiveness is quite high right after a baby's birth (2.72 on the 1-to-3 scale), declining somewhat (to 2.66) by year 9 (among couples that report at the respective waves). Comparing married and cohabiting couples (at birth), we see

¹In sensitivity analyses, we used models with fewer categorical variables and less item-missing data to compare our results when using auxiliary variables to those with joint survival and growth curve models. Our results for the total co-residential sample and the total unmarried samples were very similar regardless of analytic strategy.

that supportiveness does not significantly differ by marital status at any wave. Overall, 61% couples who were in some sort of romantic relationship at the time of the birth were still together at 9 years—73% of married couples, 49% of cohabiting couples, and only 20% of dating couples. When average relationship quality scores are examined only among couples who remain stably together (bottom panel), the differences by time-of-birth relationship status are even smaller and are never statistically significant. As shown in the bottom rows of Table 2, over the post-birth period, an increasing fraction of the unmarried couples who stay together get married—from 23% at year 1, to fully 63% at year 9. In other words, of the subset of unmarried couples that stay together over the long term (about half of cohabitators at birth and one-fifth of those dating at birth), the majority will eventually marry.

5.2 Marital Status at Birth and Relationship Supportiveness Trajectory

Turning to results for how marriage is related to mothers' perceived supportiveness by fathers over time, we first estimate latent growth curve models for the full sample of couples from the child's birth, using models that estimate supportiveness while accounting for relationship stability. The first model in Table 3 displays the initial supportiveness level (intercept) and the rate of change (slope) in supportiveness over time, comparing cohabiting and dating couples at birth to married couples at birth; we use married couples as the reference group to allow direct comparisons to cohabiting and dating couples. Compared to couples married at the time of the focal child's birth, dating couples have a significantly lower level of initial supportiveness ($-.098$, or about 39% of a standard deviation), but there is no significant difference between married and cohabiting couples.

The slope coefficient—which represents the average yearly change in supportiveness—is negative and statistically significant, suggesting that supportiveness for married couples significantly declines following a child's birth ($-.019$). The average decline in supportiveness for cohabiting couples is an additional $-.018$ and for dating couples an additional $-.013$. In other words, without adjusting for any confounding characteristics, cohabiting and dating couples (at birth) experience a significantly greater rate of decline in supportiveness, although the magnitudes of the differences are small.

When background characteristics are controlled in Model 2, the difference for dating couples becomes smaller ($-.036$) and is no longer statistically significant. This is primarily due to the fact that married mothers are more likely to be white and to have some college education, and these characteristics are associated with a higher initial level of supportiveness. The slope parameter for cohabitators is reduced by about one third (from $-.018$ to $-.013$) but remains statistically significant, while the slope for dating couples is no longer statistically significant. When health and social-behavioral covariates are included (Model 3), cohabiting couples now have significantly *higher* supportiveness at birth, suggesting that the initial advantage among married couples was partly due to their better health and social-psychological characteristics; the intercept for dating couples declines in magnitude and is no longer statistically significant. The slope estimate remains statistically significant but small ($-.012$) for cohabitators, suggesting that even net of a host of characteristics with which marriage is correlated, supportiveness declines more slowly over time among married couples than among cohabitators. For dating couples, net of covariates,

the pattern of decline in supportiveness does not notably differ from married couples, but keep in mind that only 20% of dating (at birth) couples remain together at 9 years — a highly selective group. Figure 1 depicts the estimated supportiveness trajectories for couples who are married, cohabiting and dating at the time of the focal child's birth over the subsequent 9 years.

The results in the lower panel of Table 3 repeat the results above but focus on the subset of couples that remain stably together over the 9-year period. The fit of Model 1 is poor, particularly with respect to the RMSEA, which is not surprising, since there is only one predictor variable (relationship status) in the model, and the sample is less than half of the full sample. Not surprisingly, the initial supportiveness level (intercept of 2.738) is higher than that for all couples in the panel above, and the rate of decline (slope of $-.012$) is lower, underscoring our basic expectation that relationships that last over the long-term are more supportive. In Model 1 (with only relationship status), we find a lower and statistically significant initial value for dating couples ($-.058$), but no significant difference between married and cohabiting couples. A statistically-significant slope for cohabiting couples suggests that supportiveness declines more quickly among cohabiting couples, though the difference is slight ($-.005$); the slope for dating couples is not statistically significant. Thus, without adjusting for any confounding characteristics, cohabiting couples at the birth who stay together have increasingly lower quality relationships than married couples at birth who stay together, but the magnitude of the difference is very small. Adding background characteristics (Model 2) diminishes both the intercept differences and the slope differences, none of which is statistically significant. Adding health and social-behavioral characteristics in Model 3 does little to change the estimates. Overall, net of a host of covariates, marital status does not differentiate initial supportiveness level nor the change over time in supportiveness as compared to the sub-set of cohabitators and dating couples at birth who remain together over the next 9 years.

5.3 Change in Supportiveness following Marriage

The next set of results (Table 4) is intended to answer the question of whether *getting* married subsequent to the birth is associated with positive change in relationship supportiveness. Because fewer than 100 dating couples at birth go on to marry (9% of 1,050) over the 9 years, the estimates for dating couples are highly unstable (the latent growth model for these couples would not converge), and including these couples obfuscates the results for the couples for whom this question is most relevant. Therefore, for this analysis, we focus on only cohabiting at birth couples and show results for such in Table 4, but we briefly discuss results if we also include dating couples at birth.

We start with model 3 from Table 3 (which includes all covariates) limited to cohabiting parents at birth, which becomes Model 1 for Table 4, and we include time-varying measures of getting married between waves. We present a second Model 2, which adds the variable for having 'plans to marry,' given that this variable has been shown to strongly differentiate couple relationship quality in past research. As with the prior analyses, we first present results for the broader group of couples who are in a relationship at birth and may (or may

not) break up over time, followed by results for those who stay together over the entire 9-year period.

Considering all cohabiting at birth couples (top panel, Model 1), the initial level of supportiveness is 2.656, with an average rate of decline of $-.022$. There is evidence that those who got married have significantly better quality relationships at most time points than couples who did not. In particular, with the exception of getting married between birth and the 1-year survey (for whom supportiveness isn't significantly higher until year 9), supportiveness is higher in the survey wave just after marriage and in all subsequent waves, as compared to couples who did not marry (the exception being 9-year supportiveness for those who married between 3 and 5 years). The overall supportiveness trajectory for all couples continues to be downward (slope of $-.022$); however, couples who marry receive a 'boost' in their supportiveness that is larger than this average decline. This leads to an increasing gap between those who marry and those who do not over time (as evidenced by the general pattern of larger marriage coefficients across waves). This could indicate that the benefits of marriage persist over time—or that as an increasing share of couples break up, the supportiveness of the reference group becomes increasingly worse. (Note that in analyses that include all cohabiting and dating couples at birth, the intercept is 2.67, and the slope is $-.018$ [both statistically significant], while the coefficients on getting married are similar in size but less consistently significant.)

Model 2 repeats this analysis but includes the variable for having plans to marry. Here, we find that the initial supportiveness level is lower than when this variable is not included, and the overall slope coefficient ($-.005$) is not statistically significant. In other words, having plans to marry (and the characteristics with which it is correlated) partially explains why supportiveness is high for couples who stay together, and a significant decline in supportiveness is no longer observed once we account for marriage plans. The coefficients on getting married remain very similar to Model 1 above, suggesting that even net of having plans to marry in advance, entering marriage itself appears to increase the level of supportiveness in the relationship.

As shown in the bottom panel of Table 4, when the sample is limited to only couples that were cohabiting at birth and stayed together over the next 9 years, there are fewer observed differences in supportiveness between couples that get married versus those that continued cohabiting (whether plans to marry are included or not). Getting married between the 1- and 3-year surveys, and the 5- and 9-year surveys, is linked to a more supportive relationship at 3 years, and 9 years, respectively, indicating some initial upswing in supportiveness after marriage for these groups. The differences between the results in the top and bottom panels of Table 4 suggest that part of why marriage is protective for supportiveness is because it reduces the likelihood of breaking up. It is important to note that we cannot evaluate whether marriage increases supportiveness in a causal way or whether those with better relationships got married (i.e., selection).

6. Discussion

This paper uses data from the Fragile Families and Child Wellbeing Study to provide new information about how marriage matters for trajectories of couple relationship supportiveness subsequent to the birth of a child in large U.S. cities in the late 1990s. Life course theory suggests that the transition into marriage—and living in the state of being married—are important aspects of social life that likely have implications for other family relationships and individual well-being. Our analysis explores whether there are differences in relationship quality (as measured by mothers' perceived supportiveness) over time by initial marital status at the child's birth, as well as whether cohabiting couples' getting married before their child's ninth birthday is associated with improved relationship quality. Given the large and growing number of nonmarital births—and policy concerns about the parenting, relationships and instability in such families, this research provides useful evidence about the role of legal marriage for couple relationship quality, an important aspect of family cohesion that is linked with both parenting (Erel and Burman 1995) and children's wellbeing (Heinrich et al., 2010).

An important consideration that has received limited attention in prior research is that marriage may matter for relationship stability as well as—or perhaps via the mechanism of—relationship quality, so failing to incorporate stability into the estimates of quality and focusing only on couples that stay together may underestimate the role of marriage for relationship quality. As expected, we find greater evidence for marriage as a differentiating factor in supportiveness when we include all couples who start out in a romantic relationship and account for subsequent relationship stability, versus limiting our analyses to the subset of couples who stay together but differ in their marital status.

With respect to our first research question—whether trajectories of supportiveness differ by marital status at the time of a new child's birth, the answer appears to be yes among all couples at birth who start in a romantic relationship. Although the initial higher level of relationship quality for married couples appears to be entirely driven by the individual and dyadic characteristics of those who get married, couples married at the time of their baby's birth do experience a significantly slower decline in supportiveness over time than cohabiting couples (but not than dating couples), net of a host of demographic, economic, and social-behavioral characteristics. In other words, consistent with earlier work that looked at a shorter timeframe (Howard and Brooks-Gunn 2009), marriage appears to be protective for relationship supportiveness in the first nine years after a baby's birth, even holding constant many observed individual and couple factors with which it is correlated. These results could suggest either that being married has a causal effect on sustaining supportiveness, or that the association is due to some other unmeasured characteristic(s) that differentiate couples who have children within versus outside of marriage (such as emotional maturity, efficacy, attitudes and values about family life, etc.). Although this investigation utilizes longitudinal data following the same couples over multiple waves, one cannot be certain which is true, and as with family structure effects more broadly (Cherlin 1999), both causation and selection are likely operative.

Analyses of the sub-group of couples that stay together over the nine years after the birth suggest that (after controlling for demographic characteristics) there is no significant difference in supportiveness—either starting level or change over time—between stably married couples and stable cohabiting or stably dating couples over nine years. This finding echoes prior work showing that cohabitators with the most serious commitment, reflected by plans to marry, have similar-quality relationships to married couples (Brown 2004). In other words, marriage matters because couples are more likely to stay together once married (whether a causal effect of the institution or a selection effect via the individuals who enter it)—not because it produces more supportive relationships among couples who are already in a stable, co-resident relationship.

With respect to the second question—whether *getting* married post-birth is associated with changes in couple relationship quality (a question that to our knowledge has not been addressed in prior work), the answer again depends on the group being analyzed. Among all cohabiting couples at birth, there is suggestive evidence that couples who go on to get married have more supportive relationships than those who continue to cohabit (even accounting for having plans to marry at the outset). At the same time, fewer differences by marriage are observed as compared to the subset of stably cohabiting couples (that do not marry). As above, this is somewhat consistent with related research using the NSFH, suggesting that while married couples have better quality relationships than cohabitators overall, there are no differences observed between married couples and the sub-set of cohabitators that plan to marry in the future (Brown and Booth 1996, Brown 2004, Wiik, Bernhardt and Noack 2009); however, our research suggests some differences even net of having plans to marry.

While this analysis has focused on couples who start out in a romantic relationship at the time of the baby's birth, it is important to recall that of all nonmarital births, couples who stay together over the subsequent nine years (whether they later marry or not) represent a very select group of couples. Overall, about half of couples that started out cohabiting at birth were co-residing at 9 years (of these about two-thirds were married and one-third still cohabiting), and the dating couples are even more selective, with only one-fifth staying together over all 9 years. Therefore, the couples analyzed in this paper clearly represent the 'best' relationships among all cohabitators—and only about half of all unmarried couples generally are living together at the time of an unwed birth (McLanahan 2011). As such, the couples that start out cohabiting (and especially those that cohabit long-term) could be the most likely to get and stay married. Hence, if getting married does not improve *their* relationships, there could be little promise of marriage for the other unwed couples. On the other hand, the opposite could be true: Since these couples are effectively living in 'marriage-like' relationships already, marriage may do the least to change their circumstances. It could be that non-resident couples—whose relationships are less strong and secure—are exactly the couples for whom a marital commitment might make more of an early difference in strengthening their union, although our estimates of getting married could not be estimated separately for this group given the small numbers. The stronger results when all co-resident couples are included are not inconsistent with this interpretation, although clearly a host of other (observed and unobserved) factors beyond marriage predict both relationship dissolution and supportiveness. Importantly, our analyses are unable to

disentangle the causal directionality between marriage, relationship supportiveness, and relationship stability. We found that couples who are (get) married have more supportive relationships over the course of 9 years and that this is due, in part, to union stability, but we are unable to identify whether marriage itself contributes to maintaining supportive and stable relationships, or if those in the best and most stable relationships get (and remain) married. Future work should try to disentangle the independent contributions of marriage and supportiveness on relationship stability and provide information on the process through which marriage facilitates relationship quality and stability.

Taken together, the findings about being married and getting married suggest that marriage is positively related to couple supportiveness: Marriage at the time of birth seems to be (modestly) protective against decline in supportiveness, and getting married after the birth is associated with more supportiveness. The fact that the difference in supportiveness between couples who get married and do not get married grows over time may suggest that the benefits of marriage take time to accrue — it takes time to develop the shared history and ‘marriage-specific capital’ (including children) that positively affect the couple relationship trajectory (England and Farkas 1986). In other words, the ‘institutionalization’ of marriage —recognized as a key element of the married state (Cherlin 2004)—may not occur immediately with entry into the legal status.

There are several limitations to this research (some of which we have discussed above and hence describe only briefly here). First, as noted above, although we include a large number of confounding variables in the analyses, there likely remains unobserved heterogeneity between couples who are married (or get married) versus those who are (do) not. As such, we cannot evaluate whether the differences in couple supportiveness by marriage are due to marriage itself or to some other attribute with which it is correlated. Second, our measure of relationship quality is limited in that it focuses on supportiveness (and does not reflect conflict or other aspects of relationship quality) and is reported only by mothers (fathers may have a different view); also, the measure reflects only emotional support, whereas marriage may affect other types of support in relationships, such as instrumental support. Third, as with all longitudinal surveys, attrition is likely not random, and results may be biased by certain types of people/couples being more likely to remain in the survey over time. We suspect that couples with better relationships and who are more advantaged are more likely to persist in the survey; hence, we may be underestimating differences in supportiveness by marital status that would be otherwise be observed if all couples continued to be interviewed. Fourth, because of its focus on unmarried parents (who are typically of low socioeconomic status), the Fragile Families sample is socioeconomically disadvantaged; thus, our analysis is not relevant to more advantaged parents. Fifth, as noted earlier, the Fragile Families Study may not be representative of married couples in urban areas, since it was designed to be representative of unmarried parents who give birth in urban areas; married parents who give birth in areas with substantial unmarried parents may be less advantaged than married parents overall.

With respect to policy implications vis-à-vis unwed parents, whether the benefits of marriage accrue over time is a crucial question. If so—and if programs could, in fact, encourage marriage—such programs might contribute to children’s wellbeing by enhancing

the longevity of the relationships, given the importance of family stability for children (Fomby and Cherlin 2007, Osborne and McLanahan 2007). Unfortunately, recent experimental evaluations of the relationship skills programs within the Building Strong Families federal initiative are not encouraging, as such programs were shown to have no overall effects on marriage, union quality, and union stability among unwed couples (Wood et al. 2012, Wood et al. 2014). It could be that programs would have greater benefit if focused on the sub-set of unmarried couples for whom the key reported barriers to marriage—relationship standards and financial stability (Edin and Kefalas 2005, Gibson-Davis, Edin and McLanahan 2005)—can most readily be overcome.

Overall, across our analyses, we find that marriage, relationship stability, and supportiveness in the couple relationship are strongly connected. Couples that are able to maintain supportive relationships stay together, and frequently get (stay) married. Future research can evaluate differences by marriage over a longer period of time, can consider multiple dimensions of relationship quality (using other data sources), and can examine the extent to which marriage may moderate the link between relationship quality and various aspects of adult and child well-being.

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Highlights

- We analyze couple supportiveness over nine years after a baby's birth.
- We compare married and unmarried (cohabiting and dating) couples and examine unmarried couples who *get* married.
- We find that marriage at birth is protective of couple supportiveness.
- Yet, marriage does not distinguish supportiveness compared to stably-together couples.

Figure 1.
Mean Trajectories of Supportiveness, by Relationship Status at Birth

Table 1

Weighted Sample Descriptives for Married, Cohabiting and Dating Couples at Time of Birth, by Relationship Status ($N=3,459$)

	Married		Cohabiting		Dating	
	% or <i>M</i>	(<i>SD</i>)	% or <i>M</i>	(<i>SD</i>)	% or <i>M</i>	(<i>SD</i>)
<i>Background characteristics</i>						
Mother's race/ethnicity (ref=black non-Hispanic)						
White non-Hispanic	50.8		26.9 ^{<i>m</i>}		16.7 ^{<i>m, c</i>}	
Black non-Hispanic	11.3		28.5 ^{<i>m</i>}		53.6 ^{<i>m, c</i>}	
Hispanic	26.5		40.0 ^{<i>m</i>}		27.9 ^{<i>m, c</i>}	
Other non-Hispanic	11.4		4.6 ^{<i>m</i>}		1.7 ^{<i>m</i>}	
Father's race differs	13.5		12.5		15.3	
Age at child's birth (years)						
Mother	29.20	(3.40)	24.67 <i>m</i>	(7.71)	22.35 <i>m, c</i>	(7.84)
Father	31.65	(3.78)	27.58 <i>m</i>	(9.64)	25.22 <i>m, c</i>	(11.11)
Mother's education						
Less than high school	14.8		39.3 <i>m</i>		44.8 <i>m</i>	
High school degree	25.9		41.6 <i>m</i>		38.1 <i>m</i>	
Some college or higher	59.3		19.1 <i>m</i>		17.1 <i>m</i>	
Father's education						
Less than high school	11.9		36.5 <i>m</i>		43.4 <i>m</i>	
High school degree	24.1		38.5 <i>m</i>		36.6 <i>m</i>	
Some college or higher	64.0		25.0 <i>m</i>		20.0 <i>m</i>	
Lived with both parents at age 15						
Mother	62.0		45.3 <i>m</i>		31.5 <i>m, c</i>	
Father	68.7		45.2 <i>m</i>		35.8 <i>m</i>	
Mother thought/Father suggested abortion	9.5		26.3 <i>m</i>		38.2 <i>m, c</i>	
Length of relationship prior to pregnancy (years)	7.09	(1.90)	3.92 <i>m</i>	(4.28)	3.66 <i>m</i>	(4.03)
Co-reside with maternal grandmother	3.8		13.2 <i>m</i>		49.3 <i>m, c</i>	

	Married		Cohabiting		Dating	
	% or <i>M</i>	(<i>SD</i>)	% or <i>M</i>	(<i>SD</i>)	% or <i>M</i>	(<i>SD</i>)
Father is employed regularly	95.6		92.1		84.2 <i>c</i>	
Mother is employed regularly	59.6		52.8		53.1	
Mothers' household income (2000 \$)	56,230	(24,275)	27,204 <i>m</i>	(31,007)	19,429 <i>m, c</i>	(29,020)
Plans to marry	NA		81.2		75.6	
<i>Health and social-psychological characteristics</i>						
Self-rated health (range=1–5)						
Mother	4.08	(.54)	3.74 <i>m</i>	(1.28)	3.88 <i>m</i>	(1.31)
Father	4.08	(.54)	3.93	(1.28)	3.90	(1.48)
Substance problem						
Mother	1.0		2.2		2.2	
Father	0.2		3.9 <i>m</i>		4.6 <i>m</i>	
<i>Health and social-psychological characteristics (cont.)</i>						
Traditional gender role attitudes (range=1–4)						
Mother	2.16	(.44)	2.07	(.81)	2.01 <i>m</i>	(.81)
Father	2.39	(.39)	2.33	(.89)	2.38	(.92)
Distrust of other gender (range=1–4)						
Mother	1.83	(.41)	2.02 <i>m</i>	(.90)	2.17 <i>m</i>	(.99)
Father	1.69	(.34)	1.93 <i>m</i>	(.85)	2.02 <i>m</i>	(.91)
Religious attendance (range=1–5)						
Mother	3.43	(.81)	2.81 <i>m</i>	(1.75)	3.11 <i>m, c</i>	(1.90)
Father	3.28	(.81)	2.50 <i>m</i>	(1.84)	2.74 <i>m</i>	(1.88)
Father is physically violent						
	1.0		2.4		1.4	
Mother is physically violent						
	4.6		11.6 <i>m</i>		19.7 <i>m</i>	
Father ever incarcerated						
	7.0		28.8 <i>m</i>		37.4 <i>m</i>	
<i>Couple fertility history</i>						
Couple first birth						
	32.9		29.2		36.8	
Couple 2+ births together (no other births)						
	44.9		14.8 <i>m</i>		7.9 <i>m, c</i>	
Father only child by other partner						
	10.5		16.8		18.0 <i>m</i>	

	Married		Cohabiting		Dating	
	% or <i>M</i>	(<i>SD</i>)	% or <i>M</i>	(<i>SD</i>)	% or <i>M</i>	(<i>SD</i>)
Mother only child by other partner	7.2		20.0 <i>m</i>		12.6 <i>c</i>	
Both parents child by other partner	4.5		19.2 <i>m</i>		24.7 <i>m</i>	
<i>Time-varying variables</i>						
Got married post birth						
Between birth and 1-year	NA		16.9		5.3 <i>c</i>	
Between 1-year and 3-year	NA		10.5		3.4	
Between 3-year and 5-year	NA		7.8		3.2	
Between 5-year and 9-year	NA		5.5		1.1	
Number of cases (<i>n</i>)	971		1,438		1,050	

Note: Data are weighted by 1-year national sampling weights.

m Adjusted Wald test indicates that the relationship category is statistically different than married couples at $p<.05$

c Adjusted Wald test indicates that the relationship category is statistically different than cohabiting couples at $p<.05$

Table 2
Supportiveness Mean Scores for Married, Cohabiting and Dating Couples at Birth, by Relationship Status at Birth ($N=3,459$)

	Birth		1-year		3-year		5-year		9-year	
	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
All couples ($n=3,459$)										
All ($n=3,459$)	2.72	(.30)	2.67	(.32)	2.67	(.31)	2.61	(.35)	2.66	(.34)
Married at birth ($n=971$)	2.74	(.18)	2.67	(.21)	2.68	(.19)	2.62	(.23)	2.68	(.23)
Cohabiting at birth ($n=1,438$)	2.73	(.43)	2.68	(.45)	2.68	(.48)	2.58	(.60)	2.57	(.55)
Dating at birth ($n=1,050$)	2.62	(.56)	m.e	(.59)	2.50	(.74)	m.e	(.59)	2.59	(.64)
Percent co-resident or dating at wave	100.0		87.2		79.4		68.6		60.6	
Married at birth ($n=971$)	100.0		96.0		90.0		79.8		72.5	
Cohabiting at birth ($n=1,438$)	100.0		82.5	m	71.9	m	59.5	m	48.7	m
% Married at wave	0.0		16.9		25.2		29.5		29.2	
% Cohabiting at wave	100.0		62.5		44.9		27.9		16.9	
Dating at birth ($n=1,050$)	100.0		51.2	m.e	36.5	m.e	27.8	m.e	20.4	m.e
% Married at wave	0.0		5.3		7.6		7.7		9.0	
% Cohabiting at wave	100.0		30.6		24.9		14.8		7.8	
% Dating at wave	100.0		15.3		4.0		5.3		3.6	
Couples who remain together, birth to 9 years ($n=1,450$)										
Relationship quality mean score	2.78	(.21)	2.70	(.25)	2.70	(.25)	2.64	(.28)	2.66	(.31)
Married at birth ($n=735$)	2.79	(.15)	2.70	(.19)	2.70	(.19)	2.65	(.21)	2.68	(.24)
Cohabiting at birth ($n=557$)	2.76	(.36)	2.69	(.40)	2.69	(.41)	2.60	(.54)	2.57	(.51)
Dating at birth ($n=158$)	2.67	(.51)	2.75	(.49)	2.59	(.63)	2.65	(.67)	2.59	(.61)
Unmarried at birth, percent married at wave	0.0		22.6		37.9		48.9		62.5	
Cohabiting at birth, percent married at wave	0.0		22.2		38.0		49.6		62.1	
Dating at birth, percent married at wave	0.0		26.2		37.0		43.8		65.2	

Note: Supportiveness score represents the average of 6 items (4 at time of birth) about supportiveness in the couple relationship, reported by mothers; range=1 (never) to 3 (often).

Note: Data are weighted by 1-year national sampling weights.

Table 3

Unstandardized Coefficients from Latent Growth Models Estimating Relationship Supportiveness among Couples Married, Cohabiting or Dating at Child's Birth

	Model 1		Model 2		Model 3	
	Intercept	Slope	Intercept	Slope	Intercept	Slope
All couples (<i>n</i> = 3,459)						
Estimated Supportiveness (Reference: Married couples)	2.700 **	-.019 **	2.669 **	-.022 **	2.665 **	-.017 *
Cohabiting at child's birth	-.024	-.018 **	.016	-.013 **	.034 *	-.012 **
Dating at child's birth	-.098 **	-.013 **	-.036	-.007	-.012	-.006
Model fit						
CFI	.945		.991		.993	
RMSEA	.045		.025		.021	
Couples who remain together, birth to 9 years (<i>n</i> = 1,450)						
Estimated Supportiveness (Reference: Married couples)	2.738 **	-.012 **	2.758 **	-.013	2.709 **	-.010
Cohabiting at child's birth	-.028	-.005 *	-.003	-.004	.002	-.004
Dating at child's birth	-.058 *	-.001	-.015	.001	-.009	.002
Model fit						
CFI	.921		.981		.985	
RMSEA	.077		.040		.033	

* $p < .05$

** $p < .01$

Note: Missing data on covariates are estimated using full information maximum likelihood.

Note: Model 2 includes background characteristics (mother's race/ethnicity, father's race differs from mother's, mother's and father's age at the focal child's birth, mother's and father's educational attainment, mother's and father's childhood family structure, mother/father thought/suggested abortion, length of the relationship prior to pregnancy, father's employment, mother's employment and mother's household income, and whether the maternal grandmother is coresident). Model 3 adds health and social-behavioral characteristics (mother's and father's self-rated health, mother's and father's substance problem, mother's and father's traditional gender role attitudes, mother's and father's distrust of the other gender, mother's and father's religious attendance, father is physically violent, mother is physically violent, father was ever in jail, and couple fertility history).

Table 4

Unstandardized Coefficients from Latent Growth Models Estimating Relationship Supportiveness among Unmarried Cohabiting Couples at Child's Birth

All cohabiting-at-birth couples (<i>n</i>=1,438)				
Model 1	Intercept	Slope		
Estimated supportiveness	2.656 **	-.022 *		
	<u>Supp1</u>	<u>Supp3</u>	<u>Supp5</u>	<u>Supp9</u>
Couple got married (Unstandardized)				
Between baseline and 1-year waves	-.021	.023	.041	.166 **
Between 1- and 3-year waves		.061 *	.101 **	.112 *
Between 3- and 5-year waves			.102 **	.055
Between 5- and 9-year waves				.292 **
Model fit				
CFI				.989
RMSEA				.022
Model 2: Add 'plans to marry'				
Estimated supportiveness	2.552 **	-.005		
	<u>Supp1</u>	<u>Supp3</u>	<u>Supp5</u>	<u>Supp9</u>
Couple got married (Unstandardized)				
Between baseline and 1-year waves	-.024	.023	.043	.172 **
Between 1- and 3-year waves		.061 *	.103 **	.118 *
Between 3- and 5-year waves			.103 **	.052
Between 5- and 9-year waves				.291 **
Model fit				
CFI				.988
RMSEA				.023
All cohabiting-at-birth couples who remain together, birth to 9 years (<i>n</i>=557)				
Model 1	Intercept	Slope		
Estimated supportiveness	2.629 **	.000		
	<u>Supp1</u>	<u>Supp3</u>	<u>Supp5</u>	<u>Supp9</u>
Couple got married (Unstandardized)				
Between baseline and 1-year waves	-.036	-.025	-.029	.075
Between 1- and 3-year waves		.058 *	.039	.037
Between 3- and 5-year waves			.010	-.053
Between 5- and 9-year waves				.164 **
Model fit				
CFI				.980
RMSEA				.033
Model 2: Add 'plans to marry'				
Estimated supportiveness	2.587 **	.013		

All cohabiting-at-birth couples (<i>n</i>=1,438)				
Model 1	Intercept	Slope		
	<u>Supp1</u>	<u>Supp3</u>	<u>Supp5</u>	<u>Supp9</u>
Couple got married (Unstandardized)				
Between baseline and 1-year waves	-.036	-.025	-.028	.079
Between 1- and 3-year waves		.059 *	.041	.041
Between 3- and 5-year waves			.009	-.056
Between 5- and 9-year waves				.162 **
Model fit				
CFI				.979
RMSEA				.034

*
 $p < .05$

**
 $p < .01$; Supp=supportiveness; 1, 3, 5 and 9 indicate survey year.

Note: Missing data on covariates are estimated using full information maximum likelihood.

Note: Model includes relationship status at birth, background characteristics (mother's race/ethnicity, father's race differs from mother's, mother's and father's age at the focal child's birth, mother's and father's educational attainment, mother's and father's childhood family structure, mother/father thought/suggested abortion, length of the relationship prior to pregnancy, father's employment, mother's employment and mother's household income, and whether the maternal grandmother is coresident) and health and social-behavioral characteristics (mother's and father's self-rated health, mother's and father's substance problem, mother's and father's traditional gender role attitudes, mother's and father's distrust of the other gender, mother's and father's religious attendance, father is physically violent, and father was ever in jail, and couple fertility history).