

“Couples as Partners and Parents over Children’s Early Years”

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## Abstract

We used data from the Fragile Families and Child Wellbeing Study to examine how couple relationship quality and parental engagement are linked over children's early years—when they are infants, toddlers, and preschoolers. Our sample included 1,630 couples that were coresident over years 1 to 3 and 1,376 couples that were coresident over years 3 to 5 (1,196 over both periods). Overall, we found that better relationship quality predicted greater parental engagement for both mothers and fathers—especially in the infant to toddler years; in contrast, we found little evidence that parental engagement predicted future relationship quality. Married and cohabiting couples were generally similar in how relationship quality and parenting were linked.

**Keywords:** Couple relationship quality, dyadic data, early childhood, fragile families, marital satisfaction, parenting

**Running head:** Couples as Partners and Parents

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Family scholars have long recognized the interdependence of family relationships (mothers and fathers, parents and children, siblings). Within a given family ‘system,’ dyadic relationships affect each other and influence individual-level change (Chase-Lansdale, Kiernan, & Friedman, 2004; Cox & Paley, 1997; O’Brien, 2005). Among family ties, the marital relationship has often been viewed as central to nuclear family dynamics (Cummings & O’Reilly, 1997). An extensive empirical literature has examined how marital quality is linked to parenting or the parent-child relationship, providing strong evidence for a positive correlation—that better marital quality is linked to better parent-child interaction (e.g., Erel & Burman, 1995).

Although developmental theory rests on the notion that relationships (and individuals) change over time, few studies have addressed the potentially changing nature of how couple relationship quality is linked to parenting as children grow and develop (Grych, 2002). Existing longitudinal studies often cover only two time points (Krishnakumar & Buehler, 2000; Schoppe-Sullivan, Schermerhorn, & Cummings, 2007), observe families only during the toddler years (Belsky, Youngblade, Rovine, & Volling, 1991; Cox, Owen, Lewis, & Henderson, 1989), or are limited by small, nonrepresentative samples (Erel & Burman, 1995)—although research on marriage in general has begun to include diverse samples (Fincham & Beach, 2010). Further, although scholars have noted the potential for reciprocal effects (Belsky et al., 1991; Goldberg & Easterbrooks, 1984; Grych, 2002), most studies have focused on how relationship quality affects parenting—rather than vice versa (but see exceptions below). In addition, although cohabitation has become a more common locus for childrearing (Kennedy & Bumpass, 2008), there has been little attention to differences between cohabiting and married couples (Grych, 2002).

In this paper, we extend previous research on how couple relationship quality and parental engagement are linked in several ways. First, we use data from three time points in early

childhood – when children are infants, toddlers, and preschoolers, and we use methods that enable us to (a) assess whether there may be a causal association between relationship quality and parental engagement (fixed effects models), and (b) evaluate the directionality of the observed associations (structural equation modeling). Second, we use data from a large, diverse, nationally-representative sample of urban births in the late 1990s. Third, we examine both mothers’ and fathers’ parenting, and fourth, we test whether the associations differ between married and cohabiting couples. Our results can be generalized to urban couples that live together (either cohabiting or legally married) during the five years subsequent to a child’s birth. This research provides new information about how adults’ relationships as partners and parents are linked as children develop from infants to toddlers to preschoolers.

#### Conceptual Framing and Previous Research

In this section, we describe the conceptual framing and prior empirical research related to the following four research questions: (a) Is there a significant association between couple relationship quality and parenting over children’s early years?; (b) What is the direction of this association—from relationship quality to parenting, parenting to relationship quality, or both?; (c) Is the pattern the same between children’s ages 1 and 3 and children’s ages 3 and 5?; and (d) Do the findings differ between married and cohabiting couples?

#### *Association between Couple Relationship Quality and Parental Engagement*

Family systems theory contains several hypotheses about how couple relationship quality is associated with the parent-child relationship. First, the *spillover hypothesis* argues that better marital quality leads to more positive parenting, whereas marital distress leads to more negative parenting (Easterbrooks & Emde, 1988; Engfer, 1988); in other words, there is a positive correlation between affect or stress/overload in the marital relationship and parenting. (Note that

some scholars [e.g., White, 1999] have identified ‘crossover’ in dyadic relations. As a positive association is also identified, we do not differentiate between the two concepts here.) Second, the *compensatory hypothesis* argues, in contrast, that a lack of satisfaction or emotional fulfillment in the marriage may lead parents to invest more in the parent-child relationship (Engfer, 1988; Goldberg & Easterbrooks, 1984); in other words, there is a negative correlation between marital quality and parenting. Third, the association between marital quality and parenting could be *spurious*, resulting from omitted variables such as child or parental temperament (Engfer, 1988).

An extensive empirical literature (using mostly small samples) has examined the association between marital quality and parenting (or parent-child relationships). This literature has produced strong evidence that marital quality is positively linked to parenting/parent-child interactions, supporting the notion of spillover in family relationships (Aldous, Mulligan & Bjarnason, 1998; Carlson & McLanahan, 2006; Erel & Burman, 1995; Grych, 2002; Krishnakumar & Buehler, 2000; White, 1999). In their meta-analysis of 68 studies, Erel and Burman (1995) found a robust positive association between marital quality and parent-child relationship quality. Their findings were underscored by two more recent reviews showing a positive association between marital quality and parenting, supporting the spillover hypothesis but less so the compensatory hypothesis (Grych, 2002; Krishnakumar & Buehler, 2000). Both reviews noted that it is difficult to distinguish support for the spillover hypothesis from spurious correlation, as only a small fraction of studies included potential confounding variables, and few used longitudinal data (Erel & Burman, 1995; Grych, 2002; Krishnakumar & Buehler, 2000).

#### *Reciprocal Association between Parental Engagement and Couple Relationship Quality*

Although it is well-known that family relationships are often mutually reinforcing, most of the literature has posited that the causal ordering proceeds from relationship quality to

parenting. Yet, there are good theoretical reasons to expect that parenting may affect couple relationship quality as well. If parent-child relationships are strong, with parents feeling part of a ‘team’ in jointly rearing their child(ren), their parental investment could enhance family social capital and strengthen their dyadic relationship quality. By contrast, parental engagement—and especially the diverging roles by gender in the transition to parenthood—may reduce the time and energy available to nurture the couple relationship, foster conflict, and diminish marital quality (Cowan & Cowan, 1992; Nomaguchi & Milkie, 2003). Although some scholars have suggested that parenting may affect couple relationship quality, little published research has directly examined this possibility, particularly using large samples (Belsky et al., 1991; Erel & Burman, 1995). One study found that marriages in the Netherlands were less likely to break up when fathers were more engaged in childrearing because the wife was more satisfied with the marriage (Kalmijn, 1999), suggesting that paternal engagement can positively affect marital quality. Related empirical research has emerged from the transition-to-parenthood literature, which provides evidence that *becoming* a parent (as opposed to the level of parental engagement) affects marital relationships. Marital satisfaction has been shown to decline after the first month postpartum (Belsky, Spanier, & Rovine, 1983; O’Brien & Peyton, 2002), and couples with more children experience a steeper decline in marital quality over time (Kurdek, 1999). Another body of related literature has focused on parental stress, which has been shown to negatively affect marital quality (Engfer, 1988; Lavee, Sharlin, & Katz, 1996), especially when children have a disability (Shonkoff, Hauser-Cram, Krauss, & Upshur, 1992). Again, most of the research in this area has relied on small, nonrepresentative (often clinical) samples.

Few studies have simultaneously assessed both pathways in order to investigate the primary direction of the association. The three published studies that (to our knowledge) have

directly evaluated potential reciprocal relationships have used small samples or have focused on a particular reporter or subpopulation. One study of married parents of children with mental retardation ( $N = 79$ ) found that marital quality affected parenting, but parenting did not affect marital quality (Floyd, Gilliom, & Costigan, 1998). Another study using children's reports of family relationships over ages 6 to 8 ( $N = 232$ ) found that children's perceptions of the emotional security in their parents' marriage sometimes (but not consistently) predicted children's perceptions of both mother-child and father-child relationships; in the other direction, the father-child relationship (at one time point)—but not the mother-child relationship—predicted perceived marital security (Schermerhorn, Cummings, & Davies, 2008). A third study (Engfer 1988) examined maternal sensitivity, marital conflict, and mother-perceived child difficulty using a sample of children in Munich ( $N = 36$ ); bivariate correlations provided some support for the spillover and compensatory hypotheses, showed that the mother-child relationship affected marital conflict, and that maternal characteristics affected both (i.e., spurious correlation).

#### *Change in Associations over Time during Early Childhood*

Although a number of studies have looked at the association between marital quality and parenting, Grych (2002) noted that most studies are confined to infants or toddlers, so we cannot test the change over time in this association (but see Brody, Pillegrini, & Sigel, 1986, Engfer, 1988; Krishnakumar & Buehler, 2000; Schermerhorn et al., 2008 for exceptions). We might expect a stronger relationship between relationship quality and parenting over child ages 1 to 3 (than ages 3 to 5), when children need more caregiving and have less-developed self-regulation skills, requiring greater time/energy input from parents (we thank an anonymous reviewer for useful comments on this point). Also, as children begin to test parental limits (around age 2), the marital relationship may be more crucial to the parent-child relationship, as the need for

consistent discipline increases, and parental stress may rise (Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004). Longitudinal research that uses multiple time points can shed light on the developmental aspects of relationship quality and parenting as they unfold over time; having at least three time points is requisite for comparing change over two time periods.

### *Differences by Marital Status*

The steady rise in nonmarital childbearing over recent decades—and of cohabitation as a precursor or alternative to marriage—portends that many children will be born to cohabiting parents or spend time living in a cohabiting union. Recent estimates suggest that two-fifths of all children will live in a cohabiting union by age 12 (Kennedy & Bumpass, 2008). Therefore, cohabitation represents an important context for parenting, particularly for disadvantaged groups, as cohabitators are disproportionately of low education and minority race/ethnicity (Raley, Frisco, & Wildsmith, 2005). Relationship quality is typically lower among cohabitators as compared to married couples (Brown & Booth, 1996), and cohabiting fathers may be less engaged with children than married fathers (Hofferth & Anderson, 2003); yet, little is known about the association between the two. Marital status may moderate the association between relationship quality and parental engagement, although the expected direction is ambiguous. The association might be stronger for married couples, as marriage is more ‘institutionalized’ as a context for childrearing (Cherlin, 2005), and the roles of partner and parent are more tightly clustered as a ‘package deal,’ especially for men (Furstenberg & Cherlin, 1991; Townsend, 2002). Or, the association might be stronger for cohabitators because their roles are less scripted by social norms, and their relationships are more fragile—and hence more vulnerable to negative spillover effects.

Very few studies have examined couple relationship quality and parenting among unmarried parents, and such studies have mostly used small samples that are neither ethnically



nor socioeconomically diverse (Grych, 2002). In their meta-analysis on marital conflict and parenting, Krishnakumar and Buehler (2000) found that only about one-fifth of the studies reviewed included any mix of racial groups, and few used large samples. What studies that do exist have focused primarily on noncustodial fathers following divorce, or nonresident fathers more generally (including never-married and divorced fathers). Using a small sample of (mostly nonresident) unmarried, African American fathers in Baltimore, Coley and Chase-Lansdale (1999) found that a closer mother-father relationship encouraged father's involvement with young children; similar results were found for a Midwestern sample of 77 fathers who had children with unwed teen mothers (Kalil, Ziol-Guest, & Coley, 2005) and for nonresident fathers in the Fragile Families Study (Ryan, Kalil, & Ziol-Guest, 2008). To our knowledge, only one study has directly tested whether marital status moderates the association between relationship quality and parenting: Using early Fragile Families data, Carlson and McLanahan (2006) found no significant difference between married and cohabiting parents in how relationship quality at a baby's birth was linked to parenting one year later. This study did not explore these processes beyond the first year after birth, did not consider reciprocal relationships, and used only simple regression techniques.

### *Control Variables*

Our analysis includes a number of control variables (measured at baseline) that we expect to be linked to both relationship quality and parental engagement. Parents' older age has been linked with lower quality marital interactions (Frosch, Mangelsdorf, & McHale, 1998) and more effective parenting (Day, Peterson, & McCracken, 1998). Parenting practices may also vary by race/ethnicity (Brooks-Gunn & Markman, 2005). Growing up with both parents likely affects both relationship quality and parenting (Gable, Belsky, & Crnic, 1995). Education predicts

greater parental engagement with children, particularly reading (Davis-Kean, 2005). Parents in better physical and mental health are expected to have greater capacity for positive family relationships (Larson & Holman, 1994). Religiosity is positively related to parental involvement (King, 2003; Wilcox, 1998). The first birth may be more significant than subsequent births for shifting individual parental roles and identities (Cowan & Cowan, 1992). Children's poor health is negatively linked to parents' relationship quality (Reichman, Corman, & Noonan, 2004). Child temperament affects family processes, with more 'difficult' children increasing negative parenting behaviors (Simons, Whitbeck, Conger, & Melby, 1990). Also, parents' impulsivity may be associated with both poorer parenting and poorer relationship quality (Dickman, 1990).

## Method

### *Data*

We used data from the Fragile Families and Child Wellbeing Study, a nationally representative birth-cohort study of 4,897 children born in large (populations over 200,000) U.S. cities between 1998 and 2000. The study is based on a stratified, multistage probability sample with an oversample of children born to unmarried parents in urban areas (3,710 unmarried, 1,187 married) (see Reichman, Teitler, Garfinkel, & McLanahan, 2001). Baseline interviews with mothers and fathers were conducted shortly after their child's birth. Mothers were interviewed in person in the hospital within 48 hours of the birth, and fathers were interviewed either in the hospital or elsewhere. Follow-up interviews with both parents were conducted when the child was about 1, 3 and 5 years old. Response rates for the baseline survey among eligible parents were 87% for unmarried mothers, 82% for married mothers, 75% for unmarried fathers, and 89% for married fathers. The 1, 3, and 5-year follow-up interviews were completed with 90%, 88% and 87% of eligible mothers, respectively, and 74%, 72%, and 70% of eligible fathers,

respectively, where eligibility was based on mothers having completed a baseline interview. In our analyses, we used information from all survey waves, but we focused our analysis on years 1, 3, and 5, when measures were available on both relationship quality and parenting.

Our sample included couples (parallel samples of biological mothers and fathers of the focal child) who were coresiding (either cohabiting or married), and for whom we had interviews with both parents and no missing data on relationship quality and parenting. Analyses of the 1-to-3-year (and 3-to-5-year) data were restricted to couples who were coresident in those years. Parental engagement could not be measured at the time of the baby's birth (the baseline survey), so we began our study using the variables of interest from the 1-year survey.

Of all coresident couples at year 1 ( $N = 2,341$ ), 347 cases (15%) were dropped from our sample because either the mother or father was not interviewed at the 3-year survey, 317 cases (14%) were dropped because the parents broke up between years 1 and 3, and 47 cases (2%) were dropped because information on the relationship quality or parenting items was missing, yielding a final 1-to-3-year sample of  $N = 1,630$  (70%). Among coresident couples at year 3 ( $N = 2,032$ ), 324 cases (16%) were dropped because either the mother or father was not interviewed at year 5; another 288 cases (14%) were dropped because the couple broke up between years 3 and 5, and 44 cases (2%) were dropped because of missing data on the relationship quality or parenting items. The final 3-to-5-year sample was  $N = 1,376$  (68%). (As a robustness check we also conducted analyses on parents who were consistently coresident over years 1, 3, and 5 [ $N = 1,196$ ] and found that there were no substantive differences from our main reported results.) The fixed effects models (see analytic strategy) pooled cases across survey years, so individuals were observed at multiple times—3,260 person-year observations (for 1,630 cases) for 1 to 3 years, 2,752 person-year observations (for 1,376 cases) for 3 to 5 years, and 3,588 person-year

observations (for 1,196 cases) for 1 to 5 years. In analyses of attrition, we found that the excluded cases were slightly younger, had lower educational attainment, and were more likely to be Black or Hispanic than the parents who remained in the sample. We comment on the possible implications of attrition in the Discussion section.

We differentiated couples by their marital status at the time of their baby's birth, as the characteristics of couples who married after a child's birth were much more similar to those of other unmarried couples than to those of couples married at the time of birth (McLanahan, 2004). In addition, because the greater public policy concern is about marital status at birth, we included couples who married post birth in the cohabiting category and referred to marital status at birth. Our substantive conclusions are not altered if we include couples who married post birth with the married group instead of the cohabiting group.

We used city sampling weights for our bivariate statistics (shown in Tables 1 and 2) in order to adjust for the oversample of nonmarital births (and the corresponding differences by age, race, and education) in the Fragile Families Study. Using the weights allowed us to generalize to all couples living together after an urban birth across the 20 cities in the Study. The weights were not necessary in our multivariate models, as we controlled for the key characteristics for which the weights adjust (marital status at birth, age, race, and education).

In order to retain a comparable sample across the different analyses and to maximize sample sizes in our multivariate models, we conducted multiple imputation to impute missing data on our covariates (but not our independent variables of interest or dependent variables). Multiple imputation is a useful strategy for dealing with missing data that eliminates biases inherent in more conventional approaches (Allison, 2002; Rubin, 1976). Multiple imputation uses observed data to impute missing values over multiple data sets; analyses are then conducted

across each data set and the estimates averaged to reflect the intrinsic uncertainty in the missing-data imputation (and yield appropriate standard errors). We also ran the analyses using listwise deletion of incomplete cases and found that our results were substantively similar, so we report only the results on the imputed data.

### *Measures*

Our primary variables of interest are couple relationship quality and parental engagement reported by mothers and fathers at 1, 3, and 5 years after the birth of their biological child. For parental engagement, parents reported at each survey the number of days in the previous week they engaged in the following five activities with their child, ranging from 0 to 7 days: (a) read stories, (b) told stories, (c) played games such as “peek-a-boo” or “gotcha” (replaced by more developmentally appropriate items at ages 3 [played imaginary games] and 5 [told child he/she is appreciated]), (d) sang songs or nursery rhymes, and (e) played inside with toys. These items are similar to those used in other large surveys, including the Early Child Longitudinal Study-Birth Cohort and the Early Head Start Study. At the 1-year survey, about one-fifth of respondents were given an initial version of the questionnaire with five categorical response choices, ranging from 1 (*never*) to 5 (*every day*). When repeating the response choices proved cumbersome, the survey was modified, and the remaining four-fifths of respondents (and all respondents at years 3 and 5) were asked the number of days in the past week that they engaged in each activity, ranging from 0 to 7. Cases given the first set of responses were reassigned as follows: *never* = 0, *once or twice/month* = 1, *several times/month* = 2, *several times/week* = 4, *every day* = 7.

Principal components factor analysis (with varimax rotation) confirmed that the parental engagement items could be appropriately represented by a single factor for each parent (Cronbach’s  $\alpha$  were .69, .75 and .69 for mothers—and .74, .80, and .76 for fathers—in years 1, 3,

and 5, respectively). The fixed effects models used an average of mothers (or fathers) parental engagement items, and in the structural equation models, engagement for mothers and fathers was estimated (separately) as a latent factor based on the five individual items at each wave.

We measured relationship quality from six items reported by mothers and fathers at years 1, 3, and 5. Mothers and fathers reported how frequently their partner: (a) “is fair and willing to compromise when you have a disagreement,” (b) “expresses affection or love for you,” (c) “insults or criticizes you or your ideas” (coding reversed), (d) “encourages or helps you to do things that are important to you,” (e) “listens to you when you need someone to talk to,” and (f) “really understands your hurts and joys.” Response choices were *never* (1), *sometimes* (2), and *often* (3), with higher scores indicating a better quality relationship (range = 1 - 3). To reflect the dyadic nature of couple relationships, we used averages of mother and father reports on these six items. In fixed effects, we used the overall average across the six (averaged) items, and in the structural equation models, we included the dyadic averages of each of the six items separately, allowing relationship quality to be estimated as a latent factor. Principal components factor analysis (with varimax rotation) confirmed that the items could be appropriately represented by a single factor with high reliability ( $\alpha = .76, .85, \text{ and } .88$  for years 1, 3, and 5, respectively).

All of our models included the set of demographic, psychosocial and socioeconomic variables (summarized above) that we expected to be related to both relationship quality and parenting. Unless otherwise indicated, we used identical measures for both mothers and fathers. Mothers’ and fathers’ ages were each specified as continuous variables. Mothers’ race/ethnicity was specified as dummy variables for non-Hispanic Black (reference); non-Hispanic White; Hispanic; and other non-Hispanic race. We included a separate dummy variable to indicate that parents differed on race/ethnicity. Family background was a dichotomy for whether each parent

lived with both of their parents at age 15. Education was specified as four variables of: less than high school (reference), high school degree, some college, and bachelor's degree or higher.

Parents' self-reported physical health ranged from 1 (*poor*) to 5 (*excellent*). Children's physical health was reported by mothers (also 1 to 5). Fathers' self-reported problems with substance abuse were indicated by a dummy variable, coded 1 if they responded affirmatively to the statement that "drinking or drug use interfered with [their] work or personal relationships." We did not include mothers' problems with substance abuse because very few mothers indicated such. Mothers' and fathers' depression was represented by the Composite International Diagnostic Interview-Short Form (CIDI), a standardized tool that assesses respondents' feelings of dysphoria or anhedonia (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998); a dummy variable indicated having met the criteria for depression.

The frequency of each parent's religious attendance ranged from 1 (*not at all*) to 5 (*once a week or more*). Number of children in the household was reported by mothers at the 1-year survey. A series of dummy variables indicated fertility history with respect to the focal birth: both parents' first birth (reference), couples' higher-order birth, mother had a child with another partner, father had a child with another partner, and both parents had a child with another partner. Parents' impulsive personality was based on an abbreviated form of Dickman's (1990) impulsivity scale, with six measures of respondents' ability to exert self control; response choices ranged from 1 (*strongly disagree*) to 4 (*strongly agree*), with higher scores indicating higher impulsivity. The household income-to-needs ratio was based on official U.S. poverty thresholds from the Census Bureau, adjusted by family composition and year; a ratio of one or less indicated that the family lived in poverty. A dummy variable indicated whether the couple was married at the birth. With respect to child characteristics, a dummy variable indicated that

the child was a boy. Child's 'difficult' temperament was represented by the average of three items from the Emotionality, Activity, and Sociability (EAS) Temperament Survey (Mathieson & Tambs, 1999); response choices ranged from 1 (*not at all like my child*) to 5 (*very much like my child*), with higher scores indicating more difficult temperaments.

[Table 1 about here]

Table 1 provides descriptive information on the demographic, psychosocial, and socioeconomic characteristics of the coresident mothers and fathers in our sample by marital status at birth (weighted by city sampling weights). Married parents were, on average, older, more likely to be non-Hispanic White, more likely to have lived with both parents at age 15, and had much higher educational attainment and income than cohabiting parents. Parents were generally in good health, and problems with substance abuse were rare. Married parents were much less likely to have had children with other partners. Children of cohabiting parents scored somewhat higher on the 'difficult' temperament measure.

#### *Analytic Approach*

We employed two analytic strategies to examine how relationship quality and parenting were linked for coresident biological parents. First, we estimated fixed effects regression models to evaluate whether there was a robust association between couple relationship quality and parenting between years 1 and 3 (and 3 and 5) after a child's birth. These models are more conservative than standard regression or structural equation models because they control for unobserved time-invariant individual characteristics that may be associated with the variables of interest (Greene, 2003; Snijders, 2005). A fixed effects model effectively 'controls' for such (e.g., intelligence, temperament) by only looking at change within the *same* individuals and provides a better estimate of the true causal association (although these models do not address



unmeasured variables that change over time). Second, as fixed effects models do not provide information about the direction of the association, for directionality, we turned to cross-lagged structural equation models (SEM). Cross-lagged modeling allows evaluation of the primary direction of causal influence in a system where there may be reciprocal effects (Finkel, 1995). Because the cross-sectional associations between the independent and dependent variables at each time point are accounted for (as are the longitudinal associations between the same variable measured across time), the longitudinal, cross-lagged paths are not biased by this confounding. As shown in Figure 1, we considered the associations between relationship quality and parental engagement across years 1, 3, and 5, where  $a$ ,  $b$ ,  $c$  and  $d$  represent the cross-lagged paths. For both fixed effects and SEM, we used standardized variables, so the estimates can be interpreted as, for each one-standard-deviation change in the independent variable, the proportion of a standard-deviation change observed in the dependent variable. For our main results (Table 3), we also reported unstandardized coefficients, so the reader can evaluate the actual magnitude of change in the dependent variable (from a one-unit change in the independent variable).

## Results

### *Descriptive Results*

Means on couple relationship quality and parental engagement are shown in Table 2 (weighted by city sampling weights) with significant differences by marital status evaluated using (unweighted)  $t$ -tests. Overall, parents in coresident relationships reported high levels of positive interaction in their relationship about one year after a baby's birth (score of 2.68 on a 1-to-3 scale). Mean relationship quality remained similar at year 3 (2.67) and then declined slightly in year 5 (2.62). Parents married at the birth reported significantly higher-quality relationships at the 1, 3, and 5-year surveys than cohabitators, and the decline in quality among cohabiting parents

between years 3 and 5 was larger than for married parents (0.10 compared to 0.04).

[Table 2 about here]

The lower half of Table 2 shows means on the average parental engagement scores for mothers and fathers, overall and by marital status. Again, significant differences were evaluated using *t*-tests. The average mother engaged in activities with her child 5.29, 5.13, and 4.92 days at 1, 3, and 5-year surveys, respectively. The average levels were somewhat lower for fathers—4.65, 4.16, and 4.02 days, respectively. Married mothers were significantly more engaged with their children at all three time points than cohabiting mothers; yet, the pattern was reversed for married fathers, who exhibited slightly lower levels of engagement at all three points compared to cohabiting fathers. Engagement decreased for both married and cohabiting parents over time; this could simply reflect fewer opportunities for interaction, as older children may enter day care, and parents may be more likely to work (or work more hours) than during children's infancy.

### *Multivariate Results*

Our first research question was whether there was a significant association between couple relationship quality and parenting over children's early years, using a large, nationally-representative sample of urban births with a rigorous analytic method. To address this question, we relied on our fixed effects results. As shown in Table 3, with respect to maternal engagement, over years 1 to 3, a one-standard-deviation increase in relationship quality was significantly—but modestly—associated with a .07 standard deviation (.35 unstandardized unit) increase in maternal engagement with the child. We noted a similar association over years 3 to 5, of .06 standard deviation (.34 unstandardized unit). With respect to paternal engagement, we found a similar pattern, but the magnitude of the estimates was slightly larger. Over years 1 to 3, a one-standard-deviation change in relationship quality was associated with a .13 standard deviation

(.79 unstandardized unit) increase in paternal engagement, and .10 standard deviation (.55 unstandardized unit) over years 3 to 5. Taken together, these results indicate that for both mothers and fathers, there was a significant positive association between change in couple relationship quality and change in parenting over years 1 to 3 and 3 to 5 after a child's birth.

[Table 3 about here]

As fixed effects models utilize only within-couple differences, they provide greater confidence in detecting a causal effect (than SEM or standard regression), but they do not provide information on the direction of the association—our second research question. To evaluate directionality, we turned to our SEM results. For maternal engagement, we found an identical standardized estimate to the fixed effects model for how couple relationship quality at year 1 was linked to parenting at year 3 (.07), although the unstandardized estimate was slightly larger (.46). Thus, over and above the fact that relationship quality at year 1 predicted relationship quality at year 3, and parental engagement at year 1 predicted parental engagement at year 3, the significant 'cross-lagged' path indicated that relationship quality was also predictive of future parental engagement. By contrast, the cross-lagged path in the other direction—from engagement to relationship quality—was close to zero and not statistically significant, suggesting that parenting was not a significant predictor of future relationship quality. In the second time period, we found a different pattern: the estimate for relationship quality to mothers' parenting and the estimate for parenting to relationship quality were very small, and neither was statistically significant.

The models for fathers' engagement showed a mostly similar pattern to those for mothers: There was a modest, statistically-significant association between relationship quality and paternal engagement over years 1 to 3 (.08 standardized, .49 unstandardized), whereas the

reciprocal path from engagement to relationship quality was very small and not statistically significant. For years 3 to 5, there was no significant association between relationship quality and parenting; for the reverse direction, there was only a small and marginally-significant negative association between parenting and relationship quality.

In order to test the sensitivity of our results to reporting bias, we tested our SEM models using each reporter's *own* measures of relationship quality on their own parental engagement. Overall, the results (not shown) were very similar to our main results, except that for years 1 to 3, mothers' reported relationship quality was less strongly linked to her own-reported parental engagement than the measure based on both parents' reports. Alternative reporter analyses were tested as well (fathers' report of relationship quality on mothers' parental engagement and vice versa). Again, we found very similar results to those when using averaged relationship quality. Lastly, because we also had measures of mothers' reports of fathers' parenting, we tested models of both average relationship quality on mothers' report of fathers' parental engagement, and mothers' reported relationship quality on fathers' report of parental engagement, and yet again found similar results. The consistency of these results gives us confidence in our main results.

In order to consider how relationship quality and parenting are linked over the entire 1- to 5-year time frame, we also ran fixed effects and SEM models on parents who were coresident over all of years 1, 3, and 5 (results not shown). In fixed effects, we pooled the data from the three surveys; in SEM, we simultaneously estimated cross-lagged paths from both 1-to-3 and 3-to-5 years. Our findings were very similar to those in the separate 1-to-3 and 3-to-5 year models (which allowed us to keep all coresident couples over each period and increase the sample sizes).

This combined model in SEM allowed us to evaluate our third research question—whether there are significant differences between how relationship quality and parenting are

linked in the 1-to-3 year period versus 3-to-5 year period. We tested the difference across time periods by comparing the fit of a model where the paths from relationship quality to parenting for years 1-to-3 and 3-to-5 were estimated freely, versus a model where they were constrained to be equal (and a degree of freedom conserved). By calculating the difference in chi-square, we could test whether the groups were significantly different. We found that the difference between the two periods was marginally statistically significant for mothers ( $p = .076$ ), with a weaker association in years 3 to 5, suggesting that the importance of relationship quality on parenting may diminish over time. This did not appear to be the case for fathers, as we could not reject the null hypothesis that the estimates for 1-to-3 and 3-to-5 years were the same ( $p = .18$ ).

To evaluate differences between married and cohabiting couples—our fourth research question, we reestimated our cross-lagged models with separate groups by marital status. We only focused on the association between relationship quality and parental engagement (and not the reverse), because our main models showed little association of parenting with future relationship quality. We tested the difference between groups by comparing the fit of an unconstrained model (A) to one where the path from relationship quality to parenting was constrained to be equal across groups (B) (and a degree of freedom conserved). By calculating the difference in chi-square, we could test whether the groups were significantly different.

[Table 4 about here]

At first glance, it looked like married parents experienced a stronger association between relationship quality and parental engagement over years 1 to 3 than their cohabiting counterparts; however, the model fit changed only slightly, and the difference was not statistically significant. Thus, we could not reject the null hypotheses that the association was the same for married and cohabiting couples (for both mothers and fathers). The 3-to-5-year results showed very small

associations for mothers that did not differ by marital status at the child's birth. For fathers, the 3-to-5-year estimates suggested a significant difference between cohabiting and married fathers. Among cohabiting men, a one-standard-deviation improvement in relationship quality was associated with a .09 standard-deviation increase in parenting; with little association for married fathers. However, the chi-square test across models was only marginally significant ( $p = .08$ ).

### Discussion

In this paper, we have examined how couple relationship quality is linked to parental engagement with children by both coresident mothers and fathers after a baby's birth over child ages 1, 3, and 5. Overall, we found that relationship quality was positively (but modestly) linked to subsequent maternal and paternal engagement as children age from infants to toddlers to preschoolers. This finding—using a large and diverse nationally-representative sample of urban births with rigorous analytic techniques—corroborates previous research using mostly small samples of White or middle-income married couples showing positive ‘spillover’ between marital quality and parent-child relationships in early childhood (e.g., Erel & Burman, 1995). Also consistent with most prior research (Erel & Burman, 1995; Grych, 2002; Krishnakumar & Buehler, 2000), we found little support for the compensatory hypothesis (Engfer, 1988), which suggests that an unsatisfying couple relationship increases parents' engagement with children.

With respect to directionality (our second research question), we found that the association appeared to largely proceed in one direction – from couple relationship quality to parenting: There was little indication that higher parent-child engagement by mothers or fathers enhanced (or diminished) the couple relationship over time, contrary to Kalmijn's (1999) finding that fathers' involvement with children in the Netherlands increased marital satisfaction for women. Apart from that study and the transition-to-parenthood literature that explores how

*becoming* a parent influences marital quality (e.g., Cowan & Cowan, 1992), there has been little direct investigation of how parenting per se affects couple relationship quality. Ours is one of the first studies to address this question with a large sample of U.S. parents *after* a child's birth, and we found little evidence of a reciprocal relationship between parenting and relationship quality.

Turning to change over time as children age (our third research question), the cross-lagged estimates suggested that the association between relationship quality and parental engagement may become weaker especially for mothers as children leave the toddler years. Yet, the fixed effects models, which are more robust to threats of omitted variable bias, demonstrated significant positive associations between relationship quality and parenting for both mothers and fathers during both time periods. The significant findings using fixed effects (but not SEM) models suggest that it is important to account for selection, as unobserved variables may be obscuring the true association between relationship quality and parenting. Also, the difference in SEM results between 1-to-3 and 3-to-5 years may reflect differential selection out of the coresident sample; by years 3 to 5, only those with the 'best' partner and parent relationships may remain, and some omitted variables (e.g., commitment to family life) may affect both couple relationship quality and parenting. Once such time-constant individual characteristics are taken into account (in the fixed effects models), we observed the expected positive correlation between relationship quality and parenting (that was not shown in the SEM results). Thus, our overall conclusion is that couple relationship quality and parenting *are* positively (though modestly) linked for coresident couples across years 1 through 5 after a child's birth, with similar results for mothers and fathers; however, we have greater confidence in the 1-to-3-year results, since the results using both analytic techniques for this period are positive and significant.

With respect to differences between married and cohabiting couples (our fourth research

question), we found that the link between relationship quality and parenting was similar for both types of couples—a striking finding given the notable sociodemographic differences between the two groups (McLanahan, 2004). Married couples are much older and more highly educated than unmarried parents, and they have higher mean levels of both relationship quality and parental engagement. Yet, the link between relationship quality and parental engagement was not significantly different—consistent with the one prior study that explored this link during the first year following birth (Carlson & McLanahan, 2006). A marginally-significant marital status difference did emerge over years 3 to 5 for fathers: Relationship quality predicted paternal engagement for cohabiting fathers but not for married fathers. This suggests that the “package deal” of partner and parenting relationships identified in prior research (Furstenberg & Cherlin, 1991; Townsend, 2002) may be less ‘automatic’ for fathers in cohabiting relationships, for whom a high-quality couple relationship remains important for connecting them to their children.

In terms of implications for research, our results underscore family systems theory that points to the fundamental link between dyadic family relationships (Cox & Paley, 1997). Our results are less compelling with respect to developmental theory about how the link between these relationships may change over time; the evidence is not strong enough to conclude that couple relationship quality becomes less important for parenting as children age. An important topic for future research is to examine these associations over an even longer period of time, during middle childhood and adolescence. Also, it would be useful to consider an array of factors that may moderate the associations between partner relationship quality and parenting, such as race/ethnicity, child gender, parity, birth order, or socioeconomic status.

Our results may also have useful implications for public policy, given the current emphasis on improving relationship skills among low-income unwed parents (Dion, 2005).



Specifically, our findings suggest that the current initiatives to promote relationship quality by increasing parents' relationship skills could potentially yield benefits for parenting behaviors and hence for children. Further, our results suggest that programs might be most effective if they target *both* parents' behaviors in (and perceptions of) the couple relationship. Until recently, most programs have focused primarily on mothers.

There are several limitations to this analysis. First, although fixed effects analysis enables causal inference to a greater extent than simple regression analysis (by controlling for time-constant characteristics), these models do not account for unobserved factors that *change* over time. The same is true, and even more so, of our SEM analyses. Thus, to the extent that other factors in couples' lives are changing between surveys (e.g., support from extended family), our estimates of the effects of relationship quality and parental engagement could be biased; this problem is reduced by limiting our analyses to couples who remain in coresident relationships.

Second, because each parent reported on both relationship quality and their own parenting, it is possible that the same respondent could be over/under-reporting positive feelings of all kinds, known as "correlated response bias" (Glenn, 1990). Using a composite measure of mothers' and fathers' relationship quality (reflecting the dyadic nature of the couple relationship) helps address this concern. Also, our supplementary analyses which varied the reporter (summarized above) suggested that our results were not driven by using the same reporter.

A third limitation concerns our parenting measures. We recognize that self-reports of parenting behavior are inferior to direct observations. At the same time, using a large-scale survey provides information about a broader group of (both married and cohabiting) parents than would be possible with observational methods. Thus, to some extent, we trade construct validity for external validity. At the same time, our maternal and paternal engagement measures include

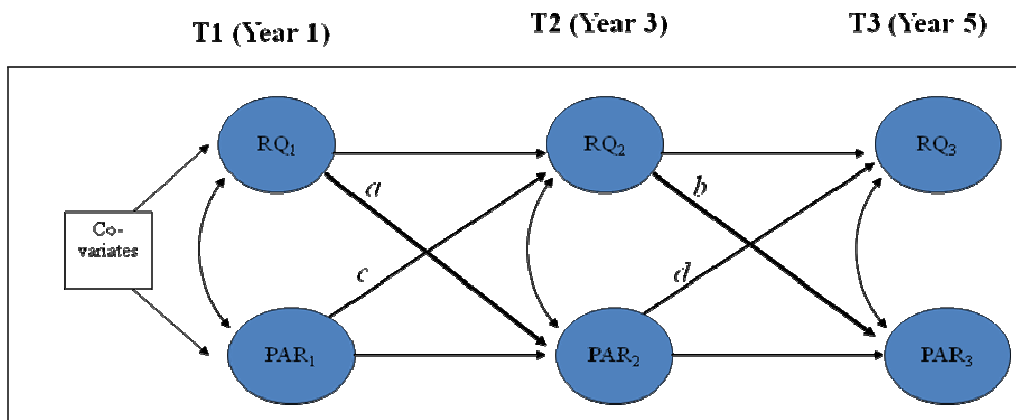
five items that load on the same factor, respectively, with acceptable reliability scores. Although we recognize that self-reported *levels* of parenting may be overstated, there is no reason to believe that the estimates of *predictors* are biased. Also, we include self-reported parenting from *both* mothers and fathers, whereas previous studies typically used maternal reports of fathering.

A final issue worth noting is that we limited our sample to couples that were romantically involved and coresident over the years after their baby's birth, so our results are only generalizable to couples who live together. Couples who break up or are lost to attrition typically have lower-quality relationships, so by excluding these couples we may downwardly bias the association between relationship quality and parenting (and upwardly bias the mean levels of both) as compared to what would be observed across a sample of *all* parents after a birth. As the majority of married couples stay together over five years after the birth, this issue is most salient for the cohabiting couples, which represent those with the 'best' family relationships.

### Conclusion

This paper used a large sample of urban parents who had a child in the late 1990s to examine how couple relationship quality is linked to parental engagement as children age from infants to toddlers to preschoolers. Using a longitudinal design with multiple methods, we discovered new associations between two dyadic relationships that are central to family life. In sum, we found evidence that positive partner and parental roles 'go together,' as a strong and supportive couple relationship quality promotes greater parental engagement with children for both married and cohabiting coresident couples. Future research can shed light on the extent to which this association persists or changes as couple relationships and parental roles unfold over time and as children enter middle childhood and adolescence.

Figure 1. Conceptual Model for Relationship Quality and Parental Engagement among Coresident Couples



Note: RQ = Relationship quality; PAR = Parental engagement.

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Table 1. Sample Descriptives (Means and Frequencies) among Coresident Couples,  
by Marital Status at Time of Baby's Birth ( $N = 1,630$ )

	Overall		Married		Cohabiting	
	<i>M</i> or %	(SD)	<i>M</i> or %	(SD)	<i>M</i> or %	(SD)
Marital status at baby's birth						
Married	73.4		-		-	
Cohabiting	26.6		-		-	
Age at baby's birth ( <i>M</i> , in years)						
Mother	28.45	(5.86)	29.72	(5.38)	24.95	(5.70)
Father	30.88	(6.57)	32.09	(6.14)	27.48	(6.56)
Mothers' race/ethnicity						
White non-Hispanic	42.3		52.7		13.3	
Black non-Hispanic	21.1		13.2		42.9	
Hispanic	28.7		24.3		40.8	
Other non-Hispanic	8.0		9.9		3.0	
Parents are of different race/ethnicity	10.7		10.1		12.3	
Lived with both parents at age 15						
Mother	61.9		68.7		43.4	
Father	64.0		71.6		42.9	
Mother's education						
Less than high school	18.8		14.4		31.1	
High school degree	29.4		22.1		49.5	
Some college	19.4		19.8		18.2	
Bachelor's degree or higher	32.4		43.7		1.2	
Father's education						
Less than high school	18.9		12.8		36.1	
High school degree	24.7		20.8		35.7	
Some college	23.6		23.5		23.9	
Bachelor's degree or higher	32.8		42.9		4.4	
Health status ( <i>M</i> , range = 1 - 5)						
Mother	3.94	(1.00)	4.02	(.98)	3.70	(1.04)
Father	4.00	(.93)	4.07	(.91)	3.83	(.97)
Child	4.55	(.73)	4.57	(.72)	4.51	(.76)
Substance abuse problem <sup>1</sup>						
Father	1.4		.57		3.6	

Table 1 (cont). Sample Descriptives (Means and Frequencies) among Coresident Couples,  
by Marital Status at Time of Baby's Birth ( $N = 1,630$ )

	Overall		Married		Cohabiting	
	<i>M</i> or %	(SD)	<i>M</i> or %	(SD)	<i>M</i> or %	(SD)
Depression <sup>2</sup>						
Mother	9.0		7.8		12.3	
Father	4.5		3.7		6.7	
Religious attendance ( <i>M</i> , range = 1 - 5)						
Mother	3.53	(1.43)	3.71	(1.36)	3.02	(1.49)
Father	3.51	(1.41)	3.69	(1.35)	2.99	(1.45)
Number of children in household ( <i>M</i> )	2.09	(1.19)	2.00	(1.11)	2.34	(1.35)
Fertility history:						
Child is both parents' first birth	32.6		35.5		24.7	
Couple has two or more children together	39.3		47.1		17.5	
Father has children with other partners	9.8		6.7		18.4	
Mother has children with other partners	9.8		5.5		21.8	
Both have children with other partners	8.5		5.2		17.6	
Child is a boy	59.3		60.6		55.7	
Child 'difficult' temperament ( <i>M</i> , range = 1 - 5) <sup>3</sup>	2.60	(.93)	2.51	(.87)	2.84	(1.06)
Impulsivity ( <i>M</i> , 3-year survey, range = 1 - 4) <sup>4</sup>						
Mother	1.91	(.58)	1.88	(.57)	2.00	(.60)
Father	1.82	(.60)	1.78	(.57)	1.93	(.65)
Income-to-needs ratio ( <i>M</i> )	3.75	(4.30)	4.55	(4.71)	1.55	(1.35)
<i>N</i>	1,630		767		863	

Note: Variables are from the baseline (just after the baby's birth) or 1-year survey unless noted. All means are weighted by city sampling weights. Numbers of cases (*N*) are unweighted.

<sup>1</sup>Mother's substance abuse is not included in the analyses due to the small proportion reporting yes. <sup>2</sup>From the Composite International Diagnostic Interview-Short Form. Indicates whether respondent meets the conservative criteria for depressive symptoms. <sup>3</sup>From the Emotionality, Activity, and Sociability Temperament Survey, reported by mothers. <sup>4</sup>From Dickman's Impulsivity Scale.

Table 2. Means on Couple Relationship Quality and Parental Engagement Measures  
among Coresident Couples ( $N = 1,630$ )

Panel A. Couple relationship Quality	1-Year		3-Year		5-Year	
	<i>M</i>	(SD)	<i>M</i>	(SD)	<i>M</i>	(SD)
All couples ( $N = 1,630$ )	2.68	(.26)	2.67	(.27)	2.62	(.36)
Fair and willing to compromise	2.49	(.46)	2.47	(.43)	2.47	(.51)
Shows affection or love	2.81	(.32)	2.82	(.30)	2.72	(.41)
Insults or criticizes (inverse)	2.54	(.44)	2.54	(.43)	2.52	(.49)
Encourages or helps	2.78	(.33)	2.75	(.35)	2.69	(.45)
Listens when needs someone to talk to	2.80	(.32)	2.76	(.36)	2.69	(.47)
Really understands hurts and joys	2.71	(.39)	2.67	(.39)	2.62	(.47)
By marital status at birth						
Married ( $n = 767$ )	2.69	(.26)	2.68	(.26)	2.64	(.36)
Cohabiting ( $n = 863$ )	2.66	(.27)	2.64	(.27)	2.54	(.37)
Significant differences	**		**		**	

Panel B. Parental Engagement	1-Year		3-Year		5-year		1-Year		3-Year		5-Year	
	<i>M</i>	(SD)	<i>M</i>	(SD)	<i>M</i>	(SD)	<i>M</i>	(SD)	<i>M</i>	(SD)	<i>M</i>	(SD)
	Maternal Engagement						Paternal Engagement					
All couples ( $N = 1,630$ )	5.29	(1.39)	5.13	(1.56)	4.92	(1.34)	4.65	(1.71)	4.16	(1.75)	4.02	(1.46)
Sang songs	5.86	(1.86)	5.46	(2.04)	4.56	(2.16)	4.67	(2.44)	3.70	(2.32)	3.02	(2.23)
Read stories	4.55	(2.32)	5.36	(2.00)	4.94	(2.08)	3.57	(2.67)	4.08	(2.33)	3.49	(2.19)
Told stories	3.90	(2.54)	4.52	(2.43)	4.21	(2.39)	3.32	(2.70)	3.80	(2.45)	3.56	(2.27)
Played inside with toys	5.82	(1.87)	5.45	(1.98)	4.42	(2.29)	5.72	(2.04)	4.88	(2.25)	4.14	(2.24)
Played peek/imagine/ appreciated <sup>1</sup>	6.25	(1.44)	4.84	(2.27)	6.48	(1.16)	5.91	(1.79)	4.33	(2.43)	5.90	(1.60)
By marital status at birth												
Married ( $n = 767$ )	5.30	(1.40)	5.20	(1.54)	4.95	(1.33)	4.64	(1.75)	4.13	(1.75)	4.01	(1.43)
Cohabiting ( $n = 863$ )	5.23	(1.36)	4.92	(1.58)	4.86	(1.38)	4.67	(1.58)	4.22	(1.73)	4.04	(1.53)
Significant differences	**		**		**		**		**		**	

Note: Significant differences by marital status are tested using one-tailed  $t$ -tests (unweighted).

<sup>1</sup>In year 1, the question is peek-a-boo; in year 3, it is played imaginary games; and in year 5, it is telling the child he/she is appreciated.

† $p < .10$  \* $p < .05$  \*\* $p < .01$

Table 3: Fixed Effects Estimates and Path Coefficients for Structural Equation Models on Relationship Quality and Parenting Engagement ( $N = 1,630$  Years 1 - 3,  $N = 1,376$  Years 3 - 5)

		1 Year to 3 Year ( $N = 1,630$ )	3 Year to 5 Year ( $N = 1,376$ )		
<b>Fixed Effects Models</b>					
		Avg RQ1 → PAR3	Avg RQ3 → PAR5		
Mothers	Standardized	.07 *	.06 *		
	Unstandardized	.35 *	.34 *		
Fathers	Standardized	.13 **	.10 **		
	Unstandardized	.79 **	.55 **		
<b>Structural Equation Models (SEM)</b>					
		Avg RQ1 → PAR3	PAR1 → Avg RQ3	Avg RQ3 → PAR5	PAR3 → Avg RQ5
Mothers <sup>1</sup>	Standardized	.07 *	.01	-.01	-.01
	Unstandardized	.46 *	.00	-.03	.00
Fathers <sup>2</sup>	Standardized	.08 **	-.02	.03	-.05 †
	Unstandardized	.49 **	-.01	.20	-.01 †

Note: RQ = relationship quality; PAR = parental engagement; 1 = 1-year survey; 3 = 3-year survey; 5=5-year survey; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation. All models include variables for parents' ages at baby's birth, race/ethnicity, lived with both parents at age 15, education, health status, substance problem, religious attendance, the number of children in the household, income-to-needs ratio, depression, parents' impulsivity, whether married at the time of birth, parents' fertility history, child gender, and child temperament.

<sup>1</sup> Goodness-of-fit statistics for mothers' SEM model Years 1 - 3:  $\chi^2 = 1334.19$ ,  $df = 834$ ,  $CFI = 0.95$ ,  $RMSEA = 0.019$ , and years 3 - 5:  $\chi^2 = 1129.83$ ,  $df = 830$ ,  $CFI = 0.97$ ,  $RMSEA = 0.016$ . <sup>2</sup> Goodness-of-fit statistics for fathers' SEM model Years 1 - 3:  $\chi^2 = 1275.16$ ,  $df = 832$ ,  $CFI = 0.96$ ,  $RMSEA = 0.018$ , and years 3 - 5:  $\chi^2 = 1138.31$ ,  $df = 828$ ,  $CFI = 0.97$ ,  $RMSEA = 0.017$ .

† $p < .10$  \* $p < .05$  \*\* $p < .01$

Table 4. Standardized Path Coefficients and Goodness-of-Fit Statistics for Structural Equation Models on Relationship Quality and Parental Engagement, by Marital Status at Birth  
( $N = 1,630$  Years 1 - 3,  $N = 1,376$  Years 3 - 5)

		Year 1 to Year 3					Year 3 to Year 5				
		RQ1 to PAR3	$\chi^2$	df	CFI	RMSEA	RQ3 to PAR5	$\chi^2$	df	CFI	RMSEA
<b>Mothers</b>											
A. Both paths free	Married	.13 **	2,120.07	1,640	.95	.019	.01	1,783.19	1,644	.98	.011
	Cohabiting	.05					-.03				
B. Constrain RQ → PAR	Married	.10 **	2,121.47	1,641	.95	.019	-.01	1,783.68	1,645	.98	.011
	Cohabiting	.09 **					-.01				
	$\chi^2$ difference test		1.40	1	$p = .237$			0.48	1	$p = .488$	
<b>Fathers</b>											
A. Both paths free	Married	.11 **	2,138.89	1,660	.95	.019	-.03 †	1,788.90	1,632	.98	.012
	Cohabiting	.07					.09 *				
B. Constrain RQ → PAR	Married	.09 **	2,139.35	1,661	.95	.019	.04	1,791.96	1,633	.98	.012
	Cohabiting	.09 **					.04				
	$\chi^2$ difference test		0.46	1	$p = .498$			3.06	1	$p = .080$	

Note: RQ = relationship quality; PAR = parental engagement; 1 = 1-year survey; 3 = 3-year survey; 5=5-year survey; CFI = Comparative Fit Index RMSEA = Root Mean Square Error of Approximation. All models include variables for parents' ages at baby's birth, race/ethnicity, lived with both parents at age 15, education, health status, substance problem, religious attendance, the number of children in the household, income-to-needs ratio, depression, parents' impulsivity, whether married at the time of birth, parents' fertility history, child gender, and child temperament.

† $p < .10$  \* $p < .05$  \*\* $p < .01$