RUNNING HEAD: Coparenting and father engagement

Coparenting and relationship quality effects on father engagement: Variations by residence, romance

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Abstract

We focused on coparenting support, partner relationship quality, and father engagement in families with young children that did not change structurally over four years of participation in the Fragile Families and Child Wellbeing study (N = 1,756). There was a significantly stronger and more robust positive association between fathers' perceived coparenting support at age 1 and father engagement at age 3 among nonresidential nonromantic parents compared with residential (married or cohabiting) and nonresidential romantic parents. There was a significantly stronger and positive association between relationship quality at age 1 and father engagement at age 3 among nonresidential nonromantic parents compared with residential parents. The findings emphasize the importance of considering both family structure and romantic involvement contexts of fathering when tracking father engagement over time.

Key words: coparenting, family structure, father engagement, nonresidential father, romantic involvement

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Researchers have suggested that coparenting, defined as "the ways that parents work together in their roles as parents" (Feinberg, 2003, p. 1499), has a significant influence on parents' relationships with their children. The implication is that positive coparenting relationships may enhance the quality and quantity of parental involvement with their children, thereby positively influencing developmental outcomes in children. Feinberg (2002) has suggested that the effects of the coparenting relationship should be generalizeable to any relationship between parental figures regardless of the family structure. Although studies have examined coparenting in different family structures (Amato & Keith, 1991; Carlson, McLanahan, & Brooks-Gunn, 2008), we are not aware of research that has compared the effects of coparenting across different structures. The present study addresses this gap by examining the effects of coparenting among four groups of parents who consistently remained in the same family structure and relational status category over time: married, cohabiting, nonresidential but romantically involved, and nonresidential nonromantically involved. The focus of this paper is on the effect of coparenting on fathers' engagement with children. These findings should be useful to responsible fatherhood and healthy marriage programs which have begun to address coparenting issues among their participants (Cowan, Cowan, Pruett, & Pruett, 2007).

Longitudinal studies are better suited to disentangle the associations between couple relationship variables and father engagement with children because the temporal aspect of these variables can be addressed (Williams, 2003). We therefore used data from the Fragile Families and Child Wellbeing (FFCW) study to conduct a cross-lagged longitudinal analysis of the associations between father engagement and coparenting when children were ages 1, 3, and 5 years. The present study focused on father engagement instead of paternal availability or responsibility because meta-analytic reviews of father involvement find stronger associations between indicators of engagement

and child outcomes than between availability or responsibility and outcomes (Marsiglio, Amato, Day, & Lamb, 2000). Father engagement refers to direct, behaviorally observable interaction between father and child. Availability is defined as fathers' accessibility to the child but not interacting directly with the child. Responsibility refers to the managing, coordinating, and scheduling functions of parenthood.

Theoretical Foundations

Researchers have suggested various ways in which the mother-father relationship influences parenting behavior (Brown, Schoppe-Sullivan, Mangelsdorf, & Neff, 2010; Erel & Burman, 1995). Recently, researchers have suggested that coparenting may have a stronger influence on parent-child relationships because it is more proximally related to parenting than is partner relationship quality (Feinberg, 2002; McHale, 2009). Coparenting connotes couples' awareness of the importance of relationship quality as it affects their children, whereas partner relationship quality may represent more compartmentalized notions that include an awareness that adult partners choose how and whether to stay in the relationship with their partner. Conversely, children do not choose their parents, and a parent's relationship with young children is often portrayed as less reciprocal than partner relationships. Although parents may engage in coparenting interactions with one another (e.g., communicating about their respective parenting roles) outside of children's view, these adult interactions often occur in the context of interacting with the child. For example, research has shown that infants are more often involved in triadic coparenting relationship contexts with their parents than in dyadic coparenting contexts (Schaffer, 1984). Moreover, empirical studies have established that infants have a triangular capacity to coordinate their attention between two parents as early as three to four months of age (McHale, Fivaz-Depeursinge, Dickstein, Robertson, & Daley, 2008). In contrast, partner interactions that are unrelated to the parenting role often take place outside of the view of children. Parents often try to shield their children from partner conflict by moderating the level of hostile expression between them (Ablow & Measelle, 2009). Even when directly exposed to

interparental conflict, children are less distressed by conflict that does not pertain to them than by conflict that does (Cummings, Goeke-Morey, & Papp, 2004). Although researchers suggest stronger associations between coparenting and father engagement than between relationship quality and engagement (McHale), researchers also note significant overlap between coparenting and relationship quality (Feinberg, 2002). The present study therefore examined the effects of both coparenting and partner relationship quality on longitudinal patterns of father engagement with children, although our major interest is on the effects of coparenting on father engagement across different family structures.

The present study was based on Feinberg's (2002) framework of coparenting which includes four components: coparenting support; childrearing disagreement; division of duties, tasks, and responsibilities; and management of interactional patterns. In the present study, we focused only on coparenting support because FFCW does not include measures of the other dimensions of coparenting. Coparenting support has been defined as "strategies and actions that support and extend the partner's efforts to accomplish parenting goals" (Van Egeren & Hawkins, 2004, p. 169). Feinberg has suggested that coparenting support has benefits to children's well-being. An obvious benefit is demonstrating a social model for the child's future social encounters. Children gain valuable insight and information about relationships by observing parents support each other (Katz & Low, 2004).

According to Feinberg (2002), coparenting should be applicable to both intact and non-intact family systems. Studies of intact families have shown a positive association between supportive coparenting and developmentally facilitative parent-child relationships, including parents' sensitivity and responsiveness to the child (Brown et al., 2010), positive parental affect and gaze at infants (Gordon & Feldman, 2008), and engagement of the infant during triadic play (Elliston, McHale, Talbot, Parmley, & Kuersten-Hogan, 2008). Several of these studies have also revealed a stronger positive relationship between supportive coparenting and father engagement of the child than between coparenting support and mother engagement of the child (Elliston et al.; Gordon & Feldman), further

supporting the present study's focus on the association between coparenting and fathers' engagement with children. Studies of non-intact families also suggest a significant association between coparenting support and father-child relationships (Futris & Schoppe-Sullivan, 2007). For example, Sobolewski and King (2005) found a positive association between nonresident fathers' supportive coparenting with the child's mother and responsive fathering. They found that the association between positive coparenting and responsive fathering resulted from nonresident fathers' increased contact with their children, which, in turn, was associated with more positive outcomes in children's internalizing and externalizing behavior.

Despite the findings that coparenting is applicable to fathers' parenting engagement across family structures, there is reason to expect that coparenting may have a stronger influence on fathers' engagement among non-intact family structures than among intact family arrangements. Coresidence has been shown to be a strong correlate of amount of fathers' engagement with children (Fagan, Palkovitz, Roy, & Farrie, 2009). As such, the proximity of the father to the child in intact families is likely to lessen the size of the effect of coparenting on the amount of father engagement with the child. On the other hand, fathers who do not reside with their children do not have regular access to the child and are likely to rely more heavily on a positive coparenting relationship with the mother in order to stay involved with the child. In families where mothers but not fathers share residence with the child, mothers tend to have considerably more control over fathers' engagement with children. Because of discrepancies in legal rights, nonresidential fathers face a greater range of barriers to ongoing engagement as they attempt to stay involved with their children. Mothers have greater legal latitude to impede visitation, access to children, time spent together, and daily decision-making around parenting issues (Insabella et al., 2003). It becomes more essential, therefore, for nonresidential fathers to maintain positive coparenting relationships with the mother if they wish to stay engaged with the child (Futris & Schoppe-Sullivan, 2007). Building on the literature, we hypothesized that coparenting

support will have a stronger positive effect on levels of nonresidential fathers' engagement with children compared with residential fathers. Nock (1995) has suggested that discrepancies in the legal rights of married and cohabiting parents serve as barriers to cohabiting fathers' engagement with children. We therefore compared the longitudinal association between coparenting support and paternal engagement among married and cohabiting partners.

Researchers have recently documented that there is considerable variability in levels of father engagement with children among nonresidential fathers (Cabrera et al., 2004). As such, the significance of the coparenting relationship for fathers may also depend on the presence or absence of a romantic relationship between mother and father. Romantic involvement is a critical variable because it is linked to the degree to which nonresidential parents are motivated and able to work together as parents. Romantic involvement implies greater emotional closeness than friend or acquaintance relationships, and a greater commitment to dyadic agreement than less close relationships. Reciprocity norms in romantic relationships require consideration of the other's perspectives and feelings to a greater degree than friendships or acquaintance relationships (Liao & Stevens, 1994). Parents in romantic relationships may be more motivated to engage in coparenting support than parents in nonromantic relationships. However, romantic involvement also implies more frequent proximity between the father and mother and hence the father and child (Fagan & Palkovitz, 2007).

Consistent with our hypothesis on nonresidential fathers, men who are not romantically involved with the mother face greater barriers to ongoing engagement as they attempt to stay involved with the child. In the absence of coparenting support, nonresidential nonromantically involved fathers may have little chance to stay engaged with the child. We therefore hypothesized that coparenting support will have a stronger positive association with paternal engagement among nonresidential nonromantic fathers compared with nonresidential romantic fathers.

We controlled for variables that are likely to be confounded with father engagement with the child. Paternal educational attainment is associated with greater employability and provision of material support (Christiansen & Palkovitz, 2001), and there is a broadly reported positive relationship between education level and father engagement. Being convicted of a crime and subsequent incarceration can have a decidedly detrimental influence on paternal involvement with children (Western, Lopoo, & McLanahan, 2004). Developmental research on parent-child interaction has also established that children's behavioral style and temperament influence parents' behavior over time (Karraker & Coleman, 2005). For example, when infant temperament challenges the establishment of synchronized routines with parents, quality of parent-infant attachments may be compromised (Sanson, Hemphill, & Smart, 2004). Consequently, early infant temperament may be an important covariate of father engagement over time. We also controlled for fathers' prenatal involvement with the mother and fetus because early commitment to the child predicts later paternal engagement with the child even among nonresidential fathers (Cabrera, Fagan, & Farrie, 2008). Finally, we controlled for child gender, as research shows that fathers spend more time with their sons than their daughters (Marsiglio, Amato, Day, & Lamb, 2000).

Research goal

The goal of the present study was to compare the longitudinal associations among fathers' perceptions of coparenting support, relationship quality, and father engagement in various types of residential and romantic relationships. In order to achieve this goal, we designed four groups of mother-father pairs: married, cohabiting, nonresidential romantic, and nonresidential nonromantic. Our sample was restricted to mother-father pairs who were consistently in one type of family structure during a four-year period of time because most previous studies assess family structure at one point in time and therefore do not account for the length of time the individuals have lived in that family arrangement. Developmental outcomes in father-child relationships have been theorized to be

contingent on the timing, dose, and duration of family relational qualities (Palkovitz & Daly, 2004). Further, transitions in family structure and romantic involvement have been linked with family stress and changes in father engagement (McBride, Schoppe, & Rane, 2002). Therefore, it is important to distinguish families with configurations that are consistent over time from those that undergo transitions in residence and romantic involvement. Our approach enabled us to determine whether specific family arrangements over time have a differential effect on the association among coparenting support, relationship quality, and father engagement.

First, we examined the longitudinal effects of coparenting support and relationship quality on father engagement among married and cohabiting parents to determine whether these two groups of parents could be combined into one group of residential parents. As we will demonstrate later, the married and cohabiting models did not differ significantly from each other. We, therefore, combined married and cohabiting parents into one group of residential parents (married or cohabiting). In order to isolate the effects of residence for couples, we compared the longitudinal influence of coparenting support and relationship quality on father engagement among residential and nonresidential romantic couples (couples in both groups were romantically involved with each other). To isolate the effects of romance in nonresidential couples, we compared the longitudinal influence of coparenting support and relationship quality on father engagement among nonresidential romantic and nonresidential nonromantic parents. In order to consider groups with the greatest contextual differences, we conducted the same set of analyses among residential and nonresidential nonromantic parents. We used structural equation modeling (SEM) to conduct a cross-lagged longitudinal analysis of the associations among coparenting support, partner relationship quality, and father engagement when children were ages 1, 3, and 5 years. Each model examined the longitudinal effects of coparenting and relationship quality at age 1 on father engagement at age 3, and the effects of relationship variables at age 3 on

engagement at age 5. We controlled for concurrent associations among engagement, coparenting, and mother-father relationship quality in addition to other confounding variables (e.g., temperament).

In addition, we examined mediation effects in the present study. Previous studies have shown that higher quality mother-father relationships shortly following the baby's birth have a positive indirect effect on father engagement with preschoolers, and this effect is mediated by father engagement during infancy (Fagan, Palkovitz, Roy, & Farrie, 2009). Based on this research, we hypothesized that coparenting support and relationship quality at age 1 year would have a positive indirect effect on father engagement at age 5 years that was mediated by father engagement at age 3 years.

Method

Data for this study came from the Fragile Families and Child Wellbeing Study (FFCW), a longitudinal study of nearly 5,000 families interviewed at the birth of a child, and again when the child was 1, 3, and 5 years old (McLanahan & Garfinkel, 2000). The FFCW survey was conducted by the Center for Research on Child Wellbeing at Princeton University and the Social Indicators Survey Center at Columbia University. This national study used a stratified random sample of all U.S. cities with 200,000 or more people. Stratification was based on policy environments and labor market conditions in the different cities (Reichman, Teitler, Garkinkel, & McLanahan, 2001). At baseline, data were collected from about 4,700 mothers of new babies at each hospital from maternity ward lists. Of the total births, approximately 3,600 births were to unmarried mothers, and 87% of eligible unmarried mothers completed baseline interviews. At least 75% of the unwed fathers were interviewed at baseline. Once a mother had been determined to be eligible, the mother signed a consent form to participate, and completed her baseline interview, and the baby's father was also asked to participate in the study (Center for Research on Child Wellbeing, 2008).

Data were used from both mothers' and fathers' interviews at one-year follow-up (Y1), three-year follow-up (Y3), and five-year follow-up (Y5). We limited the sample to parents that were consistently married at Y1, Y3, and Y5 (n = 841); consistently cohabiting across all three interview years (n = 323); consistently nonresidential romantic across all three interview years (n = 181); and consistently nonresidential nonromantic across all three interview years (n = 411). Two items from the father questionnaire were used to determine residence at Y1, Y3, and Y5. Fathers were asked if they and the mother were currently living together (1 = *yes*, 2 = *no*). Fathers who answered *no* to this question were then asked whether in the past two years they and the mother ever lived together for more than one month (1 = *yes*, 2 = *no*). Fathers who answered *yes* to this item were dropped from the study (n = 67). Fathers were also asked at each interview what their relationship with the mother is now. Response options included *married, romantic, separated, divorced, friends*, or *no relationship*. Fathers who indicated they were *separated, divorced, friends*, or *no relationship* were coded as *nonromantic*. The final sample included a total of 1,756 mothers and fathers.

Participant Characteristics

Table 1 shows the descriptive statistics for the married, cohabiting, nonresidential romantic, and nonresidential nonromantic samples. Fathers and mothers in the married sample were significantly older than fathers and mothers in the other samples. White European American parents were significantly more likely to be married than to be in the other relationship statuses. Black parents were significantly more likely to be married or nonresidential nonromantic than to be cohabiting or nonresidential romantic. The education level was significantly higher for married fathers than for fathers in the other samples.

Measures

Coparenting support. Five items were used from the Y1, Y3, and Y5 father questionnaires to assess fathers' perceptions of coparenting support. Sample items included: mother supports the way

you want to raise your child, mother talks with you about problems with raising the child, and mother respects your rules for the child. These coparenting items were used in a prior study based on FFCW and were found to have strong psychometric properties (Bronte-Tinkew, Horowitz, & Carrano, 2010). Items were based on a scale with responses ranging from 1 = *always* to 4 = *never.* The items were reverse recoded and then summed to construct composite measures of perceived coparenting support (range = 5 – 20). Cronbach's *α*s for the entire sample were: $\alpha_{Y1, Y3, Y5}$ = .81, .75, .85.

Partner relationship quality. The FFCW study included a series of relationship quality items that addressed both the positive and negative aspects of relationship behavior at Y1, Y3, and Y5. At Y1, fathers were asked how often their partner: is fair and willing to compromise; expresses affection or love; insults or criticizes you; encourages or helps with things that are important to you; tries to isolate you from friends or family; tries to prevent you from going to work or school; withholds or tries to control your money; listens when you need someone to talk to; and understands your hurts and joys. At Y3, respondents were asked these same questions with the addition of three items: she slaps or kicks you; she hits you with a fist or object that can hurt you; and she tries to make you have sex or do sexual things. The Y5 questionnaire included one additional question: how often does she throw things at you? Response options were 1 = *often*, 2 = *sometimes,* or 3 = *never*. Positive relationship behaviors were reverse coded so that a high score indicated higher relationship quality. The results of factor analysis revealed that all but the first item ("is fair and willing to compromise") loaded on one factor (eigenvalues ranged from 2.45 to 4.28). After omitting the first item, the remaining items were added together to form composite measures of positive relationship quality ($ranges_{Y1, Y3,Y5}$ = 8 - 24, 11 - 33, 12 - 36; $\alpha_{Y1,Y3, Y5}$ = .67, .70, .76). This relationship quality composite measure has been used in prior studies and has been shown to be significantly associated with father involvement with children (Gee, McNerney, Reiter, & Leaman, 2007).

Father engagement. The FFCW father questionnaire included seven items at Y1, 12 items at Y3, and eight items at Y5 geared towards addressing paternal childcare and participation in play and oral language activities. Items were based on a scale with responses ranging from 0 = *no days* to 7 = *seven days per week.* Sample Y1 items included how often the father plays games such as peek-a-boo or gotcha, sings songs or nursery rhymes, and hugs or shows physical affection. Though previous studies have distinguished between paternal engagement in caregiving, play, and literacy, we created a composite father engagement measure because all items represented fathers' behavioural expressions of involvement and a sufficient number of items were not available to create adequate caregiving, play, and literacy subscales. Further, the data available in FFCW were not conducive to assessing the quality of paternal engagement. Consequently, our measure represented a composite of level of fathers' engagement. The Y1 composite measure showed strong reliability (range = 0 - 49, $\alpha = .86$). All Y1 items, with the exception of "plays games such as peek-a-boo or gotcha," were included atY3. The Y3 composite measure included six additional items (e.g., tell child you love him/her, let child help you with household chores) (range = 0 - 84; $\alpha = .91$). The Y5 measure included eight items (e.g., read stories, play inside with toys) (range = 0 to 56; $\alpha = .74$).

*Controls***.** To measure fathers' *convictions*, fathers were asked at Y1 if they had ever been convicted of a charge, the number of times they had been convicted, and the date of their most recent conviction. Convictions that took place after the date of baseline interview were coded as convictions between baseline and Y1 (1 = *yes*, 0 = *no*). At Y3 and Y5, fathers were again asked the total number of convictions they had ever received. Conviction at Y3 was determined by subtracting the number of convictions at Y1 from Y3. The same procedure was used to calculate convictions at Y5. We also controlled for fathers' *education*. Fathers were asked to indicate the highest level of school completed. Responses ranged from less than eighth grade to graduate school. We only used fathers' education at Y1 in our analyses because of high collinearity (rs > .70) among education variables at Y1, Y3, and

Y5. Fathers were asked at baseline about their *prenatal involvement* with three items (e.g., "were you present at the birth?"). All items were coded 0 = *no*, 1 = *yes*. The fathers' responses on these items were summed to create a composite measure of fathers' prenatal involvement (range = 0 to 3, α = .60). We also included a measure of the *child's temperament* based on three items addressing the child's reactivity from the Y1 father questionnaire (1 = *least like* to 5 = *most like*): child often fusses and cries, child gets upset easily, and child reacts strongly when upset. These items were summed to construct a continuous measure, with higher scores suggesting more negative reactivity (α = .65).

Results

Preliminary Analyses and Descriptive Statistics

We conducted a series of statistical analyses to determine if there were selection effects for fathers who participated in the study versus those who did not. Across all but one relationship status group, mothers reported that fathers who were in the study had significantly higher education levels than those who were not in the study: married fathers, $F(1, 940) = 18.02$, $p < .001$; cohabiting fathers, $F(1, 415) = 2.78$, *ns*; nonresidential romantic, $F(1, 250) = 10.08$, $p < .001$; and nonresidential nonromantic, $F(1, 540) = 20$, $p < .001$.

Tables 2 and 3 show that all correlations among study variables were under .70, suggesting no evidence of collinearity. Tables 2 and 3 also show the descriptive statistics for the major study variables for each relationship status group. During Y1, Y3, and Y5 there were significant differences in father engagement by relationship status group, $F(3, 1{,}752) = 240$; 186; 213, respectively, $p < .001$. Scheffe tests showed that married and cohabiting fathers were significantly more engaged than nonresidential romantic and nonresidential nonromantic fathers at Y1, and nonresidential romantic fathers were more engaged than nonresidential nonromantic fathers. At Y2 and Y3, married, cohabiting, and nonresidential romantic fathers were significantly more engaged than nonresidential nonromantic fathers.

A similar pattern was also evidenced for coparenting support and partner relationship quality. During Y1, Y3, and Y5 there were significant differences in coparenting support by relationship status group, $F(3, 1{,}752) = 148; 136; 265$, respectively, $p < .001$. Scheffe tests showed that married, cohabiting, and nonresidential romantic fathers reported significantly higher coparenting support than nonresidential nonromantic fathers during Y1, Y3, and Y5. At Y1, Y3, and Y5, there were significant differences in relationship quality by group, $F(3, 1{,}752) = 100; 96; 135$, respectively, $p < .001$. Scheffe tests revealed married fathers reported significantly higher relationship quality than cohabiting fathers, and married, cohabiting, and nonresidential romantic fathers reported significantly higher relationship quality than nonresidential nonromantic fathers during all three years.

Path Analysis

Analyses were conducted using AMOS (see Table 4 and Figure 1). Full information maximum likelihood estimation in AMOS was used to handle all missing data. First, comparisons were made between the unrestrained models for married and cohabiting parents. There was no significant difference between these two models, $\Delta\chi^2$ ($df = 1$, $N = 1{,}164$) = 3.5, *ns.* We therefore combined married and cohabiting parents into one group that we refer to as residential parents.

Multiple group analysis was then used to examine and compare the structural equation models for residential, nonresidential romantic, and nonresidential nonromantic parents. First, comparisons were made between residential and nonresidential romantic parents. Next, comparisons were made between nonresidential romantic and nonresidential nonromantic couples. Finally, comparisons were made between residential and nonresidential nonromantic couples. The models were constrained in each multiple group analysis. Four parameters were tested for equivalence in these analyses: coparenting at Y1 → father engagement at Y3, relationship quality at Y1 → father engagement at Y3, coparenting at Y3 → father engagement at Y5, and relationship quality at Y3 → father engagement at Y5.

Adequate fit to the data was suggested when the chi square divided by the degrees of freedom was less than 5 (Schumacker & Lomax, 2004), the comparative fit index (CFI) was greater than .90 (Hu & Bentler, 1999), and the root-mean-square error of approximation (RMSEA) was less than .06 (Browne & Cudeck, 1993). Chi square difference tests were conducted to test for measurement invariance across groups.

Comparisons between models. In order to assess the influence of residence for romantically involved couples, the first multiple group analysis included residential (married/cohabiting) and nonresidential romantic couples. The multiple group model for these two groups fit the data well, χ^2/df ($df = 96$, $N = 1{,}345$) = 4.43, CFI = .93, RMSEA = .048. With approximately 90% confidence, the RMSEA was between .044 and .053. Imposing restrictions of four equal path coefficients (e.g., coparenting at Y1 → father engagement at Y3) across the two groups did not result in a statistically significant improvement of the overall model, $\Delta\chi^2$ ($df = 4$, $N = 1{,}345$) = 4.63, *ns*. These findings suggested that both models had good fit, but the path coefficients were not significantly different from each other in the two groups.

To isolate the effects of romance in nonresidential couples, the second comparison was between nonresidential romantic and nonresidential nonromantic couples. The multiple group model for these two groups fit the data well, χ^2/df ($df = 96$, $N = 592$) = 1.25, CFI = .99, RMSEA = .021. With approximately 90% confidence, the RMSEA was between .003 and .031. Imposing restrictions of four equal path coefficients across the two groups resulted in a statistically significant improvement of the overall model, $\Delta\chi^2$ ($df = 4$, $N = 592$) = 10.58, $p < 001$. These findings suggested that both models had good fit, and some of the path coefficients were significantly different in the two groups.

With constraints, the models (see Table 4) revealed a significant difference in the association between coparenting at Y1 and father engagement at Y3 among nonresidential nonromantic couples ($\beta = .41$, $p < .0001$) compared with nonresidential romantic couples ($\beta = .08$, *ns*), $\Delta\chi^2$ ($df = 1$, $N = 592$) =

3.98, $p < .05$. There were no significant associations between coparenting at Y3 and father engagement at Y5 among nonresidential nonromantic or nonresidential romantic couples.

We examined whether father engagement at Y3 mediated the association between coparenting at Y1 and father engagement at Y5. There was a significant indirect positive effect of coparenting at Y1 on father engagement at Y5 ($\beta = .19$, $p < .001$, not shown in table) among nonresidential nonromantic couples. We used the Baron and Kenny (1986) method to test for mediation. Father engagement at Y3 significantly and completely reduced the association between coparenting at Y1 and father engagement at Y5. Sobel's test revealed that the mediation effect was significant ($t = 4.5$, $p < .0001$).

The multiple group analysis between nonresidential romantic and nonresidential nonromantic couples revealed significant positive associations between partner relationship quality at Y1 and father engagement at Y3 among nonresidential romantic couples ($\beta = .21$, $p < .01$) and nonresidential nonromantic couples ($\beta = .27$, $p < .001$). However, there were no significant differences between the two models when they were constrained. There was a significant indirect effect of relationship quality at Y1 on father engagement at Y5 ($\beta = .10$, $p < .01$) among nonresidential nonromantic parents. We examined whether father engagement at Y3 mediated the indirect effect of relationship quality at Y1 on engagement at Y5. The indirect association did not meet the mediation criteria according to Baron and Kenny (1986).

In order to consider groups with the greatest contextual differences, the third multiple group analysis included residential and nonresidential nonromantic couples. The multiple group model for these two groups fit the data well, χ^2 / df ($df = 96$, $N = 1{,}575$) = 4.15, CFI = .94, RMSEA = .043. With approximately 90% confidence, the RMSEA was between .039 and .047. Imposing restrictions of four equal path coefficients across the two groups resulted in a statistically significant improvement of the overall model, $\Delta\chi^2$ ($df = 4$, $N = 1{,}575$) = 21.53, $p < .001$.

With constraints, the models (see Table 4) revealed a significant difference in the association between coparenting at Y1 and father engagement at Y3 among nonresidential nonromantic couples (β = .41, $p < .0001$) compared with residential couples (β = .04, *ns*), $\Delta\chi^2$ (df = 1, N = 1,575) = 25.95, $p <$ .0001. In addition, the models revealed a significant difference in the association between partner relationship quality at Y1 and father engagement at Y3 among nonresidential nonromantic couples (β = .27, $p < .001$) compared with residential couples (β = .07, $p < .05$), $\Delta\chi^2$ (df = 1, N = 1,575) = 27.29, $p <$ .001. These findings suggested that coparenting support and relationship quality at Y1 had significantly stronger positive effects on father engagement at Y3 among nonresidential nonromantic couples compared with residential couples.

To address possible shared method variance when fathers provided self-reports for all measures, the structural equation models were also tested with mothers' perception of father engagement at Y1, Y3, and Y5 (these analyses included father self-report of coparenting and relationship quality). The multiple group model comparing residential with nonresidential romantic couples fit the data well, but was not significantly different from the same model that included father perception of engagement, $\Delta\chi^2$ (df = 1, N = 1,345) = 53, *ns*. The model comparing nonresidential romantic and nonresidential nonromantic couples fit the data well, but was also not significantly different from the same model that included father perception of engagement, $\Delta\chi^2$ (df = 1, N = 592) = .03, *ns*. Finally, the model comparing residential with nonresidential nonromantic couples fit the data well, but was not significantly different from the model that included father perception of engagement, $\Delta\chi^2$ (df = 1, N = 1,575) = 77, *ns*. Moreover, comparisons between the mother and father models showed that the parameter estimates among the exogenous and endogenous variables were nearly identical.

To summarize, the findings of the path analyses suggested that coparenting support at Y1 had a significantly stronger longitudinal association with father engagement at Y3 among couples in

nonresidential nonromantic relationships compared with couples in residential and nonresidential romantic relationships. Our findings also revealed that partner relationship at Y1 had a stronger positive longitudinal association with father engagement at Y3 among nonresidential nonromantic couples compared with residential couples. Neither coparenting nor relationship quality at Y3 was significantly associated with father engagement at Y5, suggesting that relationship variables have their greatest effect on father engagement earlier in the child's and family's development. Coparenting support at Y1 was indirectly associated with father engagement at Y5 among nonresidential nonromantic couples, and this effect was mediated by the effect of coparenting at Y1 on engagement at Y3.

Discussion

The present study tested the coparenting support component of Feinberg's (2002) framework and his hypothesis which states that the effect of coparenting on parenting behavior is generalizeable across different family structures. We also hypothesized, however, a stronger longitudinal association between coparenting support and father engagement among nonresidential romantic parents compared with residential parents, and between nonresidential nonromantic parents compared with nonresidential romantic parents. The findings of this study did not support the generalizeability of coparenting support effects on fathers' engagement with young children across all structures. Coparenting support was significantly and positively associated with father engagement in only one family group—nonresidential nonromantic parents—and only when the child was between 1 and 3 years old. Our hypotheses were also only partially supported. We did not find a significant difference in the relationship between coparenting support and father engagement among nonresidential romantic parents compared with residential parents (both groups were romantically involved in this analysis). We found a significantly stronger positive longitudinal association between coparenting support and father engagement among nonresidential nonromantic parents compared with nonresidential romantic

parents (both groups were nonresidential). These findings suggest that romantic involvement and residential status are important contextual variables to consider when examining the association between coparenting support and father engagement.

We note that the sample for the current study consisted of urban fathers in the U.S. who were primarily low-income. In addition, we restricted the sample to fathers who were consistently in one type of family structure (e.g., nonresidential romantic) during a four-year period of time. Approximately 38% of the families in the entire FFCW study stayed in consistent family structures categories during the four years, and therefore represent a significant portion of the FFCW sample. Nonetheless, many other FFCW families had multiple family structures, and our findings cannot be generalized to them, as we did not study patterns of father engagement across transitions in residential status.

This study provides integrated advancements over previous studies that did not longitudinally examine the associations between coparenting and father engagement and that did not include measures of partner relationship quality. Moreover, we found that the fit of our models did not differ from each other when mothers or fathers provided ratings of father engagement. The cross-lagged longitudinal approach of the present analysis enabled us to examine whether earlier levels of coparenting support predicted later father engagement while also controlling for concurrent levels of coparenting. Because fathers' perceived coparenting support and father engagement measured at one time period tend to be intercorrelated, the cross-lagged method provides stronger evidence of the extent to which coparenting support influences paternal engagement. It is plausible that previous studies have overestimated the effects of coparenting on father engagement. For example, whereas Carlson, McLanahan, and Brooks-Gunn (2008) find a significant concurrent association between coparenting and father engagement among nonresidential fathers, we find that coparenting support and father engagement are longitudinally related only among nonresidential nonromantic fathers.

The association between coparenting at Y1 and father engagement at Y3 was moderate to strong among nonresidential nonromantic couples whereas the associations between these variables were weak and nonsignificant among residential and nonresidential romantic couples. Moreover, coparenting at Y1 was indirectly associated with father engagement at Y5 among nonresidential nonromantic couples, and this indirect association was mediated by fathers' engagement at Y3, suggesting that fathers who adopt an early paternal role that emphasizes coparenting support are more likely to stay engaged with their children when they are ready to enter school because of their increased paternal engagement with the child during the early preschool period. Together these findings suggest that positive coparenting is a facilitator of father engagement in the absence of a more stable set of ongoing relationship parameters, namely coresidence and romantic engagement with the child's mother. Researchers have suggested that fathers in nonresidential relationships frequently have substantial barriers to engagement with children, and positive coparenting relationships between the mother and father may be critical for fathers to stay involved with their children (Futris & Schoppe-Sullivan, 2007). Our findings support these hypotheses in that coparenting is associated with father engagement in the couple group (nonresidential nonromantic) that is likely to have the greatest barriers to engagement.

A significant finding of this study was that the longitudinal association between coparenting and father engagement was significantly stronger among nonresidential nonromantic parents compared with nonresidential romantic parents. Nonromantically involved fathers in all likelihood have little motivation to be in proximity with their child's mother (see Cabrera et al., 2004), unless they are intrinsically motivated to establish a positive coparenting relationship. In order to do this, these couples would need to appreciate the value of having both parents involved in the child's life, set aside emotional hurts and conflict in their relationship, and possibly establish a friendship bond. In short, the coparenting relationship becomes a particularly important contextual factor for facilitating fathers'

ongoing engagement with their children when they are in nonromantic relationships with their child's mother.

Another important finding of this study was that coparenting support at Y1 was only longitudinally and directly associated with father engagement among nonromantic couples when the child was 3 years old (and indirectly associated with father engagement at 5 years). There was no significant association between coparenting support at Y3 and father engagement at Y5. One possible explanation for this finding is that by age 5, fathers who have been involved with their children since birth developed strong paternal identities and bonds with the children and are highly motivated to spend time with them. These fathers may be less influenced by the quality of the coparenting relationship at Y3 and more by the relationship they have with their child. Alternatively, mothers' gatekeeping and encouragement of fathers may become more important for father engagement as time passes. For example, studies have shown that the quality of the coparenting relationship is only relevant when mothers' criticism of the father is low and her encouragement is high (Schoppe-Sullivan et al., 2008). Alternatively, positive coparenting may provide enough impetus to facilitate father engagement for a relatively short period of time, but fathers in populations represented in the Fragile Families data set may require greater cost benefits ratios than coparenting can provide. Specifically, positive coparenting may be less attractive to fathers than romantic relationships, and when the prospects of developing a coparenting relationship into a romantic relationship wane, fathers may decrease their investments in the child as they search for new romantic alliances.

Another interesting finding of this study was that the longitudinal association between relationship quality at Y1 and father engagement at Y3 was positive among all three family structure groups, but the associations between these variables were significantly stronger only among the nonresidential nonromantic group compared with the residential group. One can assume that nonresidential nonromantic fathers spend less time with their coparenting partners and children than

residential fathers either out of their own volition or because mothers restrict their access to children when the partner relationship is lower quality. Although the present data cannot be used to explain how relationship quality influences paternal engagement, the results do suggest that nonresidential nonromantic fathers may find it difficult to stay engaged with their children in the absence of a good quality mother-father relationship. It is also noteworthy that relationship quality at Y1 was significantly related to paternal engagement at Y3 among all three family structures, whereas coparenting at Y1 was only related to father engagement at Y3 among nonresidential nonromantic parents. Relationship quality may be more generalizeable across family structures than is coparenting. However, this is only the case when the children are age 3 and not when they are age 5. Taken together, these findings provide further evidence for the notion that coparenting and partner relationship quality are different aspects of the mother-father relationship, and although both are related to paternal engagement, their associations with engagement are influenced by the specific family structure context.

Limitations

There are a number of significant limitations in this study. The present study examines only one component of Feinberg's (2002) coparenting framework. It is possible that other coparenting variables (e.g., childrearing disagreement) will be related to father engagement across more than just one family structure group. In addition, observational measures of the study variables would provide more nuanced assessments of the mother-father relationship and father engagement and possibly reduce the risks of shared method variance. We also note possible limitations with the nonromantic involvement variable. The FFCW questionnaires did not ask fathers or mothers whether the couple was romantically involved during the entire time period since the last interview. Instead, the study asked about the couple's current relationship. Couples' relationship status between interviews could have been different than what was reported during each interview. There are also sample limitations;

fathers who participated in the study were more likely to have higher levels of education. Thus, caution should be exercised when generalizing the findings of the study to all urban fathers. We also acknowledge that the pathways between coparenting, relationship quality, and father engagement may be more complex than we assume. For example, coparenting support may lead to more positive child behavior, which then encourages increased levels of father engagement. Moreover, despite the benefits of longitudinal research designs, it is still not possible to establish cause-effect relationships among coparenting, relationship quality, and father engagement. We can only state that there are longitudinal associations among these variables.

Conclusions

Our study shows that residence and romantic involvement between parents are important contexts for father engagement with young children, at least as measured in the Fragile Families research project. Positive coparenting support and partner relationship quality are most facilitative of father engagement in the most distal contexts of father-child relationships over time: nonresidential, nonromantically involved fathers. Fathers with the most tenuous connections to their children and partners benefit most from relationship resources in regard to facilitated paternal engagement over time. Family support workers and policymakers should recognize the importance of helping new parents to value the facilitative power of coparenting support and partner relationship quality for maintaining father-child engagement over time. Future research should address other aspects of the Feinberg (2002) coparenting framework in relation to paternal engagement, including childrearing disagreement; division of duties, tasks, and responsibilities; and management of interactional patterns. Further contributions could be made by focusing on the meanings and processes of specific aspects of coparental support that facilitate father engagement with children over time as well as designing prospective program evaluation studies that track the efficacy of providing expectant parents with

information on the value of maintaining positive coparenting relationships across time, relational status, and residential transitions.

References

Ablow, J. C., & Measelle, J. R. (2009). Capturing young children's perceptions of marital conflict. In M. S. Schulz, M. K. Pruett, P. K. Kerig, & R. D. Parke (Eds.) *Strengthening couple relationships for optical child development* (pp. 41-57). Washington, DC: APA.

Amato, P. R., & Keith, B. (1991). Parental divorce and adult well-being: A meta-analysis. *Journal of Marriage and the Family, 53,* 43-58.

Bronte-Tinkew, J., Horowitz, A., & Carrano, J. (2010). Aggravation and stress in parenting: Associations with coparenting and father engagement among resident fathers. *Journal of Family Issues, 31,* 525-555.

Brown, G. L., Schoppe-Sullivan, S. J., Mangelsdorf, S. C., & Neff, C. (2010). Observed and reported coparenting as predictors of infant-mother and infant-father attachment security. *Early Child Development and Care, 180*, 121-137.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Beverly Hills, CA:Sage.

Cabrera, N., Fagan, J., & Farrie, D. (2008). Explaining the long reach of fathers' prenatal involvement on later paternal engagement with children. *Journal of Marriage and Family, 70*, 1094-1107.

Cabrera, N., Ryan, R. M., Shannon, J. D., Brooks-Gun, J., Vogel, C., Raikes, H., Tamis-LeMonda, C., & Cohen, R. (2004). Low-Income fathers' involvement in their toddlers' lives: Biological fathers from the Early Head Start research and evaluation study. *Fathering, 2,* 5-30.

Carlson, M. J., McLanahan, S. S., Brooks-Gunn, J. (2008). Coparenting and nonresident fathers' involvement with young children after a nonmarital birth. *Demography, 45,* 461-488.

Center for Research on Child Wellbeing (2008). Introduction to the Fragile Families public use data: Baseline, one-year, three-year, and five-year core telephone data. Retrieved June 2, 2010, from the World Wide Web: www.fragilefamilies.princeton.edu/documentation/core/4waves_ff_public.pdf.

Christiansen, S. L., & Palkovitz, R. (2001). Why the 'good provider' role still matters: Providing as a form of paternal involvement. *Journal of Family Issues, 22,* 84-106.

Cowan, C. P., Cowan, P. A., Pruett, M. K., & Pruett, K. (2007). An approach to preventing coparenting conflict and divorce in low-income families: Strengthening couple relationships and fostering fathers' involvement. *Family Process, 46,* 109-121.

Cummings, E. M., Goeke-Morey, M. C., & Papp, L. M. (2004). Everyday marital conflict tactics in the home. *Journal of Abnormal Child Psychology, 32,* 191-202.

Elliston, D., McHale, J., Talbot, J., Parmley, M., & Kuersten-Hogan, R. (2008). Withdrawal from coparenting interactions during early infancy. *Family Process, 47,* 481-499.

Erel, O., & Burman, B. (1995). Interrelatedness of marital relations and parent-child relations: A meta-analytic review. *Psychological Bulletin, 118,* 108-132.

Fagan, J., & Palkovitz, R. (2007). Unmarried, nonresident fathers' involvement with their infants: A risk and resilience perspective. *Journal of Family Psychology*, *21*. 479-489.

Fagan, J., Palkovitz, R., Roy, K., & Farrie, D. (2009). Pathways to paternal engagement: Longitudinal effects of cumulative risk and resilience on nonresident fathers. *Developmental Psychology*, *45*, 1389-1405.

Feinberg, M. E. (2002). Coparenting and the transition to parenthood: A framework for prevention. *Clinical Child and Family Psychology Review, 5,* 173-195.

Feinberg, M. E. (2003). The internal structure and ecological context of coparenting: A framework for research and intervention. *Parenting: Science and Practice, 3,* 95-131.

Futris, T. G., & Schoppe-Sullivan, S. J. (2007). Mothers‘ perceptions of barriers, parenting alliance, and adolescent fathers‘ engagement with their children. *Family Relations, 56,* 258-269.

Gee, C. B., McNerney, C. M., Reiter, M. J., & Leaman, S. C. (2007). Adolescent and young adult mothers' relationship quality during the transition to parenthood: Associations with father involvement in Fragile Families. *Journal of Youth and Adolescence, 36,* 213-224.

Gordon, I., & Feldman, R. (2008). Synchrony in the triad: A microlevel process model of coparenting and parent-child interactions. *Family Process, 47,* 465-479.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55.

Insabella, G. M., Williams, T., & Pruett, M. K. (2003). Individual and coparenting differences between divorcing and unmarried fathers: Implications for family court services. *Family Court Review, 41,* 290-306.

Karraker, K. H., & Coleman, P. K. (2005). The effects of child characteristics on parenting. In T. Luster & L. Okagaki (Eds.), *Parenting: An ecological perspective* (pp.147-176). Mahwah, NJ: Lawrence Erlbaum Associates.

Katz, L. F., & Low, S. M. (2004). Marital violence, co-parenting, and family-level processes in relation to children's adjustment. *Journal of Family Psychology, 18*, 372-382.

Liao, T. F., & Stevens, G. (1994). Spouses, homogamy and social networks. *Social Forces*, 73, 693-707.

Marsiglio, W., Amato, P., Day, R. D., & Lamb, M. E. (2000). Scholarship on fatherhood in the 1990s and beyond. *Journal of Marriage and Family, 62,* 1173-1191.

McBride, B. A., Schoppe, S. J., & Rane T. R. (2002). Child characteristics, parenting stress, and parental involvement: Fathers versus mothers. *Journal of Marriage and Family, 64*, 998- 1011.

McHale, J. (2009). Shared child rearing in nuclear, fragile, and kinship family systems: Evolution, dilemmas, and promise of a coparenting framework. In M. S. Schulz, M. K. Pruett, P. K. Kerig, & R. D. Parke (Eds.), *Strengthening couple relationships for optimal child development* (pp. 77-94). Washington, DC: American Psychological Association.

McHale, J., Fivaz-Depeursinge, E., Dickstein, S., Robertson, J., & Daley, M. (2008). New evidence for the social embeddedness of infants' early triangular capacities. *Family Process, 47,* 445-463.

McLanahan, S., & Garfinkel, I. (2000). The Fragile Families and Child Wellbeing Study: Questions, design, and a few preliminary results. Center for Research on Child Wellbeing, Working Paper # 00-07. Retrieved on June 19, 2006, from http://crcw.princeton.edu/papers.html.

Nock, S. L. (1995). A comparison of marriages and cohabiting relationships. *Journal of Family Issues*, *16*, 53-76.

Palkovitz, R., & Daly, K. (2004). Eyeing the edges: theoretical considerations of work and family for fathers in midlife development. *Fathering, 2,* 215-233.

Reichman, N. E., Teitler, J. O., Garkinkel, I., & McLanahan, S. S. (2001). Fragile Families: Sample design. *Children and Youth Services Review, 23*(4/5), 303 – 326.

Sanson, A., Hemphill, S. A., & Smart, D. (2004). Connections between temperament and social development: A review. *Social Development, 13*, 142-170.

Schaffer, H. R. (1984). *The child's entry into a social world*. London: Academic Press.

Schoppe-Sullivan, S. J., Brown, G. L., Cannon, E. A., Mangelsdorf, S. C., & Sokolowski, M. S. (2008). Maternal gatekeeping, coparenting quality, and fathering behavior in families with infants. *Journal of Family Psychology, 22,* 389-398.

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Sobolewski, J. M., & King, V. (2005). The importance of the coparental relationship for nonresident fathers' ties to children. *Journal of Marriage and Family, 67,* 1196-1212.

Van Egeren, L. A., & Hawkins, D. P. (2004). Coming to terms with coparenting: Implications of definition and measurement. *Journal of Adult Development, 11*, 65-178.

Western, B., Lopoo, L., & McLanahan, S. (2004). Incarceration and the bonds among parents in fragile families. In M. Patillo, D. Weiman, & B. Western (Eds.), *The impact of incarceration on families and communities.* New York: Russell Sage.

Williams, K. (2003). Has the future of marriage arrived? A contemporary examination of gender, marriage, and psychological well-being. *Journal of Health and Social Behavior, 44,* 470-487.

Table 1. *Participant Characteristics (N = 1,756)*.

	Married		Cohabiting		Nonresidential		Nonresidential		*F*	Scheffe	χ^2	*p* <
	n = 841		*n* = 323		romantic *n* = 181		nonromantic *n* = 411					
Father age Y5, *M, SD*	35.63	6.40	32.31	6.72	31.38	7.59	30.73	7.33	32	1 > 2,3,4		.001
Mother age Y5, *M, SD*	32.54	7.92	29.01	7.25	25.88	10.89	25.93	11.03	120	1 > 2,3,4		.001
Father's race/ethnicity, *n, %*						5.50	30	7.30			261	.001
Non-Hispanic white	333	39.60	40	12.40	10							
Black	226	26.90	144	44.70	127	70.20	269	65.50			223	.001
Hispanic/Latino	221	26.30	118	36.60	18	9.90	47	11.40			53	.001
Asian	34	4.00	5	1.60	2	1.10	7	1.70			16	.01
American Indian	20	2.40	15	5.00	6	3.30	6	1.50			31	.001
Other	7	.80			3	1.70	11	2.70				
Missing					15	8.30	41	9.90				
Father's education, median	some college		HS graduate		HS graduate		HS graduate		108	1 > 2,3,4		
Child gender (1 = male), *n, %*	458	54.50	165	51.20	95	52.50	209	50.90			.71	*ns*

Note: Statistical difference tests were not conducted on the "other" or "missing" race/ethnicity categories because of small cell sizes.

Degrees of freedom for *F* tests were 1 and 1,752. Degrees of freedom for chi square tests were 3.

Table 2. *Correlation Matrix for Married* (*n* = 841) *and Cohabiting Fathers* (*n* = 323).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Conviction B-1		-.00	-.00	-.05	.07*	-.04	-.02	-.04	-.02	-.05	-.01	.02	-.08*	.03	.02	-.02
2. Conviction 1-3	-		.08*	-.08*	.06	-.01	.09**	-.02	.01	.01	-.01	-.03	.02	-.08*	-.06	.02
3. Conviction 3-5	-	.20***		-.09	-.02	.01	.07*	-.01	-.03	.02	-.02	-.06	.02	-.12***	-.06	.05
4. Education 1	-	-.06	.01		-.10**	.01	-.29***	.07*	.10**	.06	.03	-.03	.04	.06	-.02	.00
5. Child temp. 1	-	.06	.10	-.06		.00	.00	-.20***	-.20***	-.09**	-.20***	-.13***	-.03**	-.19***	-.12***	-.08*
6. Child gender	-	-.01	.09	-.01	-.10		-.02	.01	.02	.02	-.01	.01	-.02	.01	-.02	.03
7. F prenatal inv.	-	-.13*	.00	.05	-.14*	.01		.00	-.05	.04	-.03	-.06	.11**	-.06	-.06	.10**
8. Rel. quality 1	-	-.09	.02	.08	-.11	.09	.05		.49***	.11***	.51***	.26***	.13***	.46***	.35***	.14***
9. Coparenting 1	-	-.05	-.02	-.14*	-.13*	.03	.02	.46***		.21***	.43***	.48***	.16***	.37***	.42***	.19***
10. F engage. 1	-	-.02	.07	.18**	-.05	.01	.12*	.23***	.20***		.10**	.12***	.48***	.09**	.07*	.46***
11. Rel. quality 3	-	-.05	.03	.04	-.05	.04	.13*	.51***	.20***	.20***		.40***	.15***	.57***	.44***	.14***
12. Coparenting 3	-	-.03	.04	-.04	-.13*	.11*	.15**	.34***	.42***	.19**	.44***		.15***	.33***	.43***	.14***
13. F engage. 3	-	-.19**	.03	.10	-.01	.11	.06	.24***	.20***	.44***	.23***	.20***		.15***	.14***	.55***
14. Rel. quality 5	-	-.16**	.02	-.04	-.17**	.02	.11	.42***	.24***	.18**	.56***	.33***	.14*		.56***	.14***
15. Coparenting 5	-	-.08	.01	-.14*	-.15**	.07	.05	.15**	.28***	.08	.32***	.36***	.14*	.56***		.17***
16. F engage. 5	-	-.01	.07	.04	-.07	.07	.05	.18**	.14*	.51***	.19**	.14*	.55***	.18**	.11*	
M	.00	.01	.01	5.67	5.38	.54	4.54	24.77	14.40	37.28	33.74	19.30	52.59	42.54	19.36	31.57
SD	.03	.10	.11	2.18	3.01	.50	.90	2.23	.92	10.12	2.30	1.22	13.27	2.92	1.22	9.68
M	.00	.04	.04	4.19	6.00	.51	5.75	24.23	14.23	38.50	33.05	19.11	53.48	41.53	19.10	33.50
SD	.00	.20	.19	1.50	2.93	.50	.55	2.35	1.06	10.58	2.73	1.23	14.00	3.77	1.56	10.16

Note: Statistics above the diagonal refer to married fathers. Statistics below the diagonal refer to cohabiting fathers. Correlations for convictions B-1 are blank for cohabiting fathers because no fathers reported a conviction during this time period. The first two *M* and *SD* rows pertain to married parents. The second two *M* and *SD* rows pertain to cohabiting parents. In regards to variable names, B = baseline, 1 = Y1, 3 = Y3, and 5 = Y5. Child temp. = child temperament. F prenatal inv. = father prenatal involvement. Rel. quality = relationship quality. F engage. = father engagement.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3. *Correlation Matrix for Nonresidential Romantic* (*n* = 181) *and Nonresidential Nonromantic Fathers* (*n* = 411).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Conviction B-1		.07	.06	-.01	.08	-.01	-.03	-.01	.06	-.14**	.01	.03	-.08	.02	.01	-.04
2. Conviction 1-3	-.08		.05	.03	.02	.01	.01	.05	.01	-.08	.09	.12*	-.18***	.07	-.00	-.03
3. Conviction 3-5	.27***	.14		.03	.02	.01	.02	-.03	-.05	-.04	.02	.04	-.08	-.09	.00	-.21***
4. Education 1	-.04	-.08	-.06		-.06	.03	.02	-.22***	-.21***	.13*	-.28***	-.07	.05	-.10*	-.02	.06
5. Child temp. 1	.03	-.05	.01	.05		.02	-.11*	.03	-.02	-.05	-.04	-.05	-.02	-.05	.07	-.05
6. Child gender	-.07	.01	.08	-.13	-.03		.07	-.13**	-.17**	-.05	-.02	.03	.03	-.01	.01	-.07
7. F prenatal inv.	-.04	.02	-.06	.05	.05	.01		.03	-.03	.12*	.07	.07	.08	.01	.03	.05
8. Rel. quality 1	.11	.17*	.01	-.13	-.09	-.04	.13		.61***	.02	.56***	.27***	.04	.41***	.24***	.03
9. Coparenting 1	-.06	.08	.01	-.06	.07	.15*	.17*	.59***		.05	.40***	.44***	.37***	.40***	.31***	.13**
10. F engage 1	-.17*	-.01	-.11	.17*	.14	.06	.23**	-.08	.21**		.01	.10*	.44***	.10*	.08	.26***
11. Rel. quality 3	.07	.02	.01	-.01	.00	.07	.11	.56***	.45***	.10		.61***	.03	.63***	.41***	-.02
12. Coparenting 3	-.01	.11	.04	.07	-.15*	-.04	.04	.45***	.37***	.15*	.68***		.12*	.60***	.58***	.05
13. F engage 3	-.05	-.25**	-.12	-.00	.08	-.03	.23**	.13	.25**	.52***	.28***	.28***		.10	.07	.42***
14. Rel. quality 5	.04	-.15*	.07	.07	-.04	.04	.12	.45***	.43***	.09	.67***	.66***	.01		.62***	.17**
15. Coparenting 5	.09	-.15*	.07	-.10	.06	-.13	.16*	.32***	.30***	.10	.44***	.34***	.28***	.66***		.11*
16. F engage 5	-.13	-.22**	-.18*	-.01	.08	.03	.09	.04	.15*	.46***	.12	.12	.60***	.01	.17*	
M	.05	.07	.09	4.21	6.23	.55	5.25	16.96	12.35	18.63	27.42	17.75	31.45	30.49	16.76	15.61
SD	.21	.26	.28	.50	3.27	.50	.83	4.45	2.70	15.38	4.43	2.56	24.26	4.54	3.61	14.90
M	.04	.12	.11	4.04	6.07	.54	5.39	20.68	13.69	24.29	29.95	18.28	37.44	38.70	17.66	19.37
SD	.21	.33	.31	1.68	3.37	.50	.78	3.09	1.70	15.83	2.47	2.14	22.01	3.23	3.11	15.01

Note: Statistics above the diagonal refer to nonresidential nonromantic parents. Statistics below the diagonal refer to nonresidential romantic parents. The first two *M* and *SD* rows pertain to nonresidential nonromantic parents. The second two *M* and *SD* rows pertain to nonresidential romantic parents. In regards to variable names, B = baseline, 1 = Y1, 3 = Y3, and 5 = Y5. Child temp. = child temperament. F prenatal inv. = father prenatal involvement. Rel. quality = relationship quality. F engage. = father engagement.

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

Table 4. *Path Analyses Showing Longitudinal Associations among Father Engagement, Coparenting Support, Partner Relationship Quality, and Controls for Residential, Nonresidential Romantic, and Nonresidential Nonromantic Fathers (N = 1,756).*

	Model 1			Model 2			Model 3		
	Residential			Nonresidential romantic			Nonresidential nonromantic		
	b	*SE(b)*	*β*	*b*	*SE(b)*	*β*	*b*	*SE(b)*	*β*
<u>→Father engagement Y3</u>									
Father engagement Y1	.59	.03	.45***	.73	.09	.52***	.70	.07	.43***
Coparenting Y1	.60	.40	.04	1.17	1.09	.08	4.25	.59	.41***
Relationship quality Y1	.40	.17	.07*	1.39	.54	.21**	1.60	.34	.27***
Convictions Y1 to Y3	-5.83	2.43	-.06*	-18.15	3.77	-.28***	-11.58	3.67	-.13**
Education Y1	-.05	.16	-.01	-1.27	.76	-.10	.33	.44	.03
Child temperament Y1	-.05	.11	-.01	-.00	.37	-.00	.18	.29	.03
Child gender	.02	.66	.00	-3.46	2.53	-.08	2.27	1.93	.05
<u>→Coparenting Y3</u>									
Father engagement Y1	.01	.00	.04	.02	.01	.14*	.01	.01	.06
Coparenting Y1	.53	.04	.42***	.19	.11	.15	.50	.06	.49***
Relationship quality Y1	.04	.02	.07*	.24	.05	.36***	-.03	.04	-.06
Convictions Y1 to Y3	-.22	.22	-.02	.23	.38	.04	1.15	.38	.13**
Education Y1	-.03	.01	-.05	.13	.08	.11	.01	.05	.01
Child temperament Y1	-.02	.01	-.05	-.09	.04	-.15*	-.02	.03	-.02
Child gender	.05	.06	.02	-.19	.25	-.05	.32	.20	.07
<u>→Relationship quality Y3</u>									
Father engagement Y1	.01	.01	.03	.01	.01	.08	-.00	.01	-.01
Coparenting Y1	.35	.07	.14***	.24	.12	.16*	.01	.10	.01
Relationship quality Y1	.47	.03	.44***	.37	.06	.48***	.54	.06	.53***
Convictions Y1 to Y3	-.06	.42	-.00	-.48	.41	-.07	.80	.60	.05
Education Y1	.01	.03	.01	.05	.08	.04	-.33	.07	-.19***
Child temperament Y1	-.05	.02	-.06*	.01	.04	.02	-.08	.05	-.07
Child gender	-.05	.12	-.01	-.27	.28	-.06	.28	.32	.04
<u>→Father engagement Y5</u>									
Father engagement Y3	.39	.02	.53***	.43	.04	.61***	.26	.03	.40***
Coparenting Y3	.25	.21	.03	-.15	.77	-.02	.26	.36	.04
Relationship quality Y3	.15	.11	.04	-.18	.65	-.03	-.17	.21	-.05
Convictions Y3 to Y5	3.24	1.69	.05	-5.19	2.80	-.11	-9.52	2.29	-.18***
Education Y1	-.17	.11	-.04	-.06	.53	-.01	.24	.30	.04
Child temperament Y1	-.09	.08	-.03	.13	.27	.03	-.17	.20	-.04
Child gender	.53	.46	.03	1.74	1.76	.06	-2.22	1.30	-.08*
<u>→Coparenting Y5</u>									
Father engagement Y3	.00	.00	.05	.03	.01	.18*	.00	.01	.00
Coparenting Y3	.30	.03	.28***	-.01	.17	-.00	.80	.08	.52***
Relationship quality Y3	.15	.02	.27***	.52	.14	.38***	.10	.05	.11*
Convictions Y3 to Y5	-.26	.24	-.03	.87	.62	.09	-.30	.49	-.02
Education Y1	-.03	.02	-.04	-.19	.12	-.11	.09	.07	.06
Child temperament Y1	-.02	.01	-.06*	.04	.06	.04	.11	.04	.10*
Child gender	-.01	.06	-.00	-.76	.39	-.12	.01	.28	.00
<u>→Relationship quality Y5</u>									
Father engagement Y3	.01	.01	.03	.00	.01	.03	.01	.01	.05
Coparenting Y3	.27	.07	.10***	.42	.14	.25**	.54	.08	.31***
Relationship quality Y3	.67	.03	.51***	.75	.12	.38***	.48	.05	.48***
Convictions Y3 to Y5	-1.38	.53	-.06**	-.65	.51	-.06	-1.56	.49	-.11***
Education Y1	.04	.03	.03	.14	.10	.07	.09	.07	.05
Child temperament Y1	-.09	.02	-.09***	-.00	.05	-.00	-.02	.04	-.01
Child gender	.05	.14	.01	1.02	.32	.16**	-.05	.28	-.01

Note: Two additional controls (fathers' convictions from baseline to Y1 and fathers' prenatal involvement) were included in the models, but they were set to covary only with Y1 variables. * $p < .05$. ** $p < .01$. *** $p < .001$.

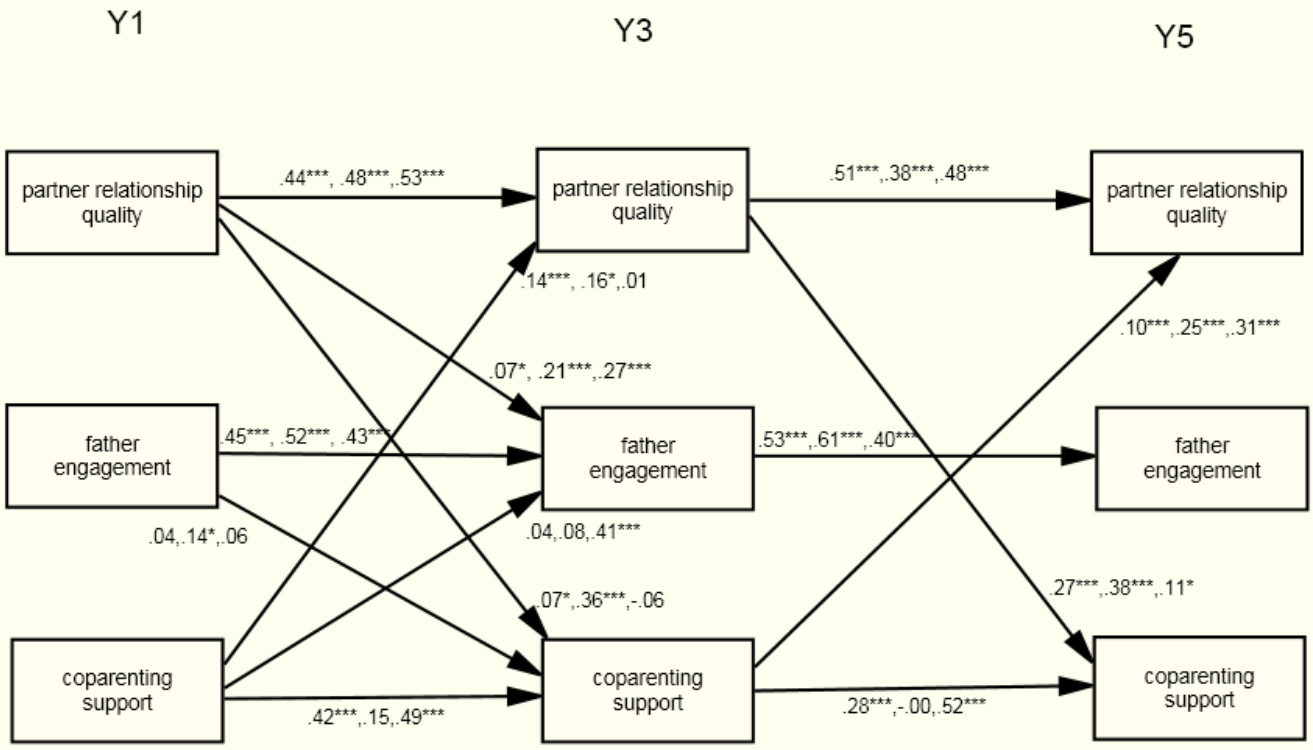

Figure 1. Path analysis for residential, nonresidential-romantic, and nonresidential-nonromantic parents (standardized path coefficients are shown in this order). All Y1 variables are correlated but not shown. Contemporaneous residuals for all Y3 variables are correlated but not shown. Contemporaneous residuals for all Y5 variables are correlated but not shown. Control variables include fathers' prenatal involvement, fathers' convictions at Y1, Y3, and Y5; father's education at Y1, child temperament at Y1, and child gender. N = 1,756.