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Cyclical Cohabitation Among Unmarried Parents in Fragile Families

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Abstract

Building on past research suggesting that cohabitation is an ambiguous family form, the authors examined an understudied residential pattern among unmarried parents: cyclical cohabitation, in which parents have multiple cohabitation spells with each other. Using 9 years of panel data from the Fragile Families and Child Wellbeing Study ($N = 2,084$), they found that 10% of all parents with nonmarital births, and nearly a quarter of those living together when the child is 9 years old, are cyclical cohabitators. Cyclically cohabiting mothers reported more material hardships than mothers in most other relationship patterns but also reported more father involvement with children. On all measures of child well-being, except grade retention, children of cyclically cohabiting parents fared no worse than children of stably cohabiting biological parents and did not differ significantly from any other group.

Keywords

child outcomes; cohabiting parents; Fragile Families and Child Wellbeing Study; living arrangements; nonmarital parenting; parenting

For many years, family scholars interested in the effects of family structure focused primarily on the effects of divorce on women and children, and on comparisons of child outcomes in biological parent households, divorced families, stepfamilies, and never-married families. The realization that children living in stepfamilies often fared no better than children living with never-married mothers, or with unpartnered divorced mothers, led to a growing interest in the role of family structure transitions on children. Furthermore, the tremendous increase in nonmarital childbearing and recognition that many unwed fathers are often living with their children, or at least regularly involved with them, has focused attention on the increasing complexity of family forms, including ambiguous residential statuses and multipartner fertility.

Our research contributes to the exploration of increasing complexity in family arrangements and on their importance in shaping children's experiences. In this article, we identify cyclical cohabitators—biological parents exhibiting multiple cohabitation transitions with each other—as an understudied residential pattern, estimate their prevalence, describe their

characteristics, and assess associations between this type of residential pattern and child well-being outcomes.

Background

Rates of nonmarital childbearing have increased tremendously in the United States in the last 50 years. Over 40% of births in the United States are now to unmarried parents (Hamilton, Martin, & Ventura, 2010), and the consequences of these trends, for women and children, have been extensively documented (see McLanahan, 2004). What the last decade or so of ethnographic and quantitative research has made clear, however, is that the relationships and circumstances of parents with nonmarital births are quite diverse. In fact, more than half (58%) of these parents are cohabiting at birth (Child Trends, 2012; Kennedy & Bumpass, 2008). Furthermore, many unmarried parents remain involved with each other for some time after the birth, and many nonresidential fathers, even those no longer romantically involved with their child's mother, remain involved with their children (Carlson, McLanahan, & England, 2004; Edin & Kefalas, 2005; Edin & Lein, 1997; McLanahan & Beck, 2010; Nepomnyaschy & Garfinkel, 2007). The continued involvement of fathers, together with a high prevalence of multipartner fertility among unmarried parents (Cancian & Meyer, 2005; Carlson & Furstenberg, 2006), has justifiably refocused attention from simple categorizations of families as intact or not to the determinants and consequences of relationship dynamics.

In addition to the descriptive research documenting the recent evolution of families, two lines of existing empirical research and several family theories guide the organization of our analyses. The first line of research focuses on the effects of family change and instability on individual and family well-being. Studies from as far back as the late 1970s, and continuing into the early 2000s (see Cherlin, 1978, 2004; Cherlin & Furstenberg, 1994), made the case that reconstituted families were very different from "intact" families because they were not institutionalized, and relationships within them remained ambiguous. Other research suggests that instability itself, rather than simply the state that results from union dissolution, has negative effects on parents and children (Capaldi & Patterson, 1991). Wu and Martinson (1993) showed that relationship dissolution was worse for children than living with a stably single mother. A number of more recent studies, focusing mostly on cohabitating couples, also have shown adverse consequences of relationship instability and transitions (Beck, Cooper, McLanahan, & Brooks-Gunn, 2010; Cavanagh & Huston, 2006, 2008; Cooper, McLanahan, Meadows, & Brooks-Gunn, 2009; Fomby & Cherlin, 2007; Osborne & McLanahan, 2007). A few other studies have documented the detrimental effects of relationship transitions and family instability on family economic circumstances (Avellar & Smock, 2005; Osborne, Berger, & Magnuson, 2012). Finally, a large literature has documented that reduced levels of economic resources and parental involvement explain much of the effects of relationship dissolution and of single parenthood on children's well-being (e.g., Amato, 2005; Carlson & Corcoran, 2004; Demo & Fine, 2009; Wu & Thomson, 2001). See Brown (2010) for a comprehensive review of this literature.

The second line of research, more methodologically focused, points to measurement problems inherent in the study of nonmarital families. Couples do not always agree about

whether they are living together. Over time, individuals sometimes change their reports about whether they were living together when their child was born, and many survey respondents report living together some of the time—a classification that does not fit into the mutually exclusive analytic scheme most often used by family sociologists (Knab & McLanahan, 2006; Manning & Smock, 2005; Teitler, Reichman, & Koball, 2006). What is clear from these studies is that the concept of cohabitation is ambiguous, not only to researchers but to study subjects as well.

Most of the research referenced above has focused either on single status changes (into or out of a relationship) or on numbers of romantic partners. Little attention has been paid to the cyclical cohabitation among biological parents—that is, repeatedly breaking up and repartnering with the same person—and no study has assessed the prevalence of these types of unions, described the attributes of the couples who cycle into and out of cohabitation, or examined the consequences of this form of instability for children. In most studies, this family “type” is usually classified as either intact or separated (depending on when cohabitation status is ascertained), but it may differ in many respects from both of those groups.

Although little is known about the prevalence and consequences of cyclical cohabitation, a number of studies have described relationship fluctuations among unmarried couples. One recently identified pattern is *living apart together*, when couples do not cohabit but identify themselves as committed and intimate partners (Strohm, Seltzer, Cochran, & Mays, 2009); another pattern is *living together apart*, when couples occasionally cohabit but do not consider themselves a cohabiting couple (Cross-Barnet, Cherlin, & Burton, 2011). Only three recent studies, however, have examined instability within couples’ relationships that are relevant to our study. One examined relationships among urban adolescents and young adults and found that half reported reconciling after a breakup and half reported “sex with an ex” (Halpern-Meehin, Manning, Giordano, & Longmore, 2012). This type of “relationship churning” among emerging adults foreshadows future relationship patterns. Two ethnographic studies focused specifically on unmarried parents and their “together, not together” (Roy, Buckmiller, & McDowell, 2008) and “intermittent” (Cross-Barnet et al., 2011) cohabitation patterns. Both studies provide evidence that changes in cohabitation are due to voluntary and involuntary forces, such as incarceration, unemployment, and relationship issues, but that the presence of shared children and a focus on childrearing brings these parents back together.

We build on these studies by using national data on unmarried parents to estimate the prevalence of this newly identified family form (which we call *cyclical cohabitation*), to describe the characteristics of parents in these relationships, and to examine the associations of this relationship pattern with child well-being outcomes.

Relationship Transitions and Child Well-Being

It is not evident a priori whether cyclical cohabitation should be associated with better or worse outcomes, in terms of parenting or child well-being, than other types of transitions, but a number of theories provide a framework for thinking about how this type of relationship configuration might affect families, and children in particular. We label these

transition theory, financial resource theory, and time or parental involvement theory. Transition theory posits that transitions are disruptive, particularly to children, and the greater the number of transitions, the worse the outcomes (see Wu & Martinson, 1993; Wu & Thomson, 2001). However, elaborations of transition theory suggest that effects of transitions vary by family structure. Specifically, transitions from a single-parent family to a two-parent family (Waldfoegel, Craigie, & Brooks-Gunn, 2010), or transitions out of a stepfamily (Brown, 2010), may not be associated with poor outcomes for children.

Financial resource theory suggests that living with a mother and her partner should benefit children because of additional resources the partner brings to the household. However, that applies only if the partner contributes more than he consumes. If he is a net drain on resources, then the effects of moving into a relationship with him could be negative and, conversely, the effects of separating from him could be positive. Some studies suggest that the material benefits of living in a cohabiting household will be greater if the male is the biological father of the child because he is more likely to allocate resources to his offspring than is a social father, who may be less invested overall or may have biological children in other households (Hofferth, 2006; Hofferth & Anderson, 2003; Manning & Brown, 2006; Manning & Smock, 2000). These investments may result in improved outcomes for children, in particular children's cognitive skills and educational achievement and attainment, which have been found to be more closely linked to economic insecurity during childhood than have children's behavior and socioemotional outcomes (Duncan & Brooks-Gunn, 1997; Magnuson & Votruba-Drzal, 2009).

Time or parental involvement theory predicts that living with a partner will benefit the household because of additional parental time and involvement (Thomson & McLanahan, 2012). An additional adult in the household can provide more child supervision and engagement directly, or indirectly, by assisting with household production tasks that free the other parent to spend time with the child. Increased levels of parental engagement with children are associated with more favorable child behavioral and developmental outcomes. For the same reasons expressed above, the expected parenting benefit from cohabiting with a biological father should be greater than from cohabiting with another partner. There is some evidence that parents' time and engagement with children may be more closely associated with behavioral outcomes than achievement related outcomes (Lamb, 2010).

The Current Study

In this study, we used five waves of data, (from birth until the child was 9 years old) from the Fragile Families and Child Wellbeing Study (FFCWS; see <http://www.fragilefamilies.princeton.edu>), to classify patterns of parents' movements into and out of cohabitation with each other and with other partners. We identified couples who regularly change cohabitation status with each other (i.e., who repeatedly interrupt and resume their coresidential relationships) and compared these cyclical cohabitators (as we refer to them) with mothers whose relationships follow more commonly studied patterns: stably cohabiting with the father, stably single, cohabitation with men other than the father, and one cohabitation episode with the father that has lasted less than 9 years without any repartnering. We explored differences between these groups in terms of mother, father, and

child characteristics that have consistently been found to be associated with parents' relationships, parenting, and child well-being (see, e.g., Amato & Fowler, 2004; Beck et al., 2010; Berger, Cancian, & Meyer, 2012; Carlson et al., 2004; Duncan & Brooks-Gunn, 1997; Geller, Garfinkel, Cooper, & Mincy, 2009; Dyer, Pleck, & McBride, 2012; Larson & Holman, 1994; Osborne et al., 2012; Osborne, Manning, & Smock, 2007; Osborne & McLanahan, 2007; Schwartz-Soicher, Geller, & Garfinkel, 2011; Wildeman, 2010). These include parents' sociodemographic characteristics (race/ethnicity, education, age, nativity, Medicaid birth [as proxy for poverty]), employment status, multiple-partner fertility, physical and mental health status, and fathers' incarceration history. We also included a measure of mothers' impulsivity, a trait that may be associated with her relationships and parenting (Dickman, 1990). Child characteristics included gender and birth weight (as a proxy for child health), which may be associated with relationship stability and quality (Lundberg, 2005; Reichman, Corman, & Noonan, 2004).

Next, we examined differences between groups on several domains of child well-being, including health, development, and educational achievement. Finally, we examined differences between groups on what we consider intermediate outcomes, based on theories discussed above, through which relationship patterns may affect child well-being: parental involvement and material resources.

Method

Data

This study is based on five waves of data from the FFCWS, a panel study of 5,000 children born between 1998 and 2000 in 20 large cities in the United States. Children born to unmarried parents were oversampled at a 3:1 ratio, resulting in a baseline sample of approximately 3,700 such children. The data are representative of births in all U.S. cities with populations greater than 200,000 at that time. Interviews with mothers and fathers (when available) were conducted in 75 sampled hospitals across the 20 cities at the time of the child's birth (or within a few days). Follow-up interviews by phone (and in person) were conducted when children were approximately 1, 3, 5, and 9 years old.

The FFCWS is ideal to examine these questions, for several reasons. First, it oversamples parents with nonmarital births, a group that is particularly susceptible to instability and relationship transitions and the focus of our study. Second, the length of the study (9 years) allowed us to observe a larger number of transitions and to examine child outcomes at an age when they are reliably measured and differentiated. Finally, the rich set of measures in FFCWS, including information about the father, allowed us to examine important sociodemographic and psychosocial differences between groups.

Analyses in the current study are based on 2,084 children whose parents were not married at birth, whose mothers were interviewed at all five waves and answered questions related to cohabitation status with the father and new partner, whose biological fathers were alive at all five waves, and whose primary caregiver was either the biological mother or father at the 9-year survey. Of the full sample of 3,711 unmarried mothers at baseline, 2,239 (60%) were interviewed at all four follow-up waves. Of these, 64 cases were dropped because the father

was reported to have died; another 63 cases were dropped because someone other than either parent was reported as primary caregiver. Finally, 38 observations were dropped because they were missing data on the main questions of interest related to relationship with father and partner at each wave. All missing observations on covariates were multiply imputed with chained equations using the *mi* set of commands in Stata 12. The number of missing observations on covariates ranged from 0 for mothers' age and child sex to 214 (10%) for grandmothers' mental health. Dependent variables (child outcomes) were included in imputation equations, but only nonimputed observations were used for analyses, as recommended by White, Royston, and Wood (2011). Thus, the sample in the multivariate regression models varied across each outcome measure.

Relationship Measures

The main variable of interest in this study was mothers' cohabitation patterns with the father and other partners. At each wave, mothers were asked about their cohabitation status with the father of the focal child. At the baseline (when children were born), possible responses were: cohabiting, romantically involved but not living together, just friends, or no relationship. Those who indicated they were cohabiting were coded as such; all other responses were coded as not. In all subsequent waves, mothers could also respond that they were married to the father, in which case they were also coded to cohabiting. In addition, subsequent waves allowed mothers to choose whether they were "cohabiting all or most of the time" or "cohabiting some of the time." For the main analyses, we classified "cohabiting some of the time" as its own category and considered this status as inherently cyclical. Thus, anyone who reported cohabiting some of the time at the 1-year follow-up was classified as having experienced a transition between baseline and 1 year, regardless of baseline relationship status, and anyone who reported cohabiting some of the time at the 3-year follow-up was classified as having experienced a transition from the 1-year follow-up to the 3-year follow-up, regardless of relationship status at the 3-year follow-up. At the 9-year follow-up, although this response was available, no mothers chose this response. Of the 2,084 mothers in the analysis sample, 214 (10%) reported sometimes cohabiting at any of the follow-up waves, 22 mothers reported this status at two waves, and only one mother reported this status at three follow-up waves. In alternate analyses, we coded sometimes cohabitators as cohabiting and as not cohabiting. From these relationship questions at each wave, we created a variable for parents' total number of transitions with each other (from 0 to 4), from cohabiting to noncohabiting and vice versa, across all five waves.

Next, we took into account mothers' relationships with other partners (i.e., cohabiting partners other than the biological father). At all follow-up waves, mothers who were not currently cohabiting with the father were asked whether they were currently cohabiting with a new partner (at the 1-year survey, "sometimes cohabitators" were also asked about new partners, but not at other waves). On the basis of responses to this question, we created a dichotomous indicator of mothers' cohabitation with a partner other than the father at any wave. In addition, at the 5- and 9-year surveys, mothers who were not cohabiting with the biological father ("all or most of the time") were asked specifically about the number of cohabiting relationships lasting 1 month or more that they had had (not with the biological father) since the last survey. We coded mothers who reported any such cohabitation

episodes as “yes” on the dichotomous indicator of cohabitation with another partner in order to capture cohabitation episodes that happened between waves.

On the basis of responses to these three sets of questions, we categorized mothers’ relationship patterns into the following five mutually exclusive categories: (a) cyclical cohabitation—two or more nonconsecutive cohabiting episodes with father, but no other partner; (b) stably cohabiting with father across all five waves, including baseline; (c) stably single—no cohabitation episodes with father or any other partner at any wave; (d) one cohabitation episode with father lasting less than 9 years, with no repartnering (with the biological father or any other partner); and (e) any report of cohabitation with a partner other than the father. Mothers who married either the father or a new partner after baseline were included in the analyses and coded as coresiding with either father or partner, and transitions from cohabitation to marriage were not considered transitions for our categorization scheme.

Child Well-Being Outcomes

We included six indicators of child well-being from the 9-year follow-up survey that encompassed domains of child health, behaviors, cognitive development, and educational achievement: (a) mothers’ reports of child health (excellent vs. very good, good, fair, or poor); (b) grade retention (whether the child had repeated grade); (c) child’s interviewer-assessed receptive vocabulary and verbal ability based on the Peabody Picture Vocabulary Test—Third Edition (PPVT–III; Dunn & Dunn, 1997), standardized; and child’s scores on the (d) Aggressive, (e) Internalizing, and (f) Rule-Breaking subscales from the Child Behavior Checklist, as reported by mothers (Achenbach & Rescorla, 2001), standardized. The first two measures were from 9-year phone interviews, and others were from the 9-year in-home survey, administered to approximately 72% of the 9-year follow-up sample.

Material Resources and Parental Involvement: Intermediate Outcomes

We focused on three measures of material resources and parental involvement, which we think of as intermediate outcomes through which parents’ relationship patterns may influence child well-being. *Material resources available to the child* were measured on the basis of mothers’ report of any material hardship at the 9-year survey from a list of 10 hardships experienced in the past year due to lack of money. Parental involvement was based on mothers’ reports of the frequency of *fathers’ participation in various activities with the child* and on the *sum of both mothers’ and fathers’ participation in activities with the child*. Both measures were calculated as the sum of activities and are standardized. Because fathers’ ability to participate in activities with children is strongly determined by their residential status, we created separate measures for these parent involvement variables for parents who were and were not cohabiting with each other at the 9-year survey.

Family Characteristics

As indicated previously, we focused on mother, father, and child characteristics that have been shown to be associated with both parents’ relationships and child well-being outcomes. Mothers’ characteristics included the following: her *race/ethnicity* (non-Hispanic White, non-Hispanic Black, Hispanic, or other); *education* (less than high school, high school or equivalent, or more than high school); *age at birth of child* (<21, 21–29, 30+); *nativity*;

whether *Medicaid paid for the birth*; whether *worked in year prior to the child's birth*; whether she *had other children with the focal father*; whether she *had children with other fathers*; *overall excellent health* (vs. very good, good, fair, or poor); *impulsivity*, based on the mean of reverse-coded responses to six items from the Dickman Impulsivity Index (Dickman, 1990); higher scores indicate higher impulsivity); *use of or problem with substances*, which was coded positively if she reported smoking any cigarettes, drinking any alcohol, or using any drugs during the pregnancy or that drugs or alcohol interfered with work or relationships in the year prior to the birth; and *maternal grandmother's mental health problem*, which was indicated if the mother reported her biological mother ever being depressed for 2 weeks or more, anxious for a month or more, having problem with alcohol or drugs, or attempting suicide. We included the maternal grandmother's mental health as a proxy for the mother's own mental health to reduce potential reverse causality between relationship patterns and mental health. Impulsivity and grandmother's mental health were measured at the 3-year follow-up and are thought to be relatively stable traits. Mothers' multiple-partner fertility was ascertained at the 1-year survey (very few mothers had another pregnancy within 1 year of the focal birth). All other individual characteristics were measured at baseline.

Fathers' characteristics include the following: *education* and *age at birth of child* (coded the same as mothers), whether *worked in week prior to the child's birth*, whether *spent time in jail or prison*, whether *had children with other women*, and whether *had an alcohol or drug problem that interfered with work or relationships*. Incarceration history and multiple-partner fertility were assessed at the 1-year survey; all other measures are from the baseline assessment. Finally, we included the child's *sex* and whether the child *had been born low birth weight* (<2,500 g).

Analytic Strategy

First, we describe the prevalence of cyclical cohabitation in this sample of mothers with nonmarital births, using our primary main classification scheme of coding "sometimes cohabitation" as a transition and alternate schemes that coded this response as cohabiting and not cohabiting. We also describe relationship patterns among mothers who were cohabiting with the biological father at the 9-year survey. We focus on this group because we wanted to understand what proportion of parents who were living together 9 years after a nonmarital birth, and would be considered in most studies as a particularly stable family constellation, have in actuality been cyclically cohabiting. Next, we examine differences in characteristics between cyclically cohabiting mothers and those in the other four types of relationship patterns. Tests of significance were estimated (only for differences between our main group of interest, cyclically cohabiting mothers, and all other groups) using bivariate ordinary least squares (OLS) regressions for continuous variables and bivariate logistic regressions for binary variables and for individual dummies from categorical variables.

Next, we examine associations between types of relationships and child well-being outcomes, using OLS regressions for continuous outcomes and logistic regressions for binary outcomes. Finally, we examine the association between types of relationships and parental involvement and material resources that children receive from parents. We treat

parental involvement and material resources as intermediate outcomes because theories and prior research suggest that these are the pathways through which family structure and relationship transitions affect child well-being, although we do not focus on testing these mediating pathways. For the analyses of parental involvement, measured as fathers' time and sum of both parents' time spent with children in various activities, we stratify the sample by whether the mother was living with the biological father at the 9-year survey, for two reasons. First, the amount of time spent with children by fathers' coresidential status is so inherently different that combining them into one measure does not make sense. Second, comparisons within residential couples (between stably cohabiting and cyclically cohabiting parents) and within nonresidential couples (between stably single and cyclically cohabiting parents) are much more informative and relevant than comparisons across residential status. We conclude our analyses with alternatively specified models to assess the sensitivity of our results to different specifications.

Results

Descriptive Results: Mothers' Relationship Patterns

The prevalence rates of relationship patterns for mothers with nonmarital births from the birth of the focal child until the 9-year follow-up survey are presented in Table 1. The top panel treats "cohabitation some of the time" responses as a transition. Among all mothers with nonmarital births ($N = 2,084$), 9% cycled in and out of cohabitation with the father; that is, they experienced at least two nonconsecutive cohabiting episodes with the father and had no other partner between the birth of the child and the last interview. Only 16% consistently cohabited with the father at all waves, and 15% had one cohabiting spell with the father shorter than 9 years and no other partner since the birth. The 40% of children in these combined three groups experienced living with men who were only their biological father from birth through age 9. Only 9% of mothers reported no cohabitation with any man in the 9 years since their child's birth, and half of mothers had at least one cohabitation episode with another man. As a parenthetical analysis (results not shown, but available on request), we tabulated the number of partners (other than the biological father) with whom mothers reported living for a month or more, over the 6 years preceding the 9 year interview. Among the group of mothers whom we classified as having cohabited with another partner (other than biological father), only 6% reported living with three or more partners. This is likely to be an underestimate of the total number of coresident partners because the figures exclude partners between the baseline and 3-year surveys. Still, even if the actual prevalence of partners were double that suggested by the available data, it would still be quite small. In other words, few of the mothers experienced a high turnover of live-in partners.

Among mothers who were cohabiting with the father at the 9-year survey ($N = 596$), who are often assumed by researchers to be long-term cohabitators, 22% had more than one cohabitation spell with the father. Only about half (55%) cohabited with him at all waves. In other words, half would be incorrectly classified as long-term cohabitators if that term implied having consistently cohabited since the child's birth. Eighteen percent reported one cohabiting episode with the father shorter than 9 years, and only 5% of women living with

the father at the 9-year interview reported having cohabited with another man since the child's birth.

The next two panels of Table 1 show the distribution of relationship patterns when alternatively coding "sometimes cohabitation" as cohabiting (middle panel) and not cohabiting (bottom panel) at each of Year 1 through Year 5 waves, when some respondents reported living together some of the time. When "sometimes cohabitators" are treated as cohabitators, the proportion of cyclical cohabitators is about 30% smaller than when the responses are coded as transitions (5.5% vs. 8.7%). Most of the reduction in the proportion of cyclers is reallocated to stable cohabitators and to one cohabiting episode with father. The consequences of the coding decision are similarly evident among the 9-year cohabitators. Treating "sometimes cohabitators" as not cohabiting (bottom panel of Table 1) also alters the distribution, though not by as much.

Descriptive Results: Parent and Child Characteristics

Descriptive statistics of all of the variables considered in this study for the full sample of mothers with nonmarital births and by their relationship patterns between the birth and the 9-year follow-up survey are presented in Table 2. Significance tests indicate statistically significant differences between cyclically cohabiting mothers and all other groups at $p < .05$. More than half of mothers reported that their child was in excellent health at the 9-year survey, and this did not differ across relationship patterns. Almost 1 in 5 mothers (18%) reported that her 9-year-old child had repeated a grade, but this varied widely by relationship category, with children of cyclers almost twice as likely to have repeated a grade than children of stably cohabiting parents (20% vs. 11%). Children of cyclers also scored lower on the PPVT-III and exhibited more aggressive behaviors than children of stably cohabiting parents. Differences in child characteristics between cyclical cohabitators and the other relationship categories were generally smaller, and none was statistically significant.

Over half the sample (54%) reported at least one material hardship in the past year at the 9-year survey. Cyclically cohabiting mothers were most likely to report a hardship among any group and statistically significantly so compared to stably cohabiting mothers (61% vs. 45%) and those who cohabited just once with the father but for less than 9 years (61% vs. 50%).

In terms of parental involvement, among 9-year cohabitators, children of cyclically cohabiting parents did not differ in regard to time spent with fathers from children of stably cohabiting parents or any other group, except one. They spent more time with fathers than children of mothers who previously lived with another partner, but the sample size of that group ($n = 50$) was very small. There were no differences between cyclically cohabiting parents and all other groups on the average amount of time spent with mothers and fathers. Among noncohabitators at the 9-year survey, children of mothers who cyclically cohabited with the father spent more time with fathers and with both parents than any of the other groups.

Cyclically cohabiting mothers were less likely to be White or Hispanic and more likely to be Black than those who were stably cohabiting with the father. Differences between cyclical cohabitators and other groups in terms of educational attainment were small, with only one

difference reaching statistical significance (they were somewhat more likely to have more than a high school education than women who lived with another partner). Cyclically cohabiting mothers were generally younger at the birth of the focal child than were other mothers, but they were older than mothers who cohabited with another partner. Cyclically cohabiting mothers were more likely to be born in the United States than stably cohabiting mothers but were less likely than those who reported cohabitation with another partner. They also were more likely to have had a Medicaid-paid birth than either stably cohabiting or stably single mothers. Cyclically cohabiting mothers were much more likely (nearly two times more) to have other children with the focal father than stably single mothers and those who reported cohabiting with another partner, but they were less likely to have had a child with another father than mothers who reported cohabiting with another partner. There were no statistically significant differences in terms of mother's health, substance abuse, own mother's mental health, or impulsivity between cyclically cohabiting mothers and any other groups.

Children of cyclically cohabiting mothers were much more likely (nearly two times more) to have been born low birth weight than children of stably cohabiting mothers and those who had one cohabiting episode with the father. Cyclically cohabiting fathers had lower levels of education than stably cohabiting fathers, fathers of children with stably single mothers, and fathers who had cohabited for one episode with the mother. They were also younger at the birth of the focal child than stably cohabiting fathers and fathers of children with stably single mothers. Finally, cyclically cohabiting fathers were less likely to have been working at the time of the birth, more likely to have been in jail, and more likely to have children with other women than stably cohabiting fathers. They also were less likely to have been in jail than fathers of children whose mothers cohabited with another partner. In addition, they were much less likely (more than two times less) to have had a substance abuse problem at the birth of the child and less likely to have children with other mothers than fathers of children with stably single mothers.

Multivariate Results: Child Well-Being

The results of multivariate regressions of the six child outcome measures on mothers' relationship patterns (with cyclically cohabiting mothers as the reference group), controlling for mothers', fathers', and children's characteristics as discussed in the preceding section, are presented in Table 3. Coefficients from OLS regression (and *t* statistics) and odds ratios from logistic regressions (and *z* statistics) are presented only for the relationship pattern variable. The top panel of the table contains results for all mothers in the sample. After adjusting for covariates, the only statistically significant difference between cyclically cohabiting mothers and all others was for grade retention: Children of mothers stably cohabiting with fathers had 53% lower odds of repeating a grade than those of cyclical cohabiters. The lower PPVT-III scores and higher aggressive behaviors found for children of cyclically cohabiting mothers (vs. stably cohabiting) in the bivariate comparisons were erased in the multivariate analyses.

The bottom panel of Table 3 contains results for mothers who were cohabiting with the father at the 9-year survey. Children of stably cohabiting mothers had 61% lower odds of

repeating a grade than those of cyclically cohabiting mothers who were living with the father at the 9-year survey, but they did not differ from them on any other outcome. Children of cyclically cohabiting mothers exhibited substantially fewer (0.66 *SD* fewer) rule-breaking behaviors, but surprisingly much lower odds of being in excellent health than children of mothers who previously cohabited with another partner. Children of cyclically cohabiting parents also exhibited fewer internalizing behaviors than children of mothers who previously cohabited with another partner, but this association was only significant at $p < .10$.

Multivariate Results: Material Resources and Parental Involvement

In Table 4, we present results comparing material resources and parental involvement between children of cyclically cohabiting parents and those of mothers in other relationship types. The models controlled for all previously discussed covariates, and statistical significance is indicated for differences between cyclical cohabitators and other groups. Among all mothers in the sample, cyclical cohabitators had higher odds of material hardship than any other group. Only two differences were statistically significant at conventional levels, however. Mothers who stably cohabited with fathers and mothers who had one cohabiting episode with the father had 34% and 33% lower odds, respectively, of experiencing any material hardship in the prior year than cyclically cohabiting mothers. Mothers who had cohabited with another partner had 28% lower odds of reporting a hardship than cyclically cohabiting mothers, but this was only marginally significant ($p = .06$).

Among parents who were cohabiting at the 9-year follow-up, children of cyclically cohabiting mothers spent more time engaged in activities with their fathers and with both their parents than children of mothers previously cohabiting with another partner, but they did not differ significantly from children of mothers who were stably cohabiting or had one cohabiting episode with father. Next, we estimate the same comparisons among mothers not cohabiting with the father at the 9-year follow-up. Among this group, children of cyclically cohabiting parents spent much more time with their nonresident fathers and with both parents than all other groups: About two-thirds of a standard deviation more than children of stably single mothers and those who had cohabited with another partner, and about one-third of a standard deviation more than children of mothers who had one cohabiting episode with the father. It appears, at least on the basis of this crude measure of father involvement, that cyclically cohabiting fathers maintained closer ties with their children when they were away than other nonresidential fathers did.

We also explored whether cyclically cohabiting fathers provided more resources to the household when they were cohabiting with the mother as compared to when they were not. In this analysis (results not shown), we limited the sample to just the cyclical cohabitators and use a fixed-effects framework to explore whether changes in cohabitation status (cohabiting vs. not cohabiting) across survey waves were associated with changes in the number of hardships reported by mothers across survey waves. We found no differences in the number of reported hardships in the past year by whether the father was cohabiting with the mother at each wave. These results suggest that either cyclically cohabiting fathers do not contribute more when they are residing with the mother than when they are not residing with her or that

any increase in contributions when he lives with her is offset by an increase in consumption, leaving the mothers' household no better off during periods of cohabitation.

Supplementary Analyses

We estimated a number of supplementary analyses to test the robustness of our results and to explore them further. We reanalyzed our regression models with “sometimes cohabitators” alternatively coded as cohabiting, coded as not cohabiting, and completely dropped from the sample, and the associations between relationship categories were remarkably similar across all three specifications to those using our primary measure (results not shown).

We also explored whether fathers' ability to provide material resources and engage with children modified the associations between relationship patterns and child well-being. Specifically, we interacted the relationship pattern variable with mothers' reports of whether the father was working in the week prior to the 9-year survey and whether he had a drug or alcohol problem at the 9-year survey. There were no significant interaction effects with fathers' work status for any outcome, although for fathers' drug or alcohol problems there were a few. For both aggressive and internalizing behavior problems, children of cyclically cohabiting parents fared better than those in any other relationship category when fathers had drug or alcohol problems. Differences were particularly apparent between cycling mothers and those who reported one cohabiting episode with father for aggressive behaviors, and between cycling mothers and those who reported stable cohabitation with father for internalizing behaviors.

Finally, we conducted tests to see whether our decision to not differentiate cohabiting from married couples influenced our results. Prior research suggests that children of cohabiting couples may not fare as well on various outcomes as children of married couples, possibly because of lower economic resources and parental involvement and less stability among cohabiting couples (Artis, 2007; Brown, 2004; Manning & Brown, 2006). We estimated models that controlled for whether parents were married at any wave and whether they were married at the 9-year survey among those cohabiting at the 9-year survey. Our results remained unchanged, and marital status was not significant for any of the outcomes considered, except for PPVT–III scores; children of married parents had higher PPVT–III scores than those of unmarried parents, even after controlling for parents' relationship patterns and all other covariates.

Discussion

The first goal of this study was to estimate the prevalence of a newly identified, yet rarely studied, type of relationship pattern among parents with nonmarital births: repeatedly breaking up and getting back together, what we refer to as *cyclical cohabitation*. High rates of relationship dissolution among unmarried parents have been widely documented; however, by measuring changes in living circumstances only at two points in time, most of the literature implicitly assumes that separations are definitive. That assumption runs counter to abundant empirical evidence that many unmarried couples maintain relationships and coparent even when they are not living together.

Our results indicate that cyclical cohabitation is not a very common relationship pattern overall, representing no more than 5% to 10% (depending on how “living together some of the time” is classified) of parents with a nonmarital child; however, this group of repeat or cyclical cohabitators represents 15% to 22% of unmarried parents who live together 9 years after the birth of their child.

Our next goal was to compare family sociodemographic and psychosocial characteristics, child well-being outcomes, and parenting and material resources between mothers who were cyclical cohabitators and those who fit into other types of relationship patterns: stably cohabiting with the father, stably single, , just one cohabitation spell with the father that lasted less than 9 years, and at least one cohabitation spell with a different partner. Cyclically cohabiting mothers were generally more disadvantaged on baseline sociodemographic characteristics than stably cohabiting mothers but less disadvantaged than those who repartnered with another man. Nonetheless, compared to children with stably cohabiting parents, children of cyclical cohabitators were disadvantaged on only one of the six outcomes we examined: They were much more likely to have repeated a grade. Children of cyclically cohabiting mothers were no worse off than children of mothers in all other relationship types on any child outcome.

In terms of material resources, cyclically cohabiting mothers reported more material hardship when children were age 9 than mothers in any other family constellation (though not all differences are significant at conventional levels). We further found that among cyclically cohabiting couples, there was no reduction in the number of hardships during episodes when fathers were cohabiting with the mother (results not shown), suggesting that, on average, living with cyclically cohabiting fathers, many of whom are likely poor (vs. living apart from them), is neither a financial burden nor advantage to the mother.

Although cyclically cohabiting mothers were generally economically worse off than others, the men in these relationships were involved with their children. In fact, when living with the mother, these men spent at least as much time with their children as any other fathers and, when not living with the mother, they spent considerably more time with their children than all other nonresidential fathers. This is consistent with prior research related to the “package deal” hypothesis (Furstenberg & Cherlin, 1991; Townsend, 2004), which suggests that fathers’ involvement with children after divorce is highly determined by the strength of the parents’ relationship. This finding has been confirmed in more recent work on unmarried parents pointing to more father involvement among romantically involved parents (Tach, Mincy, & Edin, 2010), as we suppose many of the cyclical cohabitators are.

The complicated picture that emerges from our analysis of cyclical cohabitators—a nontrivial proportion of unmarried parents living together 9 years after their child was born—is one of parents who are committed to their child but struggling financially. We can only speculate that the financial hardships they experience stressed their relationships, leading them to repeatedly separate. Because of inconsistencies across survey waves in how questions were asked and the relatively small number of separations between each wave, it was not possible to tell the extent to which that is the case, from the survey data; however, these speculations are consistent with ethnographic descriptions from the only two prior studies that have

examined these types of cohabitation transitions among unmarried parents. Roy and colleagues (2008) and Cross-Barnet and colleagues (2011) also suggested that involuntary forces, such as fathers' unemployment and material hardships, lead to separation, but both parents' commitment to coparenting leads to reconciliation. Less consistent with these prior studies is the fact that we did not find cyclically cohabiting parents to have had higher levels of emotional or psychosocial problems (substance abuse, mental health, or impulsivity) than stably cohabiting parents. It is also possible that children of cyclical cohabitators were harmed by poverty (relative to children in other family types) but that positive effects of having highly engaged fathers offset these disadvantages, resulting in little variation in child outcomes across groups on average.

Another interpretation of the findings is that our measure of cyclical cohabitation partly reflects measurement noise, exacerbated by ambiguous relationship boundaries, rather than actual changes in living arrangements. The fact that cohabitation is often an ambiguous concept that is unreliably measured has been well documented. The group of couples we term *cyclical cohabitators* may partly comprise couples (or women, considering we are using mother reports) who consistently perceived their relationship to be on boundary edges. That said, survey Waves 2 through 5 allowed respondents to identify themselves as "cohabiting some of the time," so it is probably reasonable to assume that respondents who were unsure about how to classify their relationship would opt for that response category rather than the more definitive categories of living together and living apart. Most couples that we classified as cyclical cohabitators, however, selected from and switched between the latter two categories from wave to wave.

At the beginning of this article, we noted that expected differences in outcomes between cyclical cohabitators and other relationship types—notably stable cohabitators, stably single mothers, and repartnered mothers—differed by theory. Specifically, transition theory would predict negative impacts of cyclical cohabitation on children relative to living in a stably single home; financial resource theory would predict cyclical cohabitators to have better outcomes than stably single mothers, but only if the father contributed more than he consumed; and parental involvement theory would predict that children of cyclically cohabiting parents would do better than those in stably single households and in repartnered households. We know of no theory that would predict that cyclical cohabitators would do better than, or even as well as, those in stably cohabiting unions. Although our goal was not to formally test any theory, of the three we described our findings provide the strongest support for the parental involvement theory and the least support for the transition theory. Among unmarried parents, cyclically cohabiting fathers tended to be among the most involved with their children, and cyclically cohabiting households looked no worse off than stably single households. The findings are more ambiguous with respect to the financial resource theory because the men in cyclical cohabiting relationships were among the most disadvantaged. It is therefore not clear whether one should expect financial benefits from partnering with them (relative to remaining single). The finding of no financial cost or benefit of living with the father are at least consistent with that ambiguity.

These conclusions are also consistent with prior research on the mechanisms through which family structure and parents' relationships affect child well-being. Financial resources have

been found to be more predictive of children's educational achievement than of their socioemotional outcomes (Magnuson & Votruba-Drzal, 2009). Our results indicate higher levels of grade failure for children of cyclically cohabiting parents, who are more economically disadvantaged, than stably cohabiting parents. On the other hand, behavioral outcomes have been shown to be more closely associated with parenting and parental involvement (Lamb, 2010). We found no difference in behavior outcomes between children of cyclically cohabiting and stably cohabiting parents, between whom there was also no difference in parental involvement. And we found lower rule-breaking behaviors for children of cyclically cohabiting parents, with whom fathers were more engaged, than for children of repartnered mothers, whose fathers were the least engaged.

Our study is not immune to data and measurement limitations. Most critically, we could not extract from the FFCWS a full relationship history. We captured living arrangements at only five points in time over a 9-year period. Thus, we likely undercounted changes in living arrangements. This is particularly true during the 4 years between the Age 5 and Age 9 surveys. Thus, our estimates of the prevalence of cyclical cohabitation should be seen as lower bound estimates.

In order to compare cyclical cohabitators to parents in other relationship types, we had to limit our sample to mother observations not missing at any wave, and these women who did not complete all survey waves could be different from those who did. In results not shown, we compared the sample of mothers in the study with the sample that was excluded on baseline demographics and one measure of father involvement at baseline. The only demographic attribute on which they substantially differed was educational attainment: Included mothers had more education than excluded mothers. The fact that the two samples look similar in terms of observable characteristics gives us some confidence that sample attrition did not seriously bias our results; however, the groups could very well differ on unobservable characteristics associated both with relationship transitions and child outcomes, which one should note when attempting to generalize to the entire population of unmarried parents.

The FFCWS also underrepresents middle-class families, by design and because of differential participation refusal. We do not know how common cyclical cohabitation is among couples of higher socioeconomic status, or how its consequences would differ for children. That said, the prevalence of nonmarital childbearing remains relatively low among advantaged couples in the United States (McLanahan, 2009), and we expect, on the basis of cohabitation and divorce research, that middle-class couples would be less likely to find themselves in on-again, off-again relationships than the population captured in the present study.

Finally, we assessed child well-being only at the 9-year survey. It is possible that older, adolescent, children would experience their parents' relationship cycling differently than 9-year-olds. It is also possible that there are sex differences in how transitions are experienced, as has been noted in studies of the consequences of divorce (Amato & Keith, 1991). Limitations in sample size made sex comparisons difficult in this study.

We entered into this project wondering whether cyclical cohabitators might represent a new and categorically different family form—one in which parents are exclusively committed to one another but repeatedly live apart for spells yet resemble more stable cohabitators in other respects. In other words, we thought that perhaps a cohabitation “light” version of relationships might be sufficiently normative in low-income communities to be accepted as a viable alternative and not disrupt most aspects of parenting and relationships. We do not think this is in fact the case. They are simply not sufficiently prevalent. It is probably also inappropriate to view these families as being on a continuum somewhere between full-time cohabitators and parents who never live together, because they are among the most disadvantaged in some respects and at the same time much more like stably cohabiting couples with respect to father–child interactions.

The consequence of misrepresenting cyclical cohabitators as stably together, never together, or as having experienced just one transition, as is almost always the case in analyses of family structure, is that reported differences between families thought to have lived together continuously and those whose relationship dissolved are likely to be biased (because both groups are “contaminated” by the cyclers), though likely not to a considerable extent. We believe that the more important implication of our findings is that ascertaining whether parents have ever lived apart in surveys is important. In addition, many family surveys screen cohabiting couples out of questions asked of nonresidential parents, and vice versa and consequently fail to capture potentially valuable information about some of them. For example, surveys rarely ask coresidential parents about relationship histories since prior interviews or about provision of child support. Similarly, surveys rarely ask questions about fathers’ activities with children or domestic violence when parents are living apart. A simple screening question about whether couples have ever lived apart could redress these limitations, providing the opportunity for a much richer and more nuanced understanding of relationships among couples with nonmarital births.

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Table 1

Relationship Patterns of Mothers With Nonmarital Births From Child's Birth to Age 9

Measure	Full sample (<i>N</i> = 2,084)	Cohabiting with father at 9-year survey (<i>n</i> = 596)
Main measure: Sometimes cohabitation coded as transition (%)		
Cyclical cohabitation with biological father only	8.7	21.8
Stable cohabitation with biological father at all waves	15.6	54.5
Stably single at all waves—no cohabitation	9.0	
One cohabitation episode with biological father only	15.3	18.3
Any cohabitation with another partner	51.4	5.5
Alternative measure: Sometimes cohabitation coded as cohabitation (%)		
Cyclical cohabitation with biological father only	5.5	14.6
Stable cohabitation with biological father at all waves	16.3	57.0
Stably single at all waves—no cohabitation	9.0	
One cohabitation episode with biological father only	17.8	23.0
Any cohabitation with another partner	51.4	5.4
Alternative measure: Sometimes cohabitation coded as not cohabitation (%)		
Cyclical cohabitation with biological father only	6.3	16.9
Stable cohabitation with biological father at all waves	15.6	54.5
Stably single at all waves – no cohabitation	9.9	
One cohabitation episode with biological father only	16.8	23.2
Any cohabitation with another partner	51.4	5.5

Table 2

Sample Characteristics by Mothers' Relationship Patterns

Characteristic	Full sample (<i>N</i> =2,084)	Relationship pattern				
		Cyclical cohabitation w/ father (<i>n</i> = 181)	Stable cohabitation w/father (<i>n</i> = 325)	Stably single (<i>n</i> = 187)	One cohabitation episode w/father (<i>n</i> = 319)	Any cohabitation w/ another partner (<i>n</i> = 1,072)
Child well-being outcomes						
Child in excellent health	54	54	54	51	54	55
Child repeated a grade	18	20	11*	15	16	21
PPVT–III score	0.00 (1.00)	−0.04 (.92)	0.17* (1.00)	−0.09 (1.16)	0.06 (1.05)	−0.05 (.97)
Aggressive behavior	0.00 (1.00)	0.02 (0.91)	−0.14* (0.96)	0.01 (1.01)	−0.09 (1.00)	0.07 (1.06)
Internalizing behavior	0.00 (1.00)	0.05 (0.97)	0.02 (0.94)	0.00 (0.99)	−0.10 (0.97)	0.02 (1.08)
Rule-breaking behavior	0.00 (1.00)	−0.06 (0.71)	−0.17 (0.74)	−0.01 (0.77)	−0.05 (1.05)	0.08 (1.14)
Material resources and parental involvement						
Any material hardship	54	61	45*	56	50*	56
Father's time w/child (cohabiting at 9-year survey only) ^a	1.02 (0.81)	1.02 (0.81)	1.10 (0.71)		0.91 (0.98)	0.63* (0.97)
Both parents' time w/child (cohabiting at 9-year survey only) ^a	0.91 (0.90)	0.91 (0.93)	0.95 (0.83)		0.85 (1.04)	0.64 (0.87)
Fathers' time w/child (not cohabiting at 9-year survey only) ^b	−0.44 (0.78)	0.22 (0.99)		−0.55* (0.57)	−0.16* (1.00)	−0.50* (0.64)
Both parents' time w/child (not cohabiting at 9-year survey only) ^b	−0.29 (0.77)	0.40 (0.95)		−0.43* (0.66)	−0.06* (0.97)	−0.35* (0.74)
Mother's characteristics						
Race/ethnicity						
White, non-Hispanic	15	10	21*	10	10	16*
Black, non-Hispanic	58	61	31*	70	59	63
Hispanic	25	25	46*	17	29	19
Other	2	4	2	2	2	2
Education						
<High school	36	36	33	28	38	38

Characteristic	Full sample (N =2,084)	Relationship pattern				One cohabitation episode w/father (n = 319)	Any cohabitation w/ another partner (n = 1,072)
		Cyclical cohabitation w/ father (n = 181)	Stable cohabitation w/father (n = 325)	Stably single (n = 187)			
High school or equivalent	36	32	37	37	32	38	
More than high school	28	32	30	35	30	25*	
Age at birth							
<21	34	33	22*	28	32	39	
21–29	41	43	42	34	38	43	
30 or older	25	24	35*	38*	30	18*	
Born in United States	90	91	73*	94	87	95*	
Medicaid paid for birth	74	77	66*	68*	75	76	
Worked year prior to birth	70	74	70	66	70	69	
Other children w/biological father	30	43	39	21*	35	26*	
Children w/other fathers	41	35	40	39	38	43*	
Excellent health at birth	31	31	27	29	31	32	
Used or had substance abuse problems	28	26	23	30	25	30	
Mother's mother MH problems	36	31	39	31	32	39	
Impulsivity index	2.05 (0.62)	2.03 (0.54)	1.96 (0.59)	2.08 (0.61)	2.03 (0.60)	2.10 (0.65)	
Child characteristics							
Male	52	50	51	52	49	53	
Low birth weight	11	13	7*	16	8*	12	
Fathers' characteristics							
Education							
<High school	35	42	34*	29*	31*	36	
High school or equivalent	42	34	35	45*	43	44*	
More than high school	23	23	31*	26	26	20	
Age at birth							
<21	17	18	11*	13	13	21	

Characteristic	Full sample (<i>N</i> =2,084)	Relationship pattern				
		Cyclical cohabitation w/ father (<i>n</i> = 181)	Stable cohabitation w/father (<i>n</i> = 325)	Stably single (<i>n</i> = 187)	One cohabitation episode w/father (<i>n</i> = 319)	Any cohabitation w/ another partner (<i>n</i> = 1,072)
21–29	44	42	40	35	46	46
30 or older	39	40	49	51 *	41	33
Worked in prior week	74	77	86 *	73	77	70
Has been in jail	37	34	20 *	43	31	44 *
Children with other women	44	42	29 *	63 *	40	48
Substance abuse problem	6	5	2	11 *	3	8

Note: Numbers are percentages or means and standard deviations, in parentheses. Tests of significance, estimated with bivariate regressions (ordinary least squares for continuous variables and logistic for binary and categorical variables), indicate statistically significant differences between cyclical cohabitators and all other groups. PPVT–III = Peabody Picture Vocabulary Test—Third Edition; MH = mental health.

^a *n* = 596.

^b *n* = 1,488.

* *p* < .05.

Table 3
Multivariate Regression Models of Child Well-Being Outcomes on Mothers' Relationship Patterns

Predictor	PPVT-III ^a	Aggressive behavior ^a	Internalizing behavior ^a	Rule-breaking behavior ^a	Excellent health ^b	Repeated a grade ^b
All mothers with nonmarital births						
Cyclical cohabitation w/father (reference group)						
Stable cohabitation w/father	0.094 (1.06)	-0.128 (1.31)	-0.085 (0.84)	-0.023 (0.24)	1.02 (0.11)	0.47** (2.68)
Stably single	-0.124 (1.25)	-0.022 (0.20)	-0.063 (0.57)	0.009 (0.09)	0.99 (0.06)	0.84 (0.60)
One cohabitation episode w/father	0.064 (0.73)	-0.090 (0.95)	-0.153 (1.54)	0.021 (0.22)	0.99 (0.03)	0.83 (0.73)
Any cohabitation w/another partner	-0.039 (0.52)	-0.014 (0.17)	-0.056 (0.65)	0.072 (0.87)	1.07 (0.39)	1.16 (0.67)
N	1,968	1,959	1,959	1,959	2,071	2,065
Mothers with nonmarital births cohabiting with father at 9-year follow-up survey						
Cyclical cohabitation w/father (reference group)						
Stable cohabitation w/father	0.084 (0.82)	-0.102 (0.92)	-0.070 (0.58)	0.001 (0.01)	1.02 (0.07)	0.39** (2.92)
One cohabitation episode w/father	0.000 (0.00)	-0.038 (0.29)	-0.170 (1.19)	0.149 (1.08)	1.21 (0.67)	0.67 (1.08)
Any cohabitation w/another partner	-0.156 (0.83)	0.300 (1.52)	0.349 [†] (1.67)	0.657** (3.13)	2.64* (2.15)	1.56 (0.92)
N	569	569	569	569	593	589

Note: The models controlled for all family characteristics from Table 2. PPVT-III = Peabody Picture Vocabulary Test—Third Edition.

^aNumbers are coefficients and (*t* statistics) from ordinary least squares regression.

^bNumbers are odds ratios and (*z* statistics) from logistic regressions.

[†]*p* < .10.

**p* < .05.

$p < .10$
**

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Table 4
Multivariate Regressions of Material Resources and Parental Involvement on Mothers' Relationship Patterns

Predictor	Full sample	Cohabitors at 9 years		Noncohabitators at 9 years	
	Any hardship ^a	Father's time ^b	Both parents' time ^b	Father's time ^b	Both parents' time ^b
Cyclical cohabitation w/father (reference group)					
Stable cohabitation w/father	0.66* (2.09)	0.133 (1.54)	0.131 (1.37)		
Stably single	0.74 (1.32)			-0.697*** (5.90)	-0.741*** (5.87)
One cohabitation episode w/father	0.67* (2.04)	-0.0638 (0.61)	-0.010 (0.87)	-0.341** (2.97)	-0.405** (3.31)
Any cohabitation w/another partner	0.72† (1.93)	-0.474* (2.99)	-0.343* (1.97)	-0.636*** (6.04)	-0.658*** (5.79)
N	2,084	596	596	1,488	1,488

Note: The models controlled for all family characteristics from Table 2.

^a Numbers are odds ratios and (z statistics) from logistic regressions.

^b Numbers are coefficients and (t statistics) from ordinary least squares regression.

† $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.