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Partnership Instability and Child Well-Being

We use data from three waves of the Fragile Families Study (N = 2,111) to examine the prevalence and effects of mothers' partnership changes between birth and age 3 on children's behavior. We find that children born to unmarried and minority parents experience significantly more partnership changes than children born to parents who are married or White. Each transition is associated with a modest increase in behavioral problems, but a significant number of children experience 3 or more transitions. The association between instability and behavior is mediated by maternal stress and lower quality mothering. The findings imply that policies aimed at reducing maternal stress and partnership instability may improve child well-being.

A growing body of research indicates that children exposed to multiple changes in family structure have poorer outcomes, on average, than children who grow up in stable families. These findings have been replicated for a variety of age-groups (early and middle childhood, as well as adolescence) and for a variety of outcomes, including child behavior problems, delinquency, and adolescent pregnancy (e.g., Cavanagh & Huston, 2006; Fomby & Cherlin, 2007; Wu &

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Thomson, 2001). Previous research also indicates that partnership instability may interact with child characteristics such as race/ethnicity and family structure at birth. In some studies, White children appear to be more affected by changes in family structure than Black children (Fomby & Cherlin; Wu & Thomson), and children born to married parents appear to be more affected than children born to unmarried parents (Cavanagh & Huston). Although some of the association between partnership instability and child outcomes is likely the result of selection (e.g., parents with preexisting problems are more likely to experience multiple relationship changes and to have children with behavioral problems; Capaldi & Patterson, 1991), there are good theoretical and empirical reasons to believe that at least part of the effect is causal (Fomby & Cherlin). Social stress theory suggests that changes in relationships lead to disruptions in resources and routines (George, 1993; Holmes & Rahe, 1967), which interfere with a mother's psychological functioning and interactions with her child and, ultimately, reduce child well-being (George, 1989; Rutter, 1983).

Understanding the role of partnership instability in shaping children's future well-being is important for several reasons. First, family instability has increased dramatically since 1960 as a result of major demographic changes, including increases in cohabitation and nonmarital childbearing (Ventura & Bachrach, 2000). The new family forms that result from these changes are much less stable than traditional marriages (Osborne, Manning, & Smock, in press), which means that children are increasingly exposed to multiple changes in family structure over the course of their childhood.

Second, cohabiting unions and nonmarital childbearing are much more common among minority and lower income families as compared to White and higher income families (Ellwood & Jencks, 2004); thus, these groups are disproportionately exposed to family instability. Insofar as family instability—independent of family structure—has negative consequences for children, the new family forms can be viewed as an important mechanism in the reproduction of poverty and inequality across generations (McLanahan, 2004).

This article uses data from a longitudinal survey of new parents to address three broad questions. First, how many partnership transitions—defined as the beginnings or endings of romantic relationships—are children exposed to during the first 3 years of life, and how does their exposure differ by race/ethnicity and family structure at birth? Second, are partnership changes associated with children's behavior problems at age 3, and does this association differ by race/ethnicity and family structure at birth? And finally, do changes in material resources and residence, maternal stress, and poor quality mothering mediate the association between partnership instability and child behavior?

Our study extends previous research in several ways. First, we use data from a large birth cohort study that is following approximately 5,000 children born between 1998 and 2000. The study oversamples nonmarital births so it includes a large number of children who are at risk for experiencing parents' partnership changes. The study also includes a large sample of Hispanic families, which means that we can examine whether the findings from previous studies can be generalized to this population.

Second, our measure of partnership changes includes changes in cohabiting and dating relationships as well as changes in marital partnerships. Whereas a few recent studies have examined transitions into and out of cohabiting relationships, our analysis is the first to examine changes in dating relationships. Although a dating partner is likely to be less involved with the child than a cohabiting partner, we argue that the beginnings and endings of dating relationships are likely to affect the mothers' psychological (and possibly material) resources and ultimately her ability to care for her child.

Third, our data include extensive information on parents' characteristics at the child's birth, including prior relationship stability and grand-

parents' mental health. Thus, we are able to control for many of the theoretically important but often unobserved characteristics that are likely to be correlated with mothers' future partnership stability as well as child behavior problems. These controls reduce the possibility that the associations we observe between partnership instability and child outcomes are spurious.

Fourth, whereas previous studies have primarily focused on older children and adolescents, we focus on children at age 3. The 0 – 3 period is a crucial stage in the development of the mother-child relationship (Belsky, 1990), and behavioral problems at early ages are thought to be predictive of subsequent behavioral and academic difficulties (McLeod & Kaiser, 2004; National Institute of Child Health and Human Development [NICHD] Early Child Care Research Network, 2004; but see Duncan et al., 2006, who find no association between behavior problems at age 5 and academic achievement at ages 8 – 13). Finally, our data include questions about changes in economic resources, residential mobility, maternal stress, and mothering quality, which allow us to examine possible mechanisms through which partnership instability affects child well-being.

Prior Research and Theoretical Perspectives

Research on the association between partnership instability and child well-being has been ongoing for 25 years. Early studies focused on changes in marital unions, including divorce and remarriage. As cohabitation became more common, researchers began to include transitions into and out of these unions as well. Several researchers have documented a negative association between the number of partnership changes a child is exposed to and the child's well-being at various developmental stages.

Looking at adolescents, Capaldi, Crosby, and Stoolmiller (1996) found that boys who are exposed to multiple partnership transitions become sexually active at younger ages than boys who grow up in stable families. Wu et al. found that the number of family transitions a child experiences between birth and age 14 is associated with early sexual intercourse and premarital childbearing among adolescent girls (Wu, 1996; Wu & Martinson, 1993; Wu & Thomson, 2001). Similar results have been reported for adolescent pregnancies by researchers using British data (Cockett &

Tripp, 1994) and New Zealand data (Woodward, Fergusson, & Horwood, 2001). Most recently, Fomby and Cherlin (2007) have shown that union instability (including changes in cohabiting relationships) is associated with behavior problems in White (but not Black) adolescents.

Looking at younger children, Capaldi and Patterson (1991) found that boys who experience three or more partnership transitions have substantially more adjustment problems in elementary school than boys who experience no transitions. Similarly, Kurdek, Fine, and Sinclair (1995) found that partnership transitions are negatively associated with academic achievement and behavior problems among sixth graders, and Najman et al. (1997) reported similar effects on child behavior problems at age 5. Ackerman and his colleagues (Ackerman, Kogos, Youngstrom, Schoff, & Izard, 1999; Ackerman, D'Eramo, Umylny, Schultz, & Izard, 2001; Ackerman, Brown, D'Eramo, & Izard, 2002; conducted a number of studies of the effects of partnership transitions on the academic performance and behavior problems of children between the ages of 5 and 8 and found that multiple transitions, including changes in cohabitation status, are associated with increases in behavior problems but not cognitive test scores. More recently, Cavanagh and Huston (2006) found that partnership instability is associated with behavior problems among middle-income 5-year-old children.

In addition to documenting the association between partnership transitions and child outcomes, researchers have also identified a number of factors that appear to modify the effects of instability on child well-being. For example, two studies report stronger effects for Whites than for Blacks (Fomby & Cherlin, 2007; Wu & Thomson, 2001); several studies report more negative effects among children whose parents have fewer resources, measured variously as mental health, cognitive skills, and economic status (Ackerman et al., 2002; Cavanagh & Huston, 2006), and there is mixed evidence regarding the moderating effects of family structure on instability (Cavanagh & Huston).

Why Would Partnership Instability Affect Child Well-Being?

Our theoretical model for how partnership instability affects poor outcomes in children is based on social stress theory (George, 1989, 1993; Holmes & Rahe, 1967). According to this theory, partnership transitions are associated with changes in material and social resources, which, in turn, negatively affect a mother's psychological functioning and capacity to positively interact with her child. Ultimately, declines in mother's functioning lead to increases in child behavior problems.

According to social stress theory, even "positive" events, such as getting married, forming a new partnership, or ending a bad relationship, may lead to increases in stress. Social stress theory posits that the negative effects of partnership changes should be most pronounced around the time of the change and should fade out over time in the absence of additional changes (Acock & Demo, 1994; Williams & Umberson, 2004). Because the stress from each event is cumulative, children who experience multiple changes over a short period of time are likely to be at greater risks for negative outcomes than children who experience a single change or no changes (Rutter, 1983).

The theoretical model described above is supported by empirical research showing that divorce is associated with income loss and greater residential mobility (Holden & Smock, 1991; McLanahan & Sandefur, 1994). Separation from cohabitation is also associated with a decline in resources (Avellar & Smock, 2005). Whereas remarriage or repartnering may lead to increases in family resources, the extent to which the additional income is equally shared in stepfamilies is unclear (Case, Lin, & McLanahan, 2000). Moreover, although remarriage may indicate a move to a larger house or safer neighborhood, the move itself may disrupt mothers' and children's connections to neighborhood ties.

Divorce also leads to disruptions in family processes that are associated with good parenting and positive outcomes in children (Hetherington, Cox, & Cox, 1982). According to these researchers, the disruptions in routines and other parental behaviors that typically accompany divorce are usually temporary, lasting between 18 months and 2 years for most families (Hetherington, Cox, & Cox, 1985). A similar process occurs when a mother remarries and her child must adapt to a new stepfather and possibly stepsiblings (Hetherington, Bridges, & Insabella, 1998; Hetherington et al., 1992).

As a family adjusts to the changes and establishes a new set of routines, parenting improves and the child's behavioral problems subside. Over the long run, however, families that experience persistent changes may not have an

opportunity to return to "normal" and thus may live in perpetual uncertainty and chaos (Brody, Neubaum, & Forehand, 1988). A chaotic, unpredictable environment negatively alters a mother's capacity to care for her child (Pavenstadt, 1965; Waters & Cummings, 2000). More specifically, high levels of stress interfere with a mother's ability to provide warm, nurturing, and supportive parenting, which are essential contributors to healthy child development (Belsky, 1990; Bowlby, 1977).

Aside from stress, there are two alternative hypotheses for why partnership instability might be associated with children's behavior problems. First, the *selection hypothesis* posits that partnership instability and child behavior problems are both determined by a third unobserved (by the researcher) variable. For example, mothers with serious psychological problems may find it more difficult to maintain stable relationships and their children may also exhibit more behavior problems. Evidence for this hypothesis is mixed (Capaldi & Patterson, 1991; Capaldi et al., 1996; Fomby & Cherlin, 2007). Second, the *reverse causality hypothesis* argues that having a child with a serious behavior problem may increase maternal stress, which will cause more partnership instability. A number of studies find that parents with an unhealthy child are more likely to divorce (e.g., Reichman, Corman, & Noonan, 2004). These alternative hypotheses have different policy implications, and we examine the hypotheses in more detail in our analyses.

Moderating Effects

Social stress theory also suggests that the effects of instability may be conditioned by race/ethnicity and family structure, although exactly how these moderating effects should play out is not entirely clear. On the one hand, social stress theory argues that change is less stressful when it is more normative and more predictable and when a mother is protected by a strong support system (Maier & Seligman, 1976; Mineka & Kihlstrom, 1978). Because partnership instability is more common among Blacks, Hispanics, and unmarried mothers (Ellwood & Jencks, 2004; Martin, 2004), the effects of instability may be less negative for these groups. There also is evidence that minority and single mothers have more supportive kin networks (Black, Dubowitz, & Starr, 1999; Coley, 1998; McLoyd, Cauce, Takeuchi,

& Wilson, 2000), although some researchers dispute this finding (McDonald & Armstrong, 2001). Finally, unmarried mothers may experience higher conflict and more violence in their relationships than married mothers (Brown & Booth, 1996; Cherlin, 1998), which suggests that ending a relationship may reduce their stress in the short term (Amato, 2005). All these arguments imply that the effects of partnership transitions on mothers' functioning should be less negative for minority and unmarried mothers.

On the other hand, social stress theory also argues that a mother's capacity to cope with a stressful event is conditioned by her education level and material resources (George, 1989; Levine, 1980). Because married mothers and nonminority mothers have more resources at their disposal than unmarried, minority mothers (Manning & Brown, 2006), we might expect the effects of instability to be less negative for these mothers.

Control Variables

To minimize the possibility that the effect of partnership instability on child behavior is driven by selection, we control for a host of maternal characteristics that predate the child's birth and that have been shown to affect both instability and child outcomes. These include mothers' age, race/ethnicity, education level, health (including mental health), and health behaviors. Age and race/ethnicity are predictive of relationship stability (Carlson, McLanahan, & England, 2004; Osborne et al., in press) and are also associated with more punitive parenting and more child behavioral problems (Brody & Flor, 1998; Klebanov, Brooks-Gunn, & Duncan, 1994; McLoyd, 1990). Similarly, education and parental health are predictive of partnership stability (see Fein, Burstein, Fein, & Lindberg, 2003, for a review) as well as parenting and child behavior (Brody & Flor; Klebanov et al. ; McLoyd). Finally, we control for two child characteristics, low birthweight (Reichman et al., 2004) and male gender (Lundberg, 2005), as both these variables have been shown to be associated with partnership instability and child behavior problems.

In addition to the standard set of controls, we include several additional variables that are not typically available in most data sets but are likely to be highly correlated with relationship instability and child outcomes. These include the number of prior romantic relationships a mother has had, the number of different men with whom she has

had children, whether she grew up in a stable home environment, and whether she was married, cohabiting, romantically involved but living apart (visiting), or not romantically involved with the child's biological father at birth (Carlson et al., 2004; Osborne, 2005a). Including these variables reduces but does not eliminate the chances that the association between instability and poor child outcomes is caused by selection.

METHOD

Data

Our analysis is based on data from the first three waves of the Fragile Families and Child Wellbeing Study (Fragile Families). The Fragile Families Study is a stratified, multistage, probability sample of approximately 5,000 births that occurred between 1998 and 2000. The data are representative of births in U.S. cities with populations of 200,000 or more. The study design called for a large oversample of nonmarital births, and thus, these data allow us to distinguish among different types of unmarried mothers, including cohabiting mothers and mothers who are romantically involved with the child's father but living apart; as well as different types of union transitions, including transitions into and out of cohabiting and dating relationships and transitions into and out of marriage. Mothers were interviewed in the hospital soon after their child's birth (Wave 1). Almost 90% ($n = 4,365$) of the mothers in the original sample ($N = 4,897$) were reinterviewed when the child was approximately 1 year old (Wave 2), and 86% ($n = 4,230$) were interviewed when the child was approximately 3 years old (Wave 3). Both the Waves 2 and 3 core surveys were conducted by telephone. In addition, at Wave 3, assessments of mothers' parenting and child well-being, including the Child Behavior Checklist (Achenbach, 1992), were completed for 78% ($n = 3,318$) of the mothers who completed the core interview at age 3. Approximately 64% of the mother-child assessments were completed in their home, whereas 36% were completed by telephone.

Our analytical sample includes 2,111 mothers. We exclude 312 mothers (6% of N) who were not interviewed at Waves 2 and 3, an additional 1,207 mothers (25% of N) who did not complete the mother/child module at age 3, and an additional 1,267 mothers (26% of N) who completed the module but did not complete the

mother/child module in the home. Mothers who did not complete the mother/child module do not differ systematically from mothers who did complete it on the variables included in this analysis, with the following exceptions. Mothers who did not complete the mother/child module have slightly higher incomes at baseline and Wave 3 interviews, they are somewhat more likely to have been raised by two parents, and they are significantly less likely to report that their parents experienced depression. In addition, mothers who completed the mother/child interview in person did not differ systematically from mothers who completed the interview by telephone (Berger, Paxson, & Waldfogel, 2005).

Child Outcome Measures

We examine two child behavioral problems, aggressive and anxious/depressed behavior, using subscales from the Achenbach 1992 Child Behavior Checklists for 2 – 3 year olds. Each mother was read a statement and asked to indicate whether the statement was *not/never true* (0), *somewhat/sometimes true* (1), or *very/often true* (2) of her child. The aggressive behavior scale consists of 15 items ($\alpha = .86$) including defiant, demands must be met immediately, disobedient, easily frustrated, fights often, hits others, has angry moods, punishment does not change actions, screams a lot, selfish, temper tantrums, easily jealous, moody, unusually loud, and whiny. The anxious/depressed scale consists of 10 items ($\alpha = .65$) including too dependent, feelings hurt easily, looks unhappy, self-conscious/embarrassed, too fearful, unhappy, upset by separation from parent, overtired, shy, and wants attention. The child behavior measures are standardized to have a mean of 0 and a standard deviation of 1.

Partnership Transitions

The main independent variable of interest is the total number of maternal partnership changes between the child's birth and the time of the 3-year interview. We focus on the beginning and ending of romantic relationships rather than changes in coresidential relationships for both substantive and methodological reasons. Substantively, we argue that romantic relationships, regardless of coresidence, may divert a mother's time, attention, energy, and resources away from her child, thus affecting her stress level and

parenting behavior. We also argue that changes in coresidence are not as clear as they might seem to be (Knab, 2005; Manning & Smock, 2005). For example, one mother who lives with a partner four nights per week may consider herself cohabiting, whereas another mother who spends the same number of nights with her partner may consider herself to be in a dating, or visiting, relationship. Further, cohabiting relationships are often preceded by a period of dating, and we are unable to determine precisely when the transition between dating and living together occurs. For both these reasons, we focus on the beginnings and endings of romantic partnerships.

A few caveats are in order. If cohabiting parents marry after the birth of their child, or if noncohabiting partners move in together, neither of these changes is considered a partnership transition for the reasons stated above; namely, we are focusing on the beginning and ending of the romantic relationship. It is likely, however, that a transition to marriage may have significant benefits to the mother (Ellwood & Jencks, 2004) that do not exist in cohabiting or visiting relationships, and we would not capture this by excluding the transition to marriage in our count. Prior research using the Fragile Families data, however, shows that transitions from cohabitation to marriage are not associated with differences in mothering (Osborne, 2005b) or child behavior (Osborne, McLanahan, & Brooks-Gunn, 2005), thus excluding this transition as a separate transition will likely have only a small influence on our results. Separation from the child's biological father following the birth, however, is considered a transition if the parents are romantically involved at the child's birth (i.e., married, cohabiting, or visiting). Moreover, if a mother reports being "separated" from the child's father at Wave 2 and being back together with the father at Wave 3 ($n = 72$), both events are counted as partnership transitions. In separate analyses (available from the authors on request), we determined that the results are robust to various methods of counting transitions.

Mothers were not asked about the number of partnerships that ended and began between interviews; rather, they were asked about current partnerships at the time of each interview and whether their current partner was the same person as their partner in the previous wave. Thus, we cannot identify partnership changes that begin and end between interviews. Mothers who report having a child with a new partner between the two interviews, however, are coded as having begun and ended a partnership if they were not in a relationship with this partner at the time of the interviews ($n = 158$, 3% of N). Presumably, we are undercounting the actual number of romantic partnerships mothers enter and exit over the course of their child's first 3 years because we cannot count partnerships that are unobserved at either interview unless they involve a new birth. Thus, our results should be interpreted as a lower bound estimate of the incidence of partnership instability. Alternatively, by including all romantic partnerships, we may be overestimating the number of partnerships that have an effect on the mother and child.

Mediating Variables

We examine four potential mediating variables: changes in income, number of residential moves, maternal stress, and poor quality mothering. Income change is measured as the difference between mother's household income at Wave 3 and mothers' household income at baseline (divided by $10,000). Household income is continuous and is based on the mother's report. Residential mobility is measured by mothers' reports of how many times she (and therefore the child) has changed residences between the child's birth and the Wave 3 interview. Maternal stress is measured by a 10-item scale ($\alpha = .89$). Responses ranged from 1 to 5 and are recoded such that a higher score indicates higher levels of stress. The sum of the responses was divided by the number of questions (10) to produce a measure with a range of $1 - 5$. Many of the items were borrowed or adapted from the Early Head Start evaluation. The 10 questions were asked of the mother at the Wave 3 interview and include the following: the mother often has feelings that she cannot handle things well, finds herself giving up more of her life to meet her child's needs than she expected, feels trapped by her responsibilities as a parent, has been unable to do new things since having the child, feels she is never able to do things she likes since having the child, is bothered by quite a few things in her life, feels having child has caused her more problems than she expected in her relationship with men, feels alone and without friends, expects to have a bad time when she goes to a party, is less interested in people than she used to be, is unhappy with the last purchase of clothing for herself, and enjoys things less than she used to.

Mothering behavior is based on four subscales created from the infant-toddler version of the Home Observation for Measurement of the Environment (HOME) inventory (Bradley & Caldwell, 1977). Mothers are coded 1 on each of the subscales if they score in the bottom quintile on punitive punishment, lack of emotional responsiveness, lack of verbal/social skills, and low language/literacy. We created a mothering measure from these subscales that ranges from 0 to 4, with a 4 indicating that the *mother scores poorly* (in the bottom quintile) on all four HOME subscales. To create the HOME subscales, each measure of mother-child interaction was observed during the in-home assessment. Each observation is based on a dichotomous (yes/no) assessment by the observer, and the observations are summed into scales such that a higher score represents more positive parenting behavior. The nonpunitive scale consists of five questions including the mother does not shout, express annoyance, spank, scold or criticize, or interfere or restrict the child during the visit ($\alpha = .76$). The emotionally responsive scale represents parental warmth and consists of six items including the mother talks with the child two or more times during visit, responds to the child's questions orally, praises the child during the visit, voices positive feelings toward the child, kisses or hugs the child, and tells the child the name of an object during the visit ($\alpha = .74$). The verbal/social scale consists of three items and reflects the language skills the mother models for the child. The questions indicate whether the mother's speech is audible, whether she initiates verbal exchange with the observer, and whether she converses freely and easily during the visit ($\alpha = .69$). The language/literacy scale consists of 11 items that include the types of toys the child has in the house (to stimulate gross and fine motor skills), having five or more books in the house, and the mother reading to the child two or more times per week. The language/literacy scale is the only one of the four scales that primarily relies on the mothers' reports rather than interviewer observation ($\alpha = .71$).

Control Variables

The mother's relationship status with her child's biological father at the time of the child's birth is measured by four categories: married, cohabiting, visiting, and single. Cohabiting mothers are those who report living with their child's biological

father at the child's birth and mothers who report living with the child's father *most or all of the time* at Waves 2 and 3. Mothers are coded as visiting if they report being romantically involved with their child's biological father at the child's birth but not living with him. Single mothers are those mothers who are not romantically involved with their child's biological father at the child's birth. Approximately 3% ($n = 8$ out of 271) of the mothers in the last group were living with a new partner when their child was born.

Mother's prior relationship instability measures the number of mother's romantic relationships lasting more than 1 month prior to her relationship with the child's biological father and the number of other men with whom she has had children. Both these questions were asked at the Wave 3 interview, but the measures are coded to reflect behavior prior to the focal child's birth. A dichotomous measure of whether the mother's parents were married when she was age 15 is also included in the models. These variables are expected to capture unobserved characteristics of the mother that are likely to be related to relationship instability, poor parenting, and children's behavior problems.

We include two variables to measure child characteristics: a dichotomous variable to indicate if the child is male and a dichotomous variable to indicate whether the child was born with low birthweight (less than 2,500 g). Both these variables have been shown to be related to partnership status and child well-being (Lundberg, 2005; Reichman et al., 2004).

All the additional control variables are measured at birth unless otherwise indicated. Mother's age is a continuous variable, and race/ethnicity is measured by a set of dummy variables for non-Hispanic White, non-Hispanic Black, Hispanic, and other. Mother's education is based on four dichotomous categories: less than high school, high school, some college or technical training, and college degree or more. Mother's health and health behaviors are assessed using four measures: the mother's self-reported health status ($1 - 5$), prenatal smoking, and her mother's or father's prior bouts with depression. Grandparent depression is based on questions asked of the mother at the Wave 3 interview. These variables may pick up a genetic tendency toward depression or other unobserved characteristics of mothers who are more likely to experience depression. Ideally, we would control directly for the mother's depression, because her depression may

influence her parenting and her reporting of her child's behavior (Rutter, 2005). Mothers' depression was not assessed until the Wave 2 interview, however. Thus, her depression may be a consequence of her partnership instability and cannot be considered a control variable. In analyses not reported here, we tested models that included the mother's depression at Wave 2, and the results were consistent with the ones shown in the final analysis.

Cases with missing data on the outcome and mothering variables were dropped from the analyses, as indicated above. For cases with missing data on the control variables, we imputed missing values to the mean of the subgroup, using mother's relationship status at her child's birth (i.e., married, cohabiting, visiting, or single), and we included a flag to indicate that the case had missing data. In no instance did we impute missing values for more than 5% of the cases.

Analytic Strategy

To determine the association between partnership instability and child behavior, we employ ordinary least squares regression techniques. We estimated three models for each outcome. The first model estimates the bivariate association between the number of partnership changes and the child's aggressive and anxious/depressive behavior at age 3. The second model adds mothers' background characteristics including demographic characteristics (age, race/ethnicity), education level, health and health behaviors (self-reported health, prenatal smoking, parents' depression), and prior instability (prior romantic relationships, number of other fathers for children, and parents married at age 15). This model also includes two child characteristics (low birthweight and male). The third model controls for possible mediators between partnership instability and child behavior and adds changes in household income between the child's birth and Wave 3, the number of residential moves between birth and age 3, maternal stress, and poor quality mothering, measured at Wave 3. We recognize that these variables may actually act as predictors of partnership instability rather than as mediators as presented in our theoretical model. To determine the direction of the relationship, we run various sensitivity tests that are described in greater detail below. Finally, to determine if the effects of partnership instability on child behavior are similar across race/ethnic groups and family struc-

tures, we interact the number of partnership changes with each of these variables (separately) in models equivalent to Model 2 presented above.

RESULTS

Descriptive Statistics

Table 1 shows the distributions of the child behavior measures and the other variables used in this analysis by the mothers' relationship with the focal child's biological father at the child's birth. With few exceptions, married mothers differ significantly from unmarried mothers; there are very few differences, however, among unmarried mothers. For child behavioral problems, a higher score indicates more problem behavior. Children born to married mothers have fewer reported aggressive and anxious/depressed behavioral problems. On the basis of the interpretation of the raw scores (not reported) compared to the national norms (Achenbach, 1992), children of married mothers have average scores in the 50th percentile of nationally normed standards, whereas children born to unmarried mothers have average scores close to the 70th percentile of nationally normed standards for 2 – 3 year olds (Achenbach). Scores above the 95th percentile are generally believed to indicate clinical problems; thus, the mean for all children in this sample falls within the normal range of behavior (Achenbach).

Married mothers are approximately 5 years older than unmarried mothers (29 vs. 24 years, respectively) and are more often White (41%) as compared to Black (28%) or Hispanic (24%). By contrast, over half of cohabiting mothers, three quarters of visiting mothers, and two thirds of single mothers are Black. Approximately one third of married mothers have a college degree compared to fewer than 3% of unmarried mothers. Moreover, approximately two fifths of unmarried mothers do not have a high school diploma compared to only 15% of married mothers.

Marital status differences in health and health behaviors are somewhat mixed. The self-rated health status differentials among mothers are not very large. The difference in prenatal smoking, however, is considerable; over 20% of unmarried mothers report smoking during pregnancy compared to 7% of married mothers. There are few differences in mothers' reports about their own parents' depression, with both groups

Table 1. *Distribution of Variables by Mother's Relationship Status at Child's Birth*

	Total (N = 2,111)	Married (n = 456)	Cohabiting (n = 795)	Visiting[a] (n = 589)	Single[b] (n = 271)
Child behaviors[c]					
Aggressive (M = 0, SD = 1)	0.09	−0.18	0.12	0.15	0.29
Anxious/depressive (M = 0, SD = 1)	0.08	−0.23	0.15	0.16	0.22
Demographic characteristics					
Age (years)	24.87	29.11	24.03	23.43	23.35
White	18.71	41.23	16.73	6.45	13.28
Black	54.52	27.85	51.82	74.36	64.21
Hispanic	23.02	23.68	28.68	16.47	19.56*
Education level					
Less than high school	34.91	15.13	38.36	40.92	45.02
High school	31.55	20.61	34.21	35.82	32.84
Some college	24.63	31.36	24.91	21.22	19.93
College	8.91	32.89	2.52	2.04	2.21
Health/health behaviors					
Fair or poor health	7.77	5.70	8.43	8.32*	8.12*
Prenatal smoking	19.89	7.02	22.89	23.09	25.83
Mother's mother depressed	27.43	29.39	29.56*	21.73	30.26*
Mother's father depressed	11.89	14.91	11.19	11.21*	10.33*
Prior instability					
Prior romantic relationships (M)	2.07	2.80	1.97	1.63	2.09
Other fathers for children (M)	0.24	0.08	0.22	0.32	0.42
Parents married at age 15	37.99	62.28	35.97	27.67	25.46
Child characteristics					
Male	52.34	50.88	50.31*	54.84*	55.35*
Low birthweight	9.09	5.26	8.93	11.71	10.33
Possible mediating variables (M)					
Change in household income (Wave 3 – birth)	0.23	1.04	0.01	0.07	−0.13
Residential moves	1.33	0.79	1.53	1.36	1.61
Maternal stress (1 – 5)[d]	2.18	1.96	2.19	2.24	2.37
Poor mothering (0 – 4)[e]	0.79	0.45	0.81	0.96	0.93

Note: Source—Fragile Families and Child Wellbeing Study. [a]Romantically involved with child's biological father but do not coreside. [b]Romantically involved with child's biological father. [c]Subscales of the Child Behavior Checklist (Achenbach, 1992). Standardized to $M = 0$ and $SD = 1$. There are no significant differences in child behavior scores among children born to unmarried mothers. [d]Single mothers report significantly higher levels of maternal stress than all other mothers. There are no significant differences between cohabiting and visiting mothers. [e]This measure is the sum of four dichotomous measures of poor parenting created from subscales from the HOME assessment: punitive, not emotionally responsive, not verbal social, and low language/literacy. Visiting mothers score significantly worse than all other mothers; there are no significant differences between cohabiting and single mothers.

*Value does not differ significantly from married at the $p \leq .05$ level; all other measures for unmarried mothers differ significantly from married mothers at the $p \leq .05$ level.

reporting more depression among their mothers than fathers.

Married mothers report having had more partnership changes prior to the birth of their child than unmarried mothers, which is not surprising given that the former are, on average, 5 years older than the latter. Interestingly, married mothers have had children with fewer partners than unmarried mothers. This finding is consistent with the idea that married mothers spend a good deal of time "searching" for mates before starting their families, whereas unmarried mothers start

their families early in the search process (Edin & Kefalas, 2005). Finally, child gender is similar for married and unmarried mothers, although low birthweight is nearly twice as common among unmarried mothers as married mothers.

With regard to the mediating variables, only married parents experience a significant increase in their household income between the child's birth and age 3. Among unmarried mothers, household income is relatively flat. Married mothers report approximately half the number of residential moves between the child's birth and age 3 as unmarried mothers report, and there are no significant differences among the unmarried mothers. In addition, married mothers report significantly lower levels of maternal stress than unmarried mothers, and mothers who are not in a relationship report the highest levels of maternal stress. Mothers who are married at their child's birth are also significantly less likely to exhibit poor mothering behaviors when their child is age 3, as compared to mothers who are unmarried at their child's birth. Mothers who are romantically involved with their child's father but living apart (visiting mothers) have the poorest observed mothering behaviors.

Prevalence of Partnership Instability

The first questions we address are how many partnership transitions are children exposed to during the first 3 years of life, and how does exposure differ by race/ethnicity and family structure at birth? The results indicate that partnership instability varies substantially by family structure (Table 2). Children born to married mothers are significantly less likely to experience a partnership transition than children born to unmarried mothers; and children born to cohabiting mothers are less likely to experience a transition than children born to unmarried mothers who do not live with a partner (visiting or single mothers). Moreover, if a child born to a married mother does experience a transition, it is generally only one, whereas children born to unmarried mothers are likely to experience multiple transitions.

Over 87% of children born to married mothers experience zero partnership transitions by age 3, as compared to 50% of children born to cohabiting mothers, 30% of children born to visiting mothers, and 26% of children born to single mothers. Children whose mothers live apart from their biological father at birth (visitors and singles) are at high risk for experiencing multiple

Table 2. *Distribution of Maternal Partnership Transitions Between Child's Birth and Age 3 by Relationship Status at Child's Birth*

	Married ($n = 456$)	Cohabiting ($n = 795$)	Visiting[a] ($n = 589$)	Single[b] ($n = 271$)
Count of transitions (%)				
0	87.28	50.06	30.56	26.20
1	6.80	25.03	29.54	24.35
2	3.73	15.22	19.52	18.82
3	1.10	3.02	7.13	25.83
4+	1.10	6.67	13.25	4.80
Number of transitions (*M*)				
All transitions[c]	0.22	0.92	1.45	1.59
Coresidential transitions[d]	0.19	0.79	1.11	0.86
Marital transitions[e]	0.14	0.03	0.01	0.08
Transitions by race/ethnicity (*M*)				
Non-Hispanic White	0.11	0.87	1.03	1.42
Non-Hispanic Black	0.47	1.11	1.55	1.62
Hispanic	0.15	0.62	1.28	1.62
Other	0.09	0.82	0.94	1.75

Note: Source—Fragile Families and Child Wellbeing Study. All unmarried mothers differ significantly from married mothers on count and number of transitions.

[a]Visiting mothers are romantically involved with child's biological father but do not coreside. [b]Single mothers are not romantically involved with child's biological father. [c]Transitions include entrances and exits from marital, cohabiting, or dating relationships. [d]Transitions include entrances and exits from marital and cohabiting relationships. [e]Transitions include entrances and exits from marital relationships only.

partnership transitions; over 20% of children born to visiting mothers and 30% of children born to single mothers experience three or more partnership transitions in the first 3 years of life. By contrast, fewer than 10% of children born to cohabiting parents and fewer than 3% of children born to married parents experience such high levels of instability. The differences are also stark when the mean number of transitions is considered. Children born to married mothers experience 0.22 transitions between birth and age 3, on average, as compared to 0.92 for children born to cohabiting mothers and approximately 1.50 for children born to visiting and single mothers.

Prior studies have not included transitions into and out of romantic partnerships but rather have focused on marital and cohabiting transitions. Table 2 illustrates how much instability we would observe in this sample if we only counted cohabiting or marital transitions. The results show significantly fewer partnership transitions for all groups, but especially for mothers who are visiting or single when their child is born. By counting only marital and cohabiting relationships, we miss about 15% of the transitions experienced by children born to married or cohabiting parents, approximately 25% of the transitions experienced by children born to visiting mothers, and almost half of the transitions experienced by children born to single mothers. By counting only marital transitions, we miss about half of the transitions experienced by children born to married mothers and almost all the transitions experienced by children born to unmarried mothers. We capture most of the transitions experienced by children born to married mothers because these transitions are nearly all separations from a marriage.

With regard to the differences in prevalence of transitions by race/ethnicity, we find that Black children experience the most partnership transitions (1.28), White children experience the fewest (0.57), and Hispanic children fall between (0.76) (results not shown). The results in Table 2 show that Black children born to married or cohabiting parents experience significantly more transitions compared to White or Hispanic children but that the differences by race/ethnicity among children born to parents who do not live together are small. This finding is important because it is most common for White children in this sample (48%) to be born to married parents, whereas Hispanic children (47%) are most commonly born to cohabiting parents, and Black children (38%) are most commonly born into visiting relationships. Thus, the difference in instability across race and ethnic groups, particularly between Black and White children, is driven by the different relationship statuses of the children's parents at the child's birth in conjunction with differing levels of instability within a given relationship status.

Multivariate Analyses

The next questions we address are how are maternal partnership transitions associated with children's behavior at age 3, and does this association differ by race/ethnicity and family structure at birth? The first three columns of Table 3 report the results for childhood aggression. Consistent with prior research on older children and adolescents, partnership instability is positively associated with behavioral problems in children as young as age 3. Model 1 shows that each partnership transition is associated with an increase in aggressive behavior equivalent to 9% of a standard deviation. Although this effect size is modest, the effects accumulate with each transition. Thus, small differences can add up to substantial effects. In Model 2, we control for a host of background characteristics of the mother. These variables reduce the coefficient for partnership instability on aggressive behavior by more than half; the coefficient declines to an effect size of approximately 4% of a standard deviation.

Interestingly, children born to cohabiting and visiting mothers show no differences in aggressive behavior at age 3 relative to children born to married mothers nor compared to each other ($p = .90$), controlling for background characteristics of the mother. Children born to single mothers, however, show significantly higher levels of aggressive behavior than children born to married mothers, taking into consideration the number of partnership changes they experience and the control variables. In fact, living in a single-mother household is equivalent, in terms of risk for aggressive behavior, to experiencing 5.25 partnership transitions.

Importantly, children born to single mothers are the most likely to experience partnership instability; over 30% experience three or more changes. The combined risks associated with being born to a single mother and multiple partnership changes place these children at extreme risk for elevated aggressive behavior relative to

Table 3. *Results of Ordinary Least Square Regression Analyses of Partnership Transitions on Child Behavior*[a] *(N = 2,111)*

	Aggressive Behavior			Anxious/Depressive Behavior		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Partnership transitions[b]	.09**	.04*	.02	.09**	.04*	.02
Relationship status at birth						
(Married)						
Cohabiting		.09	.07		.10	.07
Visiting		.10	.07		.09	.05
Single		.21*	.13†		.12	.06
Demographic characteristics						
Age		−.01**	−.01**		−.00	−.00
(White)						
Black		.04	−.02		.06	.01
Hispanic		.08	.08		.19*	.19**
Other		.14	.02		.27*	.17
Economic resources						
(Less than high school)						
High school		−.08	.00		−.23**	−.16**
Some college		−.20**	−.05		−.50**	−.38**
College		−.29**	−.09		−.68**	−.51**
Health/health behaviors						
Fair or poor health		.21**	.12		.20*	.12†
Prenatal smoking		.16**	.08		.06	−.00
Mother's mother depressed		.15**	.09*		.14**	.09†
Mother's father depressed		.09	.09		−.04	−.03
Prior instability						
Prior relationships		.01	.02†		−.01	−.00
Other fathers for children		.06†	.03		.04	.02
Parents separated at age 15		.05	.02		.08†	.06
Child's characteristics						
Male		.14**	.11**		.05	.03
Low birthweight		.04	.01		.06	.03
Possible mediating variables						
Change in income			−.01			.00
Residential mobility			−.01			.01
Maternal stress (1 − 5)			.42**			.32**
Poor mothering (1 − 4)			.13**			.11**
Constant	−.01	.09	−.83	−.01	.09	−.66
R^2	.0141	.0656	.1687	.0143	.1055	.1698

Note: Source—Fragile Families and Child Wellbeing Study.
[a]Standardized with $M = 0$ and $SD = 1$. [b]Tests for interactions between partnership instability and race/ethnicity and partnership instability and relationship status yielded only one significant result: Partnership instability is associated with more aggressive behavior among Hispanic children relative to White children ($\beta = .12$; $p = .01$). Reference groups are in parentheses.
†$p \leq .10$. *$p \leq .05$. **$p \leq .01$.

their counterparts born to married parents who experience fewer partnership changes. Several other factors including the mother's age, education level, health, and prior instability, and the child's gender are also predictive of aggressive behavior.

The results for anxious/depressive behavior are similar to those for aggressive behavior. The last three columns of Table 3 show that each partnership transition is associated with more anxious/depressive behavior, equivalent to an effect size of 9% of a standard deviation. The control

variables introduced in Model 2 explain 56% of the effect of partnership instability on anxious/depressed behavior, yet the effect remains statistically significant. Ethnicity, education, and health are also predictive of anxious/depressive behaviors.

Robustness Checks

To determine if our results are sensitive to how we measured partnership instability and how we defined our sample, we performed a number of sensitivity tests. First, we examined categorical specifications of partnership transitions and found that the effects are generally linear and additive. We estimated a model using the same variables as included in Model 2, and measuring transitions as one change, two changes, three changes, or four changes or more. For aggressive behavior, the standardized coefficients were as follows: .02 for one transition, .04 for two transitions, .12 for three transitions, and .15 for four or more transitions. Wald tests revealed that there are no threshold effects and that the effects are additive. One should be cautious in interpreting these results, however, because the coefficients themselves indicate that one transition has no effect on child behavior, whereas three or more transitions have large effects. To be consistent with prior research and to be more parsimonious, we opted to measure partnership transitions as a linear variable. The results are similar for anxious/depressive behavior.

In addition, we might find larger effects associated with more transitions because children who experience more changes, by definition, have also experienced more recent changes, and the effect of recent changes is likely worse than those that occurred prior to age 1. We tested this by limiting our analysis to partnership transitions between the child's first and third years and found the results are consistent with the ones that include changes in the first year. Moreover, we cannot account for changes that occur within interview waves, which increases the measurement error in our count of transitions. This increase in measurement error makes finding significant differences more difficult because it increases our standard errors. Finally, we investigated whether the effect of partnership transitions was linear and additive regardless of the initial relationship status of the mother by running separate models using the count variables for transitions for each relationship status and testing for

significant differences across models. It is likely that the first transition for married parents (i.e., separation) would have a different effect from the first transition for single mothers (i.e., forming a new partnership). Nonetheless, we found that the effects of the transitions are similar, linear, and additive for all groups.

Next, we looked at whether the results were sensitive to including transitions in dating relationships. We found that the effect of partnership transitions, when limited to coresidential transitions, was very similar to the effect when all transitions were included. For aggression, the standardized coefficients (using the equivalent of Model 2) were .0367 for all transitions and .0366 for coresidential (married and cohabiting) transitions only. For anxious/depressive behavior, the differences were somewhat larger, but still quite small (.0347 for all transitions and .0260 for coresidential transitions only).

We also looked at whether our results were sensitive to the exclusion of mothers who did not complete the mother-child assessment in person (and thus, their mothering behaviors were not observed). As noted above, 3,318 mothers completed the mother-child module, but only 2,111 completed it in their home rather than by telephone. We found that the effect of transitions on child behavior problems was similar for the two samples. In models equivalent to Model 2, for aggressive behavior, the standardized coefficient on partnership transitions was .0376 for the larger sample as compared to .0367 for the limited sample; for anxious/depressive behavior, the standardized coefficients are .0384 and .0347, respectively. We chose to limit this analysis to the mothers who completed the child module in the home rather than by telephone because we wanted to use the observed measure of mothering quality rather than rely solely on maternal reports of her interactions with her child.

Moderators

To determine if the effect of partnership instability is conditioned by the child's race/ethnicity or family structure at birth, we tested for significant interactions between partnership transitions and these other variables (using a model similar to Model 2). The results are reported in a note in Table 3. None of these interactions is significant with one notable exception: Partnership instability appears to be more strongly associated with aggressive behavior among Hispanic children as compared

to non-Hispanic White children ($\beta = .12$; $p = .01$). The stronger effect for Hispanics is not something that has been found in the previous literature, primarily because Hispanics have rarely been examined separately. Although this significant interaction could be spurious, given that so many interactions were tested, it merits serious attention in future work. In additional analyses, not shown, we separated the Hispanic group according to their nativity status to determine if the effect of instability was different for native-born Hispanic mothers and immigrant mothers. Although foreign-born Hispanics have more stable relationships than native-born Hispanics (Osborne et al., in press; Sweeney & Phillips, 2004), we did not find that the effect of instability differed by nativity status.

Our findings are inconsistent with prior studies that have found that the effects of family instability are stronger for Whites. The fact that previous studies have found weaker effects for Blacks may be because previous studies have not counted changes in cohabiting and dating relationships, thus missing a large proportion of transitions in this group. The difference could also be because the results are sensitive to the age of the child. The studies that found significant interactions were looking at older children. In any case, our findings indicate that future research should continue to try to determine if family instability has differential effects for various children, with more attention paid to Hispanics.

Mediators

The final question we address is whether changes in resources and residence, maternal stress, and poor quality parenting mediate the effect of partnership instability on child behavior problems. Our theoretical model posits that partnership instability introduces stress in the household because of changes in resources, which undermine a mother's interaction with her child. These factors, in turn, will negatively affect a child's behavior. Model 3 in Table 3 reports the results of this analysis for aggressive behavior in children. The results indicate that maternal stress and parenting do mediate the effect of partnership instability on aggressive behavior; the coefficient on partnership instability declines to 2% of a standard deviation when the mediators are introduced to the model, and the effect is no longer significant. Changes in income and residence are not significant predictors of aggressive be-

havior. In other analyses, we introduced each of the mediators separately to the model; changes in resources and residence did not attenuate the effect of partnership instability, whereas maternal stress and mothering behaviors attenuated the effect of partnership instability to a similar degree when entered separately. Maternal stress and poor mothering also attenuate the single-mother effect as well as the effects of mothers' education and health on children's aggressive behavior; the coefficients on these variables decline substantially when maternal stress and poor mothering are included in the model. Maternal stress appears to attenuate the effect of these other variables more than mothering behavior, however, as indicated by a larger decline in these coefficients when maternal stress is introduced independent of mothering behaviors than vice versa. Interestingly, maternal stress and poor mothering behaviors have largely independent effects on aggressive behavior. The sizes of the coefficients for each of these variables when entered jointly are very similar to the sizes of the coefficients when the variables are entered individually (results not shown). This finding is important because, in our analysis, maternal stress is self-reported, whereas poor quality mothering is based on interviewer observations.

Table 3 also reports similar results for anxious/depressive behavior. Model 3 shows that maternal stress and poor mothering jointly explain the significant effect of partnership instability on anxious/depressed behavior in 3-year-old children. The coefficient on partnership instability declines to .02 of a standard deviation and is no longer significant. As with aggressive behavior, changes in economic resources and residence do not mediate the association between partnership transitions and child behavior, and the effects of maternal stress and poor mothering on anxious/depressed behavior are largely independent; the coefficients change very little whether introducing the variables individually or jointly (results not shown).

Robustness Checks

Again, we performed several tests to determine whether our results were sensitive to our exclusion restrictions and whether our findings were consistent with the reverse causality hypothesis. To address the first issue, we reestimated the model using questions on mothers' behavior taken from the core survey. In the core survey,

the mothers self-reported their behaviors with their child (e.g., number of days/week the mother played games, sang songs, told stories to, showed affection), whereas in the in-home version, the mothers' behaviors were observed. The core mothering behaviors were predictive of child behavior but did not attenuate the instability effect. We suspect that the reason for this finding is that the questions on mothering in the core survey are not as reliable as the in-home observations using the HOME scale.

To address the reverse causality hypothesis— that partnership instability is caused by child behavior problems, poor mothering, and maternal stress—we estimated models that treated instability between Waves 2 and 3 as a function of child temperament, poor mothering, and maternal stress at Wave 2 (drawn from questions from the core Wave 2 survey). We found that none of these variables has a significant association with partnership instability, controlling for mothers' background characteristics, and prior instability. The standardized coefficients were .03 for maternal stress ($p = .12$), .004 for child temperament ($p = .35$), and $-.02$ for poor quality mothering at Wave 2 ($p = .59$). This finding lends little support to the reverse causality hypothesis.

DISCUSSION

Our analysis addressed three questions: First, what is the prevalence of partnership instability during the first 3 years of a child's life, and how does this differ by race/ethnicity and relationship status at the child's birth? Second, is partnership instability associated with child behavior problems at age 3, and, if so, does the association differ by the child's race/ethnicity or family structure at birth? And finally, do changes in resources and residence, maternal stress, and poor quality parenting mediate the association between partnership instability and child behavioral problems?

With regard to the first question, we found that partnership instability is very common among children born to unmarried parents, particularly those born to mothers who are not living with their child's father. Between 25% and 30% of children born to noncohabiting mothers experience three or more partnership transitions by age 3. Ours is the first analysis that we know of to document this level of partnership instability at such an early age in children's development.

Our analysis also shows that the level of partnership instability is substantially underestimated if dating relationships are not considered. This problem is especially serious for children born to African American parents whose mothers are least likely to cohabit or marry and most likely to experience multiple dating transitions. These findings are important for researchers interested in family change and children's family experiences and especially for those interested in race/ethnic differences in these experiences.

Regarding the second question, we found that partnership instability is positively associated with aggressive and anxious/depressive behavior in children at age 3. Whereas one partnership change has only a modest effect on child outcomes, effects accumulate with each change leading to large effects for children who experience multiple transitions. Because children with fewer resources are more likely to experience multiple partnership transitions and these transitions are negatively associated with child well-being, the increasing instability in families may be contributing to growing disparities among children. These findings are consistent with previous research on older children and adolescents, which has focused on instability in marital and cohabiting unions.

Somewhat surprisingly, we found only one significant interaction between partnership instability and child's race/ethnicity and family structure at birth. Although the level of instability is much higher among children born to unmarried and minority mothers, the effect of instability on child behavior problems appears to be similar regardless of the relationship status from which the changes occur or the child's race/ethnicity. The one exception is that partnership instability appears to have more negative effects on aggressive behavior for Hispanic children as compared to non-Hispanic White children. Although this association may have occurred by chance, future research should study the effects of family structure changes on Hispanic children, as this group has thus far been largely ignored.

Finally, regarding the third question, we found that maternal stress and poor mothering behaviors jointly account for all the significant effects of partnership instability on child's aggressive and anxious/depressive behavior. Maternal stress and poor mothering, however, appear to have largely independent effects on child behavior. Although maternal stress and low-quality mothering mediate the effect of partnership instability

on child behavior, the pathway is not entirely consistent with our theoretical model. The social stress hypothesis posits that partnership instability will lead to more stress and poorer parenting because of changes in resources. Our findings, however, do not support that changes in income or residential mobility explain the effect of instability on stress. We found that changes in resources are not an important part of this story, perhaps because unmarried mothers experience very little change in their material resources or because relationship transitions that lead to the accumulation of greater resources are canceled out by relationship transitions that lead to a loss in resources. It is also likely that if we could measure the changes in resources at the time of the partnership transition, these might have a stronger effect, but unfortunately, the data do not permit this. Other mechanisms that explain how instability leads to greater stress and poorer mothering should be explored in future work. It is likely that partnership instability leads to changes in emotional resources, unmeasured in this analysis, which affect a mother's stress level and interactions with her child. The positive or negative family contributions of the child's biological and new social fathers subsequent to family transitions also should be explored more fully, because these may be affecting the mother's stress and parenting.

Limitations

Our analysis has several other limitations. First, our measure of instability is restricted to the first 3 years of a child's life and ignores disruptions that occur later in childhood and adolescence. By focusing on the first 3 years, we miss many of the transitions that children ultimately experience, especially children born to married parents. Because marital unions are slower to dissolve than nonmarital unions (Osborne et al., in press), by focusing on the first 3 years after birth, we miss most of the partnership changes that follow divorce. A longer time span is needed to know whether partnership instability among divorced mothers is as common as it is among never-married mothers, once a relationship ends.

A second limitation is that children's behavioral problems are assessed at a very young age and only once. Although previous research shows a strong correlation between behavioral problems in early children and conduct disorders in adolescence and young adulthood (NICHD Early Child Care Research Network, 2004), we

would have preferred to have data covering a longer time span and multiple observations on each child.

Third, we are not able to determine if a change in residence directly coincides with a change in partnership. The data measure changes in residence separately from partnership transitions. It is plausible, however, that a partnership transition that also requires a change in residence may place more stress on the mother and may have more harmful effects on the child. In this vein, we would like to have had more detailed information on the changes in mothers' economic and social resources that are the direct result of partnership changes.

Finally, and most important, our analysis is limited in its ability to identify causal effects. Because our data are observational rather than experimental, we cannot be certain that our measure of instability is not a proxy for some other (unobserved) characteristic of the mother that is causing partnership instability as well as more stress, poorer parenting, and behavior problems in children. To deal with this issue, we used a rich set of control variables including the number of partnership transitions a mother has had at the time of child's birth, the number of different men with whom she has had children, and her relationship status with the father at the time of the birth. To deal with the reverse causality hypothesis, we conducted a number of additional analyses to determine if partnership instability was a consequence of child behavioral problems, poor mothering, or maternal stress. We found no evidence to support this hypothesis.

Policy Implications

Our findings have important implications for the new government programs funded under the welfare reauthorization act and designed to increase marriage and marital stability (Garfinkel & McLanahan, 2003). A subgroup of these programs is aimed explicitly at unmarried parents who have recently given birth. Although our analysis does not address the question of whether the children of unmarried parents would be better off if their parents married, it does suggest that reducing the number of partnership changes a mother experiences may lead to better child outcomes. At the same time, the strong link between maternal stress and child well-being suggests that encouraging marriage among couples who are likely to break up or among parents whose

relationship is a source of stress is likely to have negative effects on children.

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