

**The Effects of Partnership Instability on Parenting
and Young Children's Health and Behavior**

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Abstract

We use data from the Fragile Families Study (N = 3317) to document the number of changes in maternal romantic partnerships experienced by children between their birth and age 3, particularly children born to unmarried mothers. We also examine the association between partnership instability and parenting, child health and behavior. We find significantly high levels of partnership instability among children born to unmarried mothers. In addition, partnership instability is negatively associated with parenting, child health, and behavioral problems for children at age 3. Each partnership change has a modest effect on each outcome, yet children who experience several partnership changes are at extreme elevated risks of negative development. This finding is especially true for children born to unmarried parents. These findings imply that policies aimed at promoting partnership stability may positively impact child wellbeing.

Introduction

The relationship between healthy child development and being born and raised by two biological married parents is well established (McLanahan & Sandefur, 1994). However, the reasons why children in other family forms are at higher risks of poor development are less well known. Research finds that parental socialization, social control, and economic resources differ between stably married and unmarried households, and that these differences account for some of the differences in child development. Another important hypothesis posits that family instability causes stress on the mother and child and leads to poorer parenting and poorer child development (Dunn, Deater-Deckard, Pickering, & O'Connor, 1998; Garnezy, 1983; Hetherington, Bridges, & Insabella, 1998; Wu & Martinson, 1993; Wu, 1996). The argument suggests that it is the cumulative exposure to family instability that is most harmful to family members, rather than any exposure to living in a single-parent family or one's current family structure. In these studies, family instability is generally defined as divorce and remarriage.

However, children may be exposed to even greater levels of family instability if all of the mother's romantic partnerships are considered (Raley & Wildsmith, 2004). Today, one-third of children are born to unmarried mothers. Most of these mothers are still romantically involved with their child's biological father at the child's birth, however. One-half of unmarried mothers are cohabiting with the child's father, and an additional one-third is romantically involved, but not co-residing (referred to as visiting) (McLanahan & Garfinkel, 2002). Separation from these non-marital relationships needs to be considered in discussions of instability. Moreover, mothers often date several new partners before forming new marriages. It is not clear whether the formation and separation of these dating relationships affect child development. Yet it is likely that these new partners distract the mother's attention from the child and may prove confusing to a young child

attempting to identify trusting adults. Thus, these new romantic partnerships should also be included in analyses of family instability.

We use longitudinal data from a new national birth cohort survey of predominantly low-income families to track the level of partnership instability over the course of a child's earliest years. Our goal is to determine how partnership instability is associated with subsequent parenting behaviors and child health and behavioral problems. Specifically, this analysis has two primary aims. First we document the level of partnership instability for all children and in the various family forms in which they are born. We expect that families with more tenuous relationships between the biological parents at the child's birth will experience the most instability over time. The second aim is to determine the effect of partnership instability on parenting, child health and behavior at age 3.

Background

Partnership instability may negatively affect a mother's interaction with her child and the child's health and behavior for several reasons. Changes in partnership statuses (either partnership formation or separation) may cause stress on the mother or child by disrupting the normal household routines, and by bringing a change to economic and relational resources. In addition, children who experience partnership instability, especially several partnership changes at a young age, may have difficulty forming trusting bonds with their caregivers. Stress from one family transition (i.e. divorce) is thought to be temporary (Hetherington, Cox, & Cox, 1982). However, if family transitions occur often, there may not be a period in which the family processes return to "normal".

Partnership instability may have particularly adverse effects on low-income families, given that low-income mothers are more likely to form nonmarital, and thus less stable, unions (Osborne, Manning, & Smock, 2004). Children may be exposed to male partners who do not assume a father

role or who provide inconsistent or ambiguous parenting (Ackerman , Brown, D'Eramo, & Izard, 2002). Unmarried romantic partnerships may also be more stressful on the mother because of poorer relationship quality and greater conflict found in unmarried versus married relationships (Brown & Booth, 1996).

Alternatively, partnership instability may affect low-income families less than other families (Ackerman, et al., 2002; Amato, 2000). Nonmarital unions involving children are more normative in low-income communities (McLoyd, Cauce, Takeuchi, & Wilson, 2000; White & Rogers, 2000). Moreover, children in low-income communities are often raised in the context of a supportive kin network (Black, Dubowitz, & Starr, 1999; Coley, 1998), which may minimize the effects of partnership instability. Male partners, in low-income communities, may also bring fewer economic resources to the relationship. Economic resources are generally thought to reduce maternal stress and have indirect and direct effects on child wellbeing.

The research on the effect of family instability on child wellbeing is limited. Most research on family transitions focuses on the transition from marriage or cohabitation to separation, or from an unmarried relationship to a marriage or remarriage. Few studies examine the cumulative experience of family transitions over a child's life course.

The extant empirical research finds that partnership instability is negatively associated with child wellbeing (Wu & Martinson, 1993; Wu, 1996), and this finding applies to disadvantaged populations as well (Ackerman, et al., 2002). Wu and his colleague find that the number of family transitions a child experiences increases the risks of a premarital birth more so than any exposure to a non-intact family structure. These studies focus on marital transitions from the child's birth through age 14 (Wu & Martinson, 1993; Wu, 1996). Ackerman and his colleagues focus on a small sample of children in a Head Start program. They find that the mothers' partnership instability predicts externalizing behavioral problems for 8 and 9 year old boys and girls, and

internalizing behavioral problems for girls. Their analysis includes partnership transitions into cohabitation, but does not consider non-coresidential romantic partnerships. Ackerman and his colleagues also examined partnership instability as one component of a larger concept of family instability that includes residential mobility, changes in households, serious illness, and negative life events (Ackerman, Kogos, Youngstrom, Schoff, & Izard, 1999). They find that family instability predicts adverse child behavior in children as young as 5 and 6 years old.

We extend this research by focusing on very young children (3 year olds) and including transitions into and out of romantic partnerships that may or may not involve cohabitation in our construct of partnership instability. In addition, we estimate the effects of partnership instability on a mother's interaction with her child, because the stress theory predicts that partnership instability affects both the mother and the child. We also examine the effects of partnership instability on child health.

Data

We use data from three waves of the Fragile Families and Child Wellbeing Study (Fragile Families Study). The Fragile Families Study is a longitudinal, birth cohort survey which interviewed approximately 5,000 mothers (4,897) in the hospital at their child's birth. The baseline interviews were conducted in 20 large cities (populations of 200,000 or more) throughout the United States, between 1998 and 2000. Almost 90% of the mothers were re-interviewed when the child was approximately 1 year old and 86% of the baseline sample was interviewed when the child was 3 years old. In addition, child assessments, including the child behavior checklist (Achenbach, 1992), were completed when the child was age 3 for 79% of the cases in which mothers completed the 3-year interview. 64% of these mothers completed the child assessment in their home, as opposed to by telephone, and were also observed on parenting behaviors. The information on mothers' characteristics and child health is taken from the core

Fragile Families Study, the information on the child's behavior is taken from the child assessment module, and the parenting behaviors are taken from the in-home component of the child module.

Data on 3,117 mothers are included in the analysis of child health and behavior. This excludes 669 mothers who were not interviewed at year 3, and an additional 911 mothers who did not complete the child module. Data on 2,210 mothers are included in the analysis of parenting behaviors. This excludes an additional 1,107 mothers who did not complete the in-home parenting assessment of the child module. Preliminary analyses show that the mothers excluded from the sample do not differ systematically from the mothers who participated, and therefore the results are not biased due to sample attrition. More thorough tests for robustness will be conducted.

Outcome Measures

Parenting

Four parenting measures derived from the infant-toddler version of the HOME inventory, are assessed: non punitive, emotionally responsive, verbal social, and language stimulation. Each measure of mother-child interaction was observed during the in-home assessment. Each observation is based on a dichotomous assessment (yes/no), and the observations are summed into scales such that higher scores represent more positive parenting behaviors. The means and standard deviations of the scales are presented in table 1. The non punitive scale consists of 5 questions including, the mother does not shout, express annoyance, spank, scold or criticize, or interfere or restrict the child during the visit. The emotionally responsive scale represents parental warmth and consists of 6 items including the mother talks with the child 2 or more times during visit, responds to child's questions orally, praises child during visit, voices positive feelings toward child, kisses or hugs child, and tells the child the name of an object during the visit. The verbal social scale consists of 3 items and reflects the

language skills the mother models for the child. The questions include the mother's speech is audible, she initiates verbal exchange with the observer, and she converses freely and easily during the visit. The language stimulation scale consists of 11 items that include the type of toys the child has in the house, having 5 or more books in the house, and the mother reading to the child 2 or more times per week. Table 1 shows that mothers who are married at their child's birth score significantly higher than their unmarried counterparts on each of these measures when no control factors are considered.

Child Health

Child health is based on the mother's assessment of the child's health at age 3. The mother's responses range from 1 (excellent) to 5 (poor), and a dichotomous scale indicating that the child's health is good/fair/poor versus very good/excellent is used. Table 1 shows that only 12% of mothers report lower levels of health for their child. Almost 88% report their child's health is very good or excellent, and this varies slightly by the mother's relationship status with her child's biological father at the child's birth. Married mothers report the highest levels of child health, whereas single mothers report the lowest.¹

Child Behavioral Problems

We assess 2 externalizing (aggressive and oppositional/defiant) and 2 internalizing (withdrawn and anxious/depressed) child behavioral problems, based on scales from the Achenbach 1992 and 2000 Child Behavior Checklists for 2 to 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. Table 1 shows the means and standard deviations for each scale. Aggressive behavior (Achenbach, 1992) consists of the sum

¹ In preliminary analyses we created a variable indicating fair/poor health versus all else. Only 2.4% of mothers report fair/poor health, so we did not have enough power to estimate the effect of partnership instability on that variable. The direction and size of the coefficients are similar to the variable that we use, which includes good, fair, and poor health.

of 15 characteristics 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 oppositional/defiant scale (Achenbach & Rescorla, 2000) is a variant of the aggressive scale and includes 6 items: defiant, disobedient, angry moods, stubborn/irritable, temper tantrums, uncooperative. The withdrawn scale (Achenbach, 1992) consists of 14 items including: acts too young for age, avoids eye contact, does not answer people, refuses to play games, unresponsive to affection, shows little attention, show little interest in things, does not get involved, underactive, does not get along with others, does not know how to have fun, lacks guilt after misbehaving, stubborn, and uncooperative. The anxious/depressed scale (Achenbach, 1992) consists of 10 items, including: too dependent, feelings hurt easily, looks unhappy, self-conscious/embarrassed, too fearful, unhappy, upset by separation from parent, overtired, shy, and wants attention. Table 1 shows that at the bivariate level, mothers who are married at their child's birth report fewer behavioral problems when their child is age 3, compared to mothers who are unmarried at their child's birth.

Independent Variables

The number of changes in romantic partnerships that the mother has between the child's birth and age 3 is the main independent variable. The number of changes in partnerships is the sum of 3 events: separation from the child's biological father, entering a new romantic partnership, and exiting a new romantic partnership. A mother could have a maximum of six changes over this time frame (e.g. she separated from the child's biological father, began and ended a new partnership between the child's birth and year 1, began and ended a new partnership between the year 1 and year 3 interviews, and was in a new partnership at the year 3 interview). A temporary separation from the child's biological father is counted as a separation and a new partnership. Single mothers

are not counted as having separated from the child's biological father, because the separation occurred before the child's birth.

Mothers were not asked about the number of partnerships they entered and separated from between interview periods; they were only asked about current partnership status at the time of each interview. However, mothers who had a child within the interval with a partner they were not involved with at the time of the interview are considered to have entered and ended a partnership within the interval. Presumably, we are undercounting the actual number of partnerships mothers enter into and separate from over the course of their child's first 3 years. Thus, our results should be interpreted as a lower bound of partnership instability.

The mother's relationship status with her child's biological father at the time of the child's birth is also included as an independent variable. Four relationship categories are included: married, cohabiting, visiting, and single. Cohabitors are unmarried, but coreside. Visitors are in a romantic relationship with the child's biological father, but do not coreside. Single mothers are not in a romantic relationship with the child's biological father. Single mothers may be involved with a new partner or live with other adults at the time of the child's birth.

The other independent variables include mothers' background characteristics that are not determined by her current relationship status, but might influence both her partnership instability and the outcomes assessed in this analysis. These include the mother's age, race, education, and prior relationship instability. Mother's age is a continuous variable. We use four dichotomous measures for the mother's race (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 or more. Prior relationship instability is based on the number of romantic relationships the mother had that lasted more than one month, prior to her relationship with the child's father, and the number of different fathers her children have.

Each of these questions is asked at the year 3 interview. We also include a dichotomous variable to indicate that the child is male.

Methodology

Our analysis begins with a description of partnership instability for the total sample and by the mother's relationship with the child's biological father at the child's birth. The multivariate analysis estimates the association between the number of partnership changes and our outcomes of interest. To determine the association between partnership instability and the mother's parenting behaviors and child behavioral problems, we use ordinary least squares regression models. For parenting behaviors, we limit our sample to those mothers who completed the in-home assessment of the child module. To determine the association between partnership instability and child health we estimate a logistic regression model. In each model we include controls for the mother's age, race, education, prior relationship instability, and relationship status at the child's birth, and the child's gender.

Results

The primary aims of this analysis are to illustrate the level of partnership instability that children experience in the first 3 years of life and to determine if partnership instability is negatively associated with parenting behaviors, and child health and behavior at age 3. Partnership instability reflects both the entrance into and separation from romantic partnerships, because both events may disrupt the normal household routines, bring a change to economic and relational resources, and promote stress on the mother and family.

Description of Partnership Instability

Table 2 shows the distribution of partnership changes between the child's birth and age 3 for the full sample and by the mother's relationship with her child's biological father at the child's birth. The results show that almost half ($100\% - 52.94\% = 47.06\%$) of the children in this sample

experience at least one partnership change by age 3, and that over 10% ($4.85 + 4.31 + 1.42 + 0.89 = 11.47\%$) experience 3 or more changes.

Children born to unmarried mothers, however, are significantly more likely to experience parental instability as compared to children born to married mothers. Almost 88% of children born to married mothers experience no parental partnership instability, as compared to 54% of children born to cohabiting mothers, and only 30% of children born to mothers who do not coreside with their child's biological father at the child's birth (visitors or single mothers). These children, who do not live with their biological father at birth, are also much more likely to experience multiple partnership changes; almost 20% of children born to visiting mothers and almost 25% of children born to single mothers experience 3 or more partnership changes within the first 3 years of life. By contrast, less than 10% of children born to cohabiting parents and less than 3% of children born to married parents experience such high levels of family instability.

Table 2 also shows the distribution of the mother's characteristics that may influence her number of partnerships and her parenting behavior and child's health and behavior. On average, the mothers in this sample are 25 years old. However, married mothers are approximately five years older than unmarried mothers (29 versus 24 years, respectively). Mothers also differ considerably by race/ethnicity across the relationship groups. Married mothers are more often White as compared to Black or Hispanic. By contrast, cohabiting mothers are more often Black and Hispanic. Over two-thirds of visiting mothers, and over half of single mothers in this sample are Black. Education also differs considerably between married and unmarried mothers. Over one-third of married mothers have a college degree compared to about 3% of unmarried mothers. By contrast, almost two-fifths of unmarried mothers do not have a high school diploma, compared to less than one-fifth of married mothers. Married and unmarried mothers also differ in terms of their prior relationship instability. Interestingly, married mothers have had

significantly more romantic relationships prior to their current union, yet they also have had children with significantly fewer men. The higher number of prior relationships may be correlated with the older age of married mothers – they have had more time to be in romantic partnerships. It may also mean that they had more extensive “searches” for possible mates, before finding their current partner to begin a family with.

Multivariate Analysis

The second aim of this analysis is to determine the association between the number of partnership changes a mother has over her child’s first 3 years of life and the mother’s interaction with her child and the child’s health and behavior at age 3.

Parenting Behaviors

Table 3 shows the results for four aspects of mothering behaviors derived from the HOME inventory². Overall, partnership instability is negatively associated with a mother’s interaction with her child. Each partnership change is associated with 6% ($\beta = -.06$, $SD = 1.05$) of a standard deviation lower score for non punitive behaviors. The effect size for the other behaviors is 4% of a standard deviation ($\beta = -.06$, $SD = 1.38$) for emotional responsive, 5% ($\beta = -.03$, $SD = 0.56$) of a standard deviation for verbal social, and 3% ($\beta = -.04$, $SD = 1.35$) of a standard deviation lower for language stimulation. The effect of partnership instability on language stimulation is not significant, however. None of these effect sizes is particularly large. Thus, one partnership change has a relatively small effect on a mother’s behaviors with her child; a finding supported by prior research examining the effects of separation on parenting (Osborne, 2004) and child behavior (Osborne, McLanahan, & Brooks-Gunn, 2004) for these families. However, these effect sizes are multiplied by each partnership change. Therefore, children who experience several partnership changes have significantly lower levels of mother-child interaction as compared to

² A higher score indicates more positive parenting behavior.

children in relatively stable families. Over 10% of children experience 3 or more changes within their first 3 years; for these children, partnership instability has a substantial impact on their mother's parenting.

In addition to partnership instability, several other factors are associated with mothering behaviors. For each outcome, Black mothers score significantly lower than their White counterpart. This finding is particularly true for emotional responsive and language stimulation behaviors where the effect size is 43% and 53% of a standard deviation lower, respectively. The race/ethnic differences are smaller for Hispanic versus White mothers, yet Hispanic mothers score significantly lower on the emotional responsive and language stimulation behaviors. In addition to race/ethnicity, education has a strong effect on mothering behaviors; mothers with some college or more score significantly higher on all mothering behaviors, especially emotional responsiveness and language stimulation. Prior relationship instability is generally not associated with a mother's behaviors with her 3 year old, net of these other factors. Moreover, the mother's relationship status with the child's biological father at the child's birth is not associated with mothering behaviors at age 3. This finding is consistent with prior research showing few differences in mothering behaviors, net of controls for selection into marital versus nonmarital childbearing (Osborne, 2004).

In further analyses, we tested separate interactions between partnership instability and race/ethnicity, child gender, and relationship status at the child's birth. We thought that the effect of partnership instability may differ by these statuses. Surprisingly, we found no significant interaction effects, with one exception; partnership instability differentially affects mothers of boys and girls in terms of emotional responsiveness. By and large, however, we find that partnership instability does not have differential effects by gender of the child, mothers' race/ethnicity, or relationship status at birth.

In subsequent analyses, we also tested a model that included controls for maternal depression, household income, mother's health, and prenatal smoking, drinking, and drug use.³ Prior research has shown a link between these factors and parenting behaviors, thus we wanted to determine if these variables explain the effect of partnership instability. We found that these variables do not attenuate the instability effect, but maternal depression and prenatal health behaviors are associated with mothering behaviors at age 3. In subsequent analyses, we plan to expand on this part of the analysis.

Child Health and Behavior

Table 4 shows the results of the effect of partnership instability on child health and behavior.⁴ Similar to the results for parenting, partnership instability has deleterious effects on child wellbeing. Each partnership change is associated with 9% higher odds of lower levels of child health at age 3. For externalizing behaviors, each partnership change is associated with higher levels of aggressive behavior and oppositional/defiant behavior at age 3. The effect size is 5.3% ($\beta = .31$, $SD = 5.87$) of a standard deviation for aggressive behavior and 4.2% ($\beta = .11$, $SD = 2.65$) of standard deviation for oppositional/defiant. For withdrawn behaviors, the effect size is 2.5% of a standard deviation, and the effect size is 5.5% of a standard deviation for anxious/depressive behaviors. Again, none of these effects sizes is large on its own. However, children who experience multiple partnership changes are at substantially higher risks of health and behavioral problems.

Unlike parenting behaviors, the relationship status of the biological parents at the child's birth is significantly associated with the child's behavior at age 3. Children born to unmarried

³ It is not clear whether these factors are endogenous or exogenous to partnership instability, and thus they were not included in our main analysis.

⁴ In this case, higher scores indicate higher levels of behavioral problems. In a subsequent version of the paper we plan to convert all of the coefficients to effect sizes, so that the interpretation of the coefficients will be standard across tables.

mothers have significantly higher levels of externalizing and internalizing behaviors at age 3. The effect sizes range from 10 to 15% of a standard deviation for children born to cohabiting and visiting mothers up to 20 to 25% of a standard deviation for children born to single mothers. This analysis also showed that children born to unmarried mothers are much more likely to experience their mother's partnership changes between birth and age 3. Thus, children born to unmarried mothers, and especially children who do not live with both of their biological parents at birth, are at substantial risk of elevated child behavioral problems; the additive effect of family structure at birth and family instability over the first 3 years on child behavior is quite large. For example, a child born to a single mother who experiences 3 maternal partnership changes scores, on average, 2.32 $((.31 \times 3) + 1.39)$ points higher on the aggressive scale, which amounts to 40% of standard deviation higher than a child born to a married mother who experiences no partnership instability. The relative effect sizes are similar for oppositional/defiant (36% of a standard deviation) and anxious/depressed (35% of a standard deviation) behaviors. The effect is slightly smaller for withdrawn behaviors (20% of standard deviation), but still substantial.⁵

We plan to extend this analysis by investigating what factors explain the effect of partnership instability on child health and behavior. We will include parenting behaviors, economic resources, and other forms of family instability (e.g. residential mobility, changes in child care, changes in extended kin in the household) as possible mediators.

⁵ In subsequent analyses, we tested interaction effects between relationship status at birth and partnership changes, and found no differential effects of partnership instability by relationship status at birth. We also found no differential effects of partnership instability by race/ethnicity or child gender. Preliminary analyses show that additional controls do not attenuate the effect of partnership instability on child health and externalizing behaviors, but they do attenuate the effect for internalizing behaviors. We plan to extend this analysis further.

Conclusion

In this analysis, we investigated the level of partnership instability that exists in fragile families, and how this instability is related to parenting, and child health and behavior at age 3. Our results show high levels of partnership instability, particularly in families in which the parents do not live together at their child's birth. In these families, the mothers are likely to have very tenuous relationships with the child's biological father. The mothers are also very likely to form a new romantic partnership early on in their child's life. This is the first analysis that we know of to document the level of partnership instability at such an early age of a child's development.

This analysis also found that greater partnership instability is linked with poorer parenting behaviors, poorer child health, and more behavioral problems in 3 year olds, net of mother's background characteristics and her relationship with the child's biological father at the child's birth. One change has a small effect, yet, with each partnership change, this effect multiplies, leading to a very large effect for some children who experience multiple partnership transitions. Children born to mothers who do not live with their child's biological father at birth are the most likely to experience multiple partnership changes.

These findings have implications for policies aimed at promoting marriage among unmarried parents. To the extent that marriage creates greater stability for children and reduces the number of partnership changes a mother has, these policies may have positive impacts on child wellbeing. The current policies aim to promote marriage among the child's biological parents. These policies largely ignore the children born to mothers who do not have a romantic relationship with their child's biological father, and these children may be at the greatest risk of partnership instability.

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Table 1: Mean Values of Parenting, Child Health and Behavior Outcomes
by Mothers' Relationship Status at Child's Birth^a

| | Range | Total N=3317 | Married N = 815 | Cohabiting N = 1216 | Visiting N = 873 | Single N = 413 |
|----------------------------|--------|-----------------------------|--------------------|------------------------|---------------------|-------------------|
| HOME measures ^b | | | | | | |
| Non punitive | 0 - 5 | 4.52 (1.05) ^c | 4.76 (0.73) | 4.53 (1.03) | 4.37 (1.18) | 4.37 (1.16) |
| Emotional responsive | 0 - 6 | 5.10 (1.38) | 5.46 (1.06) | 5.06 (1.38) | 4.91 (1.52) | 5.05 (1.41) |
| Verbal social | 0 - 3 | 2.81 (0.56) | 2.89 (0.44) | 2.79 (0.59) | 2.78 (0.59) | 2.80 (0.56) |
| Language stimulation | 0 - 11 | 9.25 (1.35) | 9.74 (1.15) | 9.17 (1.35) | 9.10 (1.43) | 9.01 (1.34) |
| Child's bad health | % | 12.15 | 10.18 | 12.25 | 12.83 | 14.32 |
| Externalizing behaviors | | | | | | |
| Aggressive | 0 - 30 | 9.68 (5.87) | 8.27 (5.19) | 9.89 (5.78) | 10.13 (6.09) | 10.87 (6.43) |
| Oppositional/defiant | 0 - 12 | 3.92 (2.65) | 3.58 (2.45) | 3.94 (2.62) | 3.98 (2.75) | 4.38 (2.85) |
| Internalizing behaviors | | | | | | |
| Withdrawn | 0 - 28 | 4.29 (3.48) | 3.60 (3.11) | 4.38 (3.39) | 4.46 (3.65) | 5.01 (3.84) |
| Anxious/depressed | 0 - 20 | 5.54 (3.29) | 4.51 (3.00) | 5.78 (3.17) | 5.92 (3.45) | 6.07 (3.35) |

- a. Married differs significantly from unmarried at birth on all outcomes at bivariate level.
- b. Sample size is smaller for HOME measures and is limited to mothers who completed the in-home component of the child module: N = 2110, Married = 456, Cohabiting = 794, Visiting = 589, and Single = 271.
- c. Standard deviations are in parentheses.

Source: Fragile Families and Child Wellbeing Study

Table 2: Distribution of Independent Variables by Mother's Relationship Status Child's Birth

| | Total N= 3317 | Married ^a N=815 | Cohabiting N=1216 | Visiting ^b N=873 | Single ^c N=413 |
|--|------------------|-------------------------------|----------------------|--------------------------------|------------------------------|
| Partnership instability | | | | | |
| No partnership change ^d | 52.94 | 87.48 | 53.62 | 30.36 | 30.51 |
| 1 partnership change | 22.70 | 6.87 | 25.58 | 32.53 | 24.70 |
| 2 partnership changes | 13.78 | 3.56 | 13.49 | 19.36 | 23.00 |
| 3 partnership changes | 4.85 | 1.23 | 2.63 | 6.76 | 14.53 |
| 4 partnership changes | 4.31 | 0.86 | 4.69 | 7.79 | 6.78 |
| 5 or 6 partnership changes | 1.42 | 0.37 | 1.15 | 3.20 | 0.48 |
| Number of changes (mean) | 0.89 | 0.22 | 0.80 | 1.39 | 1.44 |
| Mother's background characteristics | | | | | |
| Age (years) | 25.18 | 29.23 | 24.16 | 23.53 | 23.66 |
| White | 21.79 | 44.66 | 18.17 | 8.48 | 15.49 |
| Black | 48.69 | 23.81 | 46.22 | 71.02 | 57.87 |
| Hispanic | 15.66 | 24.54 | 32.48 | 17.98 | 23.97 |
| Less than high school | 33.86 | 16.19 | 38.49 | 39.98 | 42.13 |
| High school | 30.18 | 19.14 | 33.79 | 34.59 | 31.96 |
| Some college | 25.20 | 29.45 | 24.67 | 22.91 | 23.24 |
| College | 10.76 | 35.21 | 3.04 | 2.52 | 2.66 |
| Prior romantic relationships (mean) | 2.09 | 2.68 | 2.02 | 1.67 | 2.09 |
| Different fathers for children (mean) | 1.21 | 1.06 | 1.19 | 1.29 | 1.36 |
| Child is male | 52.28 | 51.66 | 51.39 | 54.07 | 52.30 |

- Married differs significantly from unmarried at birth on all variables with the exception of male child, and for Hispanic compared to single mothers.
- Visiting mothers are romantically involved with child's biological father, but do not coreside.
- Single mothers are not romantically involved with child's biological father.
- Changes include separation from child's biological father, number of entrances into new romantic partnerships, and number of separations from new romantic partnerships between child's birth and age 3. The maximum number is 6.

Source: Fragile Families and Child Wellbeing Study.

Table 3: Results of Multivariate Analysis^a of Partnership Instability on Parenting Measures^b

| | Non Punitive 0 – 5 | Emotional Responsive 0 – 6 | Verbal Social 0 – 3 | Language Stimulation 0 - 11 |
|--------------------------------------|-----------------------|----------------------------------|---------------------------|-----------------------------------|
| # of partnership changes | -.06** | -.06* | -.03** | -.04 |
| Mothers' characteristics | | | | |
| Age | .00 | .00 | -.00 | .00 |
| (White) | | | | |
| Black | -.21** | -.59** | -.10** | -.72** |
| Hispanic | .11 | -.23* | -.01 | -.50** |
| (Less than high school) | | | | |
| High school | .01 | .31** | .07* | .44** |
| Some college | .18** | .55** | .17** | .68** |
| College | .18+ | .64** | .21** | .98** |
| # of prior romantic relationships | .00 | -.00 | .01 | .01 |
| # of different fathers for children | .01 | -.02 | .04* | -.05 |
| Relationship status at child's birth | | | | |
| (Married) | | | | |
| Cohabiting | -.07 | -.03 | .00 | .00 |
| Visiting | -.12 | -.01 | .03 | .08 |
| Single | -.14 | .09 | .04 | -.05 |
| Child is male | -.08+ | -.06 | .01 | .06 |
| Constant | 4.63** | 5.26** | 2.91** | 9.23** |
| R2 | .05 | .08 | .04 | .15 |
| N | 2110 | 2110 | 2110 | 2110 |
| Mean (standard deviation) | 4.52 (1.05) | 5.10 (1.38) | 2.81 (0.56) | 9.25 (1.35) |

- a. Models based on ordinary least squares regressions. Other race is included in the model and not shown in table.
- b. Parenting measures based on HOME inventory, and is limited to respondents who completed the in-home component of the child module. Higher scores indicate more positive parenting.

Source: Fragile Families and Child Wellbeing Study. ** $p \leq .01$; * $p \leq .05$; + $p \leq .10$.

Table 4: Results of Multivariate Analyses of Partnership Instability on Child Health^a and Behavior^b

| | Odds Ratio Child has Bad Health | Externalizing Behaviors | | Internalizing Behaviors | |
|--------------------------------------|--|---------------------------|---------------------------|--------------------------|-------------------------------|
| | | Agg- ressive 0 – 30 | Opp/ Defiant 0 - 12 | With- Drawn 0 - 28 | Anxious/ Depress 0 - 20 |
| # of partnership changes | 1.09* | .31** | .11** | .09+ | .18** |
| Mothers' characteristics | | | | | |
| Age | 1.03** | -.05** | -.02** | -.00 | .00 |
| (White) | | | | | |
| Black | 1.21 | .02 | -.54** | .03 | .33* |
| Hispanic | 2.18** | .13 | -.45** | .42* | .56** |
| (Less than high school) | | | | | |
| High school | .71** | -.51* | -.12 | -.66** | -.73** |
| Some college | .43** | -1.19** | -.23+ | -1.44** | -1.48** |
| College | .27** | -1.75** | -.32 | -1.82** | -1.98** |
| # of prior romantic relationships | .98 | .13** | .06** | .01 | -.00 |
| # of different fathers for children | .99 | .33* | .09 | .08 | .08 |
| Relationship status at child's birth | | | | | |
| (Married) | | | | | |
| Cohabiting | .85 | .74** | .29* | .13 | .49** |
| Visiting | .92 | .73* | .32* | .16 | .49** |
| Single | 1.02 | 1.39** | .64** | .66** | .63** |
| Child is male | 1.42** | .63** | .29** | .43** | .04 |
| Constant | | 9.96** | 4.28** | 4.49** | 5.36** |
| R2 | | .05 | .03 | .06 | .09 |
| N | 3117 | 3117 | 3317 | 3317 | 3317 |
| Mean (standard deviation) | | 9.68 (5.87) | 3.92 (2.65) | 4.29 (3.48) | 5.54 (3.29) |

a. Model based on logisitc regression analysis. Odds ratios for bad health are shown. Other race is included in all models and not shown in table.

b. Model based on ordinary least squares regressions. Higher scores indicate more behavior problems.

Source: Fragile Families and Child Wellbeing Study. ** $p \leq .01$; * $p \leq .05$; + $p \leq .10$.