Fragile Families and Child Wellbeing

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Summary

Jane Waldfogel, Terry-Ann Craigie, and Jeanne Brooks-Gunn review recent studies that use data from the Fragile Families and Child Wellbeing Study (FFCWS) to examine why children who grow up in single-mother and cohabiting families fare worse than children born into married-couple households. They also present findings from their own new research.

Analysts have investigated five key pathways through which family structure might influence child well-being: parental resources, parental mental health, parental relationship quality, parenting quality, and father involvement. It is also important to consider the role of the selection of different types of men and women into different family types, as well as family stability. But analysts remain uncertain how each of these elements shapes children's outcomes.

In addition to providing an overview of findings from other studies using FFCWS, Waldfogel, Craigie, and Brooks-Gunn report their own estimates of the effect of a consistently defined set of family structure and stability categories on cognitive, behavioral, and health outcomes of children in the FFCWS study at age five. The authors find that the links between fragile families and child outcomes are not uniform. Family instability, for example, seems to matter more than family structure for cognitive and health outcomes, whereas growing up with a single mother (whether that family structure is stable or unstable over time) seems to matter more than instability for behavior problems. Overall, their results are consistent with other research findings that children raised by stable single or cohabiting parents are at less risk than those raised by unstable single or cohabiting parents.

The authors conclude by pointing to three types of policy reforms that could improve outcomes for children. The first is to reduce the share of children growing up in fragile families (for example, through reducing the rate of unwed births or promoting family stability among unwed parents). The second is to address the pathways that place such children at risk (for example, through boosting resources in single-parent homes or fostering father involvement in fragile families). The third is to address directly the risks these children face (for example, through high-quality early childhood education or home-visiting policies).

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For much of the nation's history, the vast majority of American children were born into and spent their childhood in intact married-couple families. Almost the only exceptions were children whose families suffered a parental death. Over the course of the twentieth century, however, as divorce became more common, an increasing share of children experienced a breakup in their families of origin and went on to spend at least some portion of their childhood or adolescence living with just one parent or with a parent and stepparent. A large research literature developed examining the effects of such living situations on child outcomes.

More recently, as unwed births have risen as a share of all births, family structure in the United States has increasingly featured "fragile families" in which the mother is unmarried at the time of the birth. Children born into fragile families spend at least the first portion of their lives living with a single mother or with a mother who is residing with a partner to whom she is not married. For simplicity, we will refer to the first of these types of fragile family as single-mother families and the second as cohabiting-couple families.[1]

An astonishing 40 percent of all children born in the United States in 2007 were born to unwed parents and thus began life in fragile families. That share was more than twice the rate in 1980 (18 percent) and an eightfold increase from the rate in 1960 (5 percent).[2] Half of the children born to unwed mothers live, at least initially, with a single mother who is not residing with the child's biological father (although about 60 percent of this group say they are romantically involved with the father), while half live with an unwed mother who is cohabiting with the child's father.[3] These estimates imply that today one-fifth of all children are born into single-mother families, while another fifth are born into cohabiting-couple families. Therefore, in examining the effects of unwed parenthood on child outcomes, it is important to consider both children living with single mothers and those living in cohabiting-couple families.

Single parenthood and cohabitation have lost much of their stigma as their prevalence has increased. But there are still many reasons to be concerned about the well-being of children in fragile families, and, indeed, research overwhelmingly concludes that they fare worse than children born into married-couple households.[4] What remains unclear is how large the effects of single parenthood and cohabitation are in early childhood and what specific aspects of life in fragile families explain those effects.

In this article, we review what researchers know about the effects of fragile families on early child development and health outcomes, as well as what they know about the reasons for those effects. Many underlying pathways or mechanisms might help explain the links between fragile families and children's cognitive, behavioral, and health outcomes. Identifying these mechanisms is important to efforts by social scientists to understand how family structure affects child outcomes and to develop policies to remedy negative effects. A challenge that must be addressed is the role of "selection." The characteristics of young women and men who enter into single parenthood or cohabiting relationships differ from those of men and women in married-couple families, and those pre-existing characteristics might lead to poorer outcomes for children regardless of family structure. Parents in fragile families, for example, tend to be younger and

less educated than those in married-couple families, and they may also differ in ways that cannot readily be observed even using detailed survey data. A final question is the degree to which the stability of the family setting affects how well children fare. In fact, recent research holds that it is in large part the stability of the traditional family structure that gives it its advantage.

We highlight new answers to these questions from studies using data from the Fragile Families and Child Wellbeing Study (FFCWS)—a data set designed specifically to shed new light on the outcomes of children born into single-mother and cohabiting families and how they compare with those of children in married-couple families. The study follows children from birth and collects data on a rich array of child health and developmental outcomes, thus providing evidence on how children's outcomes differ depending on whether they grow up in single and cohabiting versus married-couple families and on the factors that might underlie those differences.

We review the evidence on the effects of fragile families on child well-being by comparing outcomes for three types of families. The first type is families where children live with two married parents (for simplicity, we refer to these as traditional families). In this category are children living with their married biological parents as well as children living with married stepparents. (Research has documented differences in outcomes between these two subgroups of children, but those differences are not our focus here.) Rather, we are interested in two other types of families—both fragile families—that have become increasingly prevalent in recent years. One is single-mother families in which the mother was not married at the time of the birth and in which she is not currently living with a boyfriend or partner. The other is cohabiting-couple families in which the mother was not married at the time of the birth but is currently cohabiting with a boyfriend or partner, who might be either the child's biological parent or a social parent (someone who is not biologically related to the child but who functions at least partially in a parental role). We do not distinguish between families that share and do not share households with extended family members or with other families or friends. We also do not distinguish between single mothers who are in a dating or visiting relationship and those who are not. Such distinctions likely matter, but our focus is on the three more general family types: traditional married-couple family, single-mother family, and cohabiting-couple family.

Explaining the Links between Fragile Families and Poorer Child Well-Being

Many studies, reviewed below, concur that traditional families with two married parents tend to yield the best outcomes for children.[5] But the specific pathways by which growing up in traditional families lead to this advantage are still being debated. The key pathways, or mechanisms, that likely underlie the links between family structure and child well-being include: parental resources, parental mental health, parental relationship quality, parenting quality, and father involvement. As noted, the selection of different types of men and women into the three different family types also likely plays a role, as does family stability and instability. We discuss each of these mechanisms in turn.

The Role of Parental Resources

One clear explanation for the poorer outcomes of children in fragile families is that

fewer resources are available to these families, particularly single-mother families.[6] As Ariel Kalil documents in her article in this volume, single-mother households face a disproportionate risk of economic disadvantage in a variety of ways—from having less money for books, clothes, and extracurricular activities to living in poorer school districts and neighborhoods. Even with child support enforcement, single parents are substantially more likely to be poor than their married-couple counterparts, and many children living with single mothers receive no child support.

In large part, the sparse resources available to children in single-mother homes reflect the fact that these homes have only one adult who can work and bring in income (and the benefits that often go along with employment, the most important of which is health insurance). Having two adults in the home could clearly make more resources available to children (assuming that adults pool their resources and use them on behalf of the family). It matters, however, who the adults are. Although cohabiting-couple families (by definition) have two adults living with the children, the characteristics of these adults do not particularly resemble those of the adults in traditional families. Cohabiting parents tend to be less educated than married parents, and as a consequence they also have lower incomes.[7] There is also evidence that cohabiting couples are less likely to share their income or invest in joint household goods than are married-couple families.

Parents invest not only economic resources in their children, but time resources as well. Particularly in early childhood, parental time is important to child health and development, and even in middle childhood and adolescence, parental time matters. Children in fragile families are likely to be shortchanged in terms of time resources too. A single mother, particularly if she is working, will not have as much time to give to her children as would two parents in a married-couple family. There can be no division of labor within her household—the single mother bears all the burden associated with child care, the financial and organizational logistics of the household, and her own welfare.[8] At the same time, children growing up with single mothers get less time with their fathers than they would in homes where the father is present.

Although cohabiting-couple families have two adults living with the children, the characteristics of these adults do not particularly resemble those of the adults in traditional families.

Cohabiting-couple families should have more parental time available for children than single-mother families. But particularly when the cohabiting partner is not the biological father, he is likely to invest less time in the children than he would in a married-couple family where he is their biological parent.

The Role of Parents' Mental Health

Parental mental health is also an important influence on child well-being, and one that differs across family types. Single mothers report more depression and psychological problems than married mothers and undoubtedly function less well as parents as a result.[9] Cohabiting mothers have also been found to suffer more from depression than

married mothers, which again would directly interfere with their ability to display good parenting skills.[10] It is important to note that these differences may be the result of these mothers' living situation or may reflect pre-existing differences between the types of women who have children out of wedlock rather than in marriage (as we discuss in the section on selection below).[11]

The Role of Parental Relationship Quality

It has long been recognized in the research on divorced parents that the quality of parents' relationships (for example, how well they get along and how much conflict they experience) would be a key intervening variable explaining links between divorce or separation and poorer child outcomes. Clearly, the adjustments and conflict associated with divorce or separation would be a source of stress, which might in turn impair parental mental health or detract from parenting quality. In addition, parental conflict fosters dysfunctional social interactions in children, leading to emotional and behavioral problems.[12] Children whose parents do not have a positive relationship may harbor anger and anguish, which may subsequently threaten their academic success and provide the impetus behind early family formation. Indeed, some researchers have argued that leaving the nest and starting a family is a direct response to less than ideal circumstances at home.[13]

It is likely that the quality of parents' relationship influences child outcomes in fragile families, although the direction of its effects is not clear.[14] One theory is that poor relationship quality (for example, parents not getting along and experiencing significant conflict) is likely to spill over to parenting, lowering its quality. Another theory is that parents who have poor relationships with adult partners might compensate by engaging more positively in their relationships with their children.

As discussed in the article by Sara McLanahan and Audrey Beck in this volume, parents in fragile families—both cohabiting couples and single mothers—tend to have poorer relationship quality than do those in married families and to report more conflict and less cooperation in parenting. (Single mothers report on the quality of their dating or visiting relationship.)[15] One situation that adversely affects parental relationship quality in fragile families is having children with multiple partners.[16]

The Role of Parenting Quality

Particularly for young children, but also for older children and adolescents, at least as consequential as the time that parents spend with them is the quality of their parenting during that time. In early childhood, two key dimensions of parenting quality are sensitivity and responsiveness to the child. Children's outcomes are better when parents are warm and nurturing, and children fare worse when parents are either harsh and punitive or detached and neglectful. Parents also engage in a range of activities that may promote or impair children's health—among them, arranging for their health care, managing family meals and nutrition, providing direction regarding exercise and television watching, and being attentive to safety hazards.

Although there is no reason why unwed parents would necessarily have poorer parenting skills, there are many reasons why they might. As noted, single parents, on average, have fewer resources, are in poorer mental health, and have more problematic relationships with their partners—any of which might in turn affect the quality of parenting that single mothers provide for their children.

Cohabiting mothers might also be expected to have poorer parenting skills than married mothers, but are likely to have better parenting skills on average than single mothers do.

The Role of Father Involvement

Also of interest is how father involvement may affect child well-being, particularly in families where the father does not live in the home. While in principle a nonresident father could still be involved in the care of his child, in fact his involvement will often, though by no means always, diminish as the child gets older. Marcia Carlson and Sara McLanahan find that by age five, nearly two-fifths of children of unwed parents had no regular contact with their fathers in the past two years, while another two-fifths were seeing their father on a regular basis (the remaining one-fifth fell somewhere in between).[17] Having a father who is actively involved in the child's upbringing even though he is not residing in the household could yield numerous benefits in terms of child health and development. Nonresident father involvement might also benefit children by raising the quality of mothers' parenting. Nonresident father involvement could also, however, be detrimental if fathers acted in ways that interfered with child health and development or if poor relationship quality between the father and mother led to lower-quality parenting behaviors on her part.

The involvement of resident biological fathers and social fathers in cohabiting-couple families is also of interest. As discussed, particularly when a father is resident, the quality of his parenting is likely to be an important input into child health and development. So too is the quality of his relationship with the mother.

Father involvement has been linked with fewer child behavioral problems, even when the father is a social father only (that is, the romantic partner of the mother living in the child's household).[18] The quality of a father's involvement has also been associated with child cognitive development and language competence.[19]

The Role of Selection

A common challenge in research in this area is that parents who are single or cohabiting may have attributes (both observed and unobserved) that differ from those of married parents and that also foster adverse child and adolescent outcomes. Men who choose to cohabit, for example, may not have the same family values that men who choose to marry do. As a consequence of such attributes, the negative "effects" being ascribed to single parenthood and cohabitation may be explained by the pre-existing attributes of members of these families, rather than reflecting an effect of the family type. Although some of these differing attributes can be controlled for using survey data on characteristics such as age and education, other differences may be harder to measure even in a detailed study such as FFCWS. A parental characteristic such as a lack of strong family values is hard to observe in survey data but it may be at work within the family system, simultaneously influencing both the structure of the family and child well-being.

Most research has not been able to address selection in a very convincing way. Studies typically include extensive controls for observed characteristics, often including controls for characteristics before the child's birth or the family's entry into a particular family structure. Accounting for such observed differences in parental and economic resources, however, is not sufficient, because there are likely to be unobserved differences as well. Couples that engage in

out-of-wedlock childbearing as opposed to childbearing within marriage may differ from each other fundamentally, in ways that are not observed in typical survey data.[20]

Because controlling for selection is so important in obtaining unbiased estimates of the effects of fragile families, we pay particular attention in this review to studies that have attempted to do so. One method that has been used often is sibling comparisons (comparing the outcomes of siblings born to married parents with the outcomes of siblings born to parents whose family status differed at the time of their birth). This method, however, is limited in that it derives its findings from blended families and also in that it is not able to control for other factors that may have changed at the same time the family's status changed.[21] Another frequently used method is comparing outcomes for the same child at different points in time, when family circumstances have changed. But this method too derives its findings from families experiencing change and is unable to control for other factors that may have changed at the same time the family's status changed. Another way to address selection is instrumental variables (IV) estimation. This estimation strategy uses variation in family structure that is predicted by a variable that is external to the family, that influences family structure, and that is not otherwise associated with child outcomes (for example, state laws or tax policies). In theory, this method is well suited to address selection, but in practice, it can be difficult to identify such an external variable.[22]

The Role of Family Stability

A further challenge in identifying exactly how family structure shapes child well-being is the difficulty of distinguishing the effects of family structure from the effects of family stability. Family stability refers to whether children grow up with the same parent(s) that were present at their birth. The assumption is that children will do better, on average, with stable parents because change can be disruptive to children and families and also because new partners coming into the household may be not as good caretakers as parents who have been with the children since birth. Poor outcomes related to instability may be explained by the stress that accompanies changes in family structure for both parent and child; moreover, changing family circumstances may confound the status quo of authority within the household.[23]

Particularly in earlier research on family structure, the vast majority of nontraditional families had been formed through divorce, and thus family structure was typically conflated with family stability or instability. To the extent that stability matters for child well-being, the effects of family structure on child outcomes might be due, at least in part, to its association with stability.[24]

Single-parent and cohabiting-couple families are both more susceptible to family instability than are traditional married-couple families. Studies have shown that family structure at birth is highly predictive of family instability, affirming that cohabiting couples experience the most instability, followed by single-parent families, and then traditional two-parent families.[25] However, it remains challenging to determine the importance of family stability relative to family structure. As we discuss below, one recent study found that family stability trumps family structure as it pertains to early cognitive development even after controlling for economic and parental resources.[26] It has been shown that children living in stable single-parent families (that is, families that were headed by a single parent throughout childhood) do better than those

living in unstable two-parent families (that is, families that had two parents present initially but then experienced a change in family structure).[27] Another study finds that children living in stable cohabiting homes (that is, families where two parents cohabit throughout the child's life) do just as well as children living with cohabiting parents who eventually marry.[28] But other research challenges the conclusion that it is family stability that is crucial for child well-being. One study, for instance, found that children who experience two or more family transitions do not have worse behavioral problems or cognitive test scores than children who experience only one or no family transitions. The same study found that children living in stable single-parent homes had the worst behavioral and cognitive outcomes.[29]

The effects of family structure as distinct from instability have been the focus of much of the recent research in this area. We provide a review of the most recent studies, and also offer some evidence from our own new analyses below.

Past Research on the Links between Family Structure and Child Outcomes

An extensive body of work has examined the effects of parental divorce on child outcomes. As noted, however, most of this work was published before the massive increase in unwed parenthood that now characterizes American families. Thus, informative as it was about the effects of divorce, this early wave of research lacked data to explain how unwed parenthood might affect child outcomes.

The classic study by Sara McLanahan and Gary Sandefur, published in 1994, bridged the gap by bringing together an array of evidence on how growing up in various types of nontraditional families—including both divorced families and unwed-mother families—affected child well-being. Even after controlling for the selection of different types of individuals into different types of family structure, the authors concluded that children who spent time in divorced- or unwed-mother households fared considerably worse than those remaining in intact two-parent families throughout their childhood and adolescence. While they were still in high school, they had lower test scores, college expectations, grade-point averages, and school attendance, and as they made the transition to young adulthood, they were less likely to graduate from high school and college, more likely to become teen mothers, and somewhat more likely to be "idle" (a term that refers to those who are disengaged from both school and work).

In addition, although the differences were not large (and not always statistically significant), children of unwed parents tended to fare worse than those with divorced parents, even after taking into account differences in basic demographic characteristics such as race, sex, mother's and father's education, number of siblings, and residence. For example, although the risk of dropping out of high school was 31 percent for children whose parents had divorced, it was 37 percent for children whose parents were unwed; similarly, although the risk of a teen birth for children whose parents had divorced was 33 percent, it was 37 percent for children whose parents were unwed.[30]

With regard to mechanisms, McLanahan and Sandefur found that income was an important explanatory factor for the poorer outcomes of children in single-parent families (but not for children in stepparent families). On average, single-parent families had only half the income of two-parent families, and

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this difference accounted for about half the gap between the two sets of children in high school dropout and nonmarital teen birth rates (in regression models that also controlled for race, sex, mother's and father's education, number of siblings, and residence).[31] The other important mechanism was parenting. When McLanahan and Sandefur entered parenting into the regressions (instead of income), they found that the poorer parenting skills and behaviors in single-parent families explained about half the gap in high school dropout rates, but only a fifth of the gap in teen birth rates (again controlling for race, sex, mother's and father's education, number of siblings, and residence). Because the authors did not control for income and parenting in the same models, the question of how much overlap there was in their effects remains.

Although child health was not a focus in the McLanahan and Sandefur analysis, other analysts have consistently found effects of family structure on children's health outcomes.[32] Janet Currie and Joseph Hotz found that children of single mothers are at higher risk of accidents than children of married mothers, even after controlling for a host of other demographic characteristics.[33] Anne Case and Christina Paxson showed that children living with stepmothers receive less optimal care and have worse health outcomes than otherwise similar children living with their biological mothers (whether married or single).[34] An extensive body of research also links single-parent and cohabiting-family structures with higher risk of child abuse and neglect.[35]

As McLanahan and Sandefur noted at the time, their findings were worrisome given the burgeoning growth in unwed parenthood in the United States at the time. Although an earlier generation of researchers had debated whether or not divorce affected children's well-being, McLanahan and Sandefur's findings left little doubt that children of unwed parents were worse off than other groups. Concern about how children would fare in unwed families ultimately led to the Fragile Families and Child Wellbeing Study.[36]

The Fragile Families and Child Wellbeing Study

The Fragile Families and Child Wellbeing Study is a new data set that follows a cohort of approximately 5,000 children born between 1998 and 2000 in medium to large U.S. cities.[37]

Approximately 3,700 of the children were born to unmarried mothers and 1,200 to married mothers.[38] The study initiated interviews with parents at a time when both were in the hospital for the birth of their child and therefore available for interviews.[39] As a consequence, FFCWS is able to comprehensively detail the characteristics of both parents and the nature of their relationship at the time of the child's birth.

Table 1. Summary of Fragile Families and Child Wellbeing Findings on Various Child Outcomes

Author	Outcomes	Addresses selection	Positive effect of traditional two-parent family	Negative effect of nontraditional families	Negative effect of family instability
Berger, Paxson, and Waldfogel (2009)	Child abuse	Yes		Yes	
Bzostek (2008)	Behavior problems and health			No (positive)	
Bzostek and Beck (2008)	Obesity/asthma/health	Yes	Yes	Yes	Yes
Cooper and others (2008)	PPVT-R/behavior problems				Yes
Craigie (2008)	PPVT-R	Yes	Yes	Yes	Yes
Fomby and Osborne (2008)	Behavior problems				Mixed
Guterman and others (2009)	Child abuse	Yes	Yes		
Harknett (2005)	Asthma		Yes	Yes	
Liu and Heiland (2007)	Asthma	Yes		Yes	Yes
Liu and Heiland (2008)	PPVT-R/asthma/behavior problems	Yes	Yes		
Osborne and others (2004)	Behavior problems	Yes	Yes	Yes	
Osborne (2007)	Behavior problems		Yes	Yes	
Osborne and McLanahan (2007)	Behavior problems				Yes
Padilla and Reichman (2001)	Low birth weight			Yes	

The study also contains extensive information on early child developmental and health outcomes. The Peabody Picture Vocabulary Test–Revised (PPVT-R) is administered to children aged three or older as a measure of their receptive vocabulary capabilities for Standard English as well as their academic readiness.[40] The Woodcock-Johnson Tests of Achievement Letter-Word Identification subtest, another measure of cognitive development, is administered at the age-five assessment. At the same time, interviewers assess children's sustained attention, a key skill that has been linked to school readiness and success in school, using the Leiter International Performance Scale-Revised.

Interviewers gather data on children's behavior problems by asking mothers questions from the Child Behavior Checklist about both externalizing and internalizing behaviors—that is, both outward displays of emotion, including violence and aggression, and introverted behavioral tendencies, including anxiety, withdrawal, and depression. The study assesses prosocial behavior (which includes the child's ability to get along in social situations with adults and peers) by asking the mother questions using the Adaptive Social Behavior Inventory.

Finally, FFCWS includes several measures of child health. The initial survey records whether a child had a low birth weight. In addition, at the age-three and age-five in-home assessment, the interviewer records physical measurements of the child's height and weight to make it possible to calculate the child's BMI and to determine whether the child is overweight or obese. At the same interviews, the mother is asked about four other health outcomes: whether the child has ever been diagnosed with asthma; the child's overall health, from the mother's perspective; whether the child was hospitalized in the past year; and whether the child had any accidents

or injuries in the past year. The study also includes fairly extensive information on child abuse and neglect, which captures another aspect of child health and well-being. The primary caregiver's use of discipline strategies is measured by the Conflicts Tactics Scale (including the child neglect supplement). Parents are also asked whether their family has ever been reported to child protective services for child abuse or neglect.

Studies using data from FFCWS have found that in general, children in traditional married-couple families fare better than children living in single-mother or cohabiting families. We summarize separately below the evidence on cognitive development, child behavior, and child health (see table 1 for details).

Fragile Families and Child Cognitive Development

Several FFCWS studies have specifically focused on the effects of family structure on children's cognitive development and also confirmed the importance of stability as an explanatory factor. Shirley Liu and Frank Heiland find that among couples unmarried at the time of the child's birth, marriage improved cognitive scores for children whose parents later married.[41] Terry-Ann Craigie distinguishes among stable cohabiting unions, stable single-mother homes, and stable married-couple families, as well as unstable cohabiting families and unstable married-couple families. She finds no difference in children's vocabulary scores at age three between stable two-parent families (whether cohabiting or married) and stable single-mother families, but she finds that scores are lower in unstable families (whether cohabiting or married) than in stable families.[42] Carey Cooper and co-authors also highlight the role that partnership instability plays in the link between family structure and child cognitive development, although these links are much weaker than those they find for behavioral development (discussed below).[43]

Fragile Families and Child Behavior Problems

Several studies using FFCWS data confirm that child behavior problems are elevated in both single-parent and cohabiting families. Cynthia Osborne and her co-authors, for instance, found that children living with cohabiting parents have more externalizing and internalizing behavioral problems than children living with married parents, even at age three. One explanation may be the pre-existing risks that accompany nontraditional families.[44] In addition, research by Rebecca Ryan, Ariel Kalil, and Lindsey Leininger suggests that resources are one mechanism underlying these links: when single mothers have more material and instrumental support, children have fewer behavior problems and more prosocial behavior.[45] Relationship quality may also play a role. Several FFCWS studies offer evidence that poorer relationship quality is linked with less parental engagement with children. Paula Fomby and Cynthia Osborne find that relationship conflict exacerbates externalized behavioral problems in children regardless of past family structure transitions.[46]

The deleterious effects of family instability on behavior problems are also highlighted in the FFCWS studies. Osborne and McLanahan show that behavioral problems are intensified with each additional change in family structure the child experiences (changing from single to cohabiting parent, or cohabiting to single, for example), with this association mediated at least in part by differences in maternal stress and parenting quality.[47] Cooper and co-authors also find a link between instability and behavior

problems, with children who experience instability in the people with whom they live going on to display more externalizing, attention, and social problems, and again find that these effects are mediated, at least in part, by mothers' problematic mental health and harsh parenting.[48] Audrey Beck and her co-authors' analyses of both cohabiting and dating mothers confirm that mothers experiencing instability in their relationships go on to report more stress and to engage in harsher parenting.[49]

It appears, however, that there is an important interaction between family structure and stability. Several studies find that behavior problems are more serious in both stable single-mother families and unstable cohabiting families than in stable married-couple families.[50] In contrast, children living with stable cohabiting-couple families do not display more behavior problems than children living with stable married-couple families. Thus, stability seems to matter in cohabiting families, but not in single-mother families, where the risk of behavior problems is elevated even if that family structure is stable. Osborne and McLanahan find that about half the association between family structure and behavior problems is attributable to mothers' higher levels of stress and poorer parenting skills and behaviors. In a study of father involvement, Sharon Bzostek shows that having a social father involved in a child's life can lower behavioral problems just as having an involved biological father can.[51]

Some studies find no evidence that family structure affects child behavioral problems. An analysis by Liu and Heiland indicates that marriage up to three years after a child's birth does not significantly improve behavioral problems.[52]

Fragile Families and Child Health

In a comprehensive analysis of the effects of nontraditional family structure on child health using data from FFCWS, Bzostek and Beck consider five health outcomes: whether the child is overweight or obese, whether the child has ever been diagnosed with asthma, the mother's overall assessment of the child's health, whether the child was hospitalized in the past year, and whether the child had any accidents or injuries over the past year.[53] Overall, they find, consistent with earlier research, that children born to unwed mothers have worse health across a range of outcomes, even after controlling for other differences in characteristics such as maternal age, race and ethnicity, and education. Children living with single mothers have worse outcomes on all five health measures than children living with married parents, while children in cohabiting-couple families tend to have worse outcomes on some but not all measures. The authors also consider the effect of instability. In contrast to some past research, they find that instability for the most part does not affect children's health outcomes (the exception is hospitalizations, where they find, unexpectedly, that children who experienced more instability are less likely to have been hospitalized).[54] These findings suggest that what negatively affects health among children in fragile families has to do with living with single or cohabiting parents (rather than experiencing changes in family structure).

Bzostek and Beck also consider several mechanisms that might account for the links between family structure and child health. Although no single factor is strongly linked with all the health outcomes, together the intervening variables (or mediators) they examine do help explain some of the differences in health outcomes across family structure type. However,

Bzostek and Beck find evidence that at least a portion of the family structure effects they estimate likely reflects selection. Their models examining the effect of changes in family structure on changes in outcomes for a child over time suggest weaker effects on child health than do their snapshot-in-time cross-sectional models.[55]

Studies have consistently found that children born to unwed parents are at higher risk of low birth weight, and analyses from FFCWS confirm this finding.[56] Further, FFCWS analyses by Nancy Reichman and her co-authors suggest some of the mechanisms that link unwed parenthood with greater risk of low birth weight. They find that women who are not married at the time of the birth are more likely to smoke cigarettes and use illicit drugs during pregnancy, and less likely to receive prenatal care in the first trimester of their pregnancy, all of which are associated with low birth weight (use of illicit drugs is also associated with other infant health problems).[57] Yolanda Padilla and Reichman find that unwed mothers who received support from the baby's father are less likely to have a low-birth-weight baby, as are those who cohabited with the father.[58]

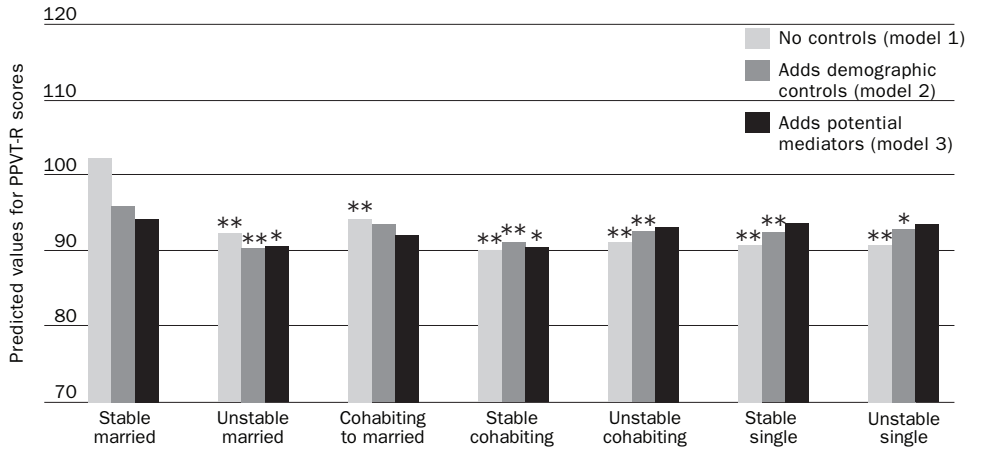
Studies based on FFCWS also confirm earlier research finding that children living with single mothers are at higher risk of asthma. For instance, Kristen Harknett finds that the likelihood that children have been diagnosed with asthma by age fifteen months is highest for children with single mothers, next highest for those with cohabiting mothers, and lowest for those with married mothers. Although differences in characteristics account for the gap between married and cohabiting families, they do not fully account for why children with single mothers are more likely to have been diagnosed with asthma.[59] Liu and Heiland, following children to age three, find that children whose parents had been cohabiting but then separated have a higher risk of asthma than otherwise comparable children whose parents remained together.[60]

A few studies have taken advantage of the data in FFCWS to examine the effects of family structure on child abuse and neglect. Neil Guterman and his co-authors look at whether mothers are less likely to be physically aggressive or punitive with their children if they are in a married household and find that, although marriage appears to be protective in the raw data, that effect disappears in models that control for parental and family characteristics.[61] Lawrence Berger and his co-authors examine the effect of family structure on whether a family has been reported to child protective services for abuse or neglect and find that both single-mother families and cohabiting families where the mother is living with a man who is not the biological father of all her children are at higher risk of having been reported than are families where the mother is living with the biological father of all her children.[62] This latter finding is robust to extensive controls for factors associated with selection into different family types, leading the authors to conclude that the presence of a social father in the home is associated with increased risk of abuse or neglect.[63]

Our Own Analyses of FFCWS

The many studies in this area, including the recent ones using FFCWS data, do not always define family structure or stability in a consistent way. Studies also vary in the extensiveness of other controls that are included in the analyses. These differences across studies can make it difficult to generalize across studies and to summarize their results.

Figure 1. Variation in Predicted Values for Scores on the Peabody Picture Vocabulary Test–Revised, by Family Type



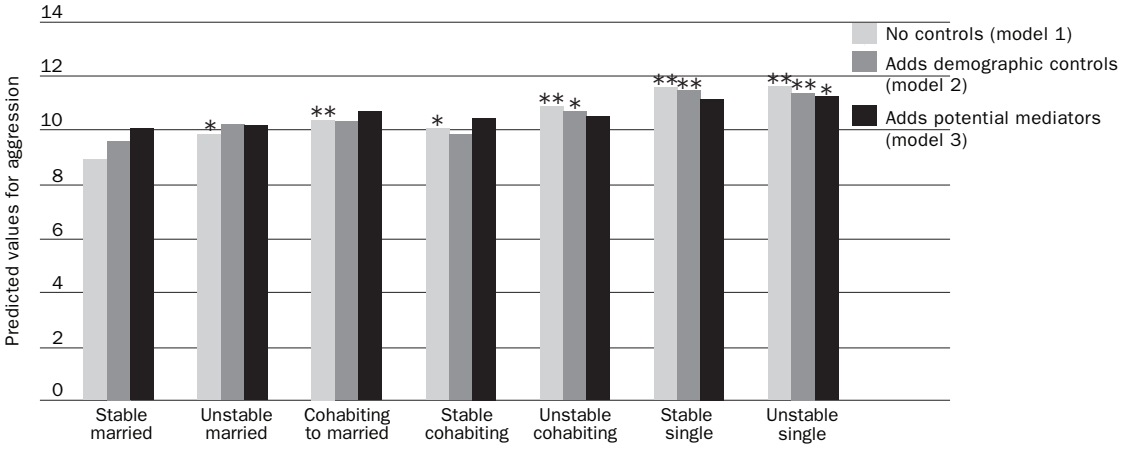
* p<0.05, ** p<0.01
Asterisks indicate that each group is statistically significantly different from the stable married group (the reference category).

Accordingly, we carried out our own analyses of FFCWS data, estimating the effect of a consistently defined set of family structure and stability categories on a set of child cognitive, behavioral, and health outcomes at age five. The family categories we defined account for both family structure at birth and stability since birth. We divide families into the following six categories: stable cohabitation, stable single, cohabitation to marriage, married at birth (unstable), cohabiting at birth (unstable), and single at birth (unstable). We then contrast them with the traditional family reference group (that is, families in which parents were married at the child's birth and have remained so).

We estimate three sets of regression models. In model 1, we control only for the family structure and stability categories; thus, these results tell us the association between family type and child outcomes without controlling for any of the differences in other characteristics between families. Model 2 adds controls for a commonly used set of demographic characteristics—the child's gender, mother and father's race and ethnicity, mother and father's education, and mother and father's age. Thus the results from model 2 regressions tell us the effect of family structure and stability holding constant these demographic differences. Model 3 further adds controls for possible mediating variables that might help explain the links between family structure and stability and child outcomes. We do not have controls for all the possible mediators of interest but we do include here controls for several important ones—mother's income, father involvement, parenting quality, and maternal and paternal depression. Thus, the results for model 3 tell us whether and how much family structure and stability matter for child well-being after controlling for demographic differences and these possible mediators.

We estimated these models for two cognitive outcomes, the Peabody Picture Vocabulary Test–Revised (PPVT–R) and Woodcock-Johnson test; two behavioral outcomes: the

Figure 2. Variation in Predicted Values for Aggression, by Family Type



* p<0.05, ** p<0.01
Asterisks indicate that each group is statistically significantly different from the stable married group (the reference category).

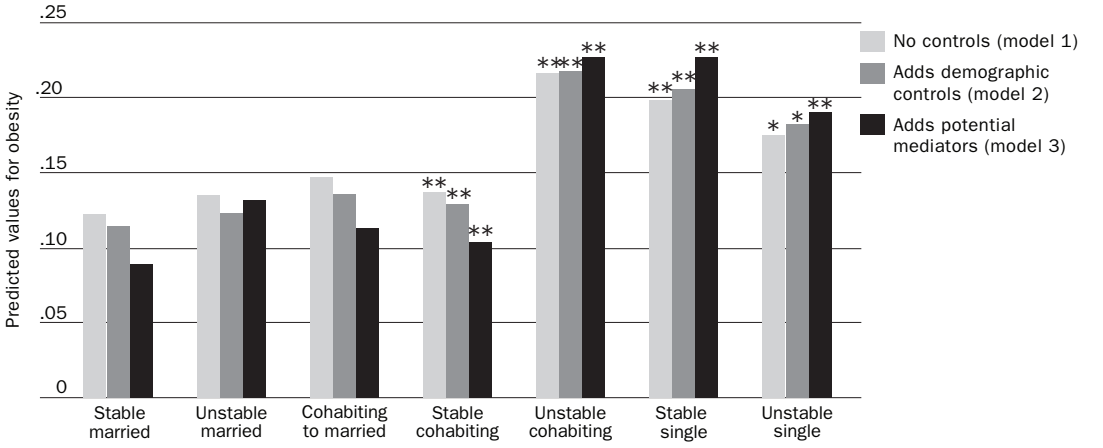
child's score on a measure of aggressive behavior and the child's score on a measure of anxiety and depression; and two health outcomes: obesity and asthma. Details on all the outcome variables are provided in Appendix 1; means for all the variables in our models are listed in Appendix 2.

We show selected results in figures 1 through 3.[64] In these figures, we show how children's predicted scores on the outcome measures vary as a function of their family type. Figure 1 displays results for the PPVT–R. In model 1, all types of nontraditional or unstable families are associated with lower scores. Results for model 2 are similar, with the exception of the cohabitation to marriage category, which is now no longer significantly different from the stable married category. In model 3, the possible mediators explain some, but not all, of these negative effects.

The findings for aggressive behavior are shown in figure 2. In model 1, just as with the results for cognitive outcomes, all types of nontraditional or unstable families are associated with worse scores (in this case, because the outcome variables are ratings of behavior problems, higher scores indicate worse outcomes). However, in contrast to the results for cognitive outcomes, it appears that for aggressive behavioral problems, growing up with a single mother (stable or unstable) is worse than growing up with a cohabiting mother. The effects of growing up with a single mother are larger in model 1 and are more likely to remain significant after controlling for demographic differences (model 2) or demographic differences plus possible mediators (model 3).

Results for the health outcomes reveal a different pattern. Figure 3 shows that for obesity, the worst outcomes, across all three models, are associated with growing up with a single parent (whether stable or unstable) or an unstable cohabiting parent. This pattern is true as well for asthma,[65] although after controlling for demographic differences (or demographic differences plus the possible

Figure 3. Variation in Predicted Values for Obesity, by Family Type



* p<0.05, ** p<0.01
Asterisks indicate that each group is statistically significantly different from the stable married group (the reference category).

mediators), instability appears to be most important (with the worst outcomes found for children of unstable single or unstable cohabiting mothers).

These results suggest that the relative importance of family structure versus family instability matters differently for behavior problems than it does for cognitive or health outcomes. That is, instability seems to matter more than family structure for cognitive and health outcomes, whereas growing up with a single mother (whether that family structure is stable or unstable over time) seems to matter more than instability for behavior problems.

Summary and Conclusions

In this article we summarize the findings from prior research, as well as our own new analyses, that address the question of how well children in fragile families fare compared with those living in traditional married-parent families, as well as what mechanisms might explain any differences. We pay particular attention to studies that use the data from FFCWS to examine the effects of family structure in early childhood.

The FFCWS studies add to a large body of earlier work that suggested that children who live with single or cohabiting parents fare worse as adolescents and young adults in terms of their educational outcomes, risk of teen birth, and attachment to school and the labor market than do children who grow up in married-couple families. Until recently, most of this research focused on divorced parents. The sharp rise over the past few decades in births to unwed mothers, however, has shifted the focus to unmarried single and cohabiting parents. These demographic changes make it difficult to compare research done even ten or fifteen years ago with research on cohorts from the beginning of this century. Rapid changes in the characteristics of parents over time also could result in different selection biases in terms of which parents (both mothers and fathers) have children when married or when unmarried (for example, as the pool of parents having

unwed births grows, the characteristics of unwed parents may become more similar to those of married parents, which would result in smaller estimated associations between fragile families and child outcomes). And given that recent cohorts of children born to single and cohabiting parents are relatively young, an additional complication involves comparing outcomes across studies (that is, analysts cannot yet estimate effects of family structure on adolescent and adult outcomes for cohorts such as FFCWS). Therefore, although growing up with single or cohabiting parents rather than with married parents is linked with less desirable outcomes for children and youth, comparisons of the size of such effects, across outcomes, ages, and cohorts, is not possible. In addition, analysts have used vastly different controls to estimate family structure effects, again complicating the quest for integration across studies. We addressed this latter problem by carrying out our own analyses using a consistent set of controls across outcomes.

Current and past research points to several mechanisms that likely underlie the links between family structure and child well-being, including: parental resources, parents' relationship quality, parents' mental health, parenting quality, and father involvement. The selection of different types of men and women into these family types also likely plays a role. Currently, researchers are examining the role of family instability as well as family structure, allowing in some cases for estimates of the influence of both on children.

As noted, past research focused mainly on children whose parents were married when they were born but then separated or divorced (and subsequently lived on their own or remarried). Today, an increasing share of American children is being born to unwed mothers and thus the children are spending the early years of their lives in fragile families, with either a single mother or a cohabiting mother.

That worrisome change informed the launch of the Fragile Families and Child Wellbeing Study a decade ago. Today FFCWS provides a wealth of policy-relevant data on the characteristics and nature of relationships among unwed parents. It also provides extensive data on early child health and development, currently available through age five. A new wave of studies from FFCWS data has enriched understanding of how unwed parenthood affects child well-being.

Studies using the FFCWS data have shed new light on how family structure affects child well-being in early childhood. The findings to date confirm some of the findings in earlier research, but also provide some new insights. In terms of child cognitive development, the FFCWS studies are consistent with past research in suggesting that children in fragile families are likely at risk of poorer school achievement. Of particular interest are analyses suggesting that some of these effects may be due to family instability as much as, or more than, family structure. That is, some studies find that being raised by stable single or cohabiting parents seems to entail less risk than being raised by single or cohabiting parents when these family types are unstable. Because findings are just emerging, the relative risks of unmarried status and turnover in couple relationships cannot be specified yet. Nor do researchers yet know the mechanisms through which family structure and instability influence children or whether the intervening mechanisms are similar or different.

With regard to child behavior problems, evidence is consistent that children in fragile

families are at risk for poorer social and emotional development starting in early childhood. In contrast to the results for cognitive outcomes, it appears that behavioral development is compromised in stable single-mother families, but, in common with the results for cognitive outcomes, such problems are aggravated by family instability for children in cohabiting families. The research also sheds a good deal of light on mechanisms, such as maternal stress and mental health as well as parenting, that might help explain why behavior problems are more prevalent in fragile families.

FFCWS is also providing some new insights on the effects of family structure on child health. Across a range of outcomes, findings suggest that children of single mothers are at elevated risk of poor health; evidence of health risks associated with living with cohabiting parents is less consistent. Findings for child abuse and neglect are also intriguing and suggest that children of single mothers and cohabiting mothers are at elevated risk of maltreatment, although marital status per se may be less consequential than whether a man who is not the child's biological father is present in the home.

These findings clearly are cause for concern. Although the children in FFCWS are still quite young, these early gaps in child cognitive, behavioral, and health outcomes do not bode well for these children's long-run prospects.[66] As the children in this cohort age, researchers will be able to study how growing up in fragile families is affecting well-being in middle childhood and adolescence for children who began life with unwed parents. Particularly important in this regard will be studies that take into account the mechanisms we discuss in this article as well as the role of selection and instability.

To the extent that children in fragile families do have poorer outcomes than children born into and growing up in more stable two-parent married-couple families, what are the policy implications? In principle, the findings summarized here point to three routes by which outcomes for children might be improved. The first is to reduce the share of children growing up in fragile families (for example, through policies that reduce the rate of unwed births or that promote family stability among unwed parents). The second is to address the mediating factors that place such children at risk (for example, through policies that boost resources in single-parent homes or that foster father involvement in fragile families). The third is to address directly the risks these children face (for example, through high-quality early childhood education policies or home-visiting policies).

Appendices

Appendix 1. Dependent Variables

Measures of Child Cognitive Ability

1. Peabody Picture Vocabulary Test–Revised (Standardized)
2. Woodcock-Johnson Letter-Word Recognition Test

Measures of Child Behavioral Problems

1. Aggressive Behavior: selected items from the Child Behavior Checklist (20 items) [see page 49 of Five-Year In-Home Longitudinal Study of Pre-School Aged Children User's Guide[1]]
2. Anxiety/Depression: selected items from the Child Behavior Checklist (14 items) [see page 50 of Five-Year In-Home Longitudinal Study of Pre-School Aged Children User's Guide[2]]

Measures of Child Health

1. Obesity [Five-Year In-Home Longitudinal Study of Pre-School Aged Children]: BMI equal to or greater than the 95th percentile
2. Asthma: "During past 12 months, has child had episode of asthma or an asthma attack?" [Mother's Fifth-Year Interview]

Potential Mediators

- Income: Fifth-year household income (in tens of thousands)
- Father's Involvement: "During the last 30 days, on how many days has father seen child?"
- Parenting Quality: "Mother's Aggravation in Parenting" [see Scales Documentation and Question Sources for Five-Year Questionnaires (page 16)[3]]
- Depression: "Constructed—Parent meets depression criteria (liberal) at five-year (Composite International Diagnostic Interview)"

1. See www.fragilefamilies.princeton.edu/documentation.asp.
2. Ibid.
3. Ibid.

Appendix 2. Means of Independent Variables, by Family Structure/Stability Group

	General	Stable married	Stable cohabiting	Stable single	Cohabiting to married	Unstable married	Unstable cohabiting	Unstable single
	N=4,032	*N*=733	*N*=265	*N*=571	*N*=281	*N*=269	*N*=900	*N*=1,013
Independent variable	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
Male	0.53	0.54	0.51	0.54	0.51	0.48	0.50	0.55
Mother white	0.21	0.49	0.17	0.10	0.27	0.28	0.15	0.11
Mother black	0.49	0.21	0.40	0.69	0.30	0.35	0.53	0.64
Mother Hispanic	0.27	0.22	0.42	0.19	0.40	0.32	0.30	0.22
Other	0.04	0.07	0.02	0.02	0.03	0.06	0.03	0.03
Father of different race	0.12	0.09	0.11	0.12	0.14	0.14	0.13	0.13
Mother is high school dropout	0.38	0.15	0.46	0.40	0.35	0.25	0.48	0.48
Mother has high school diploma	0.26	0.15	0.31	0.30	0.29	0.25	0.27	0.28
Mother has some college	0.25	0.27	0.22	0.26	0.31	0.31	0.23	0.22
Mother has college degree	0.11	0.42	0.02	0.03	0.05	0.20	0.02	0.02
Father has same education	0.52	0.60	0.55	0.50	0.50	0.51	0.50	0.49
Father has less education	0.23	0.22	0.20	0.24	0.24	0.32	0.21	0.23
Father has more education	0.25	0.18	0.25	0.26	0.26	0.16	0.28	0.28
Mother's age	30.29	35.05	29.85	29.73	29.53	32.74	29.04	27.95
Father's age	32.89	37.26	32.83	32.71	32.43	35.42	31.51	30.50
Mother's income (in 10,000)	3.79	7.89	3.33	2.09	4.48	4.45	2.60	2.60
Father involvement	17.18	29.89	30.00	5.24	29.79	14.72	12.16	12.92
Parenting quality	2.82	2.87	2.87	2.75	2.90	2.90	2.80	2.79
Mother depressed	0.16	0.11	0.09	0.17	0.19	0.22	0.20	0.17
Father depressed	0.08	0.05	0.09	0.07	0.06	0.12	0.11	0.08

Data: Fragile Families and Child Wellbeing Study.

Endnotes

1. It is important to note that both types of families may spend at least some time as part of larger households that include other family members or friends.

2. Stephanie Ventura, "Changing Patterns of Nonmarital Childbearing in the United States," NCHS Data Brief 18 (Hyattsville, Md.: National Center for Health Statistics, 2009) (www.cdc.gov/nchs/data/databriefs/db18.htm [accessed October 2, 2009]). The share of children born to unwed parents is considerably higher among African Americans, and somewhat higher among Hispanics, than for non-Hispanic whites; see Robert A. Hummer and Erin R. Hamilton, "Race and Ethnicity in Fragile Families," in this volume.

3. See Sara McLanahan and Audrey Beck, "Parental Relationships in Fragile Families," in this volume.

4. Wendy Sigle-Rushton and Sara McLanahan, "Father Absence and Child Well-Being: A Critical Review," Working Paper 02-20-FF (Princeton: Center for Research on Child Wellbeing, October 2002); Sara McLanahan and Gary Sandefur, *Growing Up with a Single Parent: What Hurts, What Helps?* (Harvard University Press, 1994); Sara McLanahan and others, "Unwed Fathers and Fragile Families," Working Paper 98-12-FF (Princeton: Center for Research on Child Wellbeing, March 1998).

5. See review in Paul Amato, "The Impact of Family Formation Change on the Well-Being of the Next Generation," *Future of Children* 15, no. 2 (2005): 75–96. Amato also provides a useful overview of mechanisms that might account for the benefits associated with marriage.

6. See Adam Thomas and Isabel Sawhill, "For Love and Money? The Impact of Family Structure on Family Income," *Future of Children* 15, no. 2 (2005): 57–74. For evidence from FFCWS, see Sara McLanahan, Jean Knab, and Sara Meadows, "Economic Trajectories in Non-Traditional Families with Children," Working Paper 09-10-FF (Princeton: Center for Research on Child Wellbeing, September 2009).

7. Susan L. Brown, "Family Structure and Child Well-Being: The Significance of Parental Cohabitation," *Journal of Marriage and Family* 66 (2004): 351–67; Deborah R. Graefe and Daniel T. Lichter, "Life Course Transitions of American Children: Parental Cohabitation, Marriage, and Single Motherhood," *Demography* 36 (1999): 205–17.

8. McLanahan and Sandefur, *Growing Up with a Single Parent* (see note 4).

9. Steven Friedlander, Daniel S. Weiss, and John Traylor, "Assessing the Influence of Maternal Depression on the Validity of the Child Behavior Checklist," *Journal of Abnormal Psychology* 14 (1986): 123–33; Cynthia Osborne, Sara McLanahan, and Jeanne Brooks-Gunn, "Young Children's Behavioral Problems in Married and Cohabiting Families," Working Paper 03-09-FF (Princeton: Center for Research on Child Wellbeing, September 2004).

10 Brown, "Family Structure and Child Well-Being" (see note 7).

11. Analyses from FFCWS suggest that exits from cohabitation or marriage between the year-one and year-three interviews are associated with deteriorating mental health for men, but not for women, whose mental health seems to be less sensitive to family structure changes (except that women who exit from cohabitation do have larger increases in anxiety than other groups). See Claire Kamp Dush and Kate Adkins, "The Mental Health of Mothers and Fathers before and after Cohabitation and Marital Dissolution," Working Paper 09-03-FF (Princeton: Center for Research on Child Wellbeing, January 2009).

12. E. Mark Cummings and Patrick T. Davies, "Effects of Marital Conflict on Children: Recent Advances and Emerging Themes in Process-Oriented Research," *Journal of Child Psychology and Psychiatry* 43 (2002): 31–63; James L. Peterson and Nicholas Zill, "Marital Disruption, Parent-Child Relationship, and Behavioral Problems in Children," *Journal of Marriage and the Family* 48 (1986): 295–307; Osborne, McLanahan, and Brooks-Gunn, "Young Children's Behavioral Problems in Married and Cohabiting Families" (see note 9).

13. McLanahan and Sandefur, *Growing Up with a Single Parent* (see note 4).

14. See discussion in Marcy Carlson and others, "Couples as Partners and Parents over Children's Early Years," Working Paper 09-12-FF (Princeton: Center for Research on Child Wellbeing, September 2009).

15. Osborne, McLanahan, and Brooks-Gunn, "Young Children's Behavioral Problems" (see note 9); Susan Brown and Alan Booth, "Cohabitation versus Marriage: A Comparison of Relationship Quality," *Journal of Marriage and Family* 58 (1996): 668–78.

16. Marcy Carlson and Frank Furstenberg, "The Consequences of Multi-Partnered Fertility for Parental Involvement and Relationships," Working Paper 06-28-FF (Princeton: Center for Research on Child Wellbeing, May 2007).

17. Marcia Carlson and Sara McLanahan, "Fathers in Fragile Families," Working Paper 09-14-FF (Princeton: Center for Research on Child Wellbeing, 2009). Forthcoming in Michael E. Lamb, ed.,*The Role of the Father in Child Development,* fifth edition (New York: Wiley and Sons).

18. Sharon Bzostek, "Social Fathers and Child Wellbeing," *Journal of Marriage and Family* 70, no. 4 (2008): 950–61; Maureen Black, Howard Dubowitz, and Raymond Starr Jr., "African American Fathers in Low-Income, Urban Families: Development, Behavior, and Home Environment of Their Three Year Old Children," *Child Development* 70, no. 4 (1999): 967–78. See also review by Carlson and McLanahan (note 17).

19. Black, Dubowitz, and Starr, "African American Fathers in Low-Income, Urban Families" (see note 18). See also review by Carlson and McLanahan (note 17).

20. Frank Heiland and Shirley H. Liu, "Family Structure and Wellbeing of Out-of-Wedlock Children: the Significance of the Biological Parents' Relationship," *Demographic Research* 15 (2005): 61–104.

21. See, for example, Eirik Evenhouse and Siobhan Reilly, "A Sibling Study of Stepchild Well-Being," *Journal of Human Resources* 39, no. 1 (2004): 248–76; Sigle-Rushton and McLanahan, "Father Absence and Child Well-Being" (see note 4); Gary Sandefur and Thomas Wells, "Using Siblings to Investigate the Effects of Family Structure on Educational Attainment," Discussion paper 1144-97 (Madison, Wis.: Institute for Research on Poverty, 1997); Lawrence L. Wu, "Effects of Family Instability, Income and Income Instability on the Risk of a Premarital Birth," *American Sociological Review* 61 (1996): 386–406.

22. For instance, some studies have used as an instrument an indicator for the gender of the oldest child, on the grounds that a family is more likely to stay intact if the oldest child is a boy. See Kelly Bedard and Olivier Deschenes, "Sex Preferences, Marital Dissolution, and the Economic Status of Women," *Journal of Human Resources* 40, no. 2 (2005): 411–34; and Elizabeth O. Ananat and Guy Michaels, "The Effect of

Marital Breakup on the Income Distribution of Women with Children," *Journal of Human Resources* 43, no. 3 (2008): 611–29.

23. See, for example, Paula Fomby and Andrew J. Cherlin, "Family Instability and Child Wellbeing," *American Sociological Review* 72 (April 2007): 181–204; Cynthia Osborne and Sara McLanahan, "Partnership Instability and Child Well-Being," *Journal of Marriage and Family* 69 (November 2007): 1065–83.

24. Shannon Cavanagh and Aletha C. Huston, "Family Instability and Children's Early Problem Behavior," *Social Forces* 85, no. 1 (2006): 551–81; Cynthia Osborne, Wendy D. Manning, and Pamela J. Smock, "Married and Cohabiting Parents' Relationship Instability: A Focus on Race and Ethnicity," *Journal of Marriage and Family* 69, no. 5 (2007): 1345–66; Osborne and McLanahan, "Partnership Instability and Child Well-Being" (see note 23).

25. Terry-Ann Craigie, "Effects of Paternal Presence and Family Instability on Child Cognitive Performance," Working Paper 08-03-FF (Princeton: Center for Research on Child Wellbeing, November 2008).

26. Cavanagh and Huston, "Family Instability and Children's Early Problem Behavior" (see note 24); Fomby and Cherlin, "Family Instability and Child Wellbeing" (see note 23).

27. Heiland and Liu, "Family Structure and Wellbeing of Out-of-Wedlock Children" (see note 20).

28. Marcy J. Carlson and Mary Corcoran, "Family Structure and Children's Behavioral and Cognitive Outcomes," *Journal of Marriage and Family* 63 (2001): 779–92.

29. Cynthia Osborne, "Maternal Stress and Mothering Behaviors in Stable and Unstable Families," Working Paper 03-08-FF (Princeton: Center for Research on Child Wellbeing, May 2004); Cavanagh and Huston, "Family Instability and Children's Early Problem Behavior" (see note 24).

30. McLanahan and Sandefur, *Growing Up with a Single Parent* (see note 4).

31. Ibid. Differentials in income also accounted for nearly half the lower school performance of children in single-parent versus two-parent families, although they explained relatively little of the gap in behavior problems between the two groups. Other studies examining the mediating role of income include: Elizabeth Thomson, Thomas L. Hanson, and Sara S. McLanahan, "Family Structure and Child Well-Being: Economic Resources vs. Parental Behavior," *Social Forces* 73 (1994): 221–42; Brown, "Family Structure and Child Well-Being" (see note 7); Osborne, McLanahan and Brooks-Gunn, "Young Children's Behavioral Problems in Married and Cohabiting Families" (see note 9).

32. This research is reviewed by Sharon Bzostek and Audrey Beck, "Family Structure and Child Health Outcomes in Fragile Families," Working Paper 08-11-FF (Princeton: Center for Research on Child Wellbeing, 2008); and by Robert Wood, Brian Goesling, and Sarah Avellar, "The Effects of Marriage on Health: A Synthesis of Recent Research Evidence," report prepared by Mathematica Policy Research for U.S. Department of Health and Human Services, Assistant Secretary for Planning and Evaluation, 2007 (http://aspe.hhs.gov/hsp/07/marriageonhealth/report.pdf [accessed October 4, 2009]).

33. Janet Currie and V. Joseph Hotz, "Accidents Will Happen? Unintentional Injury, Maternal Employment, and Child Care Policy," *Journal of Health Economics* 23, no. 1 (2004): 25–59.

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35. This literature is reviewed in Lawrence Berger, Christina Paxson, and Jane Waldfogel, "Mothers, Men, and Child Protective Services Involvement," *Child Maltreatment* 14 (2009): 263–76. See also Jane Waldfogel, *The Future of Child Protection* (Harvard University Press, 1998).

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37. Nancy Reichman, Julien Teitler, and Sara McLanahan, "Fragile Families: Sample and Design," *Children and Youth Services Review* 23, nos. 4/5 (2001): 303–26.

38. Osborne, McLanahan, and Brooks-Gunn, "Young Children's Behavioral Problems in Married and Cohabiting Families" (see note 9); Carlson and Corcoran, "Family Structure and Children's Behavioral and Cognitive Outcomes" (see note 28).

39. Reichman, Teitler, and McLanahan, "Fragile Families" (see note 37).

40. Craigie, "Effects of Paternal Presence and Family Instability on Child Cognitive Performance" (see note 25).

41. Shirley Liu and Frank Heiland, "Should We Get Married? The Effect of Parents' Marriage on Out-of Wedlock Children," Working Paper 07-02-FF (Princeton: Center for Research on Child Wellbeing, 2008).

42. Craigie, "Effects of Paternal Presence and Family Instability on Child Cognitive Performance" (see note 25).

43. Carey Cooper and others, "Partnership Instability and Child Wellbeing during the Transition to Elementary School," Working Paper 08-08-FF (Princeton: Center for Research on Child Wellbeing, April 2010).

44. Osborne, McLanahan, and Brooks-Gunn, "Young Children's Behavioral Problems in Married and Cohabiting Families" (see note 9); Cynthia Osborne, "Is Marriage Protective for All Children? Cumulative Risks at Birth and Subsequent Child Behavior among Urban Families," Working Paper 07-09-FF (Princeton: Center for Research on Child Wellbeing, April 2007).

45. Rebecca Ryan, Ariel Kalil, and Lindsey Leininger, "Low-Income Mothers' Private Safety Nets and Children's Socioemotional Wellbeing," *Journal of Marriage and the Family* 71, no. 2 (2009): 278–98.

46. Marcy Carlson, Sara McLanahan, and Jeanne Brooks-Gunn, "Do Good Partners Make Good Parents? Relationship Quality and Parenting in Two-Parent Families," Working Paper 06-34-FF (Princeton: Center for Research on Child Wellbeing, November 2006); Marcy Carlson and others, "Couples as Partners and Parents over Children's Early Years" (see note 14); Paula Fomby and Cynthia Osborne, "The Relative Effects of Family Instability and Mother/ Partner Conflict on Children's Externalizing Behavior," Working Paper 08-07-FF (Princeton: Center for Research on Child Wellbeing, May 2008).

47. Cynthia Osborne and Sara McLanahan, "Partnership Instability and Child Wellbeing," *Journal of Marriage and Family* 69 (2007): 1065–83. This result was also found in a study using data from the NICHD Study of Early Child Care and Youth Development, which is important since that study included a measure of teacher-reported behavior problems (whereas the measure in FFCWS is mother-reported). See Cavanagh and Huston, "Family Instability and Children's Early Problem Behavior" (see note 24).

48. Carey Cooper and others, "Partnership Instability and Child Wellbeing during the Transition to Elementary School" (see note 43).

49. Audrey Beck and others, "Relationship Transitions and Maternal Parenting," Working Paper 08-12-FF (Princeton: Center for Research on Child Wellbeing, January 2009).

50. Cynthia Osborne and Sara McLanahan, "Partnership Instability and Child Wellbeing" (see note 47).

51. Bzostek, "Social Fathers and Child Wellbeing" (see note 18).

52. Liu and Heiland, "Should We Get Married?" (see note 41).

53. Bzostek and Beck, "Family Structure and Child Health Outcomes in Fragile Families" (see note 32).

54. See also a FFCWS study that finds that instability is associated with mothers' obesity but not with children's obesity; see Earle Chambers, Christiane Duarte, and Frances Yang, "Household Instability, Area Poverty, and Obesity in Urban Mothers and Their Children," *Journal of Health Care for the Poor and Underserved* 20, no. 1 (2009): 122–34.

55. They also examine the role of reverse causality and find some evidence that children who are in poorer health are less likely to have their parents cohabiting at the next survey wave.

56. Lisa Bates and Julien Teitler, "Immigration and Low Birthweight in the US: The Role of Time and Timing," Working Paper 08-15-FF (Princeton: Center for Research on Child Wellbeing, July 2008). In this study and others, low birth weight is typically defined as a birth weight of less than 2,500 grams.

57. Nancy Reichman and others, "Infant Health Production Functions: What a Difference the Data Make," *Health Economics* 18, no. 7 (2009): 761–82.

58. Yolanda Padilla and Nancy Reichman, "Low Birthweight: Do Unwed Fathers Help?" *Children and Youth Services Review* 23, nos. 4/5 (2001): 505–30. See also Julien Teitler, "Father Involvement, Child Health, and Maternal Health Behavior," *Children and Youth Services Review* 23, nos. 4/5 (2001): 403–26.

59. Kristen Harknett, "Why Are Children with Married Parents Healthier? The Case of Pediatric Asthma," *Population Research and Policy Review* 28, no. 3 (2009): 347–65; Kristen Harknett, "Children's Elevated Risk of Asthma in Unmarried Families: Underlying Structural and Behavioral Mechanisms," Working Paper 05-01-FF (Princeton: Center for Research on Child Wellbeing, July 2005).

60. Shirley Liu and Frank Heiland, "New Estimates of the Effect of Parental Separation on Child Health," in *Causal Analysis in Population Studies: Concepts, Methods, and Applications,* edited by Henriette Engelhardt, Hans Peter Kohler, and Alexia Furnkranz-Prskawetz (Vienna: Springer, 2009), pp. 167–99.

61. Neil Guterman and others, "Fathers and Maternal Risk for Physical Child Abuse," *Child Maltreatment* 14 (2009): 277–90.

62. Berger, Paxson, and Waldfogel, "Mothers, Men, and Child Protective Services Involvement" (see note 35).

63. The authors were not able to determine whether the increased risk was due to abuse or neglect on the part of the mother, the social father, or another caregiver.

64. See Terry-Ann Craigie, Jane Waldfogel, and Jeanne Brooks-Gunn, "Family Structure, Stability, and Early Child Health and Development," Princeton University and Columbia University mimeo, 2010, for full results.

65. Ibid.

66. See, for example, Janet Currie, "Healthy, Wealthy, and Wise: Socioeconomic Status, Poor Health in Childhood, and Human Capital Development," *Journal of Economic Literature* 47, no. 1 (2009): 87–122; and Janet Currie and others, "Child Health and Young Adult Outcomes," *Journal of Human Resources,* forthcoming.