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Authors

Musick, Kelly
Meier, Ann

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**Kelly Musick
Ann Meier**

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**ARE BOTH PARENTS ALWAYS BETTER THAN ONE?
PARENTAL CONFLICT AND YOUNG ADULT WELL-BEING***

**Kelly Musick
Cornell University**

**Ann Meier
University of Minnesota**

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* Direct correspondence to Kelly Musick, Department of Policy Analysis and Management, MVR 254, Cornell University, Ithaca, NY 14853; E-mail: musick@cornell.edu; Phone: 607-255-6067; Fax: 607-255-4071. Support for this research was provided by Grant Numbers K01 HD42690 and K01 HD49571 from the National Institute of Child Health and Human Development and the Office of Behavioral and Social Sciences to the first and second authors, respectively. We are grateful to Larry Bumpass, Paula England, and Judith Seltzer for comments on earlier drafts.

**ARE BOTH PARENTS ALWAYS BETTER THAN ONE?
PARENTAL CONFLICT AND YOUNG ADULT WELL-BEING**

ABSTRACT. Using new data from three waves of the National Survey of Families and Households (N=1,963), we examine associations between adolescent family experiences and young adult well-being across a range of indicators, including schooling, substance use, and family-related transitions. We investigate how children living in biological two-parent families characterized by frequent marital conflict fare compared to those living in stepfather and single-mother families, and we assess whether differences can be understood in terms of family income and parenting practices. Findings suggest that exposure to parental conflict in adolescence is associated with poorer academic achievement, increased substance use, and early family formation and dissolution, often in ways indistinguishable from living in a stepfather or single-mother family. Income and parenting largely do not account for these associations. While children tend to do better living with two biological married parents, the advantages of two-parent families are not shared equally by all.

The association between family structure and child well-being is frequently cited: children who grow up with two married parents tend to fare better than others (for reviews see Amato, 2005; McLanahan & Sandefur, 1994; Sigle-Rushton & McLanahan, 2004). Most studies of family structure compare children in single-parent and stepparent families to those living with both biological parents, without considering variation within this large group. A somewhat distinct body of work shows the importance of parental conflict for child outcomes. Children whose parents often argue score worse on measures of academic achievement, behavior problems, psychological well-being, and adult relationship quality; they are also more likely to form families early and outside of marriage (Amato & Sobolewski, 2001; Booth & Amato, 2001; Booth & Edwards, 1990; Furstenberg & Teitler, 1994; Hanson, 1999; Jekielek, 1998; Morrison & Coiro, 1999; Musick & Bumpass, 1999). Examining this kind of variation in married-parent families is important for social scientists because it expands our understanding of how families matter for children. It is also important for the broader public, with marriage emerging high on the U.S. policy agenda in recent years as a tool for improving child outcomes (Nock, 2005). Increasing marriage rates was an explicit goal of the 1996 welfare reform legislation and a key piece of the Bush administration's welfare reform re-authorization package (Ooms, 2007; U.S. DHHS 2008). The success of marriage promotion for the sake of children depends not just on the overall association between marriage and child well-being, but on how this association varies across marriages.

Much of the research to date on parental conflict and child outcomes stems from an interest in the divorce process. Studies typically follow children living with continuously married parents and examine the role of parental conflict in explaining or conditioning the effects of subsequent marital disruption. But many poor quality marriages survive, and children may

experience parental conflict independent of divorce. Few studies treat high conflict marriages as a family type in their own right (but see Amato & Sobolewski, 2001; Musick & Bumpass, 1999; Sobolewski & Amato, 2007). Our analysis sets up a comparison to directly address whether children fare better living with both parents than living with just one, in particular, when parents do not get along. We further test mechanisms that potentially account for differences across family types defined by parental conflict and family structure.

We thus extend prior work by comparing child outcomes across single-parent, stepparent, and high conflict continuously married-parent family types, and by testing key explanations for these associations. Our analysis relies on all three waves of the National Survey of Families and Households (NSFH); to our knowledge, it is the first to use the recently fielded third wave to investigate these questions. The NSFH is uniquely suited to our study, with rich, prospective data from multiple members of the same family over time, including both parents' reports of marital conflict and the family environment during children's adolescence and children's reports of well-being in young adulthood. We provide a broad descriptive portrait of family structure, parental conflict, and child well-being, bringing together literatures on family structure and marital conflict.

FAMILY STRUCTURE, CONFLICT, AND CHILD WELL-BEING

Growing up without both parents is associated with a host of poor child outcomes. Children from single-parent and stepparent families have higher poverty rates and lower levels of educational and occupational attainment than children who grow up with both their biological or adoptive parents (Astone & McLanahan, 1991; Biblarz & Raftery, 1993, 1999; DeLeire & Kalil, 2002; Kiernan, 1992; McLanahan & Sandefur, 1994; Wojtkiewicz, 1993). They report greater substance use and risk-taking behavior, such as smoking, drinking, and drug use (Carlson, 2006;

DeLeire & Kalil, 2002; Hoffmann & Johnson, 1998). Further, these children are more likely to have sex at an early age (Davis & Friel, 2001; Thornton & Camburn, 1989), to be young and unmarried when they form their families (Cherlin, Kiernan, & Chase-Lansdale, 1995; Kiernan 1992; Kiernan & Hobcraft, 1997; McLanahan & Sandefur, 1994; Thornton 1991; Wu 1996), and to experience the dissolution of their own romantic unions (Amato & DeBoer, 2001; Kiernan & Cherlin, 1999; McLanahan & Bumpass, 1988; Wolfinger 1999).

Most of the family structure literature treats continuously married-parent families as a single, homogenous group. Another line of research has devoted attention to variation within continuously married two-parent families, particularly with respect to marital conflict. Children whose parents often argue fare worse than those whose parents get along: parental conflict is associated with negative schooling outcomes (Hanson, 1999), behavior problems (Morrison & Coiro, 1999), early and nonmarital family formation (Furstenberg & Teitler, 1994; Musick & Bumpass, 1999), lower quality adult relationships (Amato & Booth, 2001; Booth & Edwards, 1990), and lower psychological well-being (Amato & Sobolewski, 2001; Jekielek, 1998). Much of the work on marital conflict focuses on continuously married-parent families at initial observation and treats conflict as either a selection or moderating factor in the divorce process. Controlling for pre-disruption marital conflict, studies typically report that it accounts for some, but not all, of the association between marital disruption and academic achievement, problem behaviors, family-related transitions, and subjective well-being (Cherlin et al., 1991; Furstenberg & Teitler, 1994; Hanson, 1999). Testing the moderating effect of conflict on divorce (i.e., the interaction between conflict and divorce), many find weaker negative associations between divorce and child outcomes in the case of high conflict marriages, suggesting that divorce may bring relief from the stress of high conflict family environments (Amato & Booth, 1997; Amato,

Spencer Loomis, & Booth, 1995; Booth & Amato, 2001; Hanson, 1999; Jekielek, 1998; Strohschein, 2005). This line of research tends not to highlight marital conflict as a family factor with independent effects on child outcomes.

A limited number of studies treat high conflict marriages as a family type and examine differences in child well-being across families defined by both parental conflict and family structure – these are closest to what we set out to do. Musick and Bumpass (1999) use data from the first two waves of the NSHF to examine associations between adolescent family type and children’s transitions to adulthood (measured when children are 18-23); they further examine whether associations can be understood in terms of parents’ income, attitudes, and behaviors. The authors find similarities in associations between children’s outcomes and high conflict married-parent families on the one hand and single and stepparent families on the other, with children in these families less likely to graduate from high school and more likely to have sex and cohabit at an early age, compared to children from low conflict continuously married-parent families. Associations are, by and large, not explained by parents’ income, attitudes, or behaviors. This study is limited by its young sample, many of whom have not yet aged into adult transitions of interest. Amato and Sobolewski (Amato & Sobolewski, 2001; Sobolewski & Amato, 2007) rely on data from the Marital Instability and the Life Course study to test associations between parental discord and divorce (measured when most children are under 19) and children’s young adult psychological well-being (measured when children are 19 to about 40).¹ They find negative associations between both discord and divorce and young adult well-being, in each case mediated by relationships between parents and young adult children. Their data come from a 17-year study of individuals married at the first wave of data collection in

¹ Child’s age at time of measurement varies somewhat across the two studies.

1980; they include child interviews in 1992 and 1997. Although many parents divorced over the study period, the sample excludes those who were divorced or unmarried at the first wave. Our analysis relies on new data to provide a broader examination of family structure, parental conflict, and child well-being. We focus on the family environment during children's adolescence, include a range of young adult outcomes, and investigate key explanations for links between the two.

EXPLAINING FAMILY STRUCTURE AND CONFLICT ASSOCIATIONS

As suggested above, there is strong evidence that both family structure and parental conflict are associated with child well-being. What explains these associations, however, remains a difficult question, to which there is not a clear answer. Selection into single-parenthood on unmeasured characteristics undoubtedly accounts for some of the observed associations between family structure and child outcomes; indeed, a recent generation of studies using longitudinal designs and techniques to address selection report weaker and less consistent associations between growing up without both parents and children's outcomes (Aughinbaugh, Pierret, & Rothstein, 2005; Cherlin, Chase-Lansdale, & McRae, 1998; Cherlin et al., 1991; Cherlin et al., 1995; Morrison & Cherlin, 1995; Sigle-Rushton, Hobcraft, & Kiernan, 2005; Strohschein, 2005; Sun, 2001). Individual characteristics may similarly select parents into conflict with their partners. Personality traits or mental health conditions, for example, may lead to poor marital relationships, and these traits may independently influence children via parenting or genetic inheritance (Amato, 2005; Gotlib, Lewinsohn, & Seely, 1998).

There are also compelling theoretical reasons to expect family structure and conflict effects on children. Family income and parenting practices are two causal pathways that have been discussed extensively in the family structure literature. While there has been less empirical

work on how these mechanisms link parental conflict and child outcomes, we expect income to play a smaller mediating role than parenting. Parental conflict may be weakly correlated with family income, but it may spill over to interactions with children (Erel & Burman, 1995).

Family income improves child health and well-being, and single-parent families, in particular, are at much higher risk of poverty than other family types (Duncan & Rodgers, 1991; Eggebeen & Lichter, 1991; Thomas & Sawhill, 2005). Single parents manage work and child care without the help of a second resident parent, and less than 50% receive what is owed to them in child support payments from noncustodial parents (Grall, 2007). Up to half the association between single-parent families and children's academic performance, teen and premarital childbearing, and idleness is due to the lower incomes of single-parent families (McLanahan & Sandefur, 1994; Thomson, Hanson, & McLanahan, 1994). Family income, however, does not explain links between stepparent families and child outcomes (McLanahan & Sandefur, 1994; Thomson et al., 1994), and it likely explains little of the association between parental conflict and child well-being (Musick & Bumpass, 1999). In the case of both stepparent and high conflict continuously married-parent families, two parents remain in the household as potential earners and caretakers.

Parenting behaviors are linked to child well-being, with children typically faring best when parents maintain a strong parent-child bond, apply consistent discipline, and respond firmly but warmly to situations at home (Baumrind, 1991) – behaviors that are displayed more often among continuously married parents. Single parents must balance the provision of financial support with solo care for children, which can lead to time pressure and stress (McLanahan & Booth, 1989). Stepfamilies must negotiate relationships for which rules are often not clearly defined. Children may compete with new spouses for parents' time and attention, and

stepparents may be less invested in non-biological children (White, 1994). Compared with continuously married parents, single parents are less emotionally supportive of their children, have fewer rules yet dispense harsher discipline, and provide less supervision; stepparents spend less time with children and offer less positive response and encouragement (Astone & McLanahan, 1991; McLanahan & Sandefur, 1994; Thomson, McLanahan, & Curtin, 1992). Parenting practices, including warmth, harshness, time, and involvement, typically explain less than 20% of the association between growing up without both parents, education outcomes, and family-related transitions (Astone & McLanahan, 1991; Musick & Bumpass, 1999; Thomson et al., 1994), although McLanahan & Sandefur, (1994) find a stronger role of parenting in explaining high school dropout and idleness among children from single-parent families.

Parenting behaviors may be an important causal link between marital conflict and child outcomes. Disagreements can preoccupy parents and decrease their time and availability to children; the stress associated with conflict can result in less warmth and harsher discipline (Fauber et al., 1990). Disagreements may also prevent cooperation between parents in decisions regarding child rearing, precluding the clear and consistent rule-setting and supervision that protects youth from risks (Grych & Fincham, 1990). Parents who often argue have weaker relationships with their children (Amato & Sobolewski, 2001; Musick & Bumpass, 1999; Sobolewski & Amato, 2007), relationships which can further protect children from risk (Resnick et al., 1997). Only a few studies estimate how much parenting accounts for the association between marital conflict and child outcomes. Musick and Bumpass (1999) find that parents' time, warmth, negativity, and relationships with children mediate a small share – typically less than 10% – of the association between marital conflict and children's transitions to adulthood; Amato and colleagues (Amato & Sobolewski, 2001; Sobolewski & Amato, 2007) find that

parent-child relationships mediate much of the association between marital conflict and children's psychological well-being in young adulthood.

We build on empirical estimates of the extent to which family income and parenting account for differential child outcomes by family type, findings that to date focus largely on family structure, i.e., single and stepparents compared to all continuously married parents. Other mechanisms – unmeasured in our analysis – may be working simultaneously or differentially depending on the outcome and developmental stage of the child. We return to a broader discussion of causal pathways in the concluding section.

ADOLESCENCE AND YOUNG ADULT WELL-BEING

Other studies comparing children in high-conflict continuously married-parent families to those in other family types are not set up to clearly delineate child age when families are observed (Amato & Sobolewski, 2001; Sobolewski & Amato, 2007), or to follow children so far into adulthood (e.g., Musick & Bumpass, 1999). Yet, the effects of family may vary depending on the child's age (Allison & Furstenberg, 1989; Duncan, Yeung, Brooks-Gunn, & Smith, 1998). We measure family circumstances when children are adolescents (ages 10 to 18), just prior to the many educational, vocational, and relationship experiences leading into adulthood, experiences that can be both high stakes and hard to reverse. The sheer proximity of adolescence may make it consequential for the transition to adulthood, while at the same time the developmental changes of adolescence may make children more attuned to family dynamics and increase the importance of family as an arena of comfort and stability (Shanahan, 2000).

The transition from adolescence to young adulthood entails moving from a stage of exploration and constrained independence to one of more autonomy and responsibility. It is dense with changes across various domains of life (Rindfuss, 1991), the timing and sequencing

of which are important for success in the subsequent life course (Hogan & Astone, 1986). Markers of a “successful” transition to adulthood include financial security, dependable behavior, and stable relationships (Hogan & Astone, 1986; Moffitt, 1993; Oppenheimer, Kalmijn, & Lim, 1997). We examine multiple indicators in each of three related domains: academic achievement, risk-taking behavior, and family-related transitions. Testing the influences of family structure and conflict across domains offers a broader perspective on the question of whether and how parental conflict matters for child well-being.

We measure outcomes when children are in their teens to early thirties, following our observation of adolescent family experiences; all outcomes bear on young adult well-being. In the domain of academic achievement, we focus on high school graduation, high school grades, and college attendance. Adult economic well-being is highly stratified by educational attainment; years of schooling are linked to life-time earnings (Day & Newburger, 2002), health (House, 2002), and marital stability (Raley & Bumpass, 2003). Our risky behaviors include smoking, heavy drinking, and marijuana use. Unlike some adolescent-limited risk behaviors (e.g., school misconduct), smoking, heavy drinking, and marijuana use may start early in life but persist into adulthood, as smoking and drinking become legally sanctioned, and all have physiologically addictive properties. In adulthood, substance use is associated with poor socioeconomic, health, and psychological outcomes (e.g., Gruber, 2001; Kandel, 2002).

Finally, in the arena of family-related transitions, we examine early sexual initiation, early cohabitation, nonmarital fertility, and union disruption. While sex, union formation, and childbearing are clearly normative life course transitions, *early sex* and *early* and *nonmarital* union formation and childbearing may have negative consequences not associated with later transitions. Early first sex increases exposure to sexually transmitted diseases and nonmarital

pregnancy (Alan Guttmacher Institute, 2002; Resnick et al., 1997). Early childbearing truncates educational attainment (Astone & Upchurch, 1989; Teti & Lamb, 1989), and nonmarital births diminish opportunities on the marriage market (Qian, Lichter, & Mellott, 2005). Early cohabitation may pull people out of the socialization and interactions that lead to successful partner selection. Young unions are also less stable than those formed later (Raley & Bumpass, 2003), and early experiences of disruption may set expectations with respect to the permanency of marriage-like relationships.

We expect parental conflict and family structure to be associated with schooling, substance use, and family-related transitions, albeit through different pathways. Less parental time associated with parental conflict, single-parenthood, and step parenthood may affect children's schooling via reduced help with homework; the lower incomes of single parents may constrain college attendance. Likewise, less time may increase children's substance use via lower levels of supervision. The tendency of parents in high conflict marriages to engage in harsh parenting and their poorer relationships with children may further increase children's substance use, as well as hasten children's first sex and cohabitation, as youth look outside the home to peers and romantic partners for support. Early sex and cohabitation among children from single and stepparent families may be more a result of their modeling dating and nonmarital relationships that they see at home (Axinn & Thornton, 1996). Direct modeling of conflict (in the case of high conflict marriages) and the experience of divorce (in the case of single or stepparents) may also raise children's own risk of union disruption. The transmission of attitudes about the importance and durability of marriage may further affect rates of union dissolution among children from high conflict, step, and single-parent families (Amato & DeBoer, 2001; Axinn & Thornton, 1996).

In line with this discussion, we expect that family type will be associated with young adult well-being. Family income and parenting practices will mediate observed associations to varying degrees. For some outcomes, e.g., academic achievement, associations may run indirectly through time with mothers; for others, like union dissolution, associations may be more directly linked to parental conflict and family structure.

PRESENT STUDY

The present study extends the literature on family structure, which generally means how parents' marital and cohabiting histories sort children into single, step, and two biological-parent families, by highlighting diversity in the family experiences of children living with continuously married parents. We build the presence or absence of conflict into our analysis, adding another family type – high conflict continuously married-parent families – to traditional measures of family structure. Drawing attention to conflict as an important family factor in and of itself, we shift the emphasis of the parental conflict literature, which tends to focus on conflict as a selection or conditioning variable in the divorce process. We extend research both on family structure and conflict by examining the roles played by income and parenting in accounting for differences in the young adult well-being of children from single, step, and high conflict continuously married-parent families.

We use three waves of the NSFH, including the recently fielded third wave. The NSFH has significant strengths relative to other data used to address parental conflict and child well-being. Of the major demographic studies to examine parental conflict, including the Marital Instability over the Life Course Study (e.g. Amato et al., 1995), the National Longitudinal Survey of Youth (Jekeliak, 1998; Morrison & Coiro, 1999), and the National Survey of Children (Cherlin et al., 1991; Furstenberg & Teitler, 1994), the NSFH is the only one to include both

parents' reports of marital conflict. It also contains relatively rich information from parents about their own social class backgrounds, education trajectories, and family formation histories, which allows us to control for key factors that potentially select parents into subsequent family structures and conflict with partners. Further, it includes detailed, prospective data on income and parenting that make it possible to look inside family categories to better understand the process through which families matter. Some of the parenting questions refer specifically to behaviors with respect to the focal child, as opposed to general parenting practices, providing better measures of children's family experiences.

The scope of our analysis – starting with single, step, and continuously married-parent families, accounting for factors that potentially explain differences in child well-being across family type, and examining a range of outcomes associated with young adult well-being – allows us to draw a broad picture of family structure, parental conflict, and child outcomes. It also raises challenging issues. First, including high conflict continuously married-parent families highlights diversity in married-parent families that is often overlooked, but it also treats conflict and divorce as independent when, as noted earlier, research tends to find that pre-divorce conflict accounts for some of the association between divorce and subsequent child outcomes. Capturing family experiences at a single point in time, as we do, may result in an underestimate of the association between parental conflict and child well-being, relative to family structure and child well-being. Some continuously married parents categorized as low conflict may have experienced conflict in the past, blurring distinctions between the high and low conflict groups. At the same time, some of the step and single-parent families may have experienced conflict prior to separation, inflating estimates of family structure by including past conflict.

Another challenge is parsing out selection and causation. We incorporate relatively rich controls that are prior to parents' family-related decisions and conflict with partners, narrowing – but not eliminating – the full set of factors that potentially threaten causal inference. That said, we have no reason to suspect that selection into conflict is any worse, or that we do any worse accounting for selection into conflict, than selection into family structure. We should be able to compare the *relative associations* between family type and child outcomes. It would take much more detailed data to fully disentangle causal pathways from selection. In the meantime, we report patterns of association and are cautious not to make strong causal arguments; we present this analysis in the spirit of learning what we can with the data we have.

DATA AND METHOD

NSFH

The first wave of the NSFH was collected in 1987-1988 and involved interviews with over 13,000 respondents, including a main cross-section and an over-sample of Blacks, Puerto Ricans, Mexican Americans, single-parent families, families with stepchildren, cohabiting couples, and recently married persons. In each household, an adult was randomly selected as the primary respondent, and the spouse or cohabiting partner was asked to complete a shorter, self-administered questionnaire. The second wave (NSFH2) was fielded in 1992-1994, and it included interviews with current partners as well as ex-partners who were in the main respondent's household at NSFH1. The most recent wave (NSFH3) was fielded in 2001-2002. Of particular interest to this study, a focal child was randomly selected from the household roster at NSFH1 and followed over the subsequent surveys. At NSFH1, primary respondents provided information on the focal child, and at NSFH2 and NSFH3, focal children themselves were also interviewed.

We use reports from main respondents, current partners, and ex-partners at NSFH1 and NSFH2 to construct measures of parental conflict, family structure, family income, and parenting during children's adolescent years. We use focal child interviews from NSFH2 and NSFH3 to construct indicators of young adult well-being. Our analysis pieces together information from all three waves of data, but we rely on just two waves to construct measures for any given child, with the combination of interviews dependent on the child's age. Focal children are 4-18 at NSFH1, 10-25 at NSFH2, and 19-34 at NSFH3.² In order to assess family experiences for all children at the same stage – adolescence – we use parents' NSFH1 responses to construct family variables for the older children, who are 12-18 at the first wave, and we use parents' NSFH2 responses for the younger children, who are 10-18 at the second wave.³ We measure outcomes using focal child self-reports from either NSFH2 or NSFH3 for the older children (ages 18-34 at these waves) and NSFH3 only for the younger children (ages 19-27 at NSFH3).

Attrition affects our sample in a few ways, again depending on the age of the focal child. For the younger focal children, cases are lost due to parents' nonresponse at NSFH2 and their own nonresponse at NSFH3. Eighty-five percent of all younger focal children had at least one parent report from NSFH2, and of these children, over half were interviewed at NSFH3. For the older focal children, parents' nonresponse is not a factor, since data on the family environment are drawn from NSFH1. Cases are lost if the focal child was not successfully interviewed at either NSFH2 *or* NSFH3; 69% of the original older focal children were interviewed at one of

² Because of the timing of birth and interview dates, a few cases fall outside these age ranges.

³ While this opens the possibility of differential period effects, recent work finds no evidence of change over time in the association between family structure and at least some aspects of child well-being (Li & Wu, 2002; Musick & Mare, 2006; Sigle-Rushton et al., 2005).

these time points.⁴ In all, we are left with about 56% of the potential sample of focal children identified at NSFH1. Attrition was greater among non-White and socioeconomically disadvantaged respondents, as well as those living with a step or single-parent family at NSFH1. Despite these differences, among the older focal children, we found (in results not shown) similar relationships between NSFH1 family environment and young adult well-being, whether outcomes were generated from the NSFH2 or NSFH3 focal child samples. This provides some evidence that our key findings are not affected by attrition.

We restrict our analyses to children who were living with their biological mother at NSFH1, thereby excluding single father and stepmother families, which are relatively rare and cannot be analyzed separately. We also exclude cases who experienced the death of a parent as there are too few deaths to analyze separately, and the processes of divorce and death affect children differently (Biblarz & Gottainer, 2000). Finally, we lose a small number of cases due to missing values on parental conflict and union transitions, child outcomes, and family background characteristics. Our initial sample includes 2,269 children whose parents were interviewed at either NSFH1 or NSFH2, who were living with their parents at the adolescent family observation, and who were interviewed themselves at NSFH2 or NSFH3. Of these, 2,065 were living with their biological mother at NSFH1. We exclude 55 children living with widowed single mothers, and we drop another 47 due to missing values on conflict, family structure, or controls, leaving a baseline sample of 1,963. Final samples vary by outcome due to item nonresponse and censoring of family-related transitions (discussed below).

⁴ Focal children were followed up for interview at NSFH3 regardless of whether they were interviewed at NSFH2. Of the 1,914 older focal children at NSFH1, 1,069 were interviewed at NSFH2. At NSFH3, 889 were interviewed, including 247 who did not respond at NSFH2.

Adolescent Family Type

We measure conflict between continuously married parents on the basis of couples' responses to six items concerning frequency of disagreement. Main respondents and their spouses/partners were asked: "The following is a list of subjects on which couples often have disagreements. How often, if at all, in the last year have you had open disagreements about each of the following..." The subjects include household tasks, money, spending time together, sex, in-laws, and the children. We generate a disagreement scale by averaging all valid responses from mothers and fathers to these six items, keeping observations on conflict when only one parent report is available. This measure has good scale reliability (Cronbach's $\alpha = 0.81$).

In 84% of cases, conflict scores are based on reports from both mothers and fathers on at least one of the six conflict questions (76% of cases include reports from both parents on all six items). The average level of conflict for those with reports from both spouses is somewhat higher than the average for the 16% with data from one spouse only. We ran baseline models flagging cases with conflict data from one spouse only, and found (in results not shown) that the flag was statistically significant in just one instance – high school dropout – and even in this case, adding the flag had little effect on other coefficients and did not change in our key findings.

We categorize continuously married-parent families by grouping the distribution of average conflict scores into thirds, corresponding to low, medium, and high average conflict. We explored the relationship between this measure and agreement between spouse reports of marital conflict. For those with both a main respondent and spouse report of conflict, the average difference between the main respondent and spouse report was quite small and varied little by the average level of spouse conflict. We examined an alternative measure of conflict based on agreement between spouses: whether they both reported low levels of conflict, both

reported high levels of conflict, or disagreed on levels of conflict. We found that agreement on high levels of conflict raised the risks of most of the outcomes we examined relative to agreement on low levels of conflict, much like we found that high average levels of conflict raised the risks relative to low average levels of conflict.

While the NSFH is unique in including reports from both spouses, relying on average levels of disagreement is a common approach to measuring marital conflict (e.g., Cherlin et al., 1991; Furstenberg & Teitler, 1994; Jekeliek, 1998; Morrison & Coiro, 1999). Using different data, Amato and colleagues further include indicators of marital problems and divorce proneness (Amato & DeBoer, 2001; Amato & Sobolewski, 2001; Amato et al., 1995; Booth & Amato, 2001). Marital problems and divorce proneness may be associated with the likelihood of divorce, but they may be less directly related to child well-being. Children are more likely to perceive – and be affected by – open disagreements than parents’ feelings about their marriage. We return to a discussion of the links between parental conflict, children’s perceptions, and child well-being in the conclusion.

Using average disagreement scores to make distinctions between continuously married-parent families, we generate five family types: low, medium, and high conflict continuously married-parent families; stepfather families; and single-mother families. Family structure is determined on the basis of the parents’ union status and history. Children are coded as living with continuously married parents if their parents were married or living together within one year of the focal child’s birth and are in the same union at the time the family environment is observed, when children are 10-18, or adolescents (we include three cohabiting families by this

definition).⁵ They are coded as coming from stepfather families if mothers are in a union that began more than a year after the focal child's birth (this includes 58 cohabiting stepfamilies). Finally, they are classified as coming from single-mother families if mothers are not married or cohabiting. Table 1 shows the distribution of our measure of adolescent family type.

-- Table 1 about here --

Mediating Mechanisms

We focus on two potential mechanisms linking family type to young adult well-being: income and parenting. Both are observed, like family type, when children are adolescents. Family income includes all sources of income to family members in the past year. It is adjusted to constant 1993 dollars and modeled as the natural log. We include three indicators of parenting: the quality of the mother-child relationship, mother's time with children, and mother's frequency of harsh behaviors toward children. We rely on *mother's* relationships and practices, as all family types in our study include the biological mother, but not all include a male parent.

The quality of the mother-child relationship is based on a single question about how the mother would describe her relationship with the focal child, with response choices ranging from 1 = *very poor* to 7 = *excellent* at NSFH1 and 0 = *really bad* to 10 = *absolutely perfect* at NSFH2. We rescaled the NSFH2 item so that our measure of relationship quality ranges from 1 – 7. Mother's time with children (all children in the household, including the focal child) is an average of four items about how often she spends time with children in leisure activities away from home, at home working on a project or playing together, having private talks, or helping

⁵ Marriage chances drop off sharply following a nonmarital birth (Brien, Lillard, & Waite, 1999). Allowing parents one year to marry following the focal's birth captures those parents that marry without including (many) step relationships (see Bumpass, Raley, & Sweet, 1995).

with reading or homework, with responses ranging from 1 = *never or rarely* to 6 = *almost every day*. Finally, mother's harsh behaviors are constructed from questions about how often she yells at or spansks or slaps her children. The wording of questions and the referent differ across waves, but are comparable. At NSFH1, mothers are asked two questions about yelling and spanking/slapping the children, i.e., all children in the household. Response alternatives range from 1 = *never* to 4 = *very often* and are averaged across items. At NSFH2, questions refer specifically to the focal child. Mothers are asked two questions about how they respond when the focal child does something especially bad, namely how often they yell at the child and how often they spank or slap the child. They are asked a third question about how they try to influence the focal child's behavior, including how often they yell or shout. Responses to the three items range from 1 = *never* to 5 = *always* and are averaged. We rescaled the NSFH2 mean so that our measure of harsh behaviors ranges from 0.8 - 4. The focal child-specific measures of parenting behaviors should result in a tighter fit between what mothers report about parenting and the focal child's own perception of parenting.

Missing data on family income and mothering are filled in with mean values for the sample, and missing cases are flagged in all models. We tested the sensitivity of our results to including cases that were missing information on these mediating factors, and key findings were similar whether we flagged cases with missing data or dropped them from our analyses.⁶ Income and mothering variables are standardized, with means of 0 and standard deviations of 1, so that we can more directly compare how each is associated with child well-being.

Table 1 shows means and standard deviations of our income and mothering variables for

⁶ Missing data on these items is as follows: 11% on family income, 8% on mother-child relationship quality, 8% on mother's time, and 13% on harsh behaviors.

our full sample and by family type. Differences across family types suggest that these variables may explain associations between family structure, conflict, and child outcomes. While family income varies somewhat by level of marital conflict, variation within continuously married-parent families is small relative to the very large gap between them and single mothers (e.g., nearly \$58,000 for high conflict continuously married parents compared to \$27,000 for single mothers). Indicators of mothering also vary as expected, with low conflict families having the highest scores on relationships and time with mother, and the lowest scores on harsh behaviors. Mothering variables for the high conflict families look more similar to those of stepfather and single mother families than to those of other, low conflict, continuously married-parent families. These associations may be confounded by pre-existing characteristics of families not yet controlled.

Outcomes

We examine indicators of young adult well-being in the areas of schooling, substance use, and family related transitions. For schooling, we model high school dropout,⁷ poor grades in high school (“C” or below), and never attended a two- or four-year college. For substance use, we model smoking in the past 30 days, binge drinking (five or more drinks in one sitting) in the past 30 days, and marijuana use in the past year. Family-related transitions include early first sex (before age 16), early cohabitation (before age 21), nonmarital childbearing, and union dissolution. Early sex is based on a single question about age at first sex, and other family

⁷ High school dropout is defined as not having received a diploma at graduation, and it includes children who passed a high school equivalency test such as the GED. In terms of labor market outcomes, exam-certified high school equivalents bear a stronger resemblance to high school dropouts than to graduates (Cameron & Heckman, 1993).

transitions are pieced together from union and childbearing histories collected at NSFH2 and NSFH3.

Outcomes are measured when children are ages 19 – 34, at NSFH3 for the younger focal children and at either NSFH2 or NSFH3 for the older focal children. If the older focal children were interviewed only at NSFH2 *or* NSFH3, we use the available interview. If both interviews are available, we prioritize NSFH2 in the case of dropout, poor grades, substance use, and early sex, since these events either take place prior to age 18 (the youngest age at NSFH2), or are somewhat more common at younger ages. For college attendance, early cohabitation, nonmarital childbearing, and union dissolution, we prioritize the NSFH3 report to give the focal child more time to experience these events. We control the age when the outcome was reported in all models, which necessarily corresponds to the age at which the behavior occurred only in the case of substance use; academic outcomes and family-related transitions are reported retrospectively, and thus the dummies account for any effects of reporting at NSFH2 vs. NSFH3.

We consider outcomes for males and females together. Recent literature indicates that there are few differences in the effects of family disruption by child gender (Amato, 2005; Jekielek, 1998). In the one case of nonmarital childbearing, because we were concerned about the quality of men's nonmarital fertility reports (Rendall, Clarke, Peters, Ranjit, & Verropoulou, 1999), we examined models separately for women. Coefficients in the models including women only were similar to those of the pooled sample, although some lost statistical significance, likely due to a reduction in statistical power. We report pooled results here.

Table 1 shows the frequency of each of our outcomes, for which final samples vary by item nonresponse and censoring: 12% dropped out of high school, over a fifth had poor grades in high school, and 37% never attended college. Substance use is reasonably common, with about a

third of the sample reporting smoking and binge drinking in the past month, and about a quarter using marijuana in the past year. The transition to first sex occurred before age 16 for 20% of young men and women (of those who did not make or age out of the transition prior to the time we observed their adolescent family experiences). Twenty percent cohabited by the age of 21, 9% had a child outside of marriage, and 40% experienced the dissolution of their first cohabiting or marital union. Almost across the board, children from low conflict continuously married-parent families have the lowest proportions engaging in measured outcomes, that is, prior to any controls for socio-demographic and other differences across family types.

Controls

In multivariate analyses, we control for as rich an array of potential selection factors as possible. The availability of mother's education, union, and childbearing histories, and detailed information on her social class background, allow us to control for important characteristics of mothers that are prior to family structure and conflict, including: race, highest level of education prior to the focal child's birth, childhood family structure, age at first birth, and union dissolution prior to the focal child's birth.⁸ Many of these factors are associated with both family structure and child well-being, and may be associated with conflict, as well. We also control for the focal child's sex and age when the focal child reported the outcome of interest, which varies depending on the outcome, as noted above. Descriptive statistics on control variables are shown

⁸ When mothers' childbearing and union histories are not available we set values to 0 and include a flag for missing mother report. When we have no report of mother's race or education, we fill this information in with partners' reports, if available, since these characteristics tend to vary little within couples (see Schwartz & Mare, [2005] on education and Qian [1997] on race).

in Appendix Table 1.⁹

Models

We use logistic regression to analyze dichotomous indicators for school-related outcomes and substance use. For these models, exponentiated coefficients represent the proportionate change in the odds associated with a unit change in the observed characteristic x_i , holding all else constant (Agresti, 1990). We use Cox proportional hazard models to examine determinants of time to family-related transitions, i.e., sex, cohabitation, nonmarital birth, and union dissolution. The Cox model provides multivariate estimates of the effects of independent variables on the time-dependent risk of transition (Cleves, Gould, and Gutierrez, 2002; Cox, 1972). Hazard models are appropriate for analyzing time to an event, especially when there is censoring. Exponentiated coefficients represent the proportionate change in the baseline hazard associated with characteristic x_i , and can be interpreted as a change in the relative risk of an event for a one-unit change in x_i . The Cox model assumes that the effect of covariates remains constant at all durations, but it makes no assumptions about the shape of the baseline hazard over time.

We model the age-specific risks of sex, cohabitation, and nonmarital childbearing and the duration-specific risk of union dissolution (i.e., duration since the start of the first union). Age

⁹ We ran sensitivity analyses including controls for child behavior problems at NSFH1. The argument for including them is mixed: if parents respond to children's behavior and not vice versa, omitting behavior problems would inflate estimates of mothering; however, if the arrows of causality work in the hypothesized direction – from parents to children – including them would capture aspects of mothering and understate the total effects of mothering. Including child behavior problems resulted in little change in key coefficients, and we leave them out of final models.

16 is treated as a competing risk in the model of first sex (i.e., at age 16, individuals are removed from the risk set). For cohabitation and nonmarital childbearing, age 21 and age at marriage are treated as competing risks, respectively. For early sex, early cohabitation, and nonmarital childbearing, children's exposure to risk starts after we observe their family circumstances in adolescence, and cases are left-truncated if children make or age out of the transition of interest prior to that date. For union dissolution, exposure starts at the time of the first union, and cases are left-truncated if their unions begin prior their adolescent family observation. The only outcome for which left-truncation results in a significant loss of cases is first sexual intercourse. Because we are modeling age-specific risks of first sex and all ages up to 16 are represented in our models, censoring these cases reduces the precision of estimates but does not lead to bias.¹⁰

RESULTS

Table 2 summarizes results of two multivariate models examining relationships between adolescent family experience and young adult well-being. Controls for background characteristics, namely, child's age and sex and mother's race, education, childhood family structure, and past childbearing and union experiences, are included in both models but not shown in Table 2; Appendix Table 1 shows parameter estimates for all variables in our final models. Model 1 estimates associations between indicators of family type and young adult well-being, and Model 2 adds (in standardized form) the natural log of family income and our three measures of mothering, the quality of the mother-child relationship, time with mother, and harsh

¹⁰ Our baseline sample of 1,963 includes 1,830 focal children with valid reports on age at first sex. Of these, 443 had sex before their parents reported on their adolescent family environment, and 275 turned 16 (without first having sex) before this date, leaving 1,112 cases. Of the remaining observations, 261 had sex prior to the age of 16.

behaviors of mothers. Panels A and B report exponentiated coefficients or odds ratios from logistic regression models of school achievement and substance use, and Panel C reports exponentiated coefficients or relative risks from hazard models of time to sex, cohabitation, nonmarital childbearing, and union dissolution. Within each panel, the first set of rows compares associations between child outcomes and exposure to conflict, living in a stepfather family, and living in a single-mother family, all relative to living in a low conflict continuously married-parent family. In the rows labeled “key contrasts,” we provide additional contrasts of interest, examining differences among high conflict, stepfather, and single-mother families.

-- Table 2 about here --

We start by reviewing results of logistic regression models of academic achievement in Panel A. Model 1 indicates that, compared to living in a low conflict continuously married-parent family, living in a high conflict family increases the odds of dropping out of high school and poor grades, but is not significantly related to college attendance. Living in a stepfather or single-mother family is associated with all three outcomes, and appears to be more strongly associated with both dropping out and not attending college than conflict (see “key contrasts”). For example, while parental conflict is associated with a 72% increased odds of drop out, stepfather and single-mother families are associated with more than a tripling of these odds.

Model 2 adds family income and mothering variables. The odds ratio on income is less than one for all three academic outcomes, but is not statistically significant in the case of dropping out. A one standard deviation increase in income is associated with about a 10% reduction in the odds of poor grades and a 15% reduction in the odds of not going to college. The quality of the mother-child relationship is negatively associated with dropping out and poor grades, but not college attendance. A one standard deviation increase in mother-child

relationship quality is associated with about a 20% decline in the odds of dropping out and poor grades. Harsh mothering increases the odds of dropping out (with a one standard deviation increase in yelling or hitting being associated with nearly a 20% increase in the odds of dropping out), but is not statistically significantly associated with the other academic outcomes.

Surprisingly, time with mother is not associated (net of other variables) with any of these academic outcomes. We hypothesized that time with mother would be particularly important in mediating the association between family type and academic achievement, especially as one dimension of time includes help with homework.

The three mothering variables are jointly significant in models of dropping out and poor grades and, together with income, they modestly reduce (mostly by 10-15%) the coefficients on parental conflict and family structure (see column 3, which compares coefficients from Models 1 and 2). In the case of high school drop out, including family income and (especially) mothering reduces the coefficient on parental conflict to statistical insignificance; in the case of poor grades, adding these mediating variables reduces coefficients on stepfather and single mother to statistical insignificance. Mothering appears unrelated to college attendance (i.e., variables are individually and jointly statistically insignificant) and thus does not explain associations between this outcome and family structure. Income, however, explains a modest share of the association between college attendance and living with a single mother (it reduces the single-mother coefficient by 12%).

Panel B of Table 2 shows logistic regression results for substance use. In Model 1, parental conflict and family structure are associated with each of the substance use outcomes, and in very similar ways. Except for binge drinking, there are no statistically significant differences among the coefficients on parental conflict and family structure (see “key

constrasts”). In the case of binge drinking, the coefficient on parental conflict is *larger* than that on single-mother family structure, suggesting that conflict is more strongly linked to binge drinking than single motherhood. This story changes slightly once income and mothering are included in Model 2, where this difference loses statistical significance (by contrast, in the case of smoking, the difference between parental conflict and single motherhood *gains* statistical significance).

Family income (Model 2) is statistically significant in the binge drinking and marijuana models, with a standard deviation increase in income *increasing* the odds of these outcomes by 27 and 15%, respectively. This is consistent with income increasing the ability of youths to purchase alcohol and drugs. Mother-child relationship quality is negatively associated with smoking and marijuana use, mother’s time is negatively associated with smoking, and mother’s yelling and hitting are negatively associated with marijuana use (contrary to expectation, although the association is small and only marginally significant). Across outcomes, the mothering variables explain little of the family conflict and structure associations – and are individually and jointly insignificant in the case of heavy drinking. Income acts as a suppressor in the associations between single-mother families and drinking and marijuana use; including income increases the coefficient on single-mother families by 15% in the case of drinking and 9% in the case of marijuana (column 3).

Panel C shows hazard model results for early sex, early cohabitation, nonmarital childbearing, and union disruption. Coefficients on high conflict, stepfather, and single-mother families are greater than 1 in each of these models, although the coefficient on parental conflict is relatively weak (and statistically insignificant) in the case of early cohabitation. In this case, differences between parental conflict and family structure are statistically significant, i.e., the

association between children's early transitions into cohabitation and parental conflict are about 30% weaker than those between cohabitation and either stepfather or single-mother families. Parental conflict is also more weakly associated with early sex and union disruption, but only compared to single-mother family structure, and only, in the case of union disruption, once additional variables are controlled in Model 2.

Family income and mothering are not consistently related to family-related transitions (Model 2). In the case of early sex, coefficients on income and mothering variables are close to 1 and are individually and jointly statistically insignificant. Income is negatively related to early cohabitation and nonmarital childbearing, with a one standard deviation increase in income associated with about a 10% reduction in the odds of these transitions. Improvements in mother-child relationship quality are associated with smaller odds of early cohabitation, nonmarital childbearing, and union disruption, on the order of 10-15% for a one standard deviation change in relationship quality. Mother's time is associated with an *increased* odds of union disruption (contrary to expectation, but the coefficient is small and marginally significant). Mothers' yelling and hitting is associated with an increased odds of cohabitation and nonmarital childbearing.

Income and mothering explain little of the associations between conflict, family structure, and family-related transitions (column 3). Adding income and mothering to Model 1 typically reduces the conflict and family structure coefficients by less than 10%. Income and mothering explain slightly more of the single-mother association with early cohabitation (reducing the coefficient by 11%) and nonmarital fertility (reducing the coefficient by 17%).

DISCUSSION

We set out to address how children who experience high levels of parental conflict fare compared to those in other family arrangements. Our results clearly illustrate that the advantages of living with two continuously married parents are not shared equally by all children. In models unadjusted for income and parenting, children from high conflict families (compared to low conflict families) have an increased likelihood, on an order of magnitude ranging from 45-75%, of 8 of 10 of our outcomes: dropping out of school, poor grades, smoking, binge drinking, marijuana use, early sex, nonmarital fertility, and union dissolution. Parental conflict appears not to be associated with college attendance or early cohabitation, net of controls. For half of our outcomes, associations with parental conflict are statistically indistinguishable from those with stepfather and single mother-families. Differences are statistically significant in five cases: dropping out of school, not attending college, binge drinking, early sex, and early cohabitation. In these cases, but for binge drinking, the risks associated with high conflict are between 25-50% lower than those associated with stepfather or single-mother families. The odds of binge drinking are about a third *higher* for children from high conflict families compared to single-mother families.

We also set out to explore key mechanisms – family income and parenting – that might account for associations between family type and child well-being. Family income was negatively related to 4, and *positively* related to 2, of our 10 outcomes. It played a modest role in explaining the association between single-mother family structure and poor grades, college attendance, early cohabitation, and nonmarital childbearing and served as a *suppressor* in the case of binge drinking and drug use. As hypothesized, it played little role in mediating associations between either high conflict or stepfather families and young adult well-being. With

a second potential earner and caretaker in the household, these families are more sheltered from the financial insecurity of single-mother families.

We found weak evidence of the importance of parenting behaviors in explaining differences across family types in child well-being. Contrary to our expectations, mother's time explained little of the associations between family type and academic achievement (e.g., via help with homework) or substance use (e.g., via monitoring). Indeed, in only one case – smoking – was time with mothers statistically significant and associated with young adult well-being in the hypothesized direction, that is, more time with mothers leading to less smoking. Mothers' harsh parenting was likewise not associated with most of our outcomes, although we expected it to be an important link between parental conflict and both substance use and early family transitions. In only three instances did we find that increases in harsh behaviors among mothers increased the likelihood of our outcomes: drop out, early cohabitation, and nonmarital fertility. The quality of the mother-child relationship was more consistently related to young adult well-being, having negative, statistically significant associations with 7 of 10 of our outcomes, including outcomes across the three domains of academic achievement, substance use, and family-related transitions. Yet, taken together, mothering variables explained no more than about 15% of the associations between family type and young adult well-being.

Understanding how families matter for children requires identifying the most salient dimensions of families and measuring them well. Measurement issues may produce underestimates of conflict relative to family structure – as well as underestimates of the pathways through which families influence children. As noted earlier, conflict is observed at a point in time, representing a snapshot in the family lives of adolescents, such that past conflict and its effects may be captured within low conflict continuously married-parent, stepfather, and single-

mother categories, resulting in inflated estimates of all groups compared to what we call high conflict families. Beyond issues relating to the timing of measurement, conceptualizing conflict is a more challenging enterprise than constructing family structure from reasonably reliable and complete marriage histories. Like many studies of parental conflict, we measure conflict by the frequency of disagreements common in marriage. This seems a good strategy when thinking about marital problems that affect children, as disagreements are observable and may set the emotional climate for the household. But how parents manage disagreement may be a key factor in children's perceptions of conflict and thus how they are affected by conflict (Cox, 1999). Incorporating, for example, how often disagreements become angry and violent, or how often parents reach resolutions or offer reassurances to children, may lead to better estimates of the associations between parental conflict and child well-being.

The salient dimensions of parenting are also difficult to capture. Subtle aspects of tone and attentiveness may affect children's perception of time with parents, just as small and scattered expressions of warmth may affect children's reactions to yelling. Further, children in the same family may be affected differently by parents' behaviors – there may be variation in children's sensitivity and needs, as well as variation in their responses that in turn influence parent-child interactions. Recall that mother-child relationship quality was more often related to young adult well-being than our other indicators of mothering. The questions (at both waves) about relationship quality refer specifically to the focal child, whereas this is not the case for time or harsh behaviors, which refer more generally to all children.¹¹ Sharpening our measurement of parenting could lead to stronger estimates of its mediating role in associations

¹¹ Harsh parenting behaviors are asked with respect to all children in the household at NSFH1, but specifically with respect to the focal child at NSFH2.

between family type and young adult well-being. Of course, the weakness of our mothering variables could also point to the need to investigate other mechanisms, such as stress or attitudes and beliefs. Family type could also be working more directly in some instances, for example in the modeling of conflict that may lead to own union dissolution.

Should parents stay together for the sake of the children? Children tend to fare better with both married parents, but mean differences in child well-being mask considerable variation. Despite caveats concerning potential underestimates of conflict, we find that high conflict, stepfather, and single-mother families are more similar than different in their associations with the outcomes examined and, where there are differences, they are not uniformly in one direction. These findings hold once account is taken of key mechanisms posited to link family type and child outcomes. They are consistent with recent research on marriage and the well-being of adults, showing that although marriage confers benefits to adults on average, those in poor quality marriages are no better off than the single and, indeed, may fare worse on some measures (Hawkins & Booth, 2005; Williams & Umberson, 2004). We conclude with the perhaps obvious point that marriage is not a blanket prescription for the well-being of children, any more than it is for the well-being of adults. Recent policy initiatives to promote marriage need to take account of how variation within marriage relates to child well-being.

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Table 1. Means on Key Variables, by Family Type

	All	Continuously married			Stepfather	Single mother
		Low conflict	Medium conflict	High conflict		
Proportion	1.00	0.24	0.25	0.26	0.13	0.12
<i>N</i>	1963	340	353	382	401	487
Mediating factors						
Family income (in 1993 dollars)	60,001 (62,811)	71,218 (67,009)	70,039 (90,157)	57,734 (36,100)	50,162 (35,552)	27,002 (28,266)
Mother-child relationship (1 - 7)	6.11 (0.95)	6.37 (0.74)	6.12 (0.93)	5.99 (0.94)	6.07 (1.06)	5.90 (1.12)
Time with mother (1 - 6)	3.90 (1.08)	4.03 (1.09)	3.84 (1.10)	3.91 (1.07)	3.79 (1.00)	3.90 (1.11)
Harsh mothering (0.8 - 4)	2.02 (0.67)	1.86 (0.68)	1.96 (0.65)	2.14 (0.66)	2.12 (0.64)	2.14 (0.67)
Outcomes						
High school dropout	0.12	0.06	0.08	0.12	0.19	0.25
Poor grades	0.22	0.18	0.18	0.24	0.23	0.28
No college	0.37	0.31	0.32	0.34	0.46	0.52
Smoking	0.31	0.24	0.27	0.33	0.38	0.38
Binge drinking	0.35	0.29	0.38	0.42	0.32	0.32
Marijuana use	0.24	0.20	0.24	0.25	0.29	0.25
Early sex	0.20	0.15	0.14	0.22	0.29	0.28
Early cohabitation	0.20	0.14	0.17	0.17	0.31	0.34
Nonmarital fertility	0.09	0.06	0.07	0.10	0.15	0.16
Union disruption	0.40	0.32	0.38	0.41	0.43	0.57

Note: Standard deviations are in parentheses. Means, proportions, and standard deviations are weighted; *N*'s are unweighted and refer to the baseline sample. Missing data on mediating factors are set to their means (and flagged in all models). *N*'s vary by outcome due to item nonresponse and censoring of family-related transitions; see Table 2 for final *N*'s of all models.

Table 2: Models of Adolescent Family Experiences and Young Adult Well-Being

	Drop out			Poor grades			No college attendance		
	M1	M2	% Δ	M1	M2	% Δ	M1	M2	% Δ
Panel A: Academic achievement	Exp(B)	Exp(B)	M1 to M2	Exp(B)	Exp(B)	M1 to M2	Exp(B)	Exp(B)	M1 to M2
Family type (low conflict omitted)									
Medium conflict	1.37	1.24	-9	1.11	1.04	-6	1.07	1.06	-1
High conflict	1.72 **	1.52	-12	1.53 **	1.38 *	-10	1.10	1.06	-4
Stepfather	2.86 ***	2.56 ***	-10	1.37 *	1.25	-9	1.52 ***	1.48 **	-3
Single-mother	3.63 ***	2.94 ***	-19	1.49 **	1.25	-16	1.68 ***	1.48 **	-12
Family income		0.91			0.89 **			0.85 ***	
Mother-child relationship		0.78 ***			0.83 ***			0.96	
Time with mother		0.92			0.92			1.00	
Harsh mothering		1.18 **			1.09			1.08	
Key contrasts									
High conflict v. step	0.60 **	0.59 **		1.11	1.10		0.73 **	0.72 **	
High conflict v. single	0.48 ***	0.52 ***		1.03	1.11		0.66 **	0.72 **	
Step v. single	0.79	0.87		0.92	1.01		0.90	1.00	
	<hr/> N=1942			<hr/> N=1950			<hr/> N=1962		
Panel B: Substance use	Current smoking			Heavy drinking			Recent marijuana		
	M1	M2	% Δ	M1	M2	% Δ	M1	M2	% Δ
	Exp(B)	Exp(B)	M2-M1	Exp(B)	Exp(B)	M2-M1	Exp(B)	Exp(B)	M2-M1
Family type (low conflict omitted)									
Medium conflict	1.32	1.25	-5	1.35 *	1.33 *	-1	1.29	1.27	-2
High conflict	1.62 **	1.51 **	-7	1.77 ***	1.75 ***	-1	1.44 **	1.40 *	-3
Stepfather	2.05 ***	1.95 ***	-5	1.38 *	1.40 **	1	1.76 ***	1.78 ***	1
Single-mother	2.07 ***	1.97 ***	-5	1.34 *	1.54 **	15	1.46 **	1.59 **	9
Family income		0.99			1.27 ***			1.15 *	
Mother-child relationship		0.91 *			0.97			0.87 **	
Time with mother		0.89 **			0.98			0.99	
Harsh mothering		1.05			0.96			0.89 *	
Key contrasts									
High conflict v. step	0.79	0.77		1.28	1.25		0.82	0.79	
High conflict v. single	0.78	0.77 *		1.32 *	1.13		0.99	0.88	
Step v. single	0.99	0.99		1.03	0.91		1.21	1.12	
	<hr/> N=1933			<hr/> N=1958			<hr/> N=1955		

Table 2 continued on next page

Table 2 (continued): Models of Adolescent Family Experiences and Young Adult Well-Being

	First sex by age 16			Cohabitation by age 21			Non-marital birth			Union dissolution		
	M1 Exp(B)	M2 Exp(B)	% Δ M1 to M2	M1 Exp(B)	M2 Exp(B)	% Δ M1 to M2	M1 Exp(B)	M2 Exp(B)	% Δ M1 to M2	M1 Exp(B)	M2 Exp(B)	% Δ M1 to M2
Panel C: Family transitions												
Family type (low conflict omitted)												
Medium conflict	0.88	0.89	1	1.08	1.06	-2	1.22	1.25	2	1.45 **	1.39 *	-4
High conflict	1.47 *	1.47 *	0	1.31	1.22	-7	1.64 *	1.52	-7	1.74 ***	1.58 ***	-9
Stepfather	1.67 **	1.62 **	-3	1.91 ***	1.84 ***	-4	1.71 **	1.60 *	-6	1.68 ***	1.60 ***	-5
Single-mother	2.02 ***	2.04 ***	1	2.03 ***	1.80 ***	-11	1.90 **	1.57 *	-17	2.07 ***	2.03 ***	-2
Family income		1.09			0.92 **			0.86 **			1.10	
Mother-child relationship		0.99			0.89 **			0.85 **			0.90 **	
Time with mother		0.89			1.02			1.03			1.09 *	
Harsh mothering		1.05			1.10 *			1.15 *			1.08	
Key contrasts												
High conflict v. step	0.88	0.91		0.69 **	0.66 **		0.96	0.95		1.04	0.99	
High conflict v. single	0.73 *	0.72 *		0.65 ***	0.68 **		0.86	0.97		0.84	0.78 *	
Step v. single	0.82	0.79		0.94	1.02		0.90	0.91		0.81 *	0.79 *	
	<hr/> N=1112			<hr/> N=1934			<hr/> N=1921			<hr/> N=1106		

Note: Panels A and B present results of logistic regression; Panel C presents results of Cox hazard regression. Controls are included in M1 and M2, but not shown, for child's age and sex and mother's race, education, childhood family structure, and past childbearing and union experiences.

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Appendix Table 1. Means on Control Variables

Focal child female	0.53
Focal child age when NSFH2 prioritized	
18-19	0.16
20-21	0.26
22-23	0.27
24-34	0.32
Focal child age when NSFH3 prioritized	
18-20	0.17
21-23	0.26
24-28	0.30
29-34	0.27
Mother's race	
White	0.83
Black	0.09
Other	0.09
Mother's education before focal born	
Less than high school	0.11
High school	0.42
Some college	0.25
College or more	0.22
Mother grew up with single parent	0.24
Mother had teen birth	0.25
Mother had union dissolution before focal's birth	0.11
No NSFH1 interview with mother	0.04
<i>N</i>	1963

Note: Proportions are weighted; *N*'s are unweighted.

Appendix Table 2: Full Models of Adolescent Family Experiences and Young Adult Well-Being

	Drop out	Poor grades	No college attendance	Current smoking	Heavy drinking	Recent marijuana	First sex	First pre-marital cohab	First non-marital birth	First union dissolution
Family type (low conflict reference)										
Medium conflict	1.24	1.04	1.06	1.25	1.33 *	1.27	0.89	1.06	1.25	1.39 *
High conflict	1.52	1.38 *	1.06	1.51 **	1.75 ***	1.40 *	1.47 *	1.22	1.52	1.58 ***
Stepfather	2.56 ***	1.25	1.48 **	1.95 ***	1.40 **	1.78 ***	1.62 **	1.84 ***	1.60 *	1.60 ***
Single-mother	2.94 ***	1.25	1.48 **	1.97 ***	1.54 **	1.59 **	2.04 ***	1.80 ***	1.57 *	2.03 ***
Family income	0.91	0.89 **	0.85 ***	0.99	1.27 ***	1.15 *	1.09	0.92 **	0.86 **	1.10
Mother-child relationship	0.78 ***	0.83 ***	0.96	0.91 *	0.97	0.87 **	0.99	0.89 **	0.85 **	0.90 **
Time with mother	0.92	0.92	1.00	0.89 **	0.98	0.99	0.89	1.02	1.03	1.09 *
Harsh mothering	1.18 **	1.09	1.08	1.05	0.96	0.89 *	1.05	1.10 *	1.15 *	1.08
Focal child female	0.61 ***	0.49 ***	0.66 ***	0.81 **	0.34 ***	0.57 ***	0.90	1.44 ***	2.05 ***	0.74 ***
Focal child age category 2	1.04	1.16	1.09	1.23	1.65 **	1.37 **	0.79	1.05	2.19 **	0.71 ***
Focal child age category 3	1.31	1.34	0.86	1.08	1.22	0.79	0.80	0.79	2.41 ***	0.43 ***
Focal child age category 4	1.13	1.45 **	0.83	1.20	1.19	0.80	0.80	0.55 ***	2.71 ***	0.44 ***
Mother's race (White reference)										
Black	0.77	0.93	1.17	0.41 ***	0.53 ***	0.78	1.55 **	0.54 ***	1.92 ***	1.35 **
Other	1.68 **	0.98	1.17	0.74	0.92	1.02	1.21	0.73	1.53 *	0.82
Mother's education (<high school reference)										
High school	0.53 ***	1.17	0.63 ***	1.28	1.08	1.98 ***	1.31	0.88	0.59 ***	1.16
Some college	0.39 ***	1.04	0.31 ***	1.20	1.19	2.13 ***	1.31	0.77	0.48 ***	1.16
College or more	0.23 ***	0.54 **	0.14 ***	0.96	1.74 ***	2.82 ***	0.83	0.45 ***	0.18 ***	1.32
Mother grew up with single parent	1.12	1.12	1.30 **	1.18	0.89	1.00	0.80	1.14	1.10	1.00
Mother had teen birth	1.43 **	1.33 **	1.40 ***	1.11	0.84	0.94	1.51 ***	1.53 ***	1.31 *	0.88
Mother union dissolution before focal's birth	1.45 **	1.20	1.17	1.16	1.33 **	1.54 ***	1.23	1.35 **	1.74 ***	1.16
No NSFH1 interview with mother	1.49	1.17	1.02	1.10	0.86	0.78	0.26 *	1.07	1.28	0.61
Constant	0.15 ***	0.24 ***	1.27	0.28 ***	0.49 **	0.15 ***	--	--	--	--

Note: For academic achievement and substance use, exponentiated coefficients from logistic regression models are shown; for family-related transitions, exponentiated coefficients from hazard models are shown. Flags are included, but not shown, for missing data on family income and mothering.

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$