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# FAMILY STRUCTURE TRANSITIONS AND ADOLESCENT WELL-BEING 

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#### Abstract

Data from waves one and two of the National Longitudinal Study of Adolescent Health $(\mathrm{N}=11,201)$ were used to investigate the influence of family instability, including parental cohabitation transitions, on adolescent delinquency, depression, and academic problems. Adolescents who experienced a living arrangement transition between waves reported lower levels of well-being at wave two, on average, than those in stable two biological parent married families. This pattern of findings held regardless of whether the transition was from a two-parent to one-parent family or a one-parent to two-parent family. The effects of transitions into and out of stepfamilies on adolescent well-being were similar for married versus cohabiting stepfamilies. Formalization of a cohabiting stepfamily through marriage did not translate into any appreciable benefits for adolescent well-being.


## FAMILY STRUCTURE TRANSITIONS AND ADOLESCENT WELL-BEING

Children s living arrangements have become increasingly diverse and complex in recent decades. The share of children residing with two biological married parents has been steadily declining and the proportions of children residing in stepfamilies or families formed outside of marriage, including single-parent and cohabiting families, are at all-time highs (U. S. Bureau of the Census 2001). Until recently, most investigations of the influence of family structure on child outcomes have involved comparisons between children in married families versus children in singlemother families or remarried stepfamilies.

Although researchers have begun to extend this literature to incorporate children residing with cohabiting parents, we still know relatively little about cohabitation as a setting for child development (Chase-Lansdale 1998; Kalil 2002). Ignoring cohabitation misrepresents children s living arrangements and the consequences of this omission will be exacerbated in the future as a growing share of children experience some time in a cohabiting family. In 1998, approximately 3.5 million American children resided with unmarried cohabiting parents, a 50 percent increase since 1990 (Brown 2002; Manning and Lichter 1996). About 20 percent of single-mother families include a cohabiting male partner in the household (London 1998). Given that about 5 percent of American children currently reside with a cohabiting parent(s) and nearly 40 percent of children will spend some time in this family form (Bumpass and Lu 2000), it is imperative that we examine child well-being in cohabiting families. Children will spend an increasing proportion of their childhoods in cohabiting unions, but we are just beginning to understand the linkages between cohabitation, family processes, and child outcomes (Bumpass and Lu 2000).

There is cause for concern about the well-being of children in cohabiting families.

Cohabiting parents report lower psychological well-being (Brown 2000), on average, and they tend to provide less parental control and support than married parents (Thomson, Braun, and Curtain 1992; Thomson, Hanson, and McLanahan 1994). Nearly one-half of children residing in cohabiting families are poor (Manning and Brown 2003; Manning and Lichter 1996). All of these differences point to the importance of a focus on cohabiting families and an assessment of how they may differ from more traditional family forms. Indeed, the few published studies on the topic indicate that child well-being is lower, on average, in cohabiting than married families and often resembles that of single-mother families (e.g., Brown 2004, 2002; Dunifon and Kowaleski-Jones 2002; Hao and Xie 2002; Manning 2002; Manning and Lamb 2003; Morrison and Ritualo 2000; Thomson et al. 1992; Thomson et al. 1994).

A major limitation of nearly all of the extant research on child well-being in cohabiting families is a reliance on a measure of current family structure. Mounting evidence shows that cohabiting unions involving children are highly unstable relative both to married families and single-mother families in which the mother does not cohabit (Raley and Wildsmith 2004). These findings coupled with theoretical and empirical evidence that family instability undermines wellbeing suggest that we should investigate the impact of transitions into and out of cohabiting unions...on children s well-being (Raley and Wildsmith 2004:218). In this paper, I use data from two waves of the National Longitudinal Study of Adolescent Health (Add Health) to investigate the consequences of family (in)stability, including parental cohabitation transitions, for the well-being of adolescents.

## PARENTAL COHABITATION AND CHILD WELL-BEING

There is an emerging literature on children in cohabiting families (Brown 2004, 2002; Clark and

Nelson 2000; Dunifon and Kowaleski-Jones 2002; Hao and Xie 2002; Manning 2002; Manning and Bulanda 2003; Manning and Lamb 2003; Manning, Smock, and Majumdar 2004; Morrison 1998, 2000; Morrison and Ritualo 2000; Nelson, Clark, and Acs 2001; Thomson et al. 1994). Parental cohabitation is associated with worse child outcomes, especially relative to two biological parent married families, and often there are few differences between children in cohabiting families and other family structures, such as married stepfamilies and single-mother families (e.g., Brown 2004; Manning and Lamb 2003). There is essentially no evidence that children fare better in cohabiting unions than other family forms.

Nonetheless, our knowledge about cohabitation and child outcomes remains limited in at least two ways that are relevant here. First, we do not adequately understand how parental cohabitation affects children at various stages of development (Chase-Lansdale 1998; Kalil 2002). Only a few studies have focused explicitly on the well-being of adolescents in cohabiting families. Adolescents do not fare as well in cohabiting families as two biological parent married families. On some dimensions of well-being, teens in cohabiting families appear similar to their counterparts in remarried stepfamilies and single-mother families, but on other dimensions they actually fare worse than all other groups. Using data from the National Survey of America s Families, Brown (2004) finds that among adolescents ages 12-17, parental cohabitation is associated with more behavioral and emotional problems and less school engagement than parental marriage. Factors such as economic and parenting resources do not mitigate this relationship. The well-being of adolescents in cohabiting families does not significantly differ from that of adolescents residing in either married stepfamilies or single-mother families. Manning and Lamb s (2003) analysis of the first wave of Add Health data yields similar
conclusions. Adolescents in cohabiting partner families exhibit lower levels of well-being than their counterparts in two biological married parent families. Moreover, there are few differences in the well-being of adolescents in cohabiting partner families, married stepfamilies, and singlemother families, especially once variation in economic resources, mother s marital history, and parenting behaviors are taken into account (although adolescents in cohabiting stepfamilies are more delinquent than their counterparts in married stepfamilies).

Second, most research on children in cohabiting families has relied on measures of current family structure, ignoring the influences of previous family living arrangements and family instability. There are exceptions, but the findings are not entirely consistent as they vary across sub-populations and indicators of well-being. Some research focuses on exposure to various family types, whereas other work examines family transitions. Hao and Xie s (2002) analysis of the National Survey of Families and Households data indicates that although stable stepfamilies and, to a lesser extent, stable single-mother families, are negatively associated with children s misbehavior, the same is not true for stable cohabiting families. The more time spent in a cohabiting family, the higher the levels of misbehavior. From their analyses of the National Longitudinal Survey of Youth, Dunifon and Kowaleski-Jones (2002) conclude that time spent in cohabiting families is positively associated with black children s math scores and delinquency, whereas among white children, years spent in a cohabiting family is negatively related to math scores and not significantly related to delinquency. Morrison s (1998) work on the well-being of children following parental divorce examines both current family structure and the effects of the number of maternal union transitions on children s behavioral problems. She finds no differences in well-being for girls and boys whose mothers cohabit, remarry, or remain single,
but having experienced multiple unions is positively associated with behavioral problems among girls, particularly during early adolescence. Similarly, Hao and Xie (2002) find that the number of family transitions is positively related to misbehavior. In contrast, Manning and Bulanda s (2003) research on cumulative family experiences and adolescent girls outcomes using the National Survey of Family Growth indicates that having lived in a cohabiting family heightens the odds of early sexual debut and teen childbearing and decreases the odds of high school graduation, regardless of the number of living arrangement transitions experienced and the duration of exposure to a cohabiting family. Overall, we have neither a complete nor consistent picture of how family transitions into and out of cohabitation are related to child and adolescent well-being.

## FAMILY INSTABILITY

Family instability may be as important as family structure for child well-being (Hao and Xie 2002; Hill, Yeung, and Duncan 2001; Sandefur and Mosley 1997; Wu 1996; Wu and Martinson 1993). From this perspective, family transitions undermine child well-being whereas stable living arrangements promote well-being. Family structure and instability are not mutually exclusive, but they are conceptually distinct: family structure taps current family membership and roles and family instability measures the number of transitions or family living arrangement events experienced by a child over a period of time.

Research on marital transitions has consistently documented that divorce and remarriage are stressful for adults and children (Cherlin et al. 1991; Wu 1996; Wu and Martinson 1993). Living arrangement transitions involve a shift in household membership and the reorganization of family roles which in turn disrupts family routines, resulting in inconsistent parenting. Poor
parenting can contribute to emotional insecurity among children and lower parent-child relationship quality. Moreover, family transitions can decrease available resources such as money and time. Family transitions often entail residential moves that require children to adjust to new neighborhoods, schools, and peer groups. Family migration during adolescence compromises individual and social development which in turn reduces social integration in adulthood (Myers 1999). DeLeire and Kalil (2002) document pervasive benefits of family stability during high school on young adult outcomes, including high school graduation, college enrollment, smoking and drinking, and sexual initiation. Similarly, Wu and Thomson (2001) show that family transitions, rather than prolonged exposure to a single-mother or the extended absence of a biological father, are positively associated with early sexual initiation. More generally, family instability undermines individual well-being among adults (Gove, Hughes, and Style 1983; Ross, Mirowsky, and Goldsteen 1991) and children (Wu 1996; Wu and Martinson 1993) alike. In fact, the negative effects of family transitions on children s outcomes accumulate with each transition into or out of marriage (Cherlin et al. 1991; Wu 1996; Wu and Martinson 1993). Even though remarriage often promotes family economic well-being, it nonetheless generates significant relationship and emotional stressors as stepfamilies face considerable challenges to effective functioning, namely, the renegotiation of family roles (Hetherington and Jodl 1994).

The impermanence of cohabitation portends considerable instability for children in cohabiting families. Over 90 percent of children born to or residing in a cohabiting family will experience a living arrangement transition within five years. Most children who experience a parental transition out of cohabitation move into a single-mother rather than a married family
(Graefe and Lichter 1999; Manning et al. 2004). Relative to being born to married parents, children born to cohabiting parents are twice as likely to experience the break up of their parents relationship, net of sociodemographic factors (Manning et al. 2004). Moreover, formalization of a cohabiting relationship through marriage does not reduce the odds of breakup to a level comparable to that for children born to married parents. Following divorce, mothers are more likely to form cohabiting than marital unions (Morrison 1998). And, although cohabiting and married stepfamilies are similarly (un)stable, the number of transitions children experience following dissolution is greater if they were in a cohabiting (versus married) stepfamily (Bumpass, Raley, and Sweet 1995).

Our measures of family instability must be expanded to include transitions into and out of cohabiting families. Most work on family instability does not include cohabitation in measures of family transitions. Raley and Wildsmith (2004) find that once cohabitation transitions are included, levels of family instability increase by 30 percent among white children and more than double among black children. Children are increasingly likely to spend time in cohabiting families, whether because they are born to cohabiting parents or their biological parent coresides with an unmarried partner. Given that 40 percent of American children spend time in a cohabiting family and this family form is arguably more unstable than any other, it is crucial that we examine the implications of parental cohabitation transitions for the well-being of children. To date, most of the studies on the linkages between family structure and child well-being that include cohabitation as a living arrangement rely on measures of current family type, obscuring the ramifications of parental cohabitation transitions for child well-being.

## THE PRESENT STUDY

This study builds on prior research on child well-being in cohabiting families by examining the consequences of family instability, and is the first to explicitly model the influence of transitions both out of and into cohabiting families, on adolescent outcomes. Cohabiting unions are typically of short duration, lasting just one or two years, on average, and unions involving children are no exception (Bumpass and Lu 2000). Cohabitation is a very unstable living arrangement for children (Graefe and Lichter 1999; Manning et al. 2004) and this instability is likely detrimental to their well-being.

These analyses are designed to answer three sets of questions. First, is a recent family living arrangement transition associated with decreases in adolescent well-being? Prior work indicates that a transition will be associated with worse outcomes than those experienced by adolescents residing in two biological parent married families (Hao \& Xie 2002; Manning and Bulanda 2003; Wu 1996; Wu and Martinson 1993). Less clear is how the experience of a transition compares to remaining in a stable single-mother family, married stepfamily, or cohabiting stepfamily. To the extent that stability is more important than family structure, I anticipate that a transition will be associated with poorer outcomes relative to any type of stable family form.

Second, does the type of transition matter? That is, is moving from a one-parent to a twoparent family less detrimental (or perhaps even beneficial) than transitioning from a two-parent to a one-parent family? Transitioning from a two-parent family into a single-mother family might be especially consequential for adolescent well-being as the loss of a parent (or parentfigure) may coincide with a decline in resources and parenting effectiveness, both of which are related to well-being. In contrast, if the two-parent family was highly conflictual, transitioning
into a single-mother family may have either no or even a positive effect on adolescent wellbeing. Turning now to the other type of transition, moving into a two-parent family may be positively associated with adolescent outcomes since two adults will presumably provide more resources as well as more supervision than one adult could. Alternatively, there may be little benefit to the adolescent of moving from a one- to a two-parent family as we observe few differences in outcomes for children in remarried stepfamilies versus single-mother families. Indeed, if it is the stress associated with a family living arrangement change that undermines well-being, then children s outcomes will not be sensitive to the type of transition (i.e., the two types of transitions will not differ from one another).

Third, does the type of union the adolescent s parent moves into or out of matter? That is, does the effect of transitioning from a single-mother family into a stepfamily depend on whether it is a married or cohabiting stepfamily? Similarly, does the effect of the transition out of a two-parent family and into a single-mother family depend on whether the two-parent family was a remarried stepfamily or cohabiting stepfamily? To the extent that married stepfamilies signify greater commitment than cohabiting stepfamilies, family ties and interdependence may be greater among members of married stepfamilies, meaning that the formation of a married stepfamily would be more beneficial for the well-being of adolescents than would a cohabiting stepfamily. Analogously, the dissolution of a married stepfamily would be more consequential than that of a cohabiting stepfamily for adolescent well-being. Alternatively though, studies document few differences in adolescent well-being in cohabiting, remarried, and single-mother families (e.g., Brown 2004; Manning and Lamb 2003), which would suggest few differences in well-being as adolescents move into or out of single-mother families, cohabiting stepfamilies,
and married stepfamilies. A special case concerns the stable cohabiting stepfamilies that are transformed through marriage into married stepfamilies. Here, the number of adults does not change, but the relationship between them is formalized. On the one hand, it seems this type of transition would not be related to adolescent well-being since structurally, the family unit remains unchanged. On the other hand, it is possible that these families that are formalized through marriage are different from those that remain informal in ways that are related to enhanced well-being. For instance, these may be especially stable cohabiting stepfamilies.

Analyses examine the influence of the various measures of family instability on subsequent adolescent outcomes, net of well-being at time one. In other words, the models depict the change in adolescent well-being associated with family instability. The outcome measures, which tap into externalizing behavior, internalizing behavior, and school performance, respectively, include delinquency, depression, and academic problems. These indicators of wellbeing are central to the developmental tasks of adolescence (Moore, Evans, Brooks-Gunn, \& Roth, 2001). Initially, I consider the signi ficance of the adolescent s own characteristics, namely, age, gender, and race-ethnicity. Then, I account for economic and parenting resources, both of which are related to family instability, family structure, and child well-being (e.g., Amato, 1993; Carlson \& Corcoran, 2001; Hanson et al., 1997; McLanahan \& Sandefur, 1994; Thornton, 2001). Economically disadvantaged families are more vulnerable to family instability. Similarly, parental supervision and support are vital to the well-being of adolescents (Moore et al. 2001). The ability of parents to provide warmth and control may be compromised by family turbulence.

## DATA

Designed to examine adolescent health and health behaviors, the Add Health is a sample of 80
high schools and 52 middle schools from the U.S. that were chosen with unequal probability of selection. Incorporating systematic sampling methods and implicit stratification into the Add Health study design ensured that this sample is representative of U.S. schools with respect to region of country, urbanicity, school type, ethnicity, and school size. Respondents were selected using a multistage, stratified, school-based cluster sampling procedure. Several oversamples were drawn, including physically disabled adolescents, African Americans from highly educated families, various ethnic groups, monozygotic and dizygotic samples of twins, and saturated samples from 14 schools. I examine the respondents and their parents who were selected for inhome surveys. The core and oversamples yield 20,745 adolescent interviews at wave one (Bearman, Jones, and Udry 1997). A second wave of data collection was performed one year later, yielding 14,738 successful adolescent reinterviews.

For this study, I focus on the 11,201 adolescents residing with a biological mother in both waves who have nonmissing sample weights. These adolescents are in either two biological married parent, mother-stepfather, single-mother, or mother-cohabiting partner families at each interview. I examine the consequences of experiencing a family structure transition between waves, focusing especially on transitions into a cohabiting stepfamily (from a single-mother family) and out of a cohabiting stepfamily (and into either a married stepfamily or a singlemother family). The consequences I explore include three domains of adolescent outcomes measured by the same items at waves one and two: behavioral, emotional, and educational. These measures, as well as the independent and control variables, are described below. The weighted means and standard errors of all variables used in the analyses are shown in the Appendix.

## Adolescent Outcomes

Delinquency is a behavioral outcome that summarizes the adolescent sparticipation in the following activities during the past year: deliberately damage property; shoplift; joyride; steal something worth more than $\$ 50$; go into a house or building to steal something; use or threaten to use a weapon to get something; steal something worth less than $\$ 50$; engage in a gang fight; behave in a loud, unruly manner in public. Respondents reports of engagement in these behaviors, ranging from (0) never to (3) five or more times in the past year, were summed to create a count variable of the frequency with which the respondent engages in various delinquent behaviors. Values range from 0 to 27 , with higher values indicating more frequent participation in delinquent activities.

Adolescent depression is gauged using a 19 item CES-D scale (Radloff 1977) that includes items that measure how often in the past week: you were bothered by things that don $t$ usually bother you; you didn t feel like eating, your appetite was poor; you had trouble keeping your mind on what you were doing; you felt that you were too tired to do many things. Responses range from (0) rarely or never to (3) most of the time or all of the time and are summed to form the scale. Values range from 0 to 56 , with higher values indicating more frequent and extensive depressive symptoms. The Cronbach s alpha for this scale is 0.86 .

Academic problems is a four-item scale (Cronbach alpha=0.85) that gauges how often the adolescent had trouble during the school year: getting along with teachers, paying attention in school, getting homework done, and getting along with other students. Responses for each item range from (0) never to (4) every day. Responses were summed to create the problems scale, which ranges from 0 to 16 , with higher values indicating more academic problems.

## Family Structure

The Add Health contains detailed household rosters as reported by the adolescent that enumerate the relationship of every member of the household to the adolescent respondent. Although wave one also includes some information from the parent about current marital and partnership status, there are no analogous data available at wave two because parents were not reinterviewed. Thus, I rely on the adolescent s report of the household roster to construct measures of family structure at waves one and two. Initially, I identify the adolescents residing with a biological mother at both waves. I retain all of the adolescents who reside in either a two biological parent married family, mother-stepfather family (i.e., married stepfamily), single-mother family, or mothercohabiting partner family (i.e., cohabiting stepfamily) at both time points. There are too few cases to analyze of adolescents who report living with a biological mother at only wave one or wave two or at neither wave. Additionally, very few adolescents reside in two biological parent cohabiting families and thus all adolescents living with both biological parents are in the two biological parent married category. The distribution of respondents across these family structure categories at the two waves is shown in Table 1. I also construct two measures of instability. The first measure, transition, is coded 1 for those respondents who experienced a change in living arrangements between waves one and two and 0 otherwise. The second measure gauges the type of transition, coded as a series of three mutually exclusive dummy variables: two-parent to one-parent family, one-parent to two-parent family, and no family change between waves.

The third measure specifies the type of family change, as shown in Table 1.

## Adolescent Characteristics

All multivariate models include controls for adolescents sociodemographic characteristics at
wave one. Race-ethnicity is tapped by a series of dummy variables: Non-Hispanic White (reference), Non-Hispanic Black, Hispanic, and Non-Hispanic Other. Male is coded 1 for boys and 0 for girls. Age of the adolescent is coded in years.

## Economic and Parenting Resources

Economic and parenting resources are central to adolescent well-being (e.g., McLanahan and Sandefur 1994). Thus, I evaluate the extent to which these factors account for the association between family instability and adolescent outcomes. All of the variables come from wave one to reduce the possibility of endogeneity. I include two measures of economic resources: household income and mother s education. Household income is reported by mothers but is compromised by considerable missing data. Missing cases are imputed to the mean and a dummy variable flags the imputation. In the multivariate analyses, household income is logged. Mother $s$ education is categorized as follows: less than high school, high school degree or GED (reference), some college, and college degree or more. Parenting resources include motheradolescent relationship quality, maternal supervision, and closeness to biological father. Motheradolescent relationship quality, reported by the adolescent, is comprised of the following four items: how close you feel to your mother, your mother is warm and loving toward you, you are satisfied with the way your mother and you communicate with each other, you are satisfied with your relationship with your mother. Values for each item range from 1 to 5 , with higher values indicating better relationship quality. The Cronbach s alpha for the scale is 0.85 . Maternal supervision is a count variable that sums the frequency with which the mother is home when you leave for school, return from school, and go to bed. Responses range from (1) always to (5) never and are reverse-coded such that higher values indicate more supervision. Closeness to the
biological father is asked of adolescents regardless of whether they live with their biological father. Responses range from (1) not at all to (5) extremely close. Most adolescents (about 53 percent) appraise the closeness as a 4 or a 5 and thus I categorize this group as high closeness. Those reporting values less than 4 are categorized as low closeness. About 21 percent of adolescents report either knowing nothing about their biological father or that he is dead. This group forms the reference category of no relationship with biological father.

## Analytic Strategy

After a brief discussion of the descriptive statistics, I turn to the multivariate analyses. For each of the three measures of adolescent well-being, I consider the role of increasingly complex measures of family instability. First, I simply model the association between making any family living arrangement transition between waves (versus no transition) and each outcome, net of well-being at time one. Next, I consider whether making any transition significantly differs from various types of family stability, including stable married stepfamily, cohabiting stepfamily, single-mother family, and two biological parent married family (reference). Then, I evaluate the two types of transitions (two-parent to one-parent family and one-parent to two-parent family) versus the four stable family measures. Finally, I model all of the specific types of change and stability possible. There are three pathways from a two-parent to a one-parent family: two biological married parents, married stepfamily, and cohabiting stepfamily to single-mother family. There are two pathways from a one-parent to a two-parent family: single-mother family to either a married stepfamily or cohabiting stepfamily. A special case is the transition from a cohabiting stepfamily to married stepfamily, which is separated from the stable cohabiting stepfamily group in this final stage of the analyses. The four stable pathways include: stable
married stepfamily, cohabiting stepfamily, single-mother family, and two biological parent married family (reference). Specific comparisons will be made to evaluate the importance of union type, i.e., married versus cohabiting stepfamily.

For each of these sets of models, I will estimate the association between family instability and the adolescent outcome net of well-being at time one and the adolescent s characteristics. I then add the measures of economic and parenting resources to determine the extent to which these factors account for the relationship between family instability and changes in adolescent well-being. By including a control for the time one value of well-being, these lagged models allow an analysis of adolescent well-being trajectories. The time one value of well-being is a proxy for adolescent functioning prior to a family structure transition, selection factors associated with family change versus stability, and stable traits of the adolescent (Bachman, Coley, and Chase-Lansdale 2003). In other words, we can be more confident that the observed effects of family structure transitions on the time two outcomes are not due to previous living arrangements (prior to time one) influencing both family structure at time one and the time two outcomes by including time one well-being. The delinquency models are estimated using negative binomial regression since delinquency is an over-dispersed count variable, i.e., its standard deviation is greater than its mean. Poisson regression models are used for depression because depression is a count variable with a skewed distribution. Academic problems is modeled using OLS regression. All analyses are conducted in STATA to ensure that standard errors are not inflated due to the complex sampling design of the Add Health (Chantala and Tabor 1999).

## RESULTS

Over 7 percent of adolescents experience a living arrangement transition during the one-year
interval separating the two interviews (see Table 1). Among those not residing in a two biological parent married family at time one, nearly 15 percent report family instability during the interval. Transitions into and out of cohabiting families are even more common. The instability of cohabiting families is illustrated by examining living arrangement transitions experienced by adolescents between waves one and two. The second wave was collected just one year after the initial interview, yet surprisingly large numbers of adolescents experienced a transition out of or into a cohabiting family. Of the 275 adolescents residing in cohabiting stepfamilies at wave one, just 107 (39 percent) remained in this same family form at wave two. Another 77 (28 percent) reported living in a married stepfamily at wave two, presumably because their mother s cohabiting relationship was formalized through marriage. The remaining 91 (33 percent) had transitioned into a single-mother family by wave two. Adolescents living in single-mother families at wave one were somewhat more likely to transition into a married (7 percent) versus cohabiting stepfamily (4 percent).

## [TABLE 1 ABOUT HERE]

These dramatic shifts in family living arrangements over such a short time interval are compelling evidence of the instability of cohabiting unions. These figures actually may underrepresent adolescents living arrangement transitions as the Add Health does not permit measurement of living arrangement transitions that took place between interviews. Instead, we must rely on the household rosters from the two interviews to construct static measures of family living arrangements. The short time period between interviews hopefully means that the number of adolescents experiencing more than one living arrangement transition between interviews is minimal.

## Is Family Instability Associated with Adolescent Well-being?

Table 2 shows models of the association between family instability and changes in adolescent well-being. Relative to residing in a stable family structure, experiencing a family living arrangement transition in the past year is associated with increases in delinquency and depression, net of adolescents ascribed characteristics, as shown in Models 1a and 2a. Family instability is not significantly associated with academic problems (Model 3a). Black teens report less delinquency and fewer academic problems but more depressive symptoms than whites. Boys engage in more delinquent activities and have more trouble at school than girls but tend to report fewer depressive symptoms. Age is negatively related to delinquency and academic problems and positively related to depression. The full models ( $1 \mathrm{~b}, 2 \mathrm{~b}$, and 3 b ) reveal that the association between family instability and well-being is an artifact of variations in economic and parenting resources. The inclusion of these factors reduces the family transition coefficient to nonsignificance for each dimension of well-being. Although income and mother s education are negatively associated with depression, it appears that parenting factors are especially consequential. Mother-adolescent relationship quality as well as maternal supervision promote well-being. Similarly, feeling very close to one s biological father regardless of whether he resides with the adolescent is associated with less delinquent activity and fewer depressive symptoms than not feeling very close to him.
[TABLE 2 ABOUT HERE]
How does a family living arrangement transition compare to various forms of family stability? Table 3 shows that not all stable family structures have the same salutory effects on adolescent well-being. Relative to residing in a stable, two biological married parent family,
experiencing a transition, living in a stable single-mother family, a stable cohabiting stepfamily, or a stable married stepfamily is associated with worse outcomes. Indeed, changing the reference category to family transition reveals that experiencing a transition does not significantly differ from residing in a stable single-mother family or a stable married stepfamily for all three outcomes (results not shown). This is also true for cohabiting stepfamilies, except academic problems, on which adolescents in stable cohabiting stepfamilies actually score higher, on average, than those experiencing a transition (Model 3a) (this is shown in the table by a bolded coefficient). A comparison of stable cohabiting stepfamilies relative to the other stable family forms suggests few differences except for academic problems. Adolescents in stable cohabiting stepfamilies have more trouble in school than teens in any other family group, including the transition group (these differences are shown in the table by superscript $a$ ). The covariates operate similarly as in Table 2.

## [TABLE 3 ABOUT HERE]

## Does the Type of Transition Matter?

Next, I evaluate the second research question concerning the significance of the type of family transition. Earlier I posited that moving from a one-parent to a two-parent family may be less harmful for adolescent well-being than transitioning from a two-parent family to a single-mother family, but tests reveal no significant differences between these two types of transitions for any of the dimensions of well-being (results not shown). Contrary to my expectations, levels of delinquency do not significantly change for those adolescents who move from a two-parent to one-parent family, yet moving from a one-parent to two-parent family is associated with an increase in delinquency that is not accounted for by parenting and economic resources (see Table
4). The transition from a two-parent to one-parent family is related to an increase in depressive symptoms (model 2a) but the coefficient reduces to nonsignificance in the full model (2b). Neither type of transition is related to academic problems. As we saw in Table 3, residing in a stable single-mother family, cohabiting stepfamily, or married stepfamily is associated with decreased well-being relative to a stable two biological parent married family. Once again, adolescents in stable cohabiting stepfamilies report significantly more academic problems than adolescents in any other family group stable or unstable (denoted in the table by superscript $a$ ). Living in a married stepfamily is associated with smaller increases in depressive symptoms than living in a cohabiting stepfamily, although once economic and parenting resources are controlled, this union type effect diminishes to nonsignificance.

## [TABLE 4 ABOUT HERE]

## Does Union Type Matter?

Finally, I compare specific types of transitions to test whether union type is associated with changes in adolescent well-being. Table 5 indicates that most types of transitions are associated with larger declines in well-being, on average, than residing in a stable two biological parent married family. For delinquency, most of these differences are accounted for by the inclusion of economic and parenting resources, except the transition from single-mother family to cohabiting stepfamily remains positive and significant. For depression, family structure change and stability differences are entirely accounted for by economic and parenting factors. For academic problems, the inclusion of these factors does not appreciably alter the effects of family instability. Tests of additional contrasts reveal few union type differences. Moving from a cohabiting versus married stepfamily into a single-mother family is associated with significantly smaller increases
in academic problems (denoted by a superscript $a$ ). Transitioning from a single-mother family into a cohabiting versus married stepfamily has no appreciable effect on any of the three indicators of well-being (results not shown). And, breaking apart the stable cohabiting stepfamily category to examine those families formalized through marriage reveals that moving from a cohabiting to married stepfamily is not significantly different from remaining in a cohabiting stepfamily for any of the three outcomes (results not shown). Perhaps somewhat surprising is the finding that moving out of a cohabiting stepfamily into a single-mother family is associated with decreases in academic problems whereas remaining in a cohabiting stepfamily is related to increases in academic problems. Adolescents in stable cohabiting stepfamilies also report more academic problems than their counterparts in stable single-mother families (although the two groups do not differ on either delinquency or depression). Comparing stable cohabiting and married stepfamilies, the former evidences larger declines in well-being than the latter (all of these differences are denoted by a superscript $b$ in the table).
[TABLE 5 ABOUT HERE]

## DISCUSSION

This study examined the consequences of family instability for three dimensions of adolescent well-being. Using national, longitudinal data, I tracked the family living arrangement transitions experienced over a one year interval for adolescents residing with their biological mothers. Despite the short interval between interviews, over six percent of adolescents reported a change in family structure. Transitions into and out of cohabitation were especially common. Among adolescents residing in a cohabiting stepfamily at wave one, about one-third experienced the dissolution of their stepfamily and transitioned into a single-mother family. Another one-third
experienced a transition from a cohabiting to a married stepfamily presumably because their mother married her cohabiting partner. The remaining one-third were still in a cohabiting stepfamily at reinterview. Among adolescents residing in single-mother families at first interview, over ten percent transitioned into either a cohabiting or married stepfamily by reinterview.

Several measures of family instability were considered in this study. First, consistent with prior research, I found that a living arrangement transition is negatively associated with adolescent well-being. Adolescents who experienced a transition reported increased delinquent behaviors and depressive symptoms relative to adolescents whose family remained stable, although no significant changes occurred in academic problems. Second, whether adolescents transitioned from a two-parent to one-parent family or a one-parent to two-parent family did not matter; both types of transitions had similar effects on well-being. Notably though, family instability is not necessarily worse for adolescents than family stability. The outcomes of adolescents who experienced family instability typically did not differ from those who reported residing in stable single-mother families, married stepfamilies, and cohabiting stepfamilies. The only stable family form that consistently offered more protective effects in terms of well-being was the stable two biological parent married family. Third, I found little evidence that the effect of a living arrangement transition on well-being differed according to union type. In other words, the impact of the dissolution of a stepfamily into a single-mother family was similar regardless of whether the adolescent was in a married versus cohabiting stepfamily at wave one (although an exception is that those moving from a cohabiting (versus married) stepfamily reported fewer academic problems). Additionally, moving out of a single-mother family into a stepfamily had
similar ramifications regardless of whether the transition was into a married versus cohabiting stepfamily. Formalization of a cohabiting stepfamily into a married stepfamily offered no benefits in terms of well-being relative to stable cohabiting stepfamilies.

Despite an extensive theoretical and empirical literature suggesting that family instability can be harmful for children, these analyses revealed that the associations between various forms of family instability and changes in adolescent well-being are due to variation in economic and parenting resources. Once I controlled for the adolescent s characteristics as well as economic and parenting factors, there were few differences in the efffects of family instability (or stability) relative to living in a stable, two biological parent married family on changes in adolescent delinquency and depression. In contrast, the associations between family structure and academic problems were not significantly reduced by the inclusion of these factors. Household income and mother s education were negatively associated with adolescents reports of depressive symptoms. Indicators of maternal warmth and control, measured by the adolescent $s$ reports of the quality of the relationship with the biological mother and maternal supervision, respectively, were positively associated with well-being. The adolescent s appraisal of the closeness to the biological father was also important. Feeling very close to the father was negatively related to both depression and academic problems. Having no relationship at all with the biological father (versus low levels of closeness to him) was associated with declines in academic problems.

These findings are consistent with those of other studies that reveal few if any differences among adolescents in cohabiting stepfamilies, married stepfamilies, and singlemother families. Regardless of recent instability, adolescents outside of two biological married parent families do not typically enjoy the same levels of well-being as those in stable two
biological parent married families. For some dimensions of well-being, these differences are apparently due to economic disadvantage and less effective parenting. But for at least one adolescent outcome, academic problems, the effects of family structure and stability are impervious to economic and parenting factors. Additional studies are needed to determine whether the duration of time spent in other family structures prior to wave one are consequential and whether there is any lagged effect of a family living arrangement transition between waves one and two on subsequent adolescent well-being.

This study has some limitations. First, there are too few cases of adolescents who experience transitions into and out of cohabiting families to support race-ethnic specific analyses. This is unfortunate because other research suggests the linkages between family structure and child outcomes are weaker among nonwhites than whites (Dunifon and Kowaleski-Jones 2002; Hao and Xie 2002; Nelson et al. 2001). Second, sample size limitations preclude analyses of those adolescents who do not reside with their biological mother. Third, the present study focuses exclusively on adolescents. Whether these findings are generalizable to younger children is an empirical question. It is likely that the associations between family instability and child well-being vary by age and developmental stage (Moore et al. 2001). Finally, this study cannot account for family transitions that occurred prior to wave one. Adolescents were not asked about previous living arrangements. Although the respondents did report whether they ever lived with their biological father, there is very little variation on this measure as 92 percent of the sample responded affirmatively (and including this variable in the models does not change the results). A growing body of evidence suggests that father s parenting rather than contact per se is more closely tied to children s well-being (Marsiglio, Amato, Day, and Lamb 2000), and not
surprisingly, this study demonstrates the importance of adolescents closeness to their biological father for their well-being. Still, the results presented here only tell us about the impact of a recent living arrangement transition on adolescent well-being. Unfortunately, unmeasured factors associated with selection into various family types cannot be accounted for in these analyses. Controlling for well-being at time one, which is prior to the family structure transition, partially addresses selection but by no means resolves the problem.

Cohabiting families are highly unstable for adolescents. Family instability undermines adolescent well-being, primarily because it is associated with lower levels of economic and parenting resources. Notably though, stable cohabiting stepfamilies, regardless of whether they are formalized through marriage, are not beneficial for adolescents, who report high levels of academic problems that are not particularly responsive to either parenting or economic factors. Indeed, it appears that it may be preferable for adolescents to move out of cohabiting stepfamilies into single-mother families. Family instability per se does not seem to undermine well-being. Rather, instability is related to lower economic and parenting resources, which in turn are associated with adolescent outcomes. For one dimension of well-being, academic problems, family stability (i.e., stable cohabiting stepfamilies) can actually be detrimental, regardless of the levels of economic and parenting resources.

APPENDIX
Weighted Means (Standard Errors) of All Variables Used in the Analyses, by Family Instability Type

|  | Married-Single <br> Mother | Maried Step- <br> Single Mother | Cohstep- <br> Single Mother | Single Mother- <br> Cohstep | Single Mother- <br> Married Step |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Outcomes <br> (T2) |  |  |  |  |  |
| Delinquency | $2.30(0.32)$ | $1.53(0.25)$ | $2.78(0.61)$ | $2.86(0.55)$ | $2.09(0.28)$ |
| Depression | $11.68(0.93)$ | $12.58(0.80)$ | $12.68(1.29)$ | $10.72(0.86)$ | $11.83(0.75)$ |
| Academic <br> Problems | $7.72(0.31)$ | $8.66(0.33)$ | $8.04(0.31)$ | $8.41(0.30)$ | $8.20(0.24)$ |
| Well-being at |  |  |  |  |  |
| Time 1 |  |  |  |  |  |


| High School | $0.34(0.05)$ | $0.48(0.06)$ | $0.52(0.06)$ | $0.36(0.06)$ | $0.41(0.05)$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Some College | $0.20(0.05)$ | $0.18(0.04)$ | $0.10(0.03)$ | $0.25(0.05)$ | $0.16(0.04)$ |
| College+ | $0.22(0.05)$ | $0.16(0.05)$ | $0.13(0.05)$ | $0.13(0.04)$ | $0.13(0.04)$ |
| M-C Relat | $16.91(0.36)$ | $16.82(0.47)$ | $17.10(0.43)$ | $17.96(0.20)$ | $17.50(0.26)$ |
| Quality | $12.20(0.21)$ | $12.07(0.24)$ | $12.29(0.34)$ | $12.32(0.24)$ | $12.22(0.23)$ |
| Maternal <br> Supervision |  |  |  |  |  |
| Closeness to <br> Biological Dad | $0.80(0.04)$ | $0.24(0.04)$ | $0.44(0.07)$ | $0.29(0.05)$ | $0.27(0.04)$ |
| High | $0.20(0.04)$ | $0.49(0.05)$ | $0.29(0.06)$ | $0.39(0.05)$ | $0.41(0.05)$ |
| Low | $0.00(0.00)$ | $0.27(0.05)$ | $0.27(0.07)$ | $0.32(0.06)$ | $0.32(0.05)$ |
| No Relat |  |  |  |  |  |

(Continued on next page)

|  | CohstepMarstep | Single MotherSingle Mother | CohstepCohstep | MarstepMarstep | Married- <br> Married |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Outcomes (T2) |  |  |  |  |  |
| Delinquency | 2.72 (0.50) | 1.99 (0.09) | 2.70 (0.68) | 1.96 (0.12) | 1.72 (0.05) |
| Depression | 12.48 (1.24) | 11.84 (0.22) | 12.73 (0.94) | 10.60 (0.31) | 9.82 (0.17) |
| Academic <br> Problems | 9.09 (0.43) | 8.06 (0.11) | 9.36 (0.56) | 7.95 (0.10) | 7.78 (0.05) |
| Well-being at Time 1 |  |  |  |  |  |
| Delinquency | 3.61 (0.58) | 2.49 (0.12) | 2.97 (0.31) | 2.11 (0.10) | 2.06 (0.06) |
| Depression | 12.10 (1.01) | 11.82 (0.24) | 12.24 (1.01) | 10.97 (0.33) | 9.92 (0.17) |
| Academic <br> Problems | 9.14 (0.43) | 8.48 (0.12) | 9.27 (0.30) | 8.47 (0.12) | 7.97 (0.06) |
| Adolescent Characteristics |  |  |  |  |  |
| NH Black | 0.08 (0.03) | 0.34 (0.04) | 0.15 (0.05) | 0.10 (0.02) | 0.08 (0.01) |
| Hispanic | 0.23 (0.07) | 0.13 (0.02) | 0.15 (0.06) | 0.12 (0.02) | 0.11 (0.02) |
| NH Other | 0.05 (0.03) | 0.05 (0.01) | 0.05 (0.03) | 0.03 (0.01) | 0.06 (0.01) |
| NH White | 0.65 (0.08) | 0.49 (0.04) | 0.64 (0.07) | 0.75 (0.03) | 0.75 (0.03) |
| Male | 0.51 (0.08) | 0.46 (0.01) | 0.54 (0.06) | 0.50 (0.02) | 0.51 (0.01) |
| Age | 14.84 (0.23) | 15.04 (0.13) | 14.95 (0.20) | 15.02 (0.13) | 14.96 (0.12) |
| Resources |  |  |  |  |  |
| HH Income | 36.88 (3.30) | 29.20 (1.32) | 28.56 (2.30) | 48.48 (1.84) | 53.15 (1.81) |
| Missing HH Income | 0.14 (0.05) | 0.18 (0.02) | 0.14 (0.05) | 0.19 (0.02) | 0.20 (0.01) |
| Mother s Education |  |  |  |  |  |
| < High School | 0.27 (0.06) | 0.21 (0.02) | 0.29 (0.06) | 0.18 (0.02) | 0.17 (0.02) |
| High School | 0.49 (0.07) | 0.39 (0.02) | 0.31 (0.06) | 0.39 (0.02) | 0.36 (0.01) |


| Some College | $0.15(0.05)$ | $0.20(0.01)$ | $0.25(0.06)$ | $0.20(0.02)$ | $0.19(0.01)$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| College + | $0.10(0.04)$ | $0.20(0.02)$ | $0.15(0.05)$ | $0.22(0.02)$ | $0.29(0.02)$ |
| M-C Relat <br> Quality | $16.48(0.46)$ | $17.34(0.11)$ | $16.74(0.39)$ | $17.42(0.11)$ | $17.55(0.06)$ |
| Maternal <br> Supervision | $11.93(0.31)$ | $12.01(0.10)$ | $12.27(0.21)$ | $12.23(0.10)$ | $12.33(0.05)$ |
| Closeness to <br> Biological Dad |  |  |  |  |  |
| High | $0.29(0.06)$ | $0.31(0.01)$ | $0.34(0.06)$ | $0.32(0.02)$ | $0.85(0.01)$ |
| Low | $0.52(0.07)$ | $0.45(0.02)$ | $0.38(0.06)$ | $0.41(0.02)$ | $0.15(0.01)$ |
| No Relat | $0.20(0.06)$ | $0.25(0.01)$ | $0.29(0.07)$ | $0.27(0.02)$ | $0.00(0.00)$ |

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Table 1. The Distribution of Adolescent Family Living Arrangements

|  | N (unweighted) | Weighted \% |
| :---: | :---: | :---: |
| Transition |  |  |
| 2 Parent 1 Parent |  |  |
| Married Single-Mother | 182 | 1.4 |
| Married Step Single-Mom | 157 | 1.3 |
| Cohab Step Single-Mom | 91 | 1.0 |
| 1 Parent 2 Parent |  |  |
| Single-Mom Cohab Step | 114 | 1.3 |
| Single-Mom Married Step | 178 | 1.7 |
| 2 Parent 2 Parent |  |  |
| Cohab Step Married Step | 77 | 0.8 |
| No Transition |  |  |
| Stable Single-Mother | 2,275 | 19.0 |
| Stable Cohabiting Step | 107 | 1.0 |
| Stable Married Step | 1,191 | 10.5 |
| Stable Married Two Bio | 6,829 | 62.0 |
| Overall N | 11,201 | 100\% |

Table 2. Models Predicting Adolescent Outcomes by Family Instability, Net of Adolescent Characteristics and Economic and Parenting Resources (unstandardized coefficients shown)

|  | Delinquency ${ }^{1}$ |  | Depression ${ }^{2}$ |  | Academic Problems ${ }^{3}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1a | Model 1b | Model 2a | Model 2b | Model 3a | Model 3b |
| T1 Well-being | 0.19*** | 0.18*** | 0.04*** | 0.04*** | 0.44*** | $0.42 * * *$ |
| Family Instability |  |  |  |  |  |  |
| Transition | 0.14* | 0.12+ | 0.06* | 0.03 | 0.16 | 0.15 |
| (Stable) | ref | ref | ref | ref | ref | ref |
| Adolescent Characteristics |  |  |  |  |  |  |
| Race-Ethnicity (NH White) |  |  |  |  |  |  |
| Non-Hispanic Black | $-0.13 * *$ | -0.11* | 0.06** | 0.04+ | -0.20* | -0.17 |
| Hispanic | 0.15** | 0.17** | 0.13*** | 0.09*** | -0.02 | -0.01 |
| Non-Hispanic Other | 0.01 | 0.01 | 0.10*** | 0.09** | -0.12 | -0.12 |
| Male (Female) | 0.20*** | $0.24 * * *$ | $-0.08 * * *$ | $-0.07 * * *$ | 0.26*** | 0.34*** |
| Age | $-0.09 * * *$ | $-0.10 * * *$ | $0.01 * *$ | 0.01* | $-0.11 * * *$ | $-0.14 * * *$ |
| Resources |  |  |  |  |  |  |
| HH Income(logged) |  | 0.03 |  | $-0.04 * * *$ |  | 0.04 |
| Missing HH Income |  | -0.06 |  | 0.05** |  | -0.10 |
| Mother s Education (hs) |  |  |  |  |  |  |
| Less than High School |  | -0.02 |  | 0.03 |  | -0.02 |
| Some College |  | 0.07 |  | -0.02 |  | -0.02 |
| College Degree+ |  | -0.05 |  | $-0.10 * * *$ |  | -0.04 |
| M-C Relationship Quality |  | $-0.03 * * *$ |  | $-0.01 * * *$ |  | -0.06 *** |
| Maternal Supervision |  | $-0.03 * * *$ |  | $-0.01 * * *$ |  | -0.01 |
| Closeness to Bio Father (Low) |  |  |  |  |  |  |
| High |  | -0.11* |  | $-0.05^{* * *}$ |  | -0.23** |
| No Dad |  | 0.01 |  | -0.01 |  | -0.33** |
| Intercept | $1.21 * * *$ | $2.24 * * *$ | $1.58 * * *$ | $2.24 * * *$ | $5.93 * * *$ | 7.77*** |

[^1]${ }^{1}$ Negative binomial regression models. ${ }^{2}$ Poisson regression models. ${ }^{3}$ OLS regression models.

Table 3. Models Predicting Adolescent Outcomes by Family Instability, Net of Adolescent Characteristics and Economic and Parenting Resources (unstandardized coefficients shown)

|  | Delinquency ${ }^{1}$ |  | Depression ${ }^{2}$ |  | Academic Problems ${ }^{3}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1a | Model 1b | Model 2a | Model 2b | Model 3a | Model 3b |
| T1 Well-being | 0.19*** | 0.18*** | 0.04*** | 0.04*** | 0.43*** | 0.42*** |
| Family Instability |  |  |  |  |  |  |
| Transition | 0.20** | 0.19* | 0.08** | 0.04 | $0.21{ }^{\text {a }}$ | $0.23+{ }^{\text {a }}$ |
| Stable Single-mother | 0.11* | 0.08 | 0.08*** | 0.02 | $0.15+^{\text {a }}$ | $0.17+^{\text {a }}$ |
| Stable Cohabiting Step | 0.40+ | $0.36+$ | 0.14** | 0.08 | 0.93*** | 0.90** |
| Stable Married Step | 0.16* | 0.13+ | $0.02^{\text {a }}$ | -0.01 | $-0.04{ }^{\text {a }}$ | -0.04 ${ }^{\text {a }}$ |
| (Stable Married Two Bio) | ref | ref | ref | ref | ref | ref |
| Adolescent Characteristics |  |  |  |  |  |  |
| Race-Ethnicity (NH White) |  |  |  |  |  |  |
| Non-Hispanic Black | -0.16** | -0.12* | 0.04* | 0.03 | $-0.25 * *$ | -0.20* |
| Hispanic | 0.13* | 0.16** | 0.12*** | 0.09*** | -0.04 | -0.02 |
| Non-Hispanic Other | -0.01 | 0.00 | 0.10*** | 0.09** | -0.13 | -0.12 |
| Male (Female) | 0.20*** | 0.24*** | $-0.08 * * *$ | -0.07*** | 0.26*** | 0.34*** |
| Age | -0.09*** | -0.10*** | 0.02** | 0.01* | -0.11 *** | -0.13*** |
| Resources |  |  |  |  |  |  |
| HH Income (logged) |  | 0.04 |  | -0.04** |  | 0.07 |
| Missing HH Income |  | -0.06 |  | 0.05** |  | -0.10 |
| Mother s Education (hs) |  |  |  |  |  |  |
| Less than High School |  | -0.01 |  | 0.03 |  | -0.02 |
| Some College |  | 0.06 |  | -0.02 |  | -0.02 |
| College Degree or More |  | -0.05 |  | $-0.10^{* * *}$ |  | -0.04 |
| M-C Relationship Quality |  | $-0.03 * * *$ |  | -0.01*** |  | -0.06*** |
| Maternal Supervision |  | $-0.03 * * *$ |  | $-0.01 * * *$ |  | -0.01 |
| Closeness to Bio Father (Low) |  |  |  |  |  |  |
| High |  | -0.06 |  | $-0.05 * *$ |  | -0.18* |


| No Dad |  | -0.02 |  | -0.01 |  | $-0.36^{* *}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Intercept | $1.17^{* * *}$ | $2.11^{* * *}$ | $1.57^{* * *}$ | $2.21^{* * *}$ | $5.91^{* * *}$ | $7.54^{* * *}$ |

$+\mathrm{p}<0.10, * \mathrm{p}<0.05, * * \mathrm{p}<0.01, * * * \mathrm{p}<0.001$.
Note: Analyses corrected for design effects of Add Health.
${ }^{1}$ Negative binomial regression models. ${ }^{2}$ Poisson regression models. ${ }^{3}$ OLS regression models.
Bolded coefficients are significantly different from Transition, $\mathrm{p}<0.05$.
${ }^{\mathrm{a}}$ Significantly different from Stable Cohabiting Stepfamily, $\mathrm{p}<0.05$.

Table 4. Models Predicting Adolescent Outcomes bu Types of Family Instability, Net of Adolescent Characteristics and Economic and Parenting Resources (unstandardized coefficients shown)

|  | Delinquency $^{1}$ |  | Depression $^{2}$ |  | Academic Problems $^{3}$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | Model 1a | Model 1b | Model 2a | Model 2b | Model 3a | Model 3b |
| T1 Well-being | $0.19 * * *$ | $0.18 * * *$ | $0.04^{* * *}$ | $0.04 * * *$ | $0.43 * * *$ | $0.42^{* * *}$ |

Family Instability

| 2 Parent 1 Parent | 0.10 | 0.09 | $0.09^{* *}$ | 0.05 | $0.19^{\mathrm{a}}$ | $0.16^{\mathrm{a}}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 Parent 2 Parent | $0.30^{* *}$ | $0.31^{* *}$ | $0.08^{+}$ | 0.02 | $0.24^{\mathrm{a}}$ | $0.31^{\mathrm{a}}$ |
| Stable Single-Mother | $0.11^{*}$ | 0.09 | $0.08^{* * *}$ | 0.02 | $0.15+^{\mathrm{a}}$ | $0.17+^{\mathrm{a}}$ |
| Stable Cohabiting Step | $0.40+$ | $0.37+$ | $0.14^{* *}$ | 0.07 | $0.93^{* * * a}$ | $0.90^{* *}$ |
| Stable Married Step | $0.16^{*}$ | $0.13+$ | $0.02^{\mathrm{a}}$ | -0.01 | $-0.04^{\mathrm{a}}$ | $-0.03^{\mathrm{a}}$ |
| (Stable Married Two Bio) | ref | ref | ref | ref | ref | ref |
| Adolescent Characteristics |  |  |  |  |  |  |
| Race-Ethnicity (NH White) |  |  |  |  |  |  |
| Non-Hispanic Black | $-0.16^{* *}$ | $-0.12^{*}$ | $0.04^{*}$ | 0.03 | $-0.25^{* *}$ | $-0.20^{*}$ |
| Hispanic | $0.13^{*}$ | $0.16^{* *}$ | $0.12^{* * *}$ | $0.09^{* * *}$ | -0.04 | -0.01 |
| Non-Hispanic Other | -0.01 | 0.00 | $0.10^{* * *}$ | $0.09^{* *}$ | -0.13 | -0.12 |
| Male (female) | $0.20^{* * *}$ | $0.24^{* * *}$ | $-0.08^{* * *}$ | $-0.07^{* * *}$ | $0.26^{* * *}$ | $0.34^{* * *}$ |
| Age | $-0.09^{* * *}$ | $-0.10^{* * *}$ | $0.01^{* *}$ | $0.01^{*}$ | $-0.11^{* * *}$ | $-0.13^{* * *}$ |

Resources

| HH Income (logged) | 0.04 | $-0.04^{* * *}$ | 0.07 |
| :--- | :--- | :--- | :--- |
| Missing HH Income | -0.06 | $0.05^{* *}$ | -0.10 |
| Mother s Education (hs) | -0.02 | 0.03 | -0.02 |
| Less than High School | 0.06 | -0.02 | -0.03 |
| Some College | -0.05 | $-0.10^{* * *}$ | -0.04 |
| College Degree or More | $-0.03^{* * *}$ | $-0.01^{* * *}$ | $-0.06^{* * *}$ |
| M-C Relationship Quality | $-0.03^{* * *}$ | $-0.01^{* * *}$ | -0.01 |

## Closeness to Bio Father (Low)

| High | -0.05 |  | $-0.05^{*}$ |  | $-0.18^{*}$ |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| No Dad |  | -0.03 |  | -0.01 |  | $-0.37^{* *}$ |
| Intercept | $1.17 * * *$ | $2.11^{* * *}$ | $1.57^{* * *}$ | $2.21^{* * *}$ | $5.91 * * *$ | $7.53^{* * *}$ |

$+\mathrm{p}<0.10, * \mathrm{p}<0.05, * * \mathrm{p}<0.01, * * * \mathrm{p}<0.001$.
Note: Analyses corrected for design effects of Add Health.
${ }^{1}$ Negative binomial regression models. ${ }^{2}$ Poisson regression models. ${ }^{3}$ OLS regression models.
${ }^{a}$ Significantly different from Stable Cohabiting Stepfamily, $\mathrm{p}<0.05$.

Table 5. Models Predicting Adolescent Outcomes by Detailed Measures of Family Instability, Net of Adolescent Characteristics and Economic and Parenting Resources (unstandardized coefficients shown)


| Mother s Education (hs) |  |  |  |
| :--- | :--- | :--- | :--- |
| $\quad$ Less than High School | -0.02 | 0.03 | -0.02 |
| Some College | 0.06 | -0.02 | -0.03 |
| College Degree or More | -0.06 | $-0.10^{* * *}$ | -0.04 |
| M-C Relationship Quality | $-0.03^{* * *}$ | $-0.01^{* * *}$ | $-0.07^{* * *}$ |
| Maternal Supervision | $-0.03^{* * *}$ | $-0.01^{* * *}$ | -0.01 |
| Closeness to Bio Father (Low) |  |  |  |
| High | -0.06 | $-0.05^{* *}$ | $-0.17^{*}$ |
| No Dad | -0.02 | -0.01 | $-0.38^{* *}$ |
| Intercept | $1.16^{* * *}$ | $2.10^{* * *}$ | $1.57^{* * *}$ |
| $+\mathrm{p}<0.10,{ }^{*} \mathrm{p}<0.05, * * \mathrm{p}<0.01,{ }^{* * *} \mathrm{p}<0.001$. |  |  | $7.51^{* * *}$ |

Note: Analyses corrected for design effects of Add Health.
${ }^{1}$ Negative binomial regression models. ${ }^{2}$ Poisson regression models. ${ }^{3}$ OLS regression models.
${ }^{a}$ Cohab Step Single-Mom and Married Step Single-Mom significantly different, $\mathrm{p}<0.05$.
${ }^{\mathrm{b}}$ Significantly different from Stable Cohabiting Stepfamily, $\mathrm{p}<0.05$.


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[^1]:    ${ }^{*} \mathrm{p}<0.05,{ }^{* *} \mathrm{p}<0.01,{ }^{* * *} \mathrm{p}<0.001$. Note: Analyses corrected for design effects of Add Health.

