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**EXTENDED ABSTRACT**

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Family Instability and  
Early Family Formation

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## **Abstract**

The link between family instability and child well-being is well established but the mechanism through which these effects persist into emerging and early adulthood has been under-explored. Using longitudinal data from Add Health, this study investigates the influence of multiple transitions in family structure on early union formation (either marital or cohabiting) and early births. We integrate several previously established conceptual frameworks, providing an empirical test of these effects within a single, more comprehensive theoretical framework. In doing so, we directly extend previous literature in several ways: family instability contributes increased risk of both types of early family formation regardless of how they are measured (family structure, total transitions, exits, entries, clustered transitions, and early childhood transitions); this effect is significant for both Black and non-Black females; and the patterns of mediation differs by race/ethnicity. Externalizing behaviors play an important role in these relationships for unions and births of Black females, whereas academic performance and selection effects are also important for unions and births of non-Black females.

## **Introduction**

Transitions in family structure have become a more normative part of family life in recent decades. The rise of single- and step-parent households has risen substantially, leading to an increase in the number of children exposed to alternative family structures. Researchers estimate that while approximately 20% of children remain in a single-parent family throughout their childhood (Aquilino 1996), half will spend at least some period of time within a single-parent home (Bumpass and Sweet 1989). Further, such transitions have been associated with a wide variety of negative outcomes for children that persist into adolescence including aggression, depression, delinquency and lower cognitive functioning (see Amato 1993 for a review).

Here, we further inform this literature by integrating three research threads. Wu and Martinson (1993) show that children growing up in single parent families are more at risk of having a premarital birth, mostly as a result of “instability and change”—that is, the stress of experiencing transitions in family structure leads individuals to have earlier births. This provides the broad-brushed framework in which much subsequent research is situated. For example, Wu and Thompson (2001) focus on how family structure transitions matter for age at first sexual initiation. They find that for White females are more at risk of earlier initiation when they experience higher numbers of family transitions, whereas Black females are more at risk when living in a single parent home during adolescence. Thus, the ways in which transitions are measured (those that capture processes occurring over time versus a simple measure of family structure at one point in time) matters.

Other research has focused on outcomes that are more proximal to these transitions. For example, Fomby and Cherlin (2007) examine the effect of family transitions on developmental and behavior problems. They demonstrate that both instability effects and selection effects exist

for White children, but that neither affects these outcomes for Black children. They also find that entries matter more for these outcomes than do exits, providing an even more complex picture of how dynamic measurements of transitions may produce different results. Still other research analyzes these effects in early childhood, focusing more on maternal stress as the reason for detriments to child well-being. Lastly, Osborne and McLanahan (2007) explore three theories of why family structure transitions exert negative effects on children: social stress theory (which posits that transitions contribute to increased behavior problems in children through changes in the material and social resources of the mother, which lead to decreased maternal psychological functioning and interaction with the child); selection effects; and reverse causality—that child problems induce maternal stress. Observing the effect of both entries and exits in maternal partnerships on behavior problems in early childhood, they find that the effect of number of transitions in family structure is mediated by two factors: maternal stress and poorer quality maternal behaviors.

To date however, no study that we know of has sought to integrate and empirically test how the effect of family instability in childhood extends to family formation behaviors in early adulthood within a single, comprehensive theoretical framework. The goal of this study is to increase knowledge about the mechanisms by which family instability leads to early union formation (either cohabitation or marriage) and childbearing. To fully explore these processes, we produce separate estimates for Black and non-Black females and incorporate six different indicators of family transitions: a “static” measure of family structure in adolescence, and several “dynamic” measures including the total number of family structure transitions in childhood, the number of entries of a parent (whether biological, cohabiting or stepparent), the number of parental exits, and two binary measures indicating if the youth experienced “clustered”

transitions (more than 2 events in one year), and if they experienced a transition in early childhood (before age 5). Within this more comprehensive framework, we test four possible mechanisms academic performance, externalizing behaviors, social isolation, and parental characteristics. In doing so, we offer more integrative statements about the effects of family instability and the mechanisms which link this instability to family formation events.

## **Data/Methods**

### *Sample*

Data were drawn from the National Longitudinal Study of Adolescent Health, a nationally representative, longitudinal dataset of over 20,000 young adults. Three waves of interviews have been collected to date: Wave 1 in 1994-5, Wave 2 in 1996, and Wave 3 in 2001-2. These data offer several advantages to address the relationship between family instability and child well-being, but one particular benefit is that parent interviews were collected in conjunction with the Wave 1 survey which asked detailed questions about the parents' relationship history since the birth of the respondent. Unlike other data sources, this provides an extremely rich and comprehensive picture of family instability throughout the life of the child, thus providing a significant advantage over previous research in terms of fully measuring these effects.

For inclusion in this analysis, only females were included for two reasons: men tend to underreport fertility behavior, and due to gender differences in the timing of early family formation behaviors it is preferable to limit the sample to just men or women. Thus, females were selected for inclusion in this analysis if they completed a Wave 1 and Wave 3 interview (dropped 2,450); had a biological or adoptive mother complete a parent survey (dropped 1,866); were born between 1977 and 1980 (since the mother's relationship history was only collected from 1977 forward; dropped 1,917); never spent more than 6 months away from their mother

during their childhood (as reported by the mother; dropped 342); were not adopted (dropped 231); did not report having a union or birth before the Wave 1 interview (dropped 152); and had a valid sample weight (dropped 133). The final sample size was 3,389.

### *Variables*

Early Family Formation. We focus on two types of family formation: union (either cohabitation or marriage) and fertility behavior, both of which were taken from Wave 3 interview. We created separate discrete-time event history person-year files where individuals contributed one person-year to the data file for each year between their Wave 1 interview and when they were censored from the dataset—either for having the failure event (a union or birth) or reaching the Wave 3 interview. Before calculating each dependent variable, data checks were performed to ensure that the “first event” reported in the data were indeed first in chronological time<sup>1</sup>.

Transitions in Family Structure. Since previous literature finds the effects of transitions in family structure are different based on how they are measured, we include five variations of family instability that reflect changes over time (similar to Wu and colleagues “dynamic” ways to measure family structure, as compared to “static” measures of family structure). The number of transitions before age 10 was calculated based on the relationship history reported by the parent since the birth of the respondent. Due to a slight right skew in the distribution, these were coded as 0=no transitions, 1=1 transition, 2=2 transitions, and 3=3+ transitions before age 10.<sup>2</sup> Here, both exits and entries of partners (including both cohabitations and marriages) within the household were considered to be family instability. Based on Fomby and Cherlin’s emphasis on

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<sup>1</sup> We gratefully acknowledge Johanne Boisjoly for her assistance in adjusting the time ordering of marriages and cohabitations.

<sup>2</sup> We thank Claire Kamp Dush for her work in extracting the number of caregiver transitions from the parent interview.

the importance of entries only (versus entries plus exists), we explored the effect of two more independent variables: the total number of entries and the total number of exits. Other literature emphasizes the importance of transitions in early childhood (Osborne and McLanahan 2007), while still other work focuses on multiple transitions as stressful life events that may be damaging when several occur in a short period of time (Amato 1993). As a result, we also include two dichotomous variables indicating if the respondent had a transition before the age of 5, and if they had two or more transitions within a one-year period before the age of 10. In addition, we consider a “static” measure for family structure at time<sub>1</sub> (1=single or stepparent family, 0=two-biological parent family).

Mediating variables. We hypothesized that three different explanatory mechanisms would mediate the total effect of family instability: academic performance, externalizing behaviors, and social isolation. As a fourth mechanism, we also account for possible selection effects. In the case of scaled items, we created factor scores based on principal component analysis where each item was allowed to vary in its contribution to the overall factor, which offer an advantage in comparison with more simplistic, additive scales.

Academic performance was measured with three variables: a cognitive functioning score as measured by the Picture Vocabulary Test (ranging from 14 to 131), a dichotomous variable indicating if the respondent ever skipped school (1=ever skipped, 0=never skipped), and a factor score of school success. This final measure contained the respondents’ grades (in Math, Science, English, and History/Social Sciences); the frequency of having trouble getting along with teachers, paying attention in school, getting homework done, and getting along with other students (0=never, 4=every day); and five questions relating to school attachment such as “You feel close to people at your school,” “You feel like you are a part of your school,” and “You feel

safe in your school” (ranging from 1=strongly agree, 5=strongly disagree). Questions within the school success scale were recoded so high scores correspond with high levels of success ( $\alpha = .815$ ). A control was also added to account for if the respondent was attending school at the time of the Wave 1 interview (1=in school during the survey year, 0=not in school).

Externalizing behaviors include delinquency, drinking behavior, early sexual initiation, and spending a night away from home without parent’s permission. First, we created a factor score comprised of nine generalized delinquent behaviors ( $\alpha = .817$ ) including ever being suspended from school and ever engaging in the following behaviors over the 12 months prior to the interview: painting graffiti, deliberately damaging someone else’s property, lying to parents/guardians about where youth had been/who they were with, stealing something from a store, getting into a serious physical fight, running away from home, driving someone else’s car without their permission, and selling marijuana or other drugs. Second, we created a factor score of drinking behavior based on five questions. Two of these were dichotomous indicators (where 0=no, 1=yes): “Have you had a drink of beer, wine, or liquor—not just a sip or a taste of someone else’s drink—more than 2 or 3 times in your life?” and “Do you ever drink beer, wine, or liquor when you are not with your parents or other adults in your family?” The other three ranged on a scale of 0 to 5 (where 0=none, 4=5 or more times): “You did something you later regretted because you had been drinking,” “Over the past 12 months, how many times were you hung over,” and “Over the past 12 months, how many times were you sick to your stomach or threw up after drinking?” Scores were recoded so high values indicate more drinking behavior ( $\alpha = .790$ ). Lastly, we included two dichotomous questions: “During the past 12 months, have you ever spent the night away from home without permission?” and whether the respondent initiated



sexual intercourse before the median age at first sex of this subsample of women—which in this sample was before age 17 (0=no, 1=yes).<sup>3</sup>

Social isolation was measured with four variables: how often the respondent ate dinner with their parent(s) in the last week (ranging from 0 to 7); a dichotomous indicator of membership in the top 20% of the distribution of depression (based on the frequency within the past week in which the respondent reported “being bothered by things,” “couldn’t shake off the blues,” “just as good as others,” “depressed,” “too tired to do things,” “enjoyed life,” “sad,” and “people disliked” him/her (0=never or rarely, 3=most of the time or all of the time); how much the respondent felt her friends “cared” about her (0=not at all, 5=very much); and mother-daughter relationship quality. This last indicator is represented by a factor score comprised of seven questions ( $\alpha = .877$ ) which were recoded so high scores indicate positive relationships: “How close do you feel to your mother,” “How much do you think she cares about you,” “Most of the time, your mother is warm and loving toward you,” “You are satisfied with the way your mother and you communicate with each other,” “Overall, you are satisfied with your relationship with your mother,” “Your mother encourages you to be independent,” and “When you do something wrong that is important, your mother talks about it with you and helps you understand why it is wrong” (ranging from 1=not at all to 5=very much).

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<sup>3</sup> Similar to Fomby and Cherlin (2007) we considered also including Attention Deficit Hyperactivity Disorder under externalizing behaviors. However, the only questions available in these data that relate to ADHD were a series of eighteen retrospective questions asked within the Wave 3 interview. Participants were asked, “When you were between 5 and 12, you failed to pay close attention to details or made careless mistakes in your work,” “had difficulty sustaining your attention in tasks or fun activities,” and “you left your seat in the classroom or in other situations when being seated was expected” (ranging from 0=never or rarely, to 3=often;  $\alpha = .895$ ). Since these questions rely on retrospective information and take information directly from the respondents (instead of from a parent or a physician) regarding the extent of these behaviors, we did not include it in our analyses.

To test the selection effects hypothesis, we utilized several variables from the parent survey. Level of education was measured as the average level of education of both parents in two-parent households and the level of education of one parent in single-parent households (ranging from 1 to 10). We also created a factor score representing parent religiosity based on four questions: frequency of attending services (1=once a week or more, 4=never), the importance of religion (1=very important, 4=not important at all), frequency of praying (1=at least once a day, 5=never), agree/disagree that the scriptures are sacred (1=agree, 2=disagree;  $\alpha = .799$ ). Lastly, we incorporated measures of parental stress (the amount of regular alcohol consumption, ranging from 1 to 6 with higher scores indicating higher consumption) and the level of supervision in the home (the number of adults in the household, ranging from 0 to 9).

### *Analysis*

We utilized logistic regression in STATA to estimate the likelihood of having a union or birth from the discrete-time event history person-year files. Each model was weighted and adjusted for design effects (such as clustering) to garner more accurate standard errors from which to estimate significance within these relationships. Since previous research suggests very different pathways exist by race/ethnicity, we ran separate models for Black vs. non-Black (including White, Hispanic, and “Other” racial/ethnic groups) females. Child age was also included as a control in all models. Lastly, since each variable had less than 5% missing data (the majority had between 2% and 4% missing data), a simple imputation procedure was employed based on the expectation maximization algorithm.

### **Findings**

Table 1 presents the weighted descriptive statistics for Black vs. non-Black females in this sample. Several important differences arise from this comparison as noted in the final

column<sup>4</sup>, supporting the necessity to run separate models by racial/ethnic group. For example, Black females experience more family structure transitions on average than non-Black females regardless of how it is measured, and non-Black females entered into more unions but had fewer births. In terms of the mediating variables, we see both similarities and differences. Black females reported lower levels of school success and cognitive functioning, but the two groups engaged in similar levels of generalized delinquent behavior. Non-Black respondents were more likely to report spending a night away from home without permission and higher levels of drinking behavior. On the other hand, they were less likely to engage in early sex and use birth control than Black females. The two groups reported similar levels of relationship quality with their mothers; although Black females reported higher levels of isolation (they ate dinner with their parent(s) less often and felt their friends cared about them less). In terms of parental characteristics, parents of non-Black females consumed alcohol more regularly, reported higher levels of adult supervision in the household and were less religious than parents of Black females.

Moving on to the logistic regression results, we find striking similarity across the five measures of family instability. Regardless of how it is measured (total transitions by age 10, total exits, total entries, clustered transitions, early transitions or family structure), greater family instability leads to a higher risk of engaging in an early union or having an early birth across the board. Therefore, we provide results for only one measure of instability (number of entries) for Black vs. non-Black females (see Tables 2-5). The number of entries is important for two reasons: Fomby and Cherlin (2007) find that entries act differently than exits, and in our data entries act as a midrange estimate of the effects of family structure transitions. That is, the effects

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<sup>4</sup> Two-sample t tests, assuming unequal variances, were performed.

of some transition measures fall below and others lie above the effect of entries. Therefore, we consider the effects of entries to be a reasonable estimation of how transitions impact early family formation outcomes. In each table, Models 2 thru 5 add each domain of mediating variables sequentially, and Model 6 presents the full model. We employ Sobel-Goodman mediation tests to interpret the extent of mediation across all models. This is advantageous to another commonly used test developed by Clogg, Petkova, and Haritou (1995) in two ways. It accommodates dichotomous dependent variables and continuous mediating variables in a more straightforward manner, whereas the Clogg et al. test is more easily performed for ordered outcome variables (MacKinnon 2008). Lastly, results from the other five transition measures are summarized in Table 6 where only the total and direct effects are included to facilitate comparisons of mediation across measures. Next we summarize the results for both outcomes.

From Table 2 we see that family structure transitions exhibit a highly significant effect on the risk of engaging in a union for non-Black females. That is, more caregiver entries lead to a higher likelihood of union behavior in emerging adulthood. In fact, for each additional entry the odds of engaging in a union are 37% higher. For this group of women, we see evidence of mediation across each of the four domains: academic performance, externalizing behavior, social isolation, and selection effects. Model 2 adds the explanatory variables in the social isolation domain, and we see that lower quality mother-daughter relationships, fewer days eating dinner with a parent or parents, and being depressed all contribute to an increased risk of having an early union. More specifically, a decrease of one standard deviation in mother-daughter relationship quality results in an increase of 11% in the odds of having an early union. Being depressed increases this risk by 30% whereas one additional day per week of eating dinner with a parent is a protective factor—it decreases these odds by 5%. Sobel mediation tests exhibit that

all three are significant mediators of this relationship. Together this group of variables (related to social isolation) mediate 15% of the total effect.

Academic performance also matters (see Model 3). A score of one standard deviation below the mean in school success results in a 27% increase in the odds of entering an early marriage or cohabitation. Similarly, the difference of one standard deviation lower in cognitive ability (13.4 points on the PVT scale for non-Black females) translates to an increase of 11%<sup>5</sup> whereas ever skipping school contributes an increase of 28%. Each of these variables are significant mediators according to the Sobel test, but school success mediates the largest proportion of the total effect. As a whole, academic performance mediates 26% of the total effect.

Model 4 indicates that externalizing behaviors are important as well—they mediate an even larger proportion of the total effect (33%). Early sexual initiation more than doubles the odds of having an early union (odds ratio=2.096,  $p < .001$ ). Engaging in delinquent behavior and ever spending a night away from home without permission are also important (the odds are 10% higher for a factor score one standard deviation above the mean of delinquent behaviors, and are 27% higher for the latter). Each of these variables provides significant mediation.

Lastly, it is apparent from Model 5 that higher parental education, religiosity and household supervision offer protection against the risk of early union behavior. The odds are 13% lower for each additional year of parental education, 11% lower for each standard deviation increase in parental religiosity, and 16% lower for each additional adult residing in the household. Each of these offer significant mediation and together decrease the total effect by 28%.

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<sup>5</sup> To obtain the relevant odds ratio, we multiplied the log odds coefficient (.009) by 13.4 and then exponentiated the result.

The final model fully mediates the effect of family structure transitions on early unions and there is evidence of mediation remaining within each set of explanatory variables (see Model 6). Lower levels of school success are a risk factor, as are early sexual initiation and spending a night away from home without permission. Parental education and household supervision remain significant, and alcohol consumption becomes significant in the full model. In terms of social isolation, females who report their friends care more about them are more likely to marry or cohabit early. This is somewhat surprising, although combined with lower levels of household supervision this may simply reflect the extent to which some females are more heavily engaged with and influenced by their peers in lieu of a strong home environment. Lastly, these same mechanisms found across the other measures of transitions, but the amount of mediation shifts. We see the least amount for early transitions (45%), but higher amounts for all other measures: 60% for both total transitions by age 10 and clustered transitions, and 65% for both total exits and family structure.

Next we turn to union behavior of Black females. Similarly, the effect of transitions on the likelihood of entering a marital or cohabiting union is significant but this risk is quite a bit higher. For each additional entry, the odds of having a union are increased by 46% for Black females. A different explanatory process also emerges: only one or two indicators within each set of variables are significant. In the intermediate models (2 through 5), we see that risk factors include eating dinner with parents less often (7% increase in odds for each day), skipping school (80% increase in odds), spending a night away from home without permission (125% increase in odds), and early sexual initiation (95% increase in odds). In the full model, each of these effects are reduced in magnitude but remain significant except for skipping school which becomes non-significant. The Sobel test indicates that all of these except for dinner with parents perform

significant mediation. Interestingly, a few others emerge as well (school success, behavior problems, drinking behavior, parent education, and parent alcohol consumption). As a whole, 39% of the total effect is mediated when we rely on the number of entries as our measure of family instability. However, similar to unions of non-Black females explanatory processes are similar across different measures of transitions but the amount of mediation shifts. About 34% of the relationship between total transitions and union behavior is mediated in the full model, but this figure is higher for other measures: 40% for clustered transitions and family structure, and 45% for total exits.<sup>6</sup>

Moving onto the second outcome of interest—births—we see that for non-Black females with more family structure transitions, the risk of having a birth is also highly significant (it is 66% higher for each additional entry) and is mediated in part by each of the four domains. In the intermediate models (2 through 5), being depressed, skipping school as well as lower school success and cognitive ability are all risk factors for early births. However, externalizing behaviors are extremely important as well. Early sexual initiation more than doubles the risk of an early birth (increase of 146% in the odds) while one increase in the standard deviation of delinquent behavior results in an increase of 19% in the odds of having an early birth. Selection effects are similarly present: lower levels of parental education, religiosity and household supervision each play a role. Not all are significant mediators however. The Sobel test identifies all of these (except for parental religiosity and alcohol) as significant mediations, in addition to the following: relationship with mother, dinner with parents, spending a night away from home without permission, and drinking. In the full model many of these effects remain salient and 36% of the total effect is mediated. Higher risk of having a birth is associated with lower school

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<sup>6</sup> The total effect of early transitions on black unions was not significant and so was not included in this comparison.

success, lower cognitive functioning, early sexual initiation, lower levels of parental education, and less household supervision. In terms of other family instability measures, each mediates a higher proportion suggesting that total entries are a lower bound estimate for non-Black fertility behavior: exits and early transition (39%), family structure (40%), total transitions (43%), and clustered transitions (51%).

Lastly, entries are also an important predictor of early fertility behavior for Black females. Each additional entry is associated with a 52% increase in the odds of having an early birth. Similar to the union behavior of this subgroup, we see some effects within each domain but externalizing behaviors are most salient in the full model. Being depressed, lower levels of school success, skipping school, spending a night away from home without permission, early sexual initiation, and lower parental education each confer higher risk of early fertility behavior in the intermediate models. Each of these are significant mediators but in the final model, only three of these effects remain significant (although school success is also marginally significant): spending a night away from home without permission (increases the odds by 124%), early sexual initiation (increases the odds by 95%) and parental education. This final model mediates anywhere between 7% and 37% of the relationship depending on how transitions are measured (where transitions and exits are lower bound estimates and both clustered and early transitions are upper bound estimates).

## **Discussion/Conclusions**

Merging three important research streams, we sought to integrate the findings of Wu and colleagues (Wu and Martinson 1993; Wu 1996; Wu and Thomson 2001), Fomby and Cherlin (2007), and Osborne and McLanahan (2007) into a more comprehensive framework explaining the effect of family instability in childhood on two types of early family formation: early unions



(either marital or cohabiting) and early births. Through this integration we contribute several new findings to this literature. Based on previous research we expected to find that, 1) the number of transitions would matter for non-Black females and family structure would matter for Black females, and 2) the effect of transitions would differ based on how it is measured. However, our results stand in contrast to both hypotheses. Regardless of how transitions are measured (total transitions by age 10, total exits, total entries, clustered transitions, early transitions, or the static measure of family structure in adolescence), each results in an increased risk of both types of early family formation. This risk is between 11% and 35% higher for each additional transition across the two outcomes (unions and births) among both subgroups.

Second, based on previous research we hypothesized that racial/ethnic differences exist among the magnitude of the direct effects (this should be larger for non-Black females) and among the patterns of mediation for each subgroup. Here, the second was supported but the first was not. The direct effects were greater for Black females than non-Black females across both outcomes (29% vs. 11% for unions respectively; 35% vs. 28% for births respectively). In terms of the mechanism involved, both early union and fertility behavior of non-Black females are mediated by academic performance (school success and cognitive ability) and externalizing behaviors (early sexual initiation). We also see evidence of selection effects for both outcomes (parental education and household supervision are significant mediators as well). This is similar to Fomby and Cherlin's work which cites evidence of both selection and "instability" pathways for White children (the latter includes behavior problems, developmental problems, and school success). Across different measures of transitions, these same explanatory variables play a role and mediate between 36% and 65% of the total effect for non-Black unions and births. On the other hand, we see less mediation for Black unions and births overall (between 7% and 45%).

Academic performance (school attendance) and externalizing behaviors (spending a night away from home without permission and early sexual initiation) constituted important risk factors for both unions and births. Third, we had no clear hypotheses regarding the strength of each respective mediator since we could find literature citing that each could be critical. We found that across both outcomes and subgroups, the strongest impact was exerted by externalizing behaviors.

This analysis should be considered with two central limitations in mind. First, to fully test the possibility of selection effects it would have been ideal to include more variables of interest from the parent's history (such as their own early union formation, behavior problems, cognitive functioning, school success, age at first birth, and family structure transitions). However, these data do not include this information. Second, we only observed young women whose biological or adoptive mothers completed the parent survey and who never spent more than six months away from their mother in childhood. While this comprised the majority of respondents, it is possible that the conclusions drawn from this sample do not extend to those living in other types of family situations (such as single father households for example).

## **Future Research**

Overall, this study provides evidence to suggest that the impact of family instability in childhood persists into emerging adulthood, affecting the choices women make about entering a cohabitation or marriage and having early births. Earlier entry into these life stages are associated with a host of other risk factors that persist across adulthood (such as lower educational and socioeconomic attainment), suggesting that the effect of family instability has the potential to impact individuals for quite some time. Unlike some recent research suggesting that divorce is limited in its impact on children (Li 2007), this provides evidence to the contrary:

changes in family structure are stressful to the child and family; are linked with greater behavior problems, lower academic achievement, and greater social isolation; these effects translate to higher risk of early family formation later on. Future research should directly test this more comprehensive conceptual framework further across the life course (i.e., in mid-adulthood) through incorporating additional outcomes to explore the extent to which these effects persist over time.

## References

Amato, Paul R. 1993. "Children's Adjustment to Divorce: Theories, Hypotheses, and Empirical Support." *Journal of Marriage and the Family* 55(1): 23-38.

Aquilino, William S. 1996. "The life course of children born to unmarried mothers: Childhood living arrangements and young adult outcomes." *Journal of Marriage and Family* 58: 293-310.

Bumpass, Larry L. and J.A. Sweet. "Children's Experience in Sing-Parent Families: Implications of Cohabitation and Marital Transitions." *Family Planning Perspectives* 21(6): 256.

Fomby, Paula and Andrew J. Cherlin. 2007. "Family Instability and Child Well-Being." *American Sociological Review* 72(April): 181-204.

Li, Jui-Chung Allen. 2007. "The Kids are OK: Divorce and Children's Behavior Problems." RAND Labor and Population Working Paper No. WR-489.

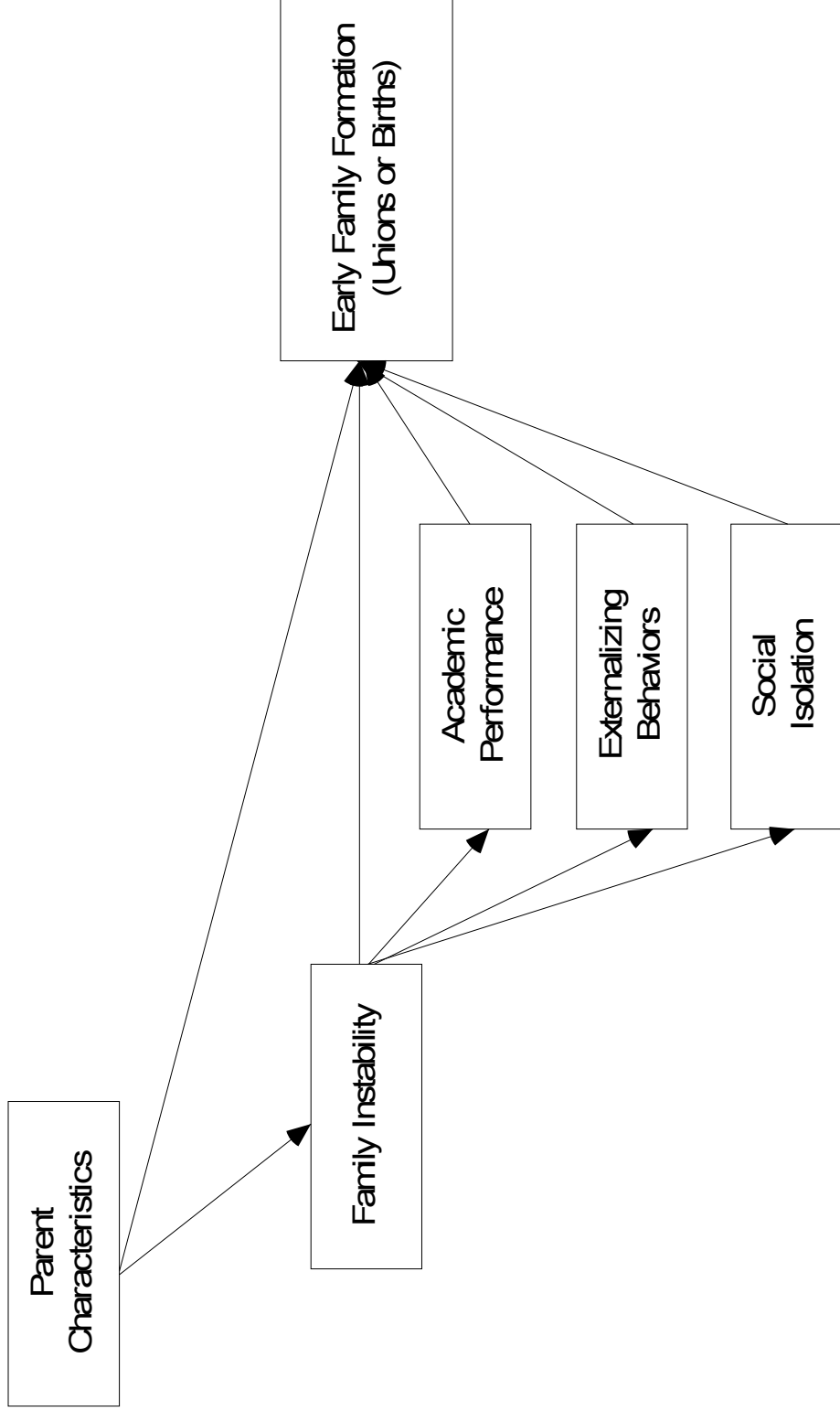
Osborne, Cynthia and McLanahan, Sara. 2007. "Partnership Instability and Child Well-Being." *Journal of Marriage and Family* 69(4): 1065-1083.

Wu, Lawrence L. 1996. "Effects of family instability, income, and income instability on the risk of a premarital birth." *American Sociological Review* 61: 386-406.

Wu, Lawrence L., and Brian C. Martinson. 1993. "Family Structure and the Risk of a Premarital Birth." *American Sociological Review* 58(2): 210-232.

Wu, Lawrence L. and Elizabeth Thomson. 2001. "Race Differences in Family Experience and Early Sexual Initiation: Dynamic Models of Family Structure and Family Change." *Journal of Marriage and the Family* 63(3): 682-696.

Figure 1. Conceptual Framework



**Table 1. Descriptive Statistics, by Race/Ethnicity**

	All Females				Nonblack Females				Black Females				Sig. Diff.
	Min.	Max.	Mean	Std. Dev.	Min.	Max.	Mean	Std. Dev.	Min.	Max.	Mean	Std. Dev.	
Ever had union	0	1	0.544	0.498	0	1	0.564	0.496	0	1	0.426	0.495	***
Ever had birth	0	1	0.280	0.449	0	1	0.255	0.436	0	1	0.425	0.494	***
Single parent family	0	1	0.348	0.476	0	1	0.307	0.461	0	1	0.596	0.491	***
# transitions by age 10	0	3	0.423	0.814	0	3	0.403	0.810	0	3	0.541	0.825	***
Total exits	0	3	0.426	0.682	0	3	0.398	0.669	0	3	0.594	0.736	***
Total entries	0	3	0.386	0.672	0	3	0.358	0.652	0	3	0.551	0.759	***
Clustered transitions	0	1	0.138	0.345	0	1	0.133	0.339	0	1	0.170	0.376	*
Early transition	0	1	0.150	0.358	0	1	0.143	0.350	0	1	0.195	0.397	***
Age	15	18	16.364	1.112	15	18	16.353	1.112	15	18	16.427	1.111	0
School success	-4.652	2.198	0	1	-4.652	2.198	0.023	1.036	-3.377	2.198	-0.120	0.932	***
Ever skip school	0	1	0.268	0.443	0	1	0.272	0.445	0	1	0.238	0.427	0
Cognitive ability	14	131	102.530	13.973	14	131	103.890	13.424	17	130	94.310	14.419	***
In school	0	1	0.983	0.130	0	1	0.982	0.131	0	1	0.985	0.121	0
Behavior problems	-0.858	5.197	0	1	-0.858	5.197	-0.025	1.023	-0.858	4.469	0.037	0.820	0
Night out	0	1	0.106	0.308	0	1	0.109	0.312	0	1	0.087	0.283	*
Early sex	0	1	0.435	0.496	0	1	0.427	0.495	0	1	0.480	0.500	*
Drinking behavior	-0.940	2.135	0	1	-0.940	2.135	0.108	1.051	-0.940	2.135	-0.272	0.818	***
Relationship with mom	-4.717	1.160	0	1	-4.717	1.160	-0.009	0.996	-4.379	1.071	0.027	1.026	0
Eat dinner w/ parents	0	7	4.662	2.438	0	7	4.765	2.390	0	7	4.043	2.630	***
Friends care	1	5	4.450	0.699	1	5	4.483	0.669	1	5	4.251	0.830	***
Depression	0	1	0.214	0.410	0	1	0.207	0.405	0	1	0.259	0.439	0
Parent Education	1	10	5.515	2.151	1	10	5.600	2.149	1	9	4.997	2.093	0
Parent Alcohol Use	1	6	1.962	1.132	1	6	1.994	1.142	1	6	1.769	1.054	**
Parent Religiosity	-2.450	0.965	0	1	-2.450	0.965	-0.130	1.032	-2.439	0.947	0.402	0.852	***
# of Adults in HH	0	9	2.246	0.900	0	9	2.286	0.885	0	8	2.005	0.950	***

**Table 2. Odds Ratio from the Event History Model of Union Behavior, Non-Black females only**

	1	2	3	4	5	6
Total entries	1.365***	1.310***	1.270**	1.245**	1.262*	1.152
Age	1.200***	1.203***	1.223***	1.232***	1.216***	1.256***
Relationship with mom		0.893**				0.951
Eat Dinner with parents		0.948***				0.985
Friends care		1.064				1.148*
Depression		1.308**				0.949
School success			0.727***			0.785***
Ever skip school			1.284**			1.130
Cognitive ability			0.991*			0.995
In school			0.630*			0.755
Behavior problems				1.103*		0.972
Night out w/out permission				1.270*		1.224†
Early sex				2.096***		1.913***
Drinking behavior				1.048		1.047
Parent education					0.873***	0.891***
Parent alcohol consumption					0.959	0.912*
Parent religiosity					0.889**	0.955
Household supervision					0.837***	0.856***
-2 log likelihood	9848.87	9758.50	9592.35	9545.09	9676.97	9326.79
F value	89.73***	29.81***	57.11***	53.92***	59.03***	30.67***

Note: \*\*\*p<.001, \*\*p<.01, \*p<.05, †p<.10 (two-tailed). 95% confidence intervals presented. 15,180 person-years based on file of 2,686 cases and 1,492 unions.

**Table 3. Odds Ratio from the Event History Model of Union Behavior, Black females only**

	1	2	3	4	5	6
Total entries	1.461***	1.419***	1.435**	1.322**	1.384**	1.281*
Age	1.255***	1.258***	1.253***	1.275***	1.263***	1.282***
Relationship with mom		0.976				1.085
Eat Dinner with parents		0.930*				0.957
Friends care		1.167				1.094
Depression		0.986				0.895
School success			0.954			1.038
Ever skip school			1.803***			1.424*
Cognitive ability			1.004			1.006
In school			3.099			3.360
Behavior problems				1.158		1.174†
Night out w/out permission				2.251**		1.980**
Early sex				1.947**		1.849*
Drinking behavior				1.084		1.033
Parent education					0.970	0.941
Parent alcohol consumption					1.181†	1.101
Parent religiosity					1.112	1.064
Household supervision					0.903	0.928
-2 log likelihood	2188.88	2185.59	2175.71	2133.43	2185.62	2112.03
F value	26.76***	17.38***	11.98***	18.72***	9.27***	20.04***

Note: \*\*\*p<.001, \*\*p<.01, \*p<.05, †p<.10 (two-tailed). 95% confidence intervals presented. 4,442 person-years based on file of 703 cases and 280 unions.



**Table 4. Odds Ratio from the Event History Model of Births, Non-Black females only**

	1	2	3	4	5	6
Total entries	1.658***	1.614***	1.522***	1.516***	1.538***	1.420***
Age	1.092***	1.095***	1.108***	1.118***	1.106***	1.140***
Relationship with mom	0.939					0.994
Eat Dinner with parents	0.972					1.011
Friends care	0.890					0.987
Depression	1.515**					1.026
School success			0.728***			0.817***
Ever skip school			1.279*			1.109
Cognitive ability			0.976***			0.981***
In school			0.366**			0.446**
Behavior problems				1.190***		1.046
Night out w/out permission				1.231		1.211
Early sex				2.458***		2.258***
Drinking behavior				0.942		0.995
Parent education					0.805***	0.850***
Parent alcohol consumption					0.955	0.914†
Parent religiosity					0.907*	0.995
Household supervision					0.812**	0.827**
-2 log likelihood	5594.19	5555.21	5380.84	5425.80	5405.78	5186.33
F value	32.29***	13.96***	37.53***	28.52***	23.36***	16.76***

Note: \*\*\*p<.001, \*\*p<.01, \*p<.05, †p<.10 (two-tailed). 95% confidence intervals presented. 17,306 person-years based on file of 2,686 cases and 681 births.

**Table 5. Odds Ratio from the Event History Model of Births, Black females only**

	1	2	3	4	5	6
Total entries	1.524***	1.502***	1.437***	1.429***	1.494***	1.406***
Age	1.045	1.047	1.051	1.061†	1.056	1.076*
Relationship with mom		0.965				1.074
Eat Dinner with parents		0.957				0.963
Friends care		0.963				0.973
Depression		1.459*				1.093
School success			0.719**			0.800†
Ever skip school			1.463*			1.157
Cognitive ability			0.988			0.990
In school			1.703			2.330
Behavior problems				1.205†		1.102
Night out w/out permission				2.332***		2.238**
Early sex				2.007***		1.945***
Drinking behavior				1.013		1.037
Parent education					0.876***	0.875***
Parent alcohol consumption					1.037	0.965
Parent religiosity					1.084	1.069
Household supervision					0.937	0.950
-2 log likelihood	2134.02	2119.06	2076.89	2065.13	2111.86	2016.19
F value	10.12***	4.81***	7.69***	7.57***	7.71***	5.90***

Note: \*\*\*p<.001, \*\*p<.01, \*p<.05, †p<.10 (two-tailed). 95% confidence intervals presented. 4,166 person-years based on file of 703 cases and 267 births.

**Table 6. Summary Table, Other Measures of Transitions**

	Non-Black Unions		Black Unions		Non-Black Births		Black Births	
	Total effect	Direct effect	Total effect	Direct effect	Total effect	Direct effect	Total effect	Direct effect
	1	2	3	4	5	6	7	8
Family Structure (1=single parent)	1.764***	1.267**	1.920**	1.549†	2.455***	1.875***	1.836***	1.685**
Total # of transitions	1.289***	1.115**	1.384***	1.254**	1.505***	1.290***	1.348***	1.316***
Total # of exits	1.409***	1.145*	1.545***	1.299*	1.699***	1.424***	1.649***	1.605***
Total # of entries	1.365***	1.167	1.461***	1.279*	1.658***	1.414***	1.524***	1.404***
Clustered transitions	1.910***	1.363**	2.280***	1.775**	2.262***	1.624***	2.047***	1.774**
Early transition	1.754***	1.414***	0.919	0.767†	2.174***	1.720***	1.462*	1.293

Note: \*\*\*p<.001, \*\*p<.01, \*p<.05, †p<.10 (two-tailed).