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Family Structure History: Links to Relationship Formation Behaviors in Young Adulthood

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Abstract

Using data from three waves of the National Longitudinal Study of Adolescent Health ($N=4,538$), we examine the intergenerational link between parental family structure history and relationship formation in young adulthood. We investigate: (a) first, whether parental family structure history is associated with young adults' own relationship formation behaviors; (b) second, which dimensions of family structure history are most predictive of children's later relationship formation behaviors; and (c) third, if the association between family structure history and young adulthood relationship formation differs by gender. Our findings provide evidence of an intergenerational link between parent relationship histories and their offspring's own relationship formation behaviors in young adulthood, over and above confounding factors.

Keywords

Family structure; intergenerational transmission; living arrangements; National Longitudinal Study of Adolescent Health (Add Health); youth/emergent adulthood

Growing up outside of a married, two-biological parent family or experiencing family structure change during childhood may have detrimental effects for youth across their life course. Although most children living in single-parent, cohabiting, or stepfamilies have positive outcomes, they are at greater risk for behavioral, cognitive, and health problems (Smock, 2000). Furthermore, youth who experience a greater number of changes in their family structure tend to have more socioemotional and behavioral problems, poorer educational outcomes, more instability in adolescent romantic relationships, and earlier sexual debut (Brown, 2006; Cavanagh, Crissey, & Raley, 2008; Cavanagh & Huston, 2008; Fomby & Cherlin, 2007; Hao & Xie, 2002; Osborne & McLanahan, 2007; Wu & Thomson, 2001).

Research also has found that the negative consequences continue to manifest themselves into young adulthood. Children of divorce or those who experienced multiple family structure transitions during childhood are more likely, as adults, to have negative attitudes towards marriage (Thornton & Camburn, 1987), poorer psychological well-being (Sigle-Rushton, 2005), lower educational and socioeconomic attainment (Aquilino, 1996; McLanahan & Sandefur, 1994), poorer self-rated health (Heard, Gorman, & Kapinus, 2008) and a greater risk of a nonmarital birth (Hill, Yeung, & Duncan, 2001; Wu & Martinson,

1993), and to form early cohabitations and marriages and experience union instability themselves (Amato, 1996; Goldscheider & Goldscheider, 1998; Teachman, 2002, 2003, 2004; Wolfinger, 2001). Relatively few of these studies that have focused on young people's own relationship formation behaviors, however, have used a comprehensive, longitudinal view of children's family structure experiences that includes parents' marriage *and* cohabitation experiences. Instead, studies that use full, longitudinal family structure histories have typically focused on child and adolescent well-being outcomes, or on young adult outcomes other than union formation.

This study helps to fill that gap by using data from the National Longitudinal Study of Adolescent Health to examine the intergenerational link between parents' union formation and dissolution behaviors and their offspring's own early relationship formation behaviors in young adulthood, hypothesizing that family structure turbulence in childhood will be associated with earlier formation of coresidential unions (cohabitations or marriages). We focus on four critical dimensions of parental family structure history (number, type, and timing of transitions, and duration of time in specific family statuses) in addressing the following research questions:

- 1) Is turbulence in family structure history associated with young adults' own relationship formation behaviors?
- 2) Which dimensions of family structure history are most predictive of children's own relationship formation behaviors in the transition to adulthood? We assess whether simpler measures of family structure history work as well as more complex measures.
- 3) Are there gender differences?

We know of no research that examines full family histories (including cohabitation), focuses on the four separate dimensions of family histories, explores union formation in young adulthood, and gives attention to gender differences, all in the same study – although we acknowledge the important research attention that has been given to several of these components separately (such as cohabitation and family structure effects on child outcomes, or gender differences in young adult union formation). The most similar work to ours is a study by Teachman (2003) in which he explores how longitudinal family structure history influences young adult marriage and cohabitation behaviors. His paper, however, uses a sample of women forming such relationships in the 1970s, 1980s, and early 1990s, and young adult union formation behaviors have changed substantially over time, with the median age at marriage increasing (U.S. Bureau of the Census, 2006) and cohabitation becoming more common. For example, by 2002, nearly 50% of all young adults had ever cohabited, compared with 41% in the 1990s (Chandra, Martinez, Mosher, Abma, & Jones, 2005). Furthermore, Teachman's work does not examine gender differences and does not examine the duration aspect of family structure history (i.e., how long youth have spent in various family forms). Thus, our paper contributes to previous research by (a) using longitudinal data on a recent cohort of youth transitioning to adulthood in the late 1990s and early 2000s; (b) exploring comprehensive measures of parental family structure history from birth through adolescence, including duration in various family statuses, as well as the number, type, and timing of changes; and (c) examining whether family structure history effects differ by gender.

Background

A life course perspective (Elder, 1985) motivates this research on the intergenerational link between parents' relationship patterns and their children's own early union formation behaviors. The life course theme of interdependent lives bears particular relevance for this

study because it emphasizes the social dynamic of linked lives—the life histories of parents shape the context in which children live and grow (Elder, 1985). For children, the family environment in which they grow up and the changes spurred by any family structure transition likely exert influences that echo throughout their childhood and adolescence and into young adulthood (Aquilino, 1996; McLanahan & Sandefur, 1994; Musick & Mare, 2006). For example, scholars have shown that childhood poverty and family structure affect one's poverty status and family structure in adulthood (Musick & Mare, 2006), and that experiencing family structure instability during childhood is associated with instability in adolescent dating relationships (Cavanagh et al., 2008). Thus, given the importance of family environment, we expect that relationship status and turbulence in the parent generation may contribute to relationship behaviors in the child generation. Past research on cohorts born in the 1950s and 1960s supports this notion, suggesting that children who lived outside of married, two-biological parent families or who experienced frequent changes in their family composition are more likely to make early, perhaps premature, transitions into adult roles. For example, they are more likely to marry or cohabit at younger ages (Teachman, 2003; Thornton, 1991).

Early Union Formation

The ever-increasing prevalence of cohabitation has made it a common mode of union formation and a normative pathway to marriage for many young adults (Kennedy & Bumpass, 2008). Recent cohorts of young people largely view cohabitation as just one stage of their life trajectories, not as a substitute for marriage (Manning, Longmore, & Giordano, 2007). Thus, in young adult years, cohabitation and marriage can be viewed as competing risks.

Regardless of whether young adults choose to cohabit or marry first, union formation at early ages is of concern because early unions, particularly cohabitations, are often unstable and are associated with an increased risk of subsequent union dissolution (Manning, Smock, & Majudmar, 2004). One-fifth of marriages and 52% of cohabitations formed by women in their teens or early 20s dissolve by age 24 (Schoen, Landale, & Daniels, 2007). In addition, coresidential union formation in the teen or early adult years is considered to be an off-time transition that interferes with schooling – the expected role for this life stage – and the role of student is considered to be incompatible with a spousal role or (less so) a cohabiting partner role (Glick, Ruf, White, & Goldscheider, 2006; Thornton, Axinn, & Teachman, 1995). However, it is important to note that recent research argues that early family formation might actually be beneficial (at least in the short term) for young adults from less advantaged backgrounds because it may remove them from harsh environments or adverse family situations at home (Booth, Rustenbach, & McHale, 2008).

Previous Family Structure History Findings

Although there is a burgeoning literature on the link between parental family structure history and young adult relationship formation, there is no consensus about which *particular* dimensions of family structure history are most salient for measuring the long-term effects on union formation, or even if multifaceted measures are necessary. The four dimensions of parental family structure history most often identified in the literature as having implications for short-term and long-term outcomes for children include the number, type, and timing of transitions, and the duration of time in various family statuses.

Several studies of child and young adult outcomes emphasize the importance of stability, or number of transitions, over family structure type (e.g., Aquilino, 1996; Cavanagh, Schiller, & Riegle-Crumb, 2006; Fomby & Cherlin, 2007; Hao & Xie, 2002; Hill et al., 2001; Wojtkiewicz, 1993; Wu & Martinson, 1993), though other scholars specify that not all types

of transitions are detrimental (Brown, 2006; Kamp Dush & Dunifon, 2007; Shaff, Wolfinger, Kowaleski-Jones, & Smith, 2008). However, the smaller body of literature that specifically examines the link between family structure history and young adult relationship formation is inconclusive about whether the *number* of transitions or the *type* of childhood living arrangement is a more important predictor of relationship formation (Teachman, 2003; Wolfinger, 2000).

Scholars who have examined the effect of *timing* in relation to young adult family formation have either found weak evidence that later transitions have a stronger effect than earlier transitions (Aquilino, 1996), or they provide evidence that age at transition is not salient at all for young adults' own union formation and dissolution, net of number and type of change (Teachman, 2002, 2003). Finally, evidence on the importance of *duration* in various family types is also mixed. Some researchers argue that the amount of time spent living in a single-parent home has no influence on child outcomes (Albrecht & Teachman, 2003; McLanahan & Sandefur, 1994), whereas others claim that the longer the time spent in a single-parent or divorced family, the more detrimental the outcomes for youth, perhaps because of prolonged lack of a positive role model for healthy relationships (Cavanagh, 2008; Chase-Lansdale, Cherlin, & Kiernan, 1995; Dunifon & Kowaleski-Jones, 2002; Hao & Xie, 2002; Heard, 2007b). Still others suggest that negative effects diminish as more time elapses since a parental union dissolution because the time allows for youth to adjust to a single-parent or stepfamily and to establish a new household stability (Amato, 1993). It is unknown how duration of time spent in specific types of families during childhood affects young adult union formation.

Theoretical Framework

As stated above, the life course perspective, with its emphasis on the importance of linked lives (Elder, 1985), provides the overall motivation for our research questions and validates the importance of examining the intergenerational influence of family structure histories. But, our specific hypotheses are informed by two other theoretical frameworks (socialization theory and the instability and change perspective) that offer an understanding about *how* each of the four dimensions of family structure history is associated with union formation in young adulthood.

The instability and change perspective guides hypotheses about the *number* and *timing* dimensions of family structure history. This theoretical perspective posits that experiencing changes in parental family structure during childhood precipitates stress for both children and parents, and that these stressors accumulate with each additional change in family composition (Amato, 1993; Martinson & Wu, 1992). The instability generated by family structure change may be disruptive by prompting changes in youth's physical environment as well as in family relationships, parental rules and expectations about behavior, and broader social networks (Amato, 2000; Astone & McLanahan, 1994). Because this perspective stresses the important influence of the cumulative effects of family structure transitions, it suggests that the total number of transitions youth have experienced will be the most salient factor influencing subsequent behavior.

The instability and change perspective also implies that adolescence is potentially a more detrimental time for transitions than early childhood because adolescence is a life phase that is already challenging for youth given other simultaneous changes they are likely to experience (i.e. changing schools, maturation, etc.) (Chase-Lansdale et al., 1995; Simmons, Burgeson, Carlton-Ford, & Blyth, 1987). Thus, this accumulation of simultaneous transitions is expected to intensify the negative effects of family structure change.

Socialization theory guides our hypotheses about the *type* and *duration* dimensions of family structure change. This theory assumes that parents function as role models and socializing agents for children (McLanahan, Astone, & Marks, 1991) and suggests that any observed intergenerational associations between family structure history and young adult relationship formation are due, in part, to single, divorced, remarried, and cohabiting parents serving as role models of weak commitment to relationships (Amato & DeBoer, 2001). Growing up in any family type other than a stable, married, two-parent family often means that children are exposed to their mother's involvement in dating and sexual relationships and cohabiting unions, and are therefore socialized to develop more liberal attitudes towards premarital sexual relationships and cohabitations (Axinn & Thornton, 1996). With respect to duration outside of a married, two-parent family, socialization theory suggests that children living in a single or cohabiting family for a greater number of years will experience prolonged exposure to role models of weak relationship commitment and, therefore, be more likely to model their mother's involvement in dating and nonmarital sexual relationships.

Gender Differences

To date, research is inconclusive in determining whether boys and girls are differentially affected by living outside a married, two-biological parent family or experiencing family structure change. Some scholars find that boys experience more adverse effects than girls when living outside a two-parent family (Cavanagh et al., 2008; Cavanagh & Huston, 2008; Tillman, 2008), yet others claim that girls in these family types engage in more risky or negative behaviors than boys (Davis & Friel, 2001; Lee, Burkham, Zimiles, & Ladewski, 1994). However, research that has examined the influence of family structure history on the formation of young adult relationships has paid little attention to gender differences. Older studies of gender differences in young adult family formation and home-leaving, however, have suggested there are stronger family structure influences on girls than boys (Glenn & Kramer, 1987; Thornton, 1991). For example, the effect of remarriage was found to be significantly stronger for daughters than for sons, but it is unclear why (Thornton, 1991). The stronger negative effects for girls may derive from the fact that, compared with boys, girls are socialized to be more attuned to relationships and they tend to form closer bonds with their mothers, making them more sensitive to the diminished emotional closeness that turbulence often brings and less trusting in future relationships (Amato, 1993).

Other Predictors of Early Union Formation

To guard against spurious associations between family structure history and relationship formation behaviors, we include in our analyses a set of controls that previous research has shown to be associated with relationship formation behaviors. These include sociodemographic characteristics, age at first sex, verbal ability, parent-teen closeness, religiosity, and substance use. Growing up in an economically disadvantaged family, early sexual debut, poor vocabulary skills, weak parent-child relationships, stronger levels of religiosity, and more delinquent behaviors (including substance use) have all been linked to early union formation behaviors (Booth et al., 2008; Raley, Crissey, & Muller, 2007; Uecker & Stokes, 2008).

Hypotheses

Based on the theoretical perspectives described above, we propose the following hypotheses:

1. Number of transitions - Experiencing any change in parental family structure during childhood, and especially multiple transitions, will be associated with forming early coresidential unions during the transition to adulthood.

2. Type - Ever living outside of a married, two-biological parent family will be associated with forming an early cohabiting union; ever living with a cohabiting parent should have an especially strong link with early cohabitation. Experiencing a parent's remarriage will be associated with greater odds of forming marital, but not cohabiting, unions.
3. Timing – We do not expect to find strong timing effects; but, if they do exist, we expect that experiencing family structure change in adolescence, rather than earlier in childhood, will be associated with forming early coresidential unions in young adulthood.
4. Duration – Cumulative time spent outside of a married, two-biological parent family as a child will be positively related to forming early coresidential unions in young adulthood.
5. Gender differences – There will be a stronger association between parental family structure history and young adult relationship formation for women than for men.

Method

Data and Sample

This study analyzed data from all three waves of the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a nationally representative, school-based study of U.S. students in 7th–12th grades in 1994–1995 (Harris et al., 2003). For Wave 1 (1995), 20,745 teens and their parents completed in-home interviews. 14,738 adolescents participated in the Wave 2 follow-up survey (1996), and almost 15,200 young adults aged 18–26 were re-interviewed for the Wave 3 (2001–2002) follow-up survey (11,621 of whom participated in all three survey waves). We use all three waves of in-home interviews and the Wave 1 parent interview to access a wealth of retrospective information on family structure history and relationship turbulence, with detailed information on the respondents' parents' relationship histories as well as relationship histories for the respondents themselves in their adolescent and young adult years. At Wave 1, *parents* provide start and end dates for their marital and cohabiting relationships dating back 18 years. In Wave 3, the *young adult* respondents provide a history of their relationships since the summer of 1995. These detailed retrospective relationship histories form the centerpiece of this paper.

Beginning with the 11,621 respondents who participated in all three survey waves, we restricted the analytic sample to 10,822 young adults who had valid sample weights. Weights were missing for 793 respondents (7%) who were not part of the initial Wave 1 probability sample (Udry, 2003). In order to examine an age-homogeneous group of 20–24 year olds at Wave 3, we included only those 6,788 respondents who were enrolled in grades 9–11 and were no older than 18 at Wave 1 (deleted $N=4,034$; 37%). Because the construction of family structure history depends upon the maternal relationship data collected in the parent survey, we eliminated respondents whose biological mothers were not interviewed for the parent survey. This included 934 respondents (14%) who had no parent questionnaire at all, as well as 528 respondents (9%) whose biological/adoptive mothers were not the respondents to the parent questionnaire and 350 respondents (7%) who did not live with their biological or adoptive mother at Wave 1 and Wave 2. Lastly, we excluded 308 respondents (6%) with widowed mothers (because we only wanted to measure parents' deliberate relationship status changes), and one respondent who was missing information for the outcome measure. Our final sample included 4,667 young adults.

Dependent variables

We used Wave 3 data to create a three-category dependent variable capturing early union formation, with mutually exclusive categories for ever married by age 20, cohabited but never married by age 20, and no coresidential union formation by age 20. Cohabitation is determined by a response of “yes” to a question asking if the respondent is currently living with a romantic partner or has lived with one in the past. Respondents who had both cohabited and married by age 20 (2%) were coded as “ever married.” We chose age 20 as the cut point for “early” because this is the age by which the first quintile of respondents is expected to form a cohabitation. Although marriage typically occurs at a later age than cohabitation and would therefore be expected to have a higher age cut-off, we must use the same age cut-off for both types of union formation because we model marriage and cohabitation simultaneously. Our choice to use age 20 to define early union formation corresponds with previous work using cut points of age 20 to capture early cohabitation (Booth et al., 2008) and age 22 for early marriage (Booth et al., 2008; Uecker & Stokes, 2008). (To test the sensitivity of our findings to our choice of age cut-off, we tested models using both age 20 and age 22 as the cut points and our findings were very similar across these ages. We use age 20 as the cut point because we believe age 22 is too high to be a valid measure of early cohabitation, as supported by the Booth et al. 2008 article cited above).

Family structure history

We constructed a detailed accounting of all maternal family structure transitions respondents experienced from birth through Wave 2, when respondents ranged in age from 13 to 19. (Because a key strength of the Add Health data is that it allows us to capture a respondent's full history of family structure transitions, we do not cap our measurement of family experience through a specific age, such as age 14 or 16. Doing so would disregard important information we have about family changes that may have been experienced after that age.) We first used the Wave 1 parent surveys in which mothers reported the start and end dates for each of their last three marital or cohabiting relationships over the previous 18 years. (Ninety-eight percent of the mothers had 3 or fewer relationships in the past 18 years.) Then, because there was no parent survey at Wave 2, we assessed family structure change between Waves 1 and 2 by relying on the child's household roster reports at Waves 1 and 2. When faced with discrepancies between Wave 1 mother and child reports, we gave preference to the mother reports because we used her reports for the other years since birth. For the small number of respondents who married ($n=6$) or cohabited ($n=81$) before Wave 2, we coded family structure history through Wave 1 only.

We examined multiple dimensions of parental family structure history, focusing on the four components most often identified in the literature as being salient for later outcomes: number, type, and timing of transitions, and duration of time in various family structure statuses. We used seven different specifications, described in detail below and depicted in Table 1.

Number of transitions

First, we created a continuous measure of the total number of transitions experienced from birth through Wave 2, capturing both the formation and disruption of mothers' marital and cohabiting unions. Second, we used a four-level categorical variable for those who experienced (a) no transitions and always lived with two married or cohabiting parents, (b) no transitions and always lived with a single mother, (c) one transition, and (d) two or more transitions (Teachman, 2002). These measures capture the cumulative stress of family change. (Less than 30 respondents had always lived with cohabiting parents from birth through adolescence, so we could not create a separate category for this situation. But, our

models are robust across three specifications: including the stable cohabiters with the stably married mothers, including them with the stably single mothers, or excluding them completely.)

Type of family structure

We measured type of family structure *transition* to differentiate experiences of union formation from union dissolution. Four dichotomous measures captured whether the respondent had ever experienced maternal marriage, maternal divorce, maternal cohabitation formation, and/or maternal cohabitation dissolution. To emphasize *status* in, rather than transitions between, family structures, we also measured type of family structure youth ever experienced. This construct used three dichotomous variables: ever lived in a single-mother family, ever lived in a cohabiting family, and ever lived in a stepfamily. It is distinct from number and type of transitions because children could have arrived in one of these family types either through a transition (i.e. divorce or remarriage), or they could have been born into these family structures and, thus, never experienced any transitions.

Timing of transitions

We examined age at last transition with a four-category measure. We compared those who experienced no transition with those who experienced their most recent transition at 0–5 years old, 6–12 years old, or 13 years or older.

Duration in various family structures

Lastly, we captured duration within various family structures using two separate measures: (a) total number of years spent living outside a married, two-biological parent family; and (b) total number of years ever spent in each of the four distinct family structure types (married, two-biological parent family; single-mother family; cohabiting family; and stepfamily). Because the time spent in each of these family structures adds up to the child's age, we excluded time in a married family as the reference group in our models (Dunifon & Kowaleski-Jones, 2002; Hao & Xie, 2002).

Controls

We controlled for six sociodemographic factors in our analyses: gender, age, race/ethnicity, and welfare receipt (all drawn from respondent reports at Wave 2), and family income and highest parental educational attainment (categorized as less than high school, high school, some college, and college graduate or higher), both drawn from parent reports at Wave 1.

We also controlled for age at first sex (never had sex; first sex at age 14 or younger; first sex at age 15 or 16; and first sex at age 17 or older), verbal ability, parent-teen closeness, religiosity, and substance use. All measures were assessed at Wave 2, except for verbal ability. Verbal ability at Wave 1 was assessed by respondents' score on a modified Peabody Picture Vocabulary Test (PVT), for which the national average is 100 (Dunn & Dunn, 1981). Parent-teen relationship quality is a four-item scale based on teen-reported characteristics of their relationship with their parents (warmth, overall closeness, satisfaction with communication, and overall satisfaction with relationship, $\alpha=.86$, range: 0–4). If two parents lived in the household, we used the average of both parents' scales; if not, we used the residential parent's score. Religiosity is a four-item index (range: 0–12) based on teen's participation in religious youth group activities, attendance at religious services, the importance of religion, and frequency of prayer. Substance use is a five-item summative index capturing whether the teen ever smoked, used marijuana, chewed tobacco, drank alcohol, or used hard drugs.

Analyses

We used multinomial logistic regression models to examine the link between family structure history and our three-category outcome measure, net of controls. We conducted these analyses in stages, entering each of the seven operationalizations of family structure history one at a time to assess their independent effects on union formation, as well as simultaneously including multiple measures and testing the difference in F values to determine if model fit improved. Lastly, we ran all models separately by gender and statistically compared the estimated effects for men and women against each other (Paternoster, Brame, Mazerolle, & Piquero, 1998) to assess whether the observed associations differ significantly across gender. All models included the control variables, and we weighted and adjusted the analyses for the data's clustered sampling design using survey estimation procedures in Stata (StataCorp, 2005). Missing values on all independent variables were imputed using the expectation maximization (EM) algorithm (Allison, 2001) in SPSS. Less than five percent of the cases were missing for most variables, with the exception of household income which had 12% missing.

Results

Descriptive Results

Table 1 presents the descriptive statistics for our sample. Five percent of young adults had ever married by age 20, 17% had cohabited but not married by age 20, and 78% had not formed a coresidential union by age 20. (The robustness of our findings when comparing multivariate models using ages 20 and 22 to define our dependent variables mitigates concern about the fact that we have a small sample of respondents who transitioned to marriage by age 20.) Women are more likely to form early cohabitations and marriages than men (20% versus 13% for cohabitations, and 8% versus 3% for marriages; not shown.) More than two-thirds of young adults had never experienced any change in family structure through adolescence, but the remaining one third had heterogeneous experiences with respect to the number, type, and timing of changes and the duration in various family structures (see Table 1).

Multivariate Results

Table 2 displays the results of the multivariate analyses, showing each of the seven sets of family structure history measures modeled one at a time. To simplify the discussion, the table displays only the estimates for the family structure measures, although the models also included the control variables previously described.

Focusing first on the full sample, the top panel of Table 2 shows the association between the continuous measure of number of transitions experienced and the dependent variable. The total number of transitions was associated only with increased odds of cohabitation by age 20 versus no union formation. Using number of transitions as a categorical variable (Panel 2) to distinguish between youth who had no transitions because they always lived with two married or cohabiting parents and youth who had no transitions because they always lived with a single mother, important differences between these two groups were revealed. Compared with those who always lived with married or cohabiting parents, both those who experienced no transitions but always lived with a single mother and those experiencing two or more transitions had greater odds of early cohabitation versus no union formation.

Panels 3 and 4 reveal that the type of transition and type of family structure status experienced matter for the formation of both early cohabitations and marriages. Experiencing the formation of a mother's new marriage was linked to higher odds of marriage by age 20 versus no union formation, whereas experiencing the dissolution of a

maternal cohabitation was associated with decreased odds of early marriage relative to early cohabitation (Panel 3). Having ever lived in a single mother family was linked with decreased odds of early marriage relative to cohabitation; in other words, those who experienced life with a single mother had a greater chance of cohabiting by age 20 than marrying (Panel 4). Having ever lived in a cohabiting family was associated with a decreased risk of early marriage (compared with no union formation and with early cohabitation), whereas having ever lived in a stepfamily was related to more than two times greater odds of forming an early marriage, relative to both no union formation and cohabitation.

Panel 5 reveals no significant differences in early union formation based on age at last family structure transition. Panel 6 indicates that the more years youth spend living outside of a married, two-biological parent household, the greater the odds of forming early cohabiting unions relative to no union. Panel 7 shows a more nuanced measure of duration by examining the number of years in specific family structures. Having lived for a longer period of time in a single-mother family was associated with higher odds of early cohabitation (relative to no union formation and to early marriage). Spending a greater duration of time in a stepfamily while growing up was linked to increased odds of early marriage compared with no union formation.

Table 2 also presents the results of the analyses separately by gender. The models by gender show that many of the significant findings presented for the full sample appear to be driven by associations for women only. Tests of significance, however, between the male and female models revealed that there are only three measures for which men and women are statistically different. For men only, having ever experienced maternal cohabitation dissolution was associated with greater odds of early cohabitation relative to no union formation. Also for men, duration of time spent in a cohabiting family was linked with lower odds of marriage compared with both no union and cohabitation. For women only, the risk of early marriage was lower (relative to cohabitation) for those who spent more time in a single mother family compared with a married, two-biological parent family.

Briefly summarizing the results for the control variables (not shown), we found that being male, older at Wave 2, non-Hispanic Black (vs. non-Hispanic White), and delaying sexual initiation until an older age were all associated with decreased odds of both early cohabitation and marriage, relative to no union by age 20. Relative to no union, odds of cohabitation were lower for Hispanics and those with greater verbal ability, higher levels of parent closeness and stronger religiosity. Higher levels of substance use were associated with increased odds of cohabitation relative to marriage and to no union. Finally, higher income was related to reduced odds of marriage (relative to no union) and being male was associated with decreased odds of marriage (relative to cohabitation).

Lastly, we explored whether model fit for the full sample improves when simultaneously including multiple dimensions of family structure history in one model. We tested nested models (not shown here) in which the type, timing, and duration dimensions of family structure history were added one at a time to a base model including number of transitions. When we added type of family structure to the base model, model fit improved slightly; the findings for the type of family structure remained stable across models, but number of transitions measure lost significance in model 2. No other nested models showed a significant improvement in model fit over the base model, nor was there an improvement in fit when number of transitions was added to base models using each of the other family structure dimensions. The findings provide limited evidence that using multiple measures of family structure history is better than using a single measure, but also suggest that type of transition experienced may be a more powerful measure than number of transitions.

Discussion

A key message to emerge from our analyses is that the long-term association between parental family structure history and young adult relationship formation behaviors depends upon the particular outcome being studied. This point is consistent with the findings of past research on child, adolescent, and young adult outcomes (Aquilino, 1996; Brown, 2006; Hill et al., 2001; Teachman, 2003).

Cohabiting Unions

Our findings suggest that the formation of early cohabiting unions is sensitive to multiple dimensions of parental family structure experiences (number, type, and duration), especially those that include spending time in a single-mother family. For example, the total number of transitions experienced is linked with greater odds of early cohabitation, but the more nuanced version of number of transitions shows that the overall association is driven by always living with a single mother or experiencing two or more transitions – which, by necessity, encompasses transitioning through a single-mother family. In addition, the duration of time in a single-mother family and having ever spent time in a single-mother or cohabiting family are also correlated with early cohabitation.

Therefore, as hypothesized, these models offer support for both socialization theory (with its focus on the importance of family structure *type* and *duration*) and the instability and change perspective (with its focus on the *number* of transitions). Our findings about the importance of number of transitions and type of family structure status closely correspond to findings from past studies (Aquilino, 1996; Hill et al., 2001; Teachman, 2003, 2004). The duration dimension of family structure history has not been well-studied by other scholars investigating cohabiting unions (e.g., Teachman, 2003, 2004; Wolfinger, 2001); thus, we know of no other research which has found that the duration of time in a single-mother family is associated with greater odds of early cohabitation, although some work has shown a positive association between duration outside of a married, two-parent family and adverse child outcomes, especially for Whites (see Dunifon & Kowaleski-Jones, 2002; Hao & Xie, 2002; Heard, 2007a).

Socialization theory suggests that children growing up in single-mother or cohabiting families are exposed to role models for weak commitment to relationships (Amato & DeBoer, 2001; Thornton & Camburn, 1987) and, therefore, are likely to form less committed relationships themselves, such as early cohabitations. Alternatively, people sometimes do not marry because they do not have the perceived financial means considered to be prerequisites for marriage (Edin, Kefalas, & Reed, 2004). For others, early family formation is seen as advantageous because it represents a path out of harsh environments or adverse family situations at home (Booth et al., 2008). Since youth growing up with single or cohabiting mothers or with multiple family changes often have lower socioeconomic resources and more stressful environments than those growing up in two-parent families (McLanahan & Sandefur, 1994), it may be the lack of resources that influences young adults to cohabit rather than marry or it may be the desire to leave one's current family situation that spurs cohabitation at an early age.

Another plausible explanation for why family structure arrangements in childhood affect early cohabitations centers upon the role of adolescent relationships, which are known to be influenced by parental relationship histories. For example, children who experience a family disruption are more likely to form and dissolve romantic adolescent relationships (Cavanagh et al., 2008) and to have multiple sexual partners in adolescence (Kirby, Lepore, & Ryan, 2005). In turn, teens who engage in nonromantic adolescent sexual relationships are more likely to form cohabiting unions, but not marriages, in early adulthood (Raley et al., 2007).

Adolescent relationships form a foundation for relationships later in the life course by providing training for intimacy (Florsheim, 2003); thus, if teens engage in multiple short-term or nonromantic relationships which often lack the intimacy of more committed romantic relationships, then they are likely to follow suit by choosing often less stable cohabitations (Smock 2000; Schoen et al., 2007) over marriage in early adulthood.

Marital Unions

Experiencing life in a stepfamily during childhood is the primary feature of family structure history associated with increased risk of early marriage during young adulthood. This result is evident using all three operationalizations of stepfamily life (experiencing mother's transition to a new marriage, ever living in a stepfamily, and number of years in a stepfamily), reflecting both type and duration of family structure experience. The findings fit closely with socialization theory's emphasis on the importance of *type* of family structure status and transitions, as well as *duration* outside of a married, two-biological parent family. In addition, they are consistent with previous research showing a link between experiencing parental remarriage and greater odds of forming early marriages (Goldscheider & Goldscheider, 1998; Teachman, 2003, 2004). Thus, as hypothesized, it appears that experiencing a parent's (re)marriage promotes role modeling of marital behavior, perhaps because living with a stepparent may socialize youth to have a renewed, positive perspective on marriage (Axinn & Thornton, 1996).

Overall, our results for both the cohabitation and marriage analyses are consistent with Teachman's (2003) study of childhood living arrangements and age at first marriage or cohabitation. Both our study and Teachman's work reveal stronger effects of parental family histories for cohabitation than for marriage formation, showing that multiple dimensions of family structure matter for cohabitation whereas stepfamily experience is the primary family structure experience correlated with early marital formation for young adults. Although our work and Teachman's are based on different datasets (Add Health vs. National Survey of Family Growth 1995, respectively), reflecting young adult cohorts from different time periods (2001 and 1995), and representing different gender compositions (both genders vs. women only), the similarities between findings from these two studies strengthen the evidence that there does indeed appear to be a strong intergenerational transmission of the effects of parental family structure on the formation of young adult marital and cohabiting relationships.

Gender Differences

Our study further extends Teachman's work by assessing gender differences in family structure effects. Although an initial glance at the results shows that more variables reach significance for women than for men, tests of significance across these gender models reveal only three measures that show statistical differences between men and women. Therefore, contrary to our hypothesis, we found no strong evidence that the effects of parental family structure history on offspring's own relationship formation behaviors are stronger for women than men. Because similar studies of early union formation have not examined gender differences, further research comparing men and women is warranted to evaluate the validity of our findings and to determine if the scarcity of gender differences is replicated in other studies. It may be that a lack of precision in the estimates is contributing to the few significant differences by gender we observed.

Methodological Findings

In general, our study supports the notion that more nuanced measures provide us with important information that would be missed if we used simpler measures. A more nuanced, categorical measure (as suggested by Teachman, 2002) shows that stability itself is not

enough to protect youth from forming early cohabiting unions - it is stability in a *married-parent* family that is vital. Similarly, examining the duration of time lived within *particular* alternative family structure settings provides more in-depth information than simply assessing duration of time outside a married, two-biological parent family.

We find only weak evidence, however, that using multiple measures of family structure history is better than using a single measure in determining the association between parental family structure experience and relationship formation during the transition to adulthood. Adding family structure type to the model with number of transitions improved model fit slightly. This suggests that, although using one measure may be sufficient, researchers may want to consider including both number of transitions and type of family structure experienced, where possible - at least with respect to studying young adult union formation.

Limitations

Although we believe our work offers important contributions to the existing literature, we acknowledge the weaknesses that exist. First, our study excludes youth living in households without a biological mother present and those whose parents did not complete a parent survey. Analyses (not shown) indicate that our sample therefore somewhat underrepresents older youth, minorities, and youth with low education mothers. Our analyses also likely underrepresent children who have experienced the most family structure change (i.e., those living in father-only families or with no parents) and probably produce somewhat conservative estimates of the effects of family structure history. Second, we do not account for education and labor force participation trajectories that are likely related to family structure history and also key in shaping young adults' lives and relationship decisions. For example, experiencing multiple family structure transitions is associated with reduced educational attainment and accelerated entry to the labor force (Aquilino, 1996), and school enrollment is known to slow young adult transitions to marriage and cohabitation (Thornton, Axinn, and Teachman, 1995). Future research that accounts for these factors would make an important contribution to the field. Third, our research would benefit from a history of family economic status to map onto the family structure history. Unfortunately, such information was unavailable in our data, although we did include a measure of welfare receipt history to approximate income history.

Conclusions

Our work is important in confirming Teachman's findings (2003) using a newer data set and a more recent cohort of young adults that includes men as well as women. In addition, it offers new insights by extending Teachman's work to include attention to the duration dimension of family structure history and to investigate gender differences. In sum, our study supports the general hypothesis that there is an intergenerational link between parent relationship histories and their offspring's own relationship formation behaviors in young adulthood. Understanding how parental family structure history may have intergenerational connections with the relationships young people choose may help prevent intergenerational cycles of family turbulence, thus improving outcomes across the life course for future generations.

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Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524 (www.cpc.unc.edu/addhealth/contract.html).

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Table 1

Weighted Descriptive Statistics (N=4,667).

Variables	M	SD	Range
Union Formation by Age 20			
Married	5.4%	0.23	0 – 1
Cohabited	16.9%	0.37	0 – 1
No union formation	77.7%	0.4	0 – 1
Family Structure History Measures			
Number of transitions experienced-continuous	0.7	1.2	0 – 6
Number of transitions experienced-categorical			
0 transitions: always lived with 2 married or cohabiting	64.6%	0.5	0 – 1
0 transitions: always lived with single mother	3.2%	0.2	0 – 1
1 transition	12.6%	0.3	0 – 1
2+ transitions	19.9%	0.4	0 – 1
Type of transitions experienced			
Ever experienced maternal marriage	17.1%	0.4	0 – 1
Ever experienced maternal divorce	24.0%	0.4	0 – 1
Ever experienced maternal cohabitation formation	9.2%	0.3	0 – 1
Ever experienced maternal cohabitation dissolution	7.0%	0.3	0 – 1
Type of family structure status experienced			
Ever lived in a single mother family	35.5%	0.5	0 – 1
Ever lived in a cohabiting family	10.6%	0.3	0 – 1
Ever lived in a stepfamily	16.4%	0.4	0 – 1
Age at last family structure transition			
No transition	68.5%	0.5	0 – 1
0 – 5 years (ref)	6.6%	0.3	0 – 1
6 – 12 years	10.8%	0.3	0 – 1
13+ years	14.0%	0.3	0 – 1
Number of years lived outside married 2-bio parent family	4.7	7.0	0 – 19
Cumulative time spent in various family types			
Number of years ever in a married, 2-bio parent family	12.1	6.9	0 – 20
Number of years ever in a single-mother family	2.8	5.1	0 – 20
Number of years ever in a cohabiting family	0.6	2.4	0 – 19
Number of years ever in a stepfamily	1.4	3.8	0 – 19
Control Variables			
Male	49.1%	0.5	0 – 1
Age at Wave 2	16.7	1.0	14 – 20
Race/Ethnicity:			
Non-Hispanic White (ref)	69.2%	0.5	0 – 1
Non-Hispanic Black	13.2%	0.3	0 – 1
Hispanic	11.9%	0.3	0 – 1
Non-Hispanic other	5.7%	0.2	0 – 1

Variables	M	SD	Range
Family income	\$50,147	\$49,803	\$0–999,000
Mother received welfare at Wave 2	11.9%	0.3	0 – 1
Parents' education			
Less than high school	9.8%	0.3	0 – 1
High school or equivalent (ref)	28.6%	0.5	0 – 1
Some college	22.4%	0.4	0 – 1
Bachelor's degree or higher	39.2%	0.5	0 – 1
Age at first sex			
Never had sex	53.2%	0.5	0 – 1
< = 14	10.1%	0.3	0 – 1
15 – 16	21.1%	0.4	0 – 1
> = 17	15.6%	0.4	0 – 1
Verbal ability	103.3	14.2	14 – 137
Parent-Child closeness	3.1	0.7	0 – 4
Religiosity	6.3	4.0	0 – 12
Substance use	1.7	1.4	0 – 5

Table 2

Relative Risk Ratios from Multinomial Logit Models, Showing Association Between Family Structure Variables and Dependent Variables (N=4,667)

	Full Sample			Male			Female		
	Married (vs. no union formation) by age 20	Cohabited (vs. no union formation) by age 20	(3)	Married (vs. no union formation) by age 20	Cohabited (vs. no union formation) by age 20	(2)	Married (vs. no union formation) by age 20	Cohabited (vs. no union formation) by age 20	(1) (2) (3)
Family Structure History									
1. Number of transitions (continuous)	1.02	1.12*	0.91	1.17	1.13	1.03	0.97	1.11	0.87
F value	18.71	18.71	18.71	4.37	4.37	4.37	10.94	10.94	10.94
df	38	38	38	36	36	36	36	36	36
2. Number of transitions experienced (categorical)									
0 transitions: always lived with 2 married or cohabiting parents (ref)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
0 transitions: always lived with single mother	0.97	1.95*	0.50	1.74	1.47	1.18	0.82	2.32*	0.36
1 transition	1.08	1.16	0.93	0.70	1.08	0.65	1.21	1.28	0.95
2+ transitions	0.92	1.41*	0.65	1.07	1.27	0.84	0.88	1.58*	0.56
F value	16.49	16.49	16.49	4.57	4.57	4.57	9.40	9.40	9.40
df	42	42	42	40	40	40	40	40	40
3. Type of transition experienced									
Ever experienced maternal marriage (vs. never)	2.15**	1.24	1.73	1.71	1.01	1.70	2.33**	1.45	1.62
Ever experienced maternal divorce (vs. never)	0.66	0.96	0.69	0.93	0.90	1.02	0.60	0.99	0.61
Ever experienced maternal cohabitation formation (vs. never)	0.88	1.20	0.73	1.25	0.87	1.43	0.84	1.55	0.54
Ever experienced maternal cohabitation dissolution (vs. never)	0.31	1.21	0.25*	0.28	2.39*a	0.12	0.27	0.72	0.38
F value	17.63	17.63	17.63	5.24	5.24	5.24	13.51	13.51	13.51
df	44	44	44	42	42	42	42	42	42
4. Type of family structure status experienced									

	Full Sample			Male			Female		
	Married (vs. no union formation) by age 20	Cohabited (vs. no union formation) by age 20	Married (vs. cohabited) by age 20	Married (vs. no union formation) by age 20	Cohabited (vs. no union formation) by age 20	Married (vs. cohabited) by age 20	Married (vs. no union formation) by age 20	Cohabited (vs. no union formation) by age 20	Married (vs. cohabited) by age 20
Family Structure History	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Ever lived in a single mother family (vs. never)	0.70	1.27	0.56*	0.73	1.20	0.61	0.69	1.33	0.52*
Ever lived in a cohabiting family (vs. never)	0.42*	1.17	0.36**	0.62	1.47	0.42	0.36*	1.01	0.35*
Ever lived in a stepfamily (vs. never)	2.34**	1.05	2.31**	2.08	0.77	2.72	2.57**	1.35	1.91*
<i>F</i> value	17.49	17.49	17.49	5.12	5.12	5.12	10.56	10.56	10.56
<i>df</i>	42	42	42	40	40	40	40	40	40
5. Age at last family structure transition									
0: no transition	0.73	0.89	0.81	1.48	0.65	2.27	0.67	1.20	0.56
0–5yrs (ref)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
6–12yrs	0.59	1.22	0.48	1.48	0.63	2.33	0.53	2.14*	0.25*
13+ yrs	0.70	1.06	0.66	1.38	0.75	1.84	0.67	1.51	0.44
<i>F</i> value	16.03	16.03	16.03	4.30	4.30	4.30	11.07	11.07	11.07
<i>df</i>	42	42	42	40	40	40	40	40	40
6. Number of years lived outside married 2-bio parent family									
Number of years lived outside married 2-bio parent family	1.00	1.02*	0.98	1.02	1.00	1.02	1.00	1.04**	0.96
<i>F</i> value	18.60	18.60	18.60	4.01	4.01	4.01	10.51	10.51	10.51
<i>df</i>	38	38	38	36	36	36	36	36	36
7. Cumulative time spent in various family types									
# of years ever in a married, 2-bio family (ref)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
# of years ever in a single-mother family	0.97	1.03*	0.94*	1.04	1.01	1.03	0.94	1.04*	0.91**
# of years ever in a cohabiting family	0.90	0.99	0.92	0.54* <i>u</i>	1.02	0.53* <i>u</i>	0.94	0.96	0.98
# of years ever in a stepfamily	1.05**	1.01	1.04	1.00	0.98	1.02	1.07	1.04*	1.03
<i>F</i> value	17.22	17.22	17.22	3.92	3.92	3.92	11.30	11.30	11.30

