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The Adolescent Family Environment and Cohabitation across the Transition to Adulthood

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Abstract

This study draws upon a sample of men and women from Waves I and IV of Add Health to examine the linkages between the adolescent family environment and cohabitation behavior across the transition to adulthood. Using event history modeling the current paper considers the association between a variety of family factors and both the timing of first cohabiting unions and their outcomes (marriage, break up, still cohabiting). This paper also considers whether the impact of predictors for cohabitation timing and outcomes varies depending on the age of individuals. Results indicate that exposure during adolescence to family instability, parental cohabitation, lower parental SES, and low family belonging were associated with an elevated likelihood of entering into cohabiting unions, but primarily during adolescence and early adulthood. Family factors, including family belonging and parental relationship history, were also associated with the outcomes of first cohabitations.

Keywords

Cohabitation; Union Transitions; Transition to Adulthood; Marriage; Family Environment

1. Introduction

Non-marital cohabitation has become an increasingly common part of the American life course. Rates of cohabitation have increased substantially over the past few decades, with the majority of adults now having spent at least some time in a cohabiting union (Goodwin, Mosher, & Chandra, 2010; Manning, Brown & Payne, 2014). Cohabitation has also surpassed marriage as the most common context of first coresidential romantic unions (Kennedy & Bumpass, 2008). The age when individuals enter into a first coresidential union, however, appears to shape outcomes in other domains, with early entrance into cohabiting unions associated earlier childbearing (Manning & Cohen, 2015) and higher rates of serial cohabitation (Cohen & Manning, 2010). Given the increasing salience of cohabiting unions for the individual life course as well as broader demographic trends in the American

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family, it is important to advance our understanding of what contributes to when people first cohabit and the stability of these unions.

Various characteristics of the family environment during adolescence may shape offspring's behavior within romantic partnerships. Looking at how more distal family experiences are associated with individuals' first coresidential romantic unions will deepen our understanding of the reach of earlier family experiences for later behavior. The current study examines several family characteristics during adolescence and their association with the timing of entrance into and stability of first cohabiting unions. To the best of my knowledge, this is the first study that considers whether the impact of family factors on cohabitation formation and stability is proportional over time. That is, do experiences in the family of origin influence the likelihood of entering into a cohabiting union in the same way during adolescence and through young adulthood? Are these factors associated with the stability of cohabiting unions and the likelihood of making transitions in similar ways regardless of the age when that union was formed? Additionally, the current study examines the cohabiting experiences of both men and women, while much prior research has focused solely on the experiences of young women. Using nationally representative data from waves I and IV of the *National Longitudinal Study of Adolescent to Adult Health*, the current study employs a competing-risk discrete time event history framework to examine the timing and stability of first cohabiting unions for men and women.

1.1 Background

There are several push and pull factors that might influence whether and when individuals begin cohabiting with a partner for the first time, as well as the trajectory the relationship takes, whether and when cohabiting partners break up or transition to marriage. While more contemporaneous factors may shape these relationship decisions, such as socioeconomic status and childbearing (e.g. Brien, Lillard & Waite, 1999; Kennedy & Bumpass, 2008), experiences within the family of origin may also influence youth's behavior when forming their first coresidential romantic relationships as well as the stability of these unions.

Adolescence is an important time to examine the roots of later romantic relationship behavior. Experiences in the family environment during this period may continue to influence offspring's later behavior within romantic relationships, through their influence on offspring's social and economic circumstances and on their development of individual characteristics and relationship skills (Bryant & Conger, 2002). Parental socioeconomic resources have been linked with offspring union behavior, with individuals from lower SES backgrounds having a higher likelihood of cohabiting (Schoen, Landale, Daniels & Cheng, 2009), and more likely to start cohabiting or marry at earlier ages (Axinn & Thornton, 1992; Wilk, 2009). Research largely finds that individuals from non-intact family backgrounds have an increased likelihood of cohabiting, and do so at earlier ages (Amato & Kane, 2011; Ryan, Franzetta, Schelar & Manlove, 2009; Sassler, Cunningham & Lichter, 2009). Research also finds that individuals who have experienced a parental divorce have more negative views about marriage (Riggio & Weiser, 2008). While some research suggests that parental divorce is more influential on the probability of offspring cohabitation than marriage (Thornton, 1991), other research finds that parental divorce increases the risk of

either partnership (Kiernan & Hobcraft, 1997). Youth who were exposed to family instability and more parental relationship transitions growing up are more likely to have their transition to adulthood characterized by experiences of cohabitation and parenthood (Fomby & Bosick, 2013). Research also suggests that individuals who have a parent who has lived in a cohabiting union are more likely to cohabit themselves (Sassler et al., 2009; Smock, Manning & Dorius, 2013). There is some suggestion that people who cohabit at relatively young ages (20) compared to those who date in non-residential relationships come from more conflictual and less supportive family environments (Conger, Cui, Bryant & Elder, 2000; Ryan, et al., 2009). Lacking support in the family environment, therefore, may increase the likelihood that youth enter into coresidential unions at earlier, and potentially less normative, ages. This body of research highlights that several dimensions of the family environment, (family structure, socioeconomic status, exposure to instability and parental cohabitation, and family belonging) are associated with the union formation behavior of offspring.

We know less about the role of prior family experiences for cohabitation outcomes. Research finds that cohabiting women who grew up in a two-biological parent family structure throughout childhood are more likely to make the transition to marriage (Bramlett & Mosher, 2002) while women who grew up in a single-parent family are more likely to separate (Manning, 2004). Individuals who were exposed to more family transitions growing up also reported less relationship satisfaction in their cohabiting unions (Sassler et al. 2009), which suggests that exposure to family instability may contribute to instability in cohabiting relationships. Close and involved relationships with parents during adolescence are associated with greater social competence in adolescence and young adulthood (Smetana, Campione-Barr & Metzger, 2006) and more supportive and less hostile relationships with romantic partners (Collins, Welsh, & Furman, 2009; Conger et al., 2000). Having a greater sense of cohesion or belonging to the family during adolescence has also been linked with greater intimacy in young adults' relationships (Feldman, Gowen & Fisher, 1998). And adolescents whose relations with their parents are characterized by more negative interactions tend to have worse conflict management skills in their later romantic unions (Linder & Collins, 2005). Therefore, having a strong parent-child bond growing up and feeling a sense of belonging to one's family may positively shape the development of relationship skills in ways that promote commitment and stability in romantic relationships, reducing the likelihood of union dissolution. This body of literature suggests that several dimensions of the earlier family environment (family structure, belonging, socioeconomic status, exposure to instability and parental cohabitation) may also influence the stability of offspring's cohabiting relationships, whether and when they make the transition into marriage or break up.

1.2 Conceptual Framework

Together this research suggests that the family environment acts as a launching pad for youth that shapes their behavior in romantic partnerships, both in forming unions and the stability of these unions thereafter. However, it is not clear whether the influence of these family factors remains consistent over time, across adolescence and young adulthood; the strength of these influences may wane as youth transition into adulthood. In the progression across

the life course, the salience of various experiences and contexts for development and behaviors may shift (Elder & Shanahan, 2006). While some experiences may guide behavior across the life course in a continuous and cumulative manner, the influences of other experiences are more localized in time and limited in their reach. Life course researchers suggest that the timing of experiences in the life course impacts development, but this might also reflect a shifting influence of events depending on their recency (Shanahan, 2000).

The life course perspective also highlights the importance of age in structuring expectations for behavior (Settersten, 2004). Life course transitions, such as entrance into marital or cohabiting unions, may be considered “off-time” if they occur outside of typical statistical patterns or socio-cultural norms of behavior. Union formation trends point to a continued delay in age at first marriage, with earlier ages at first cohabitation (Manning et al., 2014). This indicates that the age-graded patterns of marriage and cohabitation are different, as are social definitions of “off-time” union formation. Transitions that interfere with the expected social roles and behavior of a given age period may also become characterized as “off-time”. For example, taking on the role of a spouse or cohabiting partner during adolescence and early adulthood may interfere with schooling and conflict with the social role of a student (Glick, Ruf, White, & Goldscheider, 2006; Thornton, Axinn, & Teachman, 1995). The transition into a coresidential union also occurs from different contexts depending on the timing. Transitions into a cohabiting or marital union during adolescence are more likely to occur from out of the family home, while transitions later in adulthood are more likely to occur from independent living (e.g. Buck & Scott, 1993). Therefore, dimensions of the family environment (e.g. socioeconomic resources, sense of family support, exposure to parental marital conflict, family instability) may be more salient for the decision to enter into a coresidential union during adolescence and early adulthood, becoming less influential on union formation as youth age.

As the transition to adulthood is marked by increased individuation, the influence of family resources and prior experiences for offspring behavior may be reduced across this transition, particularly as youth gain more social and economic autonomy which may render earlier family contexts less impactful (Smetana, et al., 2006). The influence of other family experiences may be more enduring. The family is an important agent of socialization as youth observe and internalize models of behavior around them, including the nature of romantic relationships (Amato & DeBoer, 2001; Bryant & Conger, 2002; Starrels & Holm, 2000). However, it is not clear how long into adulthood these different models of behavior in the family continue to be influential on the behavior of offspring. Some research suggests that family structure arrangements can have a powerful impact on individual's attitudes towards marriage in ways that continue to impact their union formation choices further into adulthood (South, 2001). Other research finds evidence of a diminished impact of prior family experiences on offspring union formation behavior, finding that exposure to parental divorce increases the likelihood of marriage among youth during adolescence up until age 20, but at older ages differences in the likelihood of marriage by parental divorce are reduced (Wolfinger, 2003). South (2001), however finds that family structure during adolescence had a consistent impact on the likelihood of offspring marriage across age, while the impact of family socioeconomic resources became less influential over time. Though prior research suggests that the impact of certain family experiences on marital

behavior shift as individuals age, to the best of my knowledge research has not yet examined the shifting influence of family factors on cohabitation behavior across the transition to adulthood.

Drawing on the life course perspective I propose several hypotheses. Given the shifting impact of earlier experiences across the life course, earlier experiences within the family, particularly those that elevate stress or contribute to disadvantages during adolescence, such as family instability and low socioeconomic status, are hypothesized to be associated with an elevated likelihood of exiting the family home and entering cohabiting unions at ages when such family experiences have greater temporal proximity (e.g. adolescence and early adulthood). Over time as youth age, these adolescent family disadvantages are hypothesized to become less influential on cohabitation behavior. Therefore it is also hypothesized that the adolescent family experiences will be more influential on the stability of cohabiting unions that are entered into during adolescence compared to those that were entered into later in adulthood.

The current study examines the long-term influence of adolescent relations within the family on the timing and stability of their first cohabiting relationships. By examining how earlier family experiences during adolescence influence later relationship formation and stability and whether the influence of prior experiences on cohabitation behavior shifts over time, this study sheds light on life course processes linking adolescence and young adulthood.

2. Data and Methods

2.1 Data & Sample

Data analysis was conducted using Waves I and IV of the National Longitudinal Study of Adolescent to Adult Health (Add Health), a nationally representative school-based survey of adolescents in grades 7 through 12 on their health and health-related behavior (Harris et al., 2009). The study commenced during the 1994-1995 academic year, with over 90,000 students completing an in-school questionnaire and 20,745 of these adolescents also completing at-home questionnaires. A portion of this sample also had a parent, predominantly the mother, fill out a parental questionnaire ($n = 17,670$). In 2007 and 2008, a fourth wave of data-collection took place with in-home interviews of original respondents, who were then adults between the ages of 24 and 32 ($N = 15,701$).

The analytic sample for the current study is restricted to individuals who participated at both Wave I and Wave IV who had a valid sample weight ($n = 14,800$). Individuals who said they had cohabited or married but were missing important date information to determine timing and type of first union were excluded (year of union formation event; $n = 662$). Individuals whose first residential union was homosexual were also excluded from the analytic sample ($n = 258$), given that people in same-sex relationships faced legal restrictions in access to marriage. Finally, individuals who entered into a union at age 15 or earlier ($n = 206$) were excluded from the analytic sample, given legal restrictions on the age at marriage (typically age 16 with parental consent). After these exclusions the final analytic sample for the first set of analyses was 13,674 individuals who were single at age 15 and at risk of entering into their first coresidential union. The second set of analyses examining the outcome of first

cohabiting unions was further restricted to the subset of individuals from the first sample whose first union was a cohabitation ($n = 8,876$). After excluding a small number of individuals who were missing important date information on union duration ($n = 54$) the sample size for the second set of analyses was 8,822 men and women whose first union was a cohabitation. Multiple imputation procedures were used to handle missing data on independent variables. Analyses used appropriate weighting and adjustments for stratification and clustering to account for the complex survey design of Add Health, using the `svy` command in Stata 13.

2.2 Measures

Dependent Variables—The dependent variable for the first set of analyses is type of first residential union formed, if any. Information on the respondents' romantic relationship histories collected at Wave IV was used to identify the first union, and type of union. The unit of analysis was the person-year of observation. The 13,674 respondents in the sample contributed a total of 121,035 person years. The dependent variable, first residential union, is categorical and was coded as 0 “single (never married/cohabited)”, 1 “marriage”, or 2 “cohabitation”. Individuals who had not married or cohabited by Wave IV were censored and their age at the Wave IV interview was used as their final person-year observation. Tests of the functional form indicated that the baseline hazard could be categorized into four distinct age groups reflecting adolescence (age 15-18), early adulthood (19-23), the mid-twenties (24-28), and the late-twenties/early-thirties (ages 29-33), to capture the changing hazard of union formation.

The dependent variable for the second set of analyses is the union-transition, break up or marriage, of individuals out of their first cohabiting relationship. Using Wave IV romantic relationship histories, relationship-specific information on the date of marriage or date of breakup (if applicable) were obtained and ordered to determine the first relevant relationship transition experienced by individuals in their first cohabiting relationship. The unit of analysis for the cohabitation outcome analyses was person-month of observation, with the 8,822 respondents in the analytic sample contributing 228,577 person-months. The dependent variable, cohabitation outcome, is categorical and was coded as 0 “still together (cohabiting)”, 1 “married”, or 2 “broken up”. Individuals who were still cohabiting with their first cohabitation partner at Wave IV were censored and considered “still together”. When testing the functional form of the baseline hazard, a measurement schema of duration captured in six-month increments for the first three years (e.g. months 1-6, months 7-12, months 13-18, months 19-24, months 25-30, months 31-36), and then in one year increments for the remaining duration years was identified as the best fitting and most interpretable specification of the changing hazard of cohabitation transitions.

Given that the nature and meaning of making a transition to legal marriage or dissolving a cohabiting union is likely quite different in long-term cohabitations compared to cohabitations of shorter duration, the current analyses focuses on transitions that occurred within the first seven years of a cohabiting union. The small proportion of the sample who did make a transition after year seven ($n = 200$) were included in the analytic sample, but they were considered as “still together” in a union. Therefore, the period of risk examined

was from the month when the respondent first began cohabiting up until they made a transition to marriage or break up, were interviewed at Wave IV while still cohabiting, or until the first month of year seven.

Family Factors—Several dimensions of the adolescent family environment are examined in the current study including: family belonging, parental marital quality, family structure, parental relationship history, and the family socioeconomic environment. These predictors were measured as time-constant variables, with the values from Wave I assigned for each person-year or person-month of observation. Descriptive information on the ranges, means/proportions, and standard deviations for all variables are presented in Table 1.

Family Belonging: The sense of belonging to their family respondent's felt during adolescence was measured using a scale of four variables which asked adolescent respondents at Wave I how much they felt that their family pays attention to them, people in their family understand them, they want to leave home, and they and their family have fun together (1 = not at all, 5 = very much; $\alpha = .76$). This scale has been used previously by family scholars examining family belonging (King, Boyd, & Thorsen, 2015; King & Boyd, 2016). Early analyses examining the associations between family belonging and union formation and stability suggested that these associations were non-linear; differences were greatest comparing those with particularly low levels of family belonging to others, when treating this variable as a continuous measure the incremental effects across the range of family belonging were not clear. Therefore, the mean level of family belonging and standard deviation from the mean for three groups of respondents by age at Wave I (age 11-14, 15-16, 17-21) were used to construct a dichotomous age-adjusted measure. Individuals were divided into those with “low family belonging” (16%; one standard deviation below the age-adjusted mean; “1” reference group), and those with “average-to-high family belonging”.

Family Structure & Parental Marital Quality: Information about household structure and the quality of residential parental marital relations during adolescence was used to assess the influence of both family structure and parental marital relations on offspring union behavior in young adulthood. A similar measurement schema has previously been employed by family scholars interested in the joint influence of family structure and parental marital quality (Amato & Kane, 2011). Two questions from the Wave I parent interview were used to capture positive and negative dimensions of residential parents' marital relationship: marital happiness and conflict. These questions were: “On a scale of 1 to 10, how would you rate your relationship with your spouse/partner?” (1 = completely unhappy, 10 = completely happy), and “How much do you fight or argue with your spouse/partner?” (1 = a lot, 2 = some, 3 = a little, 4 = not at all). Parents who provided a rating of 7 or less on the happiness question and a 1 or 2 on the conflict item were labeled as “distressed”. Along with information from the household roster this information was used to construct a categorical variable of family structure with 6 categories: 1) married biological parents, low distress (49%; reference group), 2) married biological parents, high distress (8%), 3) married step parents, low distress (11%), 4) married step parents, high distress (2%), 5) single parent (22%), 6) other family form (8%; including cohabiting step parents).

Maternal Relationship History: Information from the Wave I parental questionnaire was used to construct two measures of parental romantic behavior that respondents were exposed to growing up: parental cohabitation and number of mother's prior relationships. A series of questions in the parental questionnaire asking the responding parent about their coresidential relationships in the past 18 years were used to construct these measures. *Parental Cohabitation* is a binary indicator of whether the respondent's biological mother ever cohabited in the past 18 years. Youth whose biological mother reported that at least one of their last three relationships in the past 18 years was a cohabiting relationship were given a one indicating exposure to parental cohabitation (17%). Youth who did not have a parent fill out a questionnaire, or whose questionnaire was filled out by a non-biological parent were given a one for exposure to parental cohabitation if they reported living with cohabiting parents in the Wave I household roster. *Number of mother's prior relationships* is a count variable indicating the number of coresidential relationships that the respondent's biological mother reported having in the past 18 years. Three categories were created for the number of mother's prior relationships: one or fewer (72%), two relationships (19%), and three or more relationships (9%).

Parental Education: Family socioeconomic status during adolescence was assessed using a measure of parental education. This variable captures the highest level of maternal educational attainment with information from the Wave I parent questionnaire. Paternal educational attainment was used when the respondent did not have a residential mother. These categories included: (1) less than a high school education (16%, reference category), (2) a high school education (38%), (3) some college education (21%), or (4) a Bachelor's degree or higher (26%).

Additional predictors of union formation and stability—Prior research suggests that several other experiences of individuals are associated with their behavior within coresidential romantic relationships including: adolescent sexual behavior (Raley, Crissey, & Muller, 2007), childbearing (Brien, Lillard & Waite, 1999; Manning, 2004), and educational attainment (Kennedy & Bumpass 2008; Manning, 2004). Furthermore, earlier family experiences are also influential on offspring sexual behavior, childbearing behavior, and educational attainment (Amato, et al., 2008; Kotchick, Shaffer, Forehand, & Miller, 2001; Sandefur & Wells, 1999), potentially in ways that help to explain later union formation behavior (e.g. adolescent sexual experiences help mediate the association between parental divorce and cohabitation formation; Kiernan & Hobcraft, 1997).

The current study therefore controls for adolescent sexual behavior, parental status, and educational attainment. *Adolescent Sexual Behavior* was captured by a measure of the number of sexual partners a respondent retrospectively reported having had before age 18 at the Wave IV interview. The count variable was transformed into a three group categorical variable: no sexual partners before age 18 (33%), one or two sexual partners before age 18 (35%), and three or more sexual partners before age 18 (32%). Information on the childbearing history of respondents was collected retrospectively at Wave IV using a detailed fertility calendar to determine the birthdates of all live births and create a time-varying construct of *parental status*. Respondents were coded “1” for being a *parent* in the

person-years or person-months that corresponded with when they had a living child and zero otherwise; once respondents were coded as a parent they remained so at all future time points. Information on the educational history of respondents collected at Wave IV (degrees earned and year of degree completion) was used to construct the *educational attainment* variable as a time-varying construct. For every person-year or person-month of risk exposure that the respondent may experience a censoring event (cohabitation or marriage in the first analyses, break up or marriage in the second) they are given a value for their educational attainment up until that time point: less than a high school degree, high school degree, Associate's degree, or Bachelor's degree and beyond.

Two demographic variables were also used as controls in both sets of analyses, race and gender. *Race* was a time-constant variable measured at Wave I with four categories: non-Hispanic white (68%), non-Hispanic Black (16%; reference group), Hispanic (12%), and non-Hispanic other race (4%; including Asian and Native American). *Gender* was also included in all models as a time-constant variable with male respondents coded as one (50%) and female respondents coded as zero.

2.2 Analytic Strategy

The first set of analyses explores how adolescent family experiences influence the age when individuals first enter into a coresidential union, while the second set of analyses examines the influence of family factors for the timing of making a transition to marriage or union dissolution within that first cohabiting union. For both analyses a discrete-time competing risk event history modeling approach is used. This approach accounts for the competing risk that the first analytic sample of single individuals face of entering into a cohabitating or marital union and accounts for the competing risk that the second analytic sample of cohabiting individuals face of marrying or breaking up. These models take the form of multinomial logistic regression models that estimate the relative risk of event occurrence at every time point of risk exposure (age in first analysis, person-month in second analysis) up until the person-year of union formation and the person-month of cohabitation transition, or until the respondent is censored by the end of the study period. To assess the extent to which the impact of predictors on hazard rates were proportional across time (e.g. age and cohabitation duration) interactions with time were tested (Singer & Willett, 2003). Wald tests of the sum of coefficients were used to determine the statistical significance of interactions.

Adjustments were also made to control for the prior sorting of individuals into first cohabiting unions when looking at cohabitation transitions. Given that the selection process of entering into a first cohabitation is over multiple alternatives (e.g. marrying directly or remaining single versus entering a cohabiting union), a selection correction which accounts for this multinomial logit specification is preferred (Bourguignon, Fournier & Gurgand, 2007). Models that adjust for potential selection bias were employed using the correction proposed by Dubin and McFadden (1984). This correction essentially uses two inverse Mills ratios, one for the initial probability of cohabiting versus marrying directly and one for the initial probability of cohabiting versus remaining single. These corrections were calculated post-imputation in a two-step process by first estimating the predicted probabilities of

alternative first union formation outcomes (e.g. remaining single or marrying directly) using the initial prediction model of union formation, and then these predicted probabilities were used to calculate the inverse Mills ratios (Bourguignon et al, 2007; Dubin & McFadden, 1984). These inverse mills ratios were included in the final multivariate model.

3. Results

Among those individuals who were single at age 15 ($n = 13,674$), the majority had entered into their first co-residential union by Wave IV, when they were on average 21.3 years old (Table 1). Cohabitation was the most common first union type, with about 66% of the sample entering into a cohabiting union first. A much smaller proportion of individuals entered into a marriage directly as their first union (16%), while about 18% of the sample remained single into young adulthood having not entered into a coresidential union by Wave IV. Among the sub-sample of first-time cohabiters ($n = 8,822$), about 50% broke up with their partner (Table 1). A sizeable minority (35%) married their partner, and the remaining 15% were still cohabiting with their first cohabiting partner at the Wave IV interview.

Empirical tests of the proportionality assumption suggested that the association between several predictors and union formation were not proportional across age, including: gender, parental education, family belonging, maternal relationship history, and number of sexual partners in adolescence. The time-varying nature of these predictors suggest that the influence of these factors on the likelihood of entering into a cohabitation varied across age, often with reduced influence later into young adulthood. Additionally, tests indicated that the association between race and cohabitation outcomes was not proportional across the duration of the first cohabitation, as evidenced by significant interactions between race and cohabitation duration period (1 “first year”, 2 “second year”, 3 “third year”, 4 “fourth year”, 5 “fifth through seventh year”). That is, racial differences in the likelihood of first time cohabiters transitioning to marriage or breaking up relative to remaining together varied across the duration of unions.

Multivariate analyses help shed light on how family experiences and sociodemographic factors are related to whether, when, and what type of first union individuals enter into between adolescence and young adulthood (Table 2). This table shows multinomial logistic regression models predicting union formation among singles. These models show the log-odds coefficients and odds ratios for all variables on the competing risks of forming a marriage versus remaining single (column 1), forming a cohabitation versus remaining single (column 2), and forming a cohabitation first versus marrying directly (column 3).

The multivariate analyses presented in Table 3 show multinomial logistic regression models predicting union transitions among first time cohabiters. These results shed light on the associations between family and sociodemographic factors and whether, when, and what type of transition (marriage or break up) first time cohabiters make across the duration of their union. To assess the extent to which the outcome of individuals' first cohabiting union was due to the selection of that individual into a cohabiting union, rather than remaining single or marrying directly, models were run with controls for this selection process. The final multivariate model presented in Table 3 includes the Dubin-McFadden selection

controls. Results were very similar for models that controlled for selection and those that did not, with a few exceptions.¹ Models presented in Table 3 show the log-odds coefficients and odds ratios for all variables of the competing risks of transitioning to marriage versus remaining cohabiting (column 1), breaking up versus remaining cohabiting (column 2), and breaking up with the first cohabiting partner versus marrying them (column 3).

Several demographic factors were related to first union formation as well as the outcomes of first cohabitations. Men were less likely to marry and less likely to cohabit than women during adolescence, but in early adulthood and the mid-twenties this difference declined, with a similar likelihood of marriage and cohabitation among men and women (Table 2). By the late-twenties/early-thirties men had significantly higher odds of entering a marriage versus remaining single or cohabiting compared to women but a similar likelihood of entering into cohabitations versus remaining single. When examining the cohabitation outcomes of men and women results indicate that among first-time cohabiters, men had 29% higher odds of breaking up with their partner rather than remaining together and 27% higher odds of breaking up rather than marrying their partner compared to women (Table 3). Men who broke-up with their partner also did so at significantly earlier durations on average (18.5 months) than women (21.5 months). Overall this suggests that men are more likely to delay entrance into marriages and cohabitations compared to women, and once they are involved in a cohabiting union they have a higher likelihood of seeing their union dissolve.

Substantial racial differences were also apparent in both analyses of union formation and cohabitation outcomes. Compared to Blacks, all other racial groups had a higher likelihood of marrying directly versus remaining single, while Whites had higher odds of cohabiting compared to Blacks (Table 2). Whites had 70% higher odds of marrying their first cohabiting partner compared to Blacks during the first year of their cohabiting union (Table 3). Whites' higher odds of transitioning to marriage increased over the first few years of their cohabitation (161% higher odds in the second year, 175% higher odds in the third year) and remained higher across all possible duration periods. Hispanics were also significantly more likely than Blacks to marry their cohabiting partner. Compared to Blacks, Whites also had 49% higher odds of breaking-up with their partner rather than remaining together during the first year, but these odds were reduced over the duration of the cohabitation. Overall, results suggest that, compared to Blacks, Whites are both more likely to enter cohabiting unions and more likely to see those cohabiting unions transition to marriage, but they are also more likely to see their cohabiting unions dissolve, especially early on in the relationship.

Level of parental education was also associated with the first union experiences of offspring. The inclusion of interactions with time indicated that parental education plays a different role for the likelihood of offspring union formation at different ages of the offspring (see Figure 1). Youth whose parent had less than a high school education were significantly more likely to enter a cohabiting union during adolescence compared to individuals whose parent had more education (Table 2). These differences become smaller in the early adult years, and

¹One dimension of the adolescent family environment was no longer statistically significant after controlling for selection, having a low degree of family belonging. This “mediation by selection” seems to indicate that the higher likelihood of breaking up with their cohabiting partner among individuals with a low sense of belonging to their family during adolescence compared to those who had average or high sense of belonging was largely explained by these individuals' higher likelihood of entering into a cohabiting union.

by the mid-twenties this trend converges; individuals whose parent had more education were no different from those who had less than a high school education in terms of their likelihood of entering a cohabiting union. In general these results suggest that early cohabitation is more common among individuals from lower socioeconomic backgrounds, but at older ages more and more individuals enter into cohabiting unions, regardless of their socioeconomic background.

Parental education was also linked to the outcomes of offspring's cohabiting unions (Table 3). Respondents whose parent had a Bachelor's degree or more had significantly higher odds of breaking up with their partner versus staying together with them or marrying them, compared to individuals whose parent had less education (less than high school, high school, or some college). These results suggest that coming from a higher socioeconomic background, having a parent with a college education, is associated with a greater likelihood of dissolving one's cohabiting union, possibly after a shorter amount of time. Supplementary exploratory analyses support this conclusion, with significant mean level differences in average duration of cohabitation by parental education level. Individuals whose parent had less than a high school education lived in a cohabitation for the longest amount of time (31.64 months), followed by those whose parents had a high school degree (26.58 months) or some college education (24.95 months), and with individuals whose parent had a Bachelor's degree living in a cohabiting union for the shortest amount of time on average (21.62 months). Perhaps coming from a higher SES background may enable individuals to get out of cohabiting unions, and more quickly, regardless of one's own educational attainment.

The family structure and parental marital quality experiences of offspring during adolescence were also associated with their likelihood of entering into a cohabiting union versus remaining single (Column 2, Table 2). Individuals from stepfamilies, single-parent families and other family forms had significantly higher odds of cohabiting versus remaining single compared to youth who grew up in either a low-distress or high-distress intact family form. Additionally, individuals who grew up in a single parent home were significantly more likely to break up or remain cohabiting with their cohabiting partner rather than marry them compared to individuals who grew up in a low-distress, intact family form (Table 3).

Multivariate results indicate that a number of other dimensions of the adolescent family environment are significantly associated with later union formation behavior (Table 2). Individuals who reported low levels of family belonging in adolescence had 43% lower odds of marrying in their mid-twenties versus remaining single compared to individuals who had average-to-high levels of family belonging. Results also suggest that individuals who reported a low level family belonging in adolescence had significantly higher odds of cohabiting in adolescence, early adulthood, and their mid-twenties rather than remaining single. This difference converges over time, and by the late-twenties and early thirties there was no significant difference in the odds of cohabiting by level of adolescent family belonging (see Figure 2). Individuals who had a parent cohabit had significantly lower odds of marrying directly versus remaining single compared to individuals who were not exposed to a parental cohabitation; they were also significantly more likely to cohabit versus marry directly. Finally, exposure to family instability, in the form of the number of mother's

romantic relationships individuals were exposed to, was significantly associated with cohabitation formation. Individuals whose mother had three or more romantic relationships had higher odds of entering a cohabiting union in adolescence and early adulthood. Over time this trend converged, and by the mid-twenties there was no longer a significant difference in the odds of cohabiting by maternal relationship history (see Figure 3).

Several dimensions of the adolescent family environment were also associated with the later stability of offspring's cohabiting unions (Table 3). Compared to individuals who reported average-to-high levels of family belonging, individuals who reported feeling a low level of belonging to their family during adolescence had 18% lower odds of marrying their partner versus remaining cohabiting and 36% higher odds of breaking up with their partner versus marrying them. After controlling for the initial selection of individuals into cohabiting unions, the higher likelihood of adolescents with low family belonging to break up with their cohabiting partner was no longer statistically significant. These results suggest that growing up in a family environment in which one doesn't feel like they belong may reduce the likelihood of making the transition to a more formalized union status.

Dimensions of parental relationship history were also associated with the outcome of offspring's first cohabiting union (Table 3). Individuals whose parent cohabited themselves had 28% lower odds of transitioning to marriage rather than remain cohabiting with their partner, compared to individuals whose parent did not cohabit. Additionally, exposure to family instability, in the form of multiple maternal coresidential romantic relationships, was associated with an elevated likelihood of breaking up with one's cohabiting partner.

Finally, the age when individuals first began cohabiting with their partner was linked with the outcome of their unions (Table 3). The older a person was when they first began cohabiting with their partner, the more likely they were to transition to marriage, with every year after age 16 associated with a 5% increase in the odds of marriage. Among whites, the older individuals were when they began cohabiting, the less likely they were to break up with their partner, with every year over age 16 associated with a 3% reduction in the odds of breaking-up. Among non-whites, entering into a cohabitation at older ages was not associated with the likelihood of breaking up versus remaining cohabiting. When individuals begin cohabiting at later ages they are more likely to make the transition to marriage, but only among Whites does a later age at union entrance contribute to more stability for that cohabiting union and a lower likelihood of dissolving the union.

4. Discussion

The results from this study make three important contributions to our understanding of cohabitation. First, the impact of certain predictors on the likelihood of entering a cohabitation are not constant across age (family instability, parental education, low family belonging). Past research has often looked at predictors in an age-constant way; future research should continue to consider how various “push” and “pull” factors may be more or less important depending on one's age. Secondly, results suggest that exposure to different parental relationships (parental cohabitations and multiple maternal coresidential relationships) has an enduring influence on the stability and trajectory of offspring's

cohabitations. Finally, support and belonging in the earlier family environment continues to have an impact on the later stability of cohabiting unions, regardless of the age when individuals enter these cohabitations. Future research should continue to explore the link between the adolescent family environment and later behavior in romantic unions, and examine some of the possible mediating mechanisms which help to account for the continuing influence of earlier family experiences.

The timing of union formation was associated with the outcome of first cohabiting unions but, importantly, the impact of adolescent family factors for union outcomes did not vary by the age when individuals first began cohabiting. That is, regardless of the age when people first begin cohabiting, family factors have a similar effect on the outcome of that union. Findings do suggest that the role of cohabitation timing for cohabitation stability varies significantly across racial and ethnic groups. These results suggest that racial differences in first cohabitation experiences may lead to a more distinct “White” cohabitation pathway, one that is more likely to lead to marriage, especially over time. Results also point to the gendered nature of the timing of union formation (Manning, et al., 2014) as well as the stability of cohabiting unions, with men more likely to break up with their cohabiting partner. This may reflect gender differences in the perceived role that cohabitation plays in people's lives. Men tend to express greater concern over a loss of freedom within cohabitations (Huang, Smock & Manning, 2011), and report less commitment to their partner than women (Pollard & Harris, 2013), which may reflect a greater openness among men to end their unions.

A major goal of the current study was to examine the link between an individual's family environment during adolescence and their experience within their first cohabiting union. A few key findings emerged. Consistent with prior research (Amato & Kane, 2011; Ryan et al, 2009), results indicate that individuals who were in a stepfamily or single-parent family during adolescence were more likely to cohabit than individuals from married biological parent families, as were individuals who were exposed to parental cohabitation (Smock et al., 2013). Results also suggest that youths' union formation behavior is less influenced by exposure to models of parental marital quality (consistent with Amato & Kane, 2011), and more impacted by family structure and the dynamics that are more prevalent in non-intact family households (e.g. exposure to family instability). Findings support a modeling perspective; youth observe the ways that their parent(s) engage in romantic unions, by living in a cohabiting union or living with several different partners, and this in turn shapes their behavior in their own romantic unions. Consistent with prior research on marital behavior (South 2001), results indicated that the influence of earlier family structure and parental cohabitation for cohabitation behavior was consistent across age, suggesting that exposure to different family constellations can have a long-term and enduring impact on offspring's behavior within romantic relationships.

The influence of family instability on offspring's cohabitation, however, appears to be concentrated on their early union formation. That is, being exposed to multiple maternal romantic partnerships elevates individuals' likelihood of entering into cohabiting unions during adolescence and early adulthood, but this elevated likelihood weakens as people age. Furthermore, the higher likelihood of cohabiting among individuals who were in more

“stressful” family environments during adolescence – higher family instability, lower parental education, and low sense of family belonging – was concentrated in adolescence and early adulthood. These dimensions of family disadvantage (more instability, fewer socioeconomic resources, less emotional support) therefore elevate the likelihood of cohabiting during adolescence and early adulthood, but over time are less influential on the likelihood of entering cohabiting unions. Therefore, we may be seeing a relatively disadvantaged, homogenous group of early cohabiters but by the mid-twenties, when cohabitation formation is highly normative, the group of individuals who enter into cohabitations for the first time becomes increasingly heterogeneous in terms of earlier disadvantages, and thus the impact of early disadvantage appears to wane over time. Additionally, individuals from more disadvantaged family environments may be using the movement into cohabiting unions as a way to escape the stress of these environments at ages when they likely have fewer resources of their own to pull on (e.g. personal income or educational attainment). These findings bring new insight to the literature by highlighting that the influence of family factors on offspring cohabitation formation shifts as individuals age.

An individual's adolescent family environment was linked not just with their likelihood of entering a cohabiting union, but also with the stability and outcome of their union. Results suggest that the degree of support and sense of belonging individuals felt towards their family during adolescence, as well as their parent's relationship history were associated with the outcomes of their later unions. Individuals who were exposed to parental cohabitations were less likely to see their own cohabitation transition to marriage. This highlights the modeling role that parents play for offspring's future romantic behaviors, where cohabitation is perhaps seen as a stable alternative to marriage when one has been exposed to it while growing up (e.g. Smock, et al., 2013). Individuals who reported feeling a low sense of belonging to their family during adolescence were significantly more likely to enter cohabiting unions during adolescence and young adulthood, and they were also significantly less likely to see their cohabiting union result in a marriage and more likely to see it dissolve. These results illuminate the enduring role that emotional support from the family during adolescence can play for later functioning in romantic relationships (Feldman, et al., 1998).

While this study provides insight into the timing and stability of first cohabitations, there are limitations. The measures used to capture family structure and dimensions of the family environment during adolescence are static and capture the experience of respondents at a single point in time. Given the sometimes fluid nature of family structure and the changing nature of family relations, it would be better to have measures of the family environment at more intervals across the life course. There are also limitations in the measure of family instability, as it captures maternal coresidential relationships that occurred in the 18 years prior to Wave I, including years when the respondent may not have been alive. Therefore, this variable is a more liberal measure of family instability that reflects a longer period of maternal relationship history. The measurement of family structure and parental marital quality did not distinguish between high- and low-distress cohabiting stepfamilies, as information was not available on the quality of parental romantic relations between cohabiting step-parents. Additionally, the economic resources of individuals and their

partners are often linked with their likelihood of moving in together and the stability of their unions thereafter (Wu & Pollard 2000). However, due to data limitations, we do not know about the earnings of individuals in our sample or their partners. Furthermore, we do not have information on the cohabiters' relationship quality, which is likely strongly linked with cohabitation outcomes. Finally, this study focuses only on transitions that occur within the first seven years of cohabiting unions and therefore transitions that occurred later in cohabitations were primarily observed among those that entered into cohabitations at earlier ages. Therefore, this study produced more stable estimates of what happens in the long-run to earlier cohabitations than what happens in cohabitations that were entered into at later ages.

The current study carefully considers how the impact of predictors on cohabitation formation and stability may vary by age at union entrance. This fills in an important gap in prior literature, which often makes the assumption that predictors have a static impact on the entrance and stability of cohabiting unions. Findings suggest that the impact of predictors do change across age, and to a lesser extent duration of the union, and highlight the need for future research to consider these experiences in a more dynamic fashion. With cohabitation an increasingly common union that many individuals will experience and with more children born into these unions than ever before (Copen, Daniels & Mosher, 2013), it is important to continue to examine how the family environment growing up contributes to the approaches individuals take in cohabiting unions and the stability of this growing family form.

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Fig 1. Parental Education & Hazard of Cohabitation

Fig 2. Family Belonging & Hazard of Cohabitation

Fig 3. Mother's Prior Relationships & Hazard of Cohabitation

Table 1
Characteristics of the Sample*

Variable	Mean/Percentage	Std. Error	Range
<i>Characteristics at Wave I</i>			
Gender (1 = male)	50%	0.01	0-1
Age	15.48	0.12	11-21
Race			
White	68%	0.03	0-1
Black	16%	0.02	0-1
Hispanic	12%	0.02	0-1
Other Race	4%	0.01	0-1
Parental Education			
Less than High School	16%	0.01	0-1
High School	38%	0.01	0-1
Some College	21%	0.01	0-1
Bachelor's or more	26%	0.01	0-1
Family Structure/Parental Marital Quality			
Two bio parents, low-distress	49%	0.01	0-1
Two bio parents, high-distress	8%	0.00	0-1
Step-parents, low-distress	11%	0.00	0-1
Step-parents, high-distress	2%	0.00	0-1
Single parent	22%	0.01	0-1
Other Family/Cohabiting Stepfamily	8%	0.01	0-1
Low Family Belonging (1 SD below mean)	16%	0.00	0-1
Parental Cohabitation	17%	0.01	0-1
Number of Mother's Prior Relationships			
One or fewer	72%	0.01	0-1
Two	19%	0.01	0-1
Three or more	9%	0.01	0-1
<i>Characteristics at Wave IV</i>			
Age	28.36	0.12	24-34
Number of Sexual Partners before age 18			
None	33%	0.01	0-1
One or two	35%	0.01	0-1
Three or more	32%	0.01	0-1
Parent	47%	0.01	0-1
<i>Dependent Variable - Type of First Union</i>			
Single at Wave IV	18%	0.01	0-1
Marriage is first union	16%	0.01	0-1
Cohabitation as first union	66%	0.01	0-1
<i>Characteristics at Union Entrance (among 1st time cohabiters)</i>			
Age at Union Entrance	21.33	0.10	16-32

Variable	Mean/Percentage	Std. Error	Range
Educational Attainment			
Less than High School	25%	0.01	0-1
High School	54%	0.01	0-1
Associates/Vocational Degree	7%	0.00	0-1
Bachelor's or more	14%	0.01	0-1
<i>Dependent Variable - Cohabitation Outcome (among 1st time cohabiters)</i>			
Still cohabiting	15%	0.01	0-1
Married	35%	0.01	0-1
Broken up	50%	0.01	0-1

Note:

* descriptive statistics refer to the sample of individuals who were single at age 15 (n=13,674) unless otherwise noted as the sample of first-time cohabiters (n=8,822); results are weighted and with adjustments made for stratification and clustering in survey design.

Table 2

Multivariate Models of First Union Formation

	Marriage (Remaining single is reference)		Cohabitation (Marriage is reference)	
	b	OR	b	OR
Parental Education (less than HS ref)				
High School	-0.203	0.82	-0.437***	0.65
Some College	-0.457	0.63	-0.565***	0.57
Bachelor's	-1.199***	0.30	-1.085***	0.34
Parental Education by Offspring Age Interactions				
High School × Age 19-23	-0.299	0.74	0.309**	1.36
High School × Age 24-28	-0.054	0.95	0.780***	2.18
High School × Age 29 plus	-0.016	0.98	0.698	2.01
Some College × Age 19-23	-0.141	0.87	0.344**	1.41
Some College × Age 24-28	0.453	1.57	0.789***	2.20
Some College × Age 29 plus	0.535	1.71	1.152**	3.16
Bachelor's × Age 19-23	0.335	1.40	0.703***	2.02
Bachelor's × Age 24-28	0.997**	2.71	1.346***	3.84
Bachelor's × Age 29 plus	1.014	2.76	1.178**	3.25
Family Structure (Bio parent, low-distress ref)				
Bio Parents, high distress	-0.138	0.87	-0.007	0.99
Step parents, low distress	0.125	1.13	0.241***	1.27
Step parents, high distress	0.213	1.24	0.296**	1.34
Single Parent	-0.081	0.92	0.213**	1.24
Other Family Form	0.124	1.13	0.285***	1.33
Low Family Belonging				
	0.113	1.12	0.278***	1.32
Family Belonging by Offspring Age Interactions				
Low Belonging × Age 19-23	-0.321	0.73	-0.073	0.93
				0.249
				1.28

	Marriage		Cohabitation		Cohabitation	
	b	OR	b	OR	b	OR
(Remaining single is reference)						
Low Belonging × Age 24-28	-0.671 [*]	0.51	-0.197	0.82	0.473	1.60
Low Belonging × Age 29 plus	0.472	1.60	-0.759 [*]	0.47	-1.231	0.29
Parental Cohabitation	-0.359 [*]	0.70	0.129	1.14	0.487 ^{***}	1.63
Number of Mother's Prior Relationships (one or fewer is ref)						
Two relationships	0.033	1.03	0.046	1.05	0.013	1.01
Three or more relationships	0.118	1.13	0.298 [*]	1.34	0.180	1.20
Mother's Prior Relationships by Offspring Age Interactions						
Three or more × Age 19-23	-0.031	0.97	-0.150	0.86	-0.120	0.89
Three or more × Age 24-28	-0.054	0.95	-0.473 [*]	0.62	-0.418	0.66
Three or more × Age 29 plus	-1.690	0.18	-0.524	0.59	1.166	3.21
Male	-1.304 ^{**}	0.27	-0.588 ^{***}	0.56	0.716 ^{**}	2.05
Male × Age 19-23	0.827 ^{***}	2.29	0.295 ^{***}	1.34	-0.531 [*]	0.59
Male × Age 24-28	1.233 ^{***}	3.43	0.602 ^{***}	1.83	-0.631 [*]	0.53
Male × Age 29 plus	1.812 ^{***}	6.12	0.438	1.55	-1.374 [*]	0.25
Race (Black is ref)						
White	1.015 ^{***}	2.76	0.496 ^{***}	1.64	-0.518 ^{***}	0.60
Hispanic	1.064 ^{***}	2.90	0.158	1.17	-0.906 ^{***}	0.40
Other Race	0.977 ^{***}	2.66	0.145	1.15	-0.832 ^{**}	0.44
Educational Attainment (less than HS ref)						
High School	0.573 ^{***}	1.77	0.208 ^{**}	1.23	-0.365 ^{**}	0.69
Associates degree	0.518 ^{***}	1.68	0.009	1.01	-0.508 ^{***}	0.60
Bachelor's degree	0.430 ^{***}	1.53	-0.023	0.98	-0.453 ^{***}	0.64
Number of Sexual Partners before age 18 (3 plus ref)						
No sexual partners	-1.327 ^{***}	0.27	-1.577 ^{***}	0.21	-0.250	0.78
One to Two sexual partners	0.255	1.29	-0.426 ^{***}	0.65	-0.681 ^{***}	0.51
Adolescent Sexual Partners by Age Interactions						

	Marriage		Cohabitation		Cohabitation	
	(Remaining single is reference)		(Marriage is reference)		(Marriage is reference)	
	b	OR	b	OR	b	OR
No sexual partners × Age 19-23	1.150 ***	3.16	0.679 ***	1.97	-0.471	0.63
No sexual partners × Age 24-28	1.500 ***	4.48	0.959 ***	2.61	-0.541	0.58
No sexual partners × Age 29 plus	2.297 **	9.94	1.337 ***	3.81	-0.960	0.38
1-2 sexual partners × Age 19-12	-0.273	0.76	0.091	1.09	0.364	1.44
1-2 sexual partners × Age 24-28	0.040	1.04	0.278 *	1.32	0.238	1.27
1-2 sexual partners × Age 29 plus	0.436	1.55	1.275 ***	3.58	0.838	2.31
Parent	0.834 ***	2.30	0.550 ***	1.73	-0.284 *	0.75
Age (15-18 ref)						
Age 19-23	1.120 ***	3.06	0.644 ***	1.90	-0.476	0.62
Age 24-28	0.446	1.56	0.091	1.10	-0.355	0.70
Age 29 plus	-1.106	0.33	-0.817	0.44	0.289	1.34
Constant	-5.297 ***	0.01	-2.715 ***	0.07	2.582 ***	13.22

Note:

* p < .05,

** p < .01,

*** p < .001; Results are weighted and with adjustments made for stratification and clustering in survey design; F(98,124.4) = 62.50, Prob > F = 0.000

Table 3

Multivariate Models of Cohabitation Stability

	Marriage (Still together is reference)		Break up (Marriage is reference)	
	b	OR	b	OR
Race (black ref)				
White	0.528**	1.70	0.396***	1.49
Hispanic	0.510**	1.67	-0.053	0.95
Other race	0.206	1.23	-0.039	0.96
Race by Cohabitation Duration Interactions				
White × second year	0.432**	1.54	-0.253**	0.78
White × third year	0.482**	1.61	-0.029	0.97
White × fourth year	0.089	1.09	-0.324*	0.72
White × fifth year plus	0.234	1.26	-0.101	0.90
Parental Education (Less than HS ref)				
High School	-0.045	0.96	0.057	1.06
Some College	0.058	1.06	0.081	1.08
Bachelor's	-0.085	0.92	0.219**	1.24
Family Structure (Bio-Married Parents, low distress ref)				
Bio Parents, high distress	-0.070	0.93	-0.012	0.99
Step parents, low distress	-0.107	0.90	0.080	1.08
Step parents, high distress	-0.033	0.97	-0.024	0.98
Single Parent	-0.229**	0.80	0.047	1.05
Other Family Form	0.098	1.10	-0.108	0.90
Low Family Belonging				
	-0.196*	0.82	0.113	1.12
Parental Cohabitation				
	-0.323*	0.72	-0.073	0.93
Number of Mother's Prior Relationships (three plus is ref)				
One or fewer	-0.012	0.99	-0.237*	0.79
Two	-0.003	1.00	-0.172	0.84

	Marriage		Break up (Still together is reference)		Break up (Marriage is reference)	
	b	OR	b	OR	b	OR
Age at Union Formation (in years)	0.045 [*]	1.05	0.027	1.03	-0.019	0.98
White × Age at Union Formation	-0.016	0.98	-0.061 ^{***}	0.94	-0.044	0.96
Male	0.016	1.02	0.254 ^{***}	1.29	0.238 ^{**}	1.27
Educational Attainment (less than HS ref)						
High School	0.395 ^{***}	1.48	0.069	1.07	-0.375 ^{**}	0.69
Associates degree	0.769 ^{***}	2.16	0.056	1.06	-0.327 [*]	0.72
Bachelor's degree	1.058 ^{***}	2.88	0.107	1.11	-0.712 ^{***}	0.49
Number of Sexual Partners before age 18 (3 plus ref)						
No sexual partners	0.487 ^{***}	1.63	-0.102	0.90	-0.589 ^{**}	0.55
One to Two sexual partners	0.242 ^{**}	1.27	-0.133	0.88	-0.375 ^{**}	0.69
Parent	0.025	1.03	-0.331 ^{***}	0.72	-0.356 ^{**}	0.70
Cohabitation Duration (1-6 months ref)						
7-12 months	0.286 ^{***}	1.33	0.138 [*]	1.15	-0.148	0.86
13-18 months	-0.001	1.00	0.017	1.02	0.018	1.02
19-24 months	0.014	1.01	0.170	1.19	0.156	1.17
25-30 months	0.002	1.00	-0.141	0.87	-0.143	0.87
31-36 months	-0.024	0.98	-0.320 ^{**}	0.73	-0.296	0.74
3 rd -4 th year	0.061	1.06	-0.068	0.93	-0.128	0.88
4 th -5 th year	0.078	1.08	-0.086	0.92	-0.165	0.85
5 th -6 th year	0.037	1.04	-0.048	0.95	-0.084	0.92
6 th -7 th year	0.160	1.17	-0.523 [*]	0.59	-0.683 [*]	0.51
Dubin-McFadden Selection Variables						
IMR (Cohabitation vs Single)	-0.033	0.97	0.005	1.01	0.038	1.04
IMR (Cohabitation vs Marriage)	-0.053	0.95	-0.032	0.97	0.021	1.02
Constant	-6.268 ^{***}	0.00	-4.185 ^{***}	0.02	2.083 [*]	8.03

Note:

* p < .05,

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**

p < .001; results are weighted and with adjustments made for stratification and clustering in survey design; F(78,125.4) = 22.89, Prob > F = 0.000