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SERIAL COHABITATION: THE LONG AND WINDING ROAD TO MARRIAGE

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Abstract

We use cycle 6 of the NSFG to examine estimates of serial cohabitation among recently married men (N=1,072) and women (N=2,407). Nearly two-thirds of men and women cohabited before their first marriage. One-fifth with cohabitation experience prior to first marriage were serial cohabitors. We investigate the predictors of serial cohabitation (vs. single-instance cohabitation) for women. Female serial cohabitors marry later, are less likely to have grown up in an intact household, and are less likely to attend religious services. Foreign-born Hispanics are less likely to serially cohabit than other race/ethnicities. Serial cohabitors have a greater number of non-cohabiting sex partners.

1. Introduction

The median age of first marriage continues to increase, for women it is 25.5 years and 27.5 years for men (U.S Bureau of the Census, 2004). Yet, this does not mean that young adults are living alone until marriage. In fact, much of the delay in marriage is offset by an increased incidence of cohabitation (Raley, 1996). The modal path to marriage is through cohabitation. Sixty-eight percent of all first marriages formed between 1997 through 2001 were preceded by cohabitation (Kennedy and Bumpass, forthcoming). As the age at first marriage increases, the opportunities to experience a greater numbers of sexual partnerships prior to marriage have also grown.

Cohabitation represents one type of sexual partnership. Prior studies have focused on cohabitation with spouses, but have typically overlooked serial cohabitation, cohabiting with more than one partner. There are two recent exceptions. Teachman (2003) relies on the 1995 National Survey of Growth (NSFG) and focuses on women married between 1970 and 1995. He reports that approximately 38% of women cohabited prior to marriage and among those who cohabited, about 6% lived with their spouse and another man. Lichter and Qian (forthcoming) use the National Longitudinal Survey of Youth (NLSY79), which examines married women, who first cohabited between 1979 and 2000 and were 35-43 years of age by the year 2000. Lichter and Qian (forthcoming), report that 21% of women cohabited prior to marriage and among those who cohabited, 13.5% lived with more than one man. However, the authors examined a birth cohort of women, who were born between 1957 and 1965, and report that most women in their study first married in the 1980s and early 1990s, decades in which the rate of cohabitation was lower than it may be for more recent marriage cohorts. The

authors state that their estimates of serial cohabitation may under-represent the actual incidence of serial cohabitation today. Past research has documented the growth of cohabitation since the early 1980s, as well as the decreasing likelihood that cohabitations will transition into marriages (Bumpass and Lu, 2000). In light of these trends, we expect that patterns of serial cohabitation may have increased among younger and more recent marriage cohorts.

The existence of serial cohabitation means that some cohabiting relationships do not always result in marriage. However, previous research indicates that when serial cohabitors do marry, they may be at greater risk of subsequent marital instability than single-instance cohabitors (DeMaris and MacDonald, 1993; Teachman and Polonko, 1990; Teachman, 2003; Lichter and Qian, forthcoming). In other words, people who cohabit with more than one person have a higher likelihood of experiencing a divorce than those who only cohabit with one person before marriage. In fact, serial cohabitors have lower quality and less stable cohabiting relationships than single-instance cohabitors (Stets, 1993; Brown 2000). Brown (2000) also report higher levels of depression among serial cohabitors than single-instance cohabitors. These findings suggest that serial cohabitors may be more willing than single-instance cohabitors to end relationships that they do not find to be emotionally satisfying, and that they may also have certain sociodemographic characteristics associated with higher rates of marital dissolution.

Our goal is to not only document the levels of serial cohabitation, but also the context of these relationships by examining duration and marriage plans. A key question is to determine the sociodemographic characteristics of couples who are most at risk of

marital dissolution once they transition into marriage (serial cohabitors). These analyses will provide a better understanding of who enters multiple cohabiting relationships. Parallel to the rise in cohabitation since the 1980s is the de-linking of sex from marriage. In 2002, less than ten percent of married women, under age 35, waited until marriage to have sex (Chandra et al., 2005). Some women may have had sex prior to marriage, but only with their future husband. According to the 1995 NSFG, 75% of married women had intercourse with someone besides their husband prior to marriage (Teachman, 2003). Women and men also have more sexual partners in their lifetime than in decades past. For example, according to the 1995 NSFG, women, between the ages 30-44, had an average of 3 sexual partners in their life time (author calculation, results not shown). Evidence from the 2002 cycle of the NSFG indicates that this average rose to four sexual partners. Men had an average of six partners in 2002 (Mosher et al., 2005).

Although the number of sexual partners a man or women will have prior to marriage has increased, researchers rarely include this measure in investigations of union formation or dissolution. One exception is Teachman (2003), who uses the 1995 NSFG in his analysis of women who were first married between 1970 and 1995. He finds women who had no premarital sex or only had premarital sex with their future spouse shared similar odds of marital dissolution. Women who had sex with someone besides their husband had a higher risk of marital dissolution. He further investigates how all sexual unions (cohabitation and other sexual partnerships) influence marital instability and finds that women who only cohabited with their spouse or only had premarital sex with their spouse had similar odds of marital dissolution as women who did not cohabit. Women, who serially cohabited and/or had premarital sex with someone besides their

husband, had higher odds of marital dissolution than women who never cohabited. Teachman's findings suggest that *both* sexual history and cohabitation history influence marital stability. To better understand romantic relationship dynamics today, scholars should include sexual histories as well as cohabitation histories. Thus, in our work we examine the interplay between the number of non-cohabiting sex partners and cohabitation patterns.

2. Research objectives

The goal of this current investigation is to examine the patterns of serial cohabitation among men and women who are recently married and to evaluate the sociodemographic characteristics associated with women's serial cohabitation. This study moves beyond prior research in three key ways. First, by analyzing the 2002 cycle of the National Survey of Family Growth, we examine recent national data available on women's cohabitation and marriage histories. Past research on serial cohabitation has examined earlier cycles of the NSFG (Teachman, 2003), the NLSY79 (Lichter and Qian, forthcoming), and the NLS72 (Teachman and Polonko, 1990). Due to the increasing incidence and social acceptance of cohabitation throughout the years, examining recent cohorts of women will provide more accurate estimates of serial cohabitation and the characteristics of serial cohabitors. Second, this investigation identifies the specific sociodemographic factors that differentiate serial cohabitors from single-instance cohabitors. Although our investigation is descriptive in nature, this work examines the determinants of one's cohabitation history or the likelihood of serially cohabiting vs. single-instance cohabiting. Previous research has typically only included cohabitation history as one of many independent covariates to investigate its association with

relationship quality and the odds of marital disruption among cohabiting couples or evercohabiting couples. Third, we include women's number of non-cohabiting sexual partners before their first marriage as an independent variable in our analysis of serial cohabitation. Past research indicates that this measure is positively correlated with women's likelihood of marital disruption (Teachman, 2003) and is most likely another significant determinant of women's serial cohabitation. However, it typically has not been included in past research on serial cohabitation (DeMaris and MacDonald, 1993; Teachman and Polonko, 1990; Lichter and Qian, forthcoming).

3. Data and methods

3.1 Data

We use cycle 6 (2002) of the National Survey of Family Growth (NSFG). The NSFG is based on a national probability sample, representing the household population of the United States, ages 15-44 years. These data are appropriate because they contain detailed cohabitation, marriage and sexual histories for women. The analytic sample for this paper consists of 2,448 women, whose first marriage occurred between the years 1988 and 2002 and were 18-30 years of age at the start date of their first marital union. Our sample of women was born between the years 1958 and 1984. The analysis is further limited to women, who provide valid information regarding the start date of their first marriage, cohabitation dates prior to first marriage, and the number of sexual partners prior to marriage (N = 2,407). We include some descriptive information on men's serial cohabitation (N=1,072). The male sample has a similar marriage cohort and age restriction as the female sample. Although the proportion of serial and single-instance cohabitors could be ascertained from the male interviews, cycle 6 of the NSFG does not

provide detailed cohabitation and sexual histories for its male respondents. Thus, our analytic method is limited and we cannot conduct multivariate analyses parallel to that of women.

This paper includes one key dependent variable. We examine the number of cohabiting relationships entered into before first marriage. This variable is recoded into three categories: zero (no cohabitation experience), one (single-instance cohabitation), and two or more (serial cohabitation). We further distinguish this variable by considering the outcome of premarital cohabitations. We establish four categories: Never cohabited before first marriage; only cohabited once, and co-residential union did result in marriage; only cohabited once, but co-residential union did not result in marriage; and cohabited more than once and co-residential unions ended with both outcomes. This variable was measured for both males and females, but is not included in the women's multivariate analysis. It is used for descriptive purposes.

A core independent variable measures the number of non-cohabiting sexual partners a woman had prior to her first marriage. The variable was created by measuring the number of sexual partners a woman had before her first marriage, with responses ranging from 0 to 50 sex partners. An additional variable was created to measure the number of cohabiting partners a woman had before first marriage, with responses ranging from 0 to 5 cohabiting partners. The number of cohabiting partners before first marriage was then subtracted from the number of sexual partners before first marriage to establish the number of non-cohabiting sex partners (or the number of sex partners who were not cohabiting partners) a woman had before her first marriage. A small number of respondents (56) stated that the number of cohabiting partners was greater than their

number of sex partners, suggesting that they did not have sex with all of their cohabiting partners. These respondents were recoded as having zero non-cohabiting sex partners. Sensitivity analyses indicate that the results are similar when these respondents are excluded from the analyses. Due to data constraints, this independent variable could not be measured for the male sample and is therefore not included in the present investigation.

A descriptive variable is women's sexual behavior relative to their cohabitation experience. The sexual history and cohabitation history questions are combined to create a variable akin to Teachman's (2003) measure. There are six response categories: Abstinent from sex before first marriage; Never cohabited, but had sex with at least one man before first marriage; Only cohabited and only had sex with spouse before first marriage; Only cohabited with spouse and had sex with more than one man before first marriage; Cohabited twice and had sex with at least one man before first marriage; and only non-premaritally cohabited and had sex with at least one man before first marriage.

We include a series of sociodemographic variables. Age at first marriage is included in the analysis instead of age at interview, to capture greater variation or range of ages within the sample. Age at first marriage is a continuous variable, measured in years and squared to test for a non-linear relationship with the dependent variable. Respondent's education is collapsed into four categories: below a high school degree, earned high school degree, college experience but no degree earned, and college degree or higher. Income is kept as a fourteen category continuous response variable, ranging from "under \$5,000" to "\$75,000 or more" per year (with inconsistent measurement intervals between categories). Women's race/ethnicity was recoded into five response

categories: White, Black, native-born Hispanic, foreign-born Hispanic, and other. Family type during childhood is measured as a binary response variable, with respondents falling into one of two categories: intact, two-parent household during childhood or non-intact, two-parent household. Religious service attendance, serving as a proxy for religiosity, has five response categories and is treated as a continuous variable. The response categories are as follows: never attends religious services; attends less than once a month; attends 1-3 times per month; attends once a week; attends more than once a week. Women's marriage cohort is measured by three categories: women first married between 1988-1992, 1993-1997, and 1998-2002.

The indicators of the relationship context of cohabitation include mean duration of cohabitation and plans for marriage at the start of a cohabiting union. These are included for descriptive purposes. We do not include them in the female bivariate or multivariate models because they are indicative of a current cohabiting relationship and therefore cannot predict the likelihood of that relationship taking place. Due to data constraints, neither the mean duration nor marital plans of men were calculated or included in this investigation. Durations were calculated by subtracting the century month end date of a respondent's cohabitation from the century month start date. We distinguish durations for cohabitations that ended in marriage and the mean duration of relationships that did not end in marriage. The marital plans of a woman at the start of their cohabitation was measured by a binary response yes/no question: "At the time you began living together, were you and your partner engaged to be married or have definite plans to get married?" We calculated whether a respondent had marriage plans for each of their cohabiting relationships.

3.2 Analytic approach

Multinomial logistic regressions are used to examine the likelihood of women entering zero (no cohabitation experience), one (single-instance cohabitation), or two or more cohabiting relationship (serial cohabitation) prior to this first marriage. This method is appropriate for a categorical dependent variable with more than two response categories (DeMaris, 1992). We are most interested in the comparison of those who cohabited more than once (serial cohabitors) with those who cohabited only one time before this marriage (single-instance cohabitors). Thus, our reference category is one cohabiting relationship before first marriage. This strategy allows us to distinguish among types of cohabitation. We first estimate zero-order models for each independent variable. Next, all the covariates are included in multivariate multinomial logistic models. The odds ratios presented are exponentiated coefficients. Therefore, an odds ratio of less than one can be interpreted as a negative relationship between the independent variables with the dependent variable and an odds ratio greater than one suggests a positive relationship.

4. Results

4.1 Descriptive analysis

Table 1 presents the descriptive statistics for ever-married women. On average, women had .70 cohabiting partners prior to their first marriage. Approximately 44% of women never cohabited before their first marriage, 45% cohabited once (single instance-cohabitors), and 11% cohabited twice or more (serial cohabitors). However, about 20% of women who did cohabit before their first marriage cohabited with more than one man prior to marrying. As shown in Appendix 1, the distribution of number of cohabiting

partners before first marriage for women is almost identical to that of men. Thus, among both men and women who cohabited prior to marriage almost one-fifth are considered serial cohabitors.

We also place serial cohabitation in the context of marriage for both men (see Appendix 1) and women (see Table 1). Most men and women who cohabited prior to marriage had lived with the partner they married. Only 2-3% of ever-married men and women cohabited with someone they did not eventually marry (non-premarital cohabitation). Approximately 98% of serial cohabiting females and 97% of serial cohabiting males lived both with their spouse and another partner (that they did not marry).

Next we focus on the sexual experiences of women. Most (86%) of women had sex before their first marriage. On average, women had approximately 4.4 sex partners and 3.8 non-cohabiting sex partners before they entered their first marriage. Women only cohabit with 26% of their sexual partners before their first marriage. Thus, the majority of women's premarital sexual experiences occur outside of cohabitation. Women who cohabited before marriage, on average, have a greater number of sexual partners than those who did not. Women with cohabitation experience before their first marriage have an average of 6 premarital sex partners and 4.8 premarital, non-cohabiting sex partners. While women who did not cohabit had on average only 2 sexual partners.

Approximately 14% of women did not have sex prior to marriage. Nearly onethird (32%) had premarital sex but no cohabitation experience. About 9% of women only cohabited with and only had sex with their spouse before marriage. Approaching a third (31%) cohabited with only their spouse, but had sex with one or more other men before

they married their partner. We find 11% of women serially cohabited and 3% only cohabited with someone they did not marry.

Table 1 includes the remaining sociodemographic characteristics of the female sample. The average age at first marriage is 24 years. The average income is approximately 10 (on a scale of 1 to 14), with a range of income from \$35,000 to \$39,000 per year. Twelve percent of women have not earned their high school degree, 19% earned their high school degree, 34% reported some college experience and 36% earned a college degree or higher. Most women (68%) grew up in an intact, two-parent household (32% did not grow up in an intact two-parent household). In terms of religiosity, one-fifth of women never attend religious services, 27% attend less than once a month, 17% attend 1-3 times per month, 23% attend once a week, and 13% attend more than once a week. The majority of the sample is white (69%), 9% is black, 8% is native-born Hispanic, 7% is foreign-born Hispanic and 7% identified as other. The sample was evenly divided across marriage cohorts.

Table 2 presents evidence about the relationship context of cohabitation. Table 2 shows that the average duration of a first cohabitation for serial cohabitors is 24.48 months, as opposed to the second cohabitation, which is slightly shorter, only 20.87 months. In addition, the proportion of serial cohabitors with marriage plans almost doubles from 22% at the start of their first cohabitation to 42% at the start of their second cohabitation. On average, single-instance cohabitors seem to have longer cohabiting relationship (25.35 months) than serial cohabitors at the start of both their first and second cohabiting relationships. A higher proportion of single-instance cohabitors (56%)

have plans to marry at the start of their only cohabitation, compared to serial cohabitors at the start of their first and second cohabiting relationships.

4.2 Bivariate analysis

Table 3 presents the zero-order associations of the independent variables on the number of cohabiting relationships women had before first marriage. Column 1 shows the odds of having no cohabitation experience versus single-instance cohabiting before first marriage. There is a significant negative association between the number of non-cohabiting sex partners and the odds of having never cohabiting before first marriage versus being a single-instance cohabitor. For every additional non-cohabiting sex partner, the odds of a woman never cohabiting before first marriage versus cohabiting once decrease by 9%. For every one year increase in the age at first marriage, the odds of a woman never cohabiting before first marriage versus single-instance cohabiting decrease by 6%. Education is significantly correlated with number of cohabitations before first marriage. Women who have earned their college degree of higher have 81% higher odds of having no cohabitation experience before first marriage versus cohabiting once. Family type at childhood is also significantly associated with number of cohabitations. Women who grew up in an intact family household have 101% higher odds of never cohabiting before first marriage versus single-instance cohabiting. Religious service attendance is positively correlated with the odds of never cohabiting before first marriage vs. being a single-instance cohabitor. As a woman's religiosity increases, the odds of never cohabiting before first marriage compared to cohabiting once, decrease by 66%. Foreignborn Hispanic women have 18% higher odds of never cohabiting before first marriage versus single-instance cohabiting compared to white women.

Column 3 of Table 3 shows the odds of serially cohabiting before first marriage versus single-instance cohabiting. An additional non-cohabiting sex partner increases the odds of a woman being a serial cohabitor versus a single-instance cohabitor by 7%. For every one year increase in the age at first marriage, the odds of serially cohabiting versus single-instance cohabiting increase by 17%. The significance of the squared age at first marriage term suggests a curvilinear relationship between age at first marriage and the number of cohabitations before first marriage. Women, who grew up in an intact household, have 40% lower odds of serially cohabiting versus single-instance cohabiting, before her first marriage, decrease by 19%. Foreignborn Hispanic women have 64% lower odds of serially cohabiting versus single-instance cohabiting, when compared to white women.

4.3 Multivariate analysis

Table 4 presents a model that includes all covariates and the results are similar to the bivariate findings. Again, column 1 shows the odds of never cohabiting versus single-instance cohabiting before first marriage and the multivariate results mirror the bivariate findings. Similar to the zero-order results, an additional non-cohabiting sex partner decreases the odds of a woman never cohabiting versus single-instance cohabiting before marriage by 40%. For every one year increase in the age at first marriage, the odds of a woman never cohabiting once before first marriage decrease by 45%. The squared age at first marriage term is now significant for the odds of never cohabiting versus single-instance cohabiting. This suggests a curvilinear relationship exists between age at first marriage and the number of cohabitations before first marriage for this

statistical comparison. Women with a college degree or more continue to have 156% greater odds of having no cohabitation experience prior to first marriage versus single instance cohabiting. Women who grew up in an intact household have 79% greater odds of never cohabiting versus being a single-instance cohabitor before marriage. Religiosity remains significantly related to cohabitation. Religiosity has a positive relationship with cohabitation and those who attend religious services have 62% greater odds of never cohabiting versus cohabiting once before marriage than those who do not attend. In contrast to the bivariate results, Black women now have 38% lower odds of never cohabiting versus cohabiting once before marriage than white women. Additional analysis shows that the addition of the non-cohabiting sex partner measure is the cause of the suppression effect of race/ethnicity (Black) on number of cohabitations before first marriage (results not shown). Foreign-born Hispanic women continue to have 107% greater odds of never cohabiting versus single-instance cohabiting than white women. In the multivariate model, marriage cohort is now significantly associated with cohabitation experience. Women who were married between 1988 and 1992 have 46% higher odds of never cohabiting vs. single-instance cohabiting than women married between 1998 and 2002. Additional analysis demonstrates that the inclusion of the squared age at first marriage term is the cause of the suppression effect of marriage cohort (1988-1992) on number of cohabitations before first marriage (results not shown).

Column 3 of Table 4 shows the odds of serially cohabiting before first marriage versus single-instance cohabiting, when controlling for all other covariates. The number of non-cohabiting sex partners continues to be positively associated with the number of cohabitations before first marriage. An additional non-cohabiting sex partner increases

the odds of serially cohabiting versus single-instance cohabiting before marriage by 60%. For every additional year in the age at first marriage the odds of a woman serially cohabiting versus single-instance cohabiting increase by 366%. The squared age at first marriage term is now significant, which suggests that a curvilinear relationship between age at first marriage and the number of cohabitations before first marriage. Additional analysis reveals that the inclusion of two measures is responsible for this suppression effect, including education and intact family status during childhood (results not shown). Women who grew up in an intact, two-parent household have 50% lower odds of serially cohabiting versus single-instance cohabiting before marriage. Religiosity has a negative relationship with the odds of serially cohabiting versus cohabiting once before marriage (19% lower odds). Foreign-born Hispanics continue to have 60% lower odds of serially cohabiting versus single-instance cohabiting before marriage, when compared to white women.

5. Conclusion

5.1 Incidence of serial cohabitation

Prior research on serial cohabitation examined older birth cohorts and found a lower incidence of men and women who cohabit with more than one person before marriage. Teachman and Polonko (1990) examined a cohort of men and women who were born in the early to mid 1950s and found that 10-12% of ever-married men and women with previous cohabitation experience lived with more than one person before marriage. Lichter and Qian (forthcoming) examined a cohort of women who were born between 1951 through 1980. They report that 13.5% of women, with cohabitation experience, cohabited with two or more men. Teachman (2003) examined a sample of women who

were born between 1951 through 1980 and report that 15% of ever-married women with cohabitation experience lived with their husband and another man before marriage. In contrast, we examine men and women who were born between 1958 through 1984 and find that almost 20% of men and women who had a premarital cohabitation experience cohabited with two or more partners before their first marriage. Therefore, serial cohabitation seems to be on the rise.

Although the proportion of serial cohabitors itself is relatively small and the experience uncommon, we must place this estimate in the context of both a growing proportion of serial cohabitation, as well as the increasing level of cohabitation itself, within the past several decades. For example, Lichter and Qian (forthcoming), the most recent study on serial cohabitation, examined women born between 1951 through 1980 and found that only 21% of women had cohabitation experience prior to their first marriage. However, by examining a more recent cohort of married women born between 1958 and 1984, we found that over half (56%) of ever-married men and women had cohabitation experience before their first marriage. Thus, we find 11% of married women serial cohabited, in contrast to only 2% among older marriage cohorts (13.5% of 21% in the Lichter and Qian study). The percentage and sheer number of serial cohabitors has obviously grown. Our analyses provide evidence of a growing trend in serial cohabitation; it is slightly more common among recent marriage cohorts. Among women married between 1988 and 1992, 17% with cohabitation experience prior to their first marriage, serially cohabited. While, 22% of women, who cohabited, and were married between 1998 and 2002, serially cohabited. For men, 13% of those with

cohabitation experience, and were married between 1988 and 1992, serially cohabited. This proportion rose to 21% for those who married between 1998 and 2002.

Serial cohabitation is by no means a common experience. Indeed, upward of 80% of ever-married men and women with cohabitation experience only cohabited once prior to their first marriage. The vast majority of serial cohabitors themselves live with their spouse before marriage. Like their single-instance counterparts, many serial cohabitors are also on the road to marriage, albeit, a somewhat long and windy one. It is fair to say, however, that serial cohabitors are a growing minority with increasing numbers of individuals in their ranks. Past research has documented the elevated risk this group faces in terms of lower relationship quality and stability (Lichter and Qian, forthcoming; Teachman, 2003; DeMaris and MacDonald, 1993; Stets, 1993; Teachman and Polonko, 1990) and serial cohabitation may have further implications for child-wellbeing and adult mental and physical health. Thus, serial cohabitors are of particular interest to researchers and policy makers.

5.2 Predictors of serial cohabitation

The results of the multivariate analysis for women suggest an existing pattern in who is most likely serial cohabit. We find that several key sociodemographic characteristics are associated with women's serial cohabitation. The models indicate that the number of non-cohabiting sex partners, age at first marriage, family type during childhood, religiosity, race/ethnicity and nativity are all correlated with the likelihood of serial cohabitation. Serial cohabitors tend to marry later in life. They are less likely to have grown up in an intact household, and to attend religious services. Foreign-born Hispanic women are less likely to serially cohabit than any other race/ethnicity and serial

cohabitors also have a greater number of non-cohabiting sex partners than single instance cohabitors.

These multivariate results for women are somewhat in keeping with prior research. Previous work has not accounted for nativity status, religiosity, or number of sexual partners. Similar to prior work we find that age at marriage and family structure while growing up is associated with serial cohabitation (Lichter and Qian forthcoming). Unlike previous studies we do not find that serial cohabitation is more common among the disadvantaged (education and income).

5.3 Non-cohabiting sex partners and serial cohabitation

The inclusion of the number of non-cohabiting sex partners before marriage in the inferential analysis of women is a contribution to research on cohabitation. By including this measure in our investigation, we now know that the majority of sexual relationships that women have with men are not taking place within the context of co-residential unions. Women who have cohabitation experience prior to marriage, on average, have a greater number of non-cohabiting sex partners than those who did not cohabit before marriage. Women who serial cohabit are more likely to have a greater number of non-cohabiting sex partners cohabitors. Our findings suggest that it may be important to consider the full range of sexual experiences in early adulthood, cohabiting and sexual relationships.

5.4 Implications for future research

The results of this study suggest that serial cohabitation is increasing in its frequency with incoming marriage cohorts. Thus, scholars may need to refine their examination of cohabitation and marriage to distinguish between those who cohabit

several times and those who do not. Our results suggest that there may be key sociodemographic differences between the two groups. Including a measure of serial cohabitation in future work may help researchers understand the relationship between cohabitation and a variety of predictors, including marriage transitions, quality and stability of relationships, child well-being, and adult mental and physical health. The interplay between the increasing number of sexual partners outside the context of cohabitation and marriage, combined with the rise of premarital co-residential union formation further complicates the study of relationship formation today.

Cohabiting Relationships Before First Marriage Average number of cohabiting relationships before first marriage	0.50		
Average number of cohabiting relationships before first marriage	0 = 0		
	0.70	0.02	0-5
NT			
No conaditation experience	44.14		
Single-instance cohabitation	44.90		
Serial cohabitation	10.96		
Percent of women with cohabitation experience who single-instance cohabited before	80.42		
Percent of women with cohabitation experience who serially cohabited before first ma	19.58		
No cohabitation experience	44.14		
Only pre-marital cohabiting relationships	41.76		
Only non-premarital cohabiting relationships	3.37		
Both pre-marital and non-premarital cohabiting relationships	10.73		
Percent of serial cohabitors who cohabited with spouse (in addition to another man)	97.92		
Percent of serial cohabitors who only cohabited with a man they did not marry	2.08		
Sex Partners Before First Marriage			
Percent of women who had premarital sex	86.37		
Average number of sex partners before first marriage	4.40	0.17	0-50
Average number of non-cohabiting sex partners before first marriage	3.77	0.16	0-50
Percent of male sexual partners with whom women also cohabited	26.07		
Percent of male sexual partners with whom women did not cohabit	73.93		
Average number of sex partners for women who cohabited before first marriage	6.02		
Average number of non-cohabiting, sex partners for women who cohabited before firs	4.80		
Average number of sex partners for women who did not cohabit before first marriage	2.35		
Abstinent from sex before first marriage	13.63		
Never cohabited/had sex with at least one man before first marriage	31.92		
Only cohabited/only had sex with spouse before first marriage	9.15		
Only cohabited with spouse/had sex with more than one man before first marriage	31.23		
Cohabited twice/had sex with at least one man before first marriage	10.92		
Only non-premaritally cohabited/had sex with at least one man before first marriage	3.14		

Table 1. Distribution of Variables for Ever-Married Women (N = 2407)

Continued

Variable	%/Mean	SE	Range
Age at First Marriage	23.50	0.08	18-30
Le como	0.00	0.11	1 14
Income	9.99	0.11	1-14
Education			
< 12 years	12.00		
12 years	18.57		
13 to 15 years	33.72		
16 or more years	35.72		
Family Type During Childhood			
Two parent household	68.29		
Non-two parent household	31.71		
Religious Service Attendance			
Never attends religious services	20.31		
Attends less than once a month	27.37		
1-3 times per month	16.96		
Once a week	22.65		
More than once a week	12.71		
Race/Ethnicity			
White	69.16		
Black	8.93		
Native-Born Hispanic	8.42		
Foreign-Born Hispanic	6.68		
Other	6.80		
Marriage Cohort			
1988-1992	33.25		
1993-1997	33.81		
1998-2002	32.94		

Table 1. Distribution of Variables for Ever-Married Women (N = 2407) - continued

SOURCE: National Survey of Family Growth, 200 NOTE: Weighted percentages and means

Table 2. Distribution of Duration and Marriage Plans by First and Second
Cohabitation for Serial (N = 254) and Single-Instance, Ever-Married Cohabitors (N=1064

Variable	Single-Instance Cohabitors	Serial Cohabitors		
	Only Cohabitation	1st Cohabitation	2sd Cohabitation	
Mean Duration	25.35	24.48	20.87	
Percent with Plans to Marry	56.07	22.20	42.25	
SOURCE: National Survey of Fam	ily Growth, 2002			
NOTE: Weighted percentages and	means			

	Comp	Compared to Single-Instance Cohabitation				
Variable	No Cohab	itation	Serial Cohab	oitation		
	Odds Ratio	SE	Odds Ratio	SE		
Non-Cohabiting Sex Partners	0.91**	0.02	1.07**	0.01		
Age at First Marriage	0.94**	0.02	1.17**	0.02		
Age at First Marriage Squared	1.00	0.00	0.97**	0.01		
Income	0.99	0.02	0.98	0.02		
Education						
< 12 years	0.90	0.16	1.25	0.39		
(12 years)						
13 to 15 years	1.15	0.19	1.43	0.32		
16 or more years	1.81**	0.27	0.87	0.23		
Family Type During Childhood						
Two parent household	2.01**	0.25	0.60**	0.11		
(Non-two parent household)						
Religious Service Attendance	1.66**	0.07	0.81**	0.05		
Race/Ethnicity						
(White)						
Black	0.69	0.13	0.91	0.21		
Native-Born Hispanic	1.15	0.20	1.05	0.30		
Foreign-Born Hispanic	1.18**	0.29	0.36**	0.10		
Other	1.78	0.54	1.43	0.66		
Marriage Cohort						
1988-1992	1.44	0.24	1.02	0.18		
1993-1997	0.75	0.16	0.88	0.15		
(1998-2002)						
SOURCE: National Survey of Family C	browth, 2002					
*p<.05. **p<.01.						
Reference group in parentheses						

 Table 3. Bivariate Multinomial Logistic Regression of Number of Cohabitating Relationships before

 First Marriage for Ever-Married Women (N=2407)

Variable No Cohabitation Odds Ratio SE Odd Non-Cohabiting Sex Partners 0.96* 0.02 1 Age at First Marriage 0.55* 0.13 4 Age at First Marriage Squared 1.01* 0.01 0 Income 0.98 0.02 0 Education 1 0.15 1 (12 years) 0.64 0.15 1 1 12 years) 1.28 0.22 1 13 to 15 years 1.28 0.22 1 16 or more years 2.56** 0.42 0 Family Type During Childhood 1.79** 0.24 0 0 0 Reeligious Service Attendance 1.62** 0.07 0	ance Cohabitation	
Odds Ratio SE Odd Non-Cohabiting Sex Partners 0.96* 0.02 1 Age at First Marriage 0.55* 0.13 4 Age at First Marriage Squared 1.01* 0.01 0 Income 0.98 0.02 0 Education 1 0.15 1 (12 years) 1.28 0.22 1 1 0 1 13 to 15 years 1.28 0.22 1 1 6 or more years 2.56** 0.42 0 Family Type During Childhood 1.79** 0.24 0 0 (Non-two parent household 1.79** 0.24 0 0 Religious Service Attendance 1.62** 0.07 0 Race/Ethnicity 0.42 0 White) Black 0.65* 0.14 0 Native-Born Hispanic 1.27 0.23 1 Foreign-Born Hispanic 2.07** 0.42 0 O	Serial Cohabitation	
Non-Cohabiting Sex Partners 0.96* 0.02 1 Age at First Marriage 0.55* 0.13 4 Age at First Marriage Squared 1.01* 0.01 0 Income 0.98 0.02 0 Education 0.44 0.15 1 < 12 years 0.64 0.15 1 < 12 years 0.64 0.15 1 < 12 years 1.28 0.22 1 16 or more years 2.56** 0.42 0 Family Type During Childhood 1.79** 0.24 0 Two parent household 1.79** 0.24 0 (Non-two parent household) 1.62** 0.07 0 Religious Service Attendance 1.62** 0.07 0 Native-Born Hispanic 1.27 0.23 1 Foreign-Born Hispanic 2.07** 0.42 0 Other 1.70 0.50 1 Marriage Cohort 1.46** 0.19 0 1993-1997 1.14 0.17 1	ls Ratio S	
Age at First Marriage 0.55* 0.13 4 Age at First Marriage Squared 1.01* 0.01 0 Income 0.98 0.02 0 Education	.06** 0.	
Age at First Marriage Squared 1.01* 0.01 0 Income 0.98 0.02 0 Education	1.66** 1.	
Income 0.98 0.02 0 Education).97** 0.	
Education < 12 years	0.97 0.	
 < 12 years (12 years) 13 to 15 years 1.28 0.22 1 16 or more years 2.56** 0.42 C Family Type During Childhood Two parent household 1.79** 0.24 (Non-two parent household) Religious Service Attendance 1.62** 0.07 0 Race/Ethnicity (White) Black 0.65* 1.40 0.42 0 0 0 0 1.62** 0.07 0 1.62** 0.07 0 1.62** 0.07 0 1.62** 0.07 0 0 0.65* 0.14 0 0 0 0 1.70 0.50 1 1.70 0.50 1 1988-1992 1.46** 0.19 0 1.93-1997 1.14 0.17 		
(12 years) 13 to 15 years 1.28 0.22 1 16 or more years 2.56** 0.42 0 Family Type During Childhood Two parent household 1.79** 0.24 0 (Non-two parent household) 1.62** 0.07 0 Religious Service Attendance 1.62** 0.07 0 Race/Ethnicity	1.25 0.	
13 to 15 years 1.28 0.22 1 16 or more years 2.56** 0.42 0 Family Type During Childhood Two parent household 1.79** 0.24 0 (Non-two parent household) 1.62** 0.07 0 Religious Service Attendance 1.62** 0.07 0 Race/Ethnicity		
16 or more years 2.56** 0.42 0 Family Type During Childhood 1.79** 0.24 0 Two parent household 1.79** 0.24 0 (Non-two parent household) 1.62** 0.07 0 Religious Service Attendance 1.62** 0.07 0 Race/Ethnicity	1.10 0.	
Family Type During Childhood 1.79** 0.24 0 Two parent household 1.79** 0.24 0 (Non-two parent household) 1.62** 0.07 0 Religious Service Attendance 1.62** 0.07 0 Race/Ethnicity 1.62** 0.07 0 (White) 1.27 0.23 1 Black 0.65* 0.14 0 Native-Born Hispanic 2.07** 0.42 0 Other 1.70 0.50 1 Marriage Cohort 1.46** 0.19 0 1993-1997 1.14 0.17 1	0.56 0.	
Two parent household 1.79** 0.24 0 (Non-two parent household) Religious Service Attendance 1.62** 0.07 0 Race/Ethnicity		
(Non-two parent household) Religious Service Attendance 1.62** 0.07 0 Race/Ethnicity (White) Black 0.65* 0.14 0 Native-Born Hispanic 1.27 0.23 1 Foreign-Born Hispanic 2.07** 0.42 0 Other 1.70 0.50 1 Marriage Cohort 1.46** 0.19 0 1993-1997 1.14 0.17 1).50** 0.	
Religious Service Attendance 1.62** 0.07 0 Race/Ethnicity (White) 0 0 Black 0.65* 0.14 0 Native-Born Hispanic 1.27 0.23 1 Foreign-Born Hispanic 2.07** 0.42 0 Other 1.70 0.50 1 Marriage Cohort 1.46** 0.19 0 1993-1997 1.14 0.17 1		
Race/Ethnicity (White) Black 0.65* 0.14 0 Native-Born Hispanic 1.27 0.23 1 Foreign-Born Hispanic 2.07** 0.42 0 Other 1.70 0.50 1 Marriage Cohort 1.46** 0.19 0 1988-1992 1.46** 0.19 0 1993-1997 1.14 0.17 1).81** 0.	
(White) Black 0.65* 0.14 0 Native-Born Hispanic 1.27 0.23 1 Foreign-Born Hispanic 2.07** 0.42 0 Other 1.70 0.50 1 Marriage Cohort 1.46** 0.19 0 1993-1997 1.14 0.17 1		
Black 0.65* 0.14 0 Native-Born Hispanic 1.27 0.23 1 Foreign-Born Hispanic 2.07** 0.42 0 Other 1.70 0.50 1 Marriage Cohort 1.46** 0.19 0 1993-1997 1.14 0.17 1		
Native-Born Hispanic 1.27 0.23 1 Foreign-Born Hispanic 2.07** 0.42 0 Other 1.70 0.50 1 Marriage Cohort 1.46** 0.19 0 1993-1997 1.14 0.17 1	0.76 0.	
Foreign-Born Hispanic 2.07** 0.42 0 Other 1.70 0.50 1 Marriage Cohort 1.46** 0.19 0 1993-1997 1.14 0.17 1	1.06 0.	
Other 1.70 0.50 1 Marriage Cohort 1 146** 0.19 0 1993-1997 1.14 0.17 1).40** 0.	
Marriage Cohort1988-19921.46**0.1901993-19971.140.171	1.88 0.	
1988-19921.46**0.1901993-19971.140.171		
1993-1997 1.14 0.17 1	0.89 0.	
	1.07 0.	
(1998-2002)		

 Table 4. Multivariate Multinomial Logistic Regression of Number of Cohabitating Relationships

 before First Marriage for Ever-Married Women (N=2407)

Reference group in parentheses

Variable	Percent
Cohabiting Relationships Before First Marriage	
No cohabitation experience	44.41
Single-instance cohabitation	44.56
Serial cohabitation	11.03
No cohabitation experience	44.41
Only pre-marital cohabiting relationships	42.25
Only non-premarital cohabiting relationships	2.66
Both pre-marital and non-premarital cohabiting relationships	10.68
Percent of men with cohabitation experience who single-instance cohabited before first	80.15
Percent of men with cohabitation experience who serially cohabited before first marria	19.85
Percent of serial cohabitors who cohabited with spouse (in addition to another woman	96.77
Percent of serial cohabitors who only cohabited with a woman they did not marry	3.23
SOURCE: National Survey of Family Growth, 2002	
NOTE: Weighted percentages and means	

Appendix 1. Distribution of Variables for Ever-Married Men (N = 1072)

References

- Brown, S. (2000). The effect of union type on psychological well-being: Depression among cohabitors versus married. Journal of Heath and Social Behavior 41, 241-255.
- Bumpass, L., Lu, H-H. (2000). Trends in cohabitation and implications for children's family contexts in the United States. Population Studies 54, 29-41.
- DeMaris, A. (1992). Logit modeling: Practical applications. Newbury Park, CA: Sage.
- DeMaris, A., MacDonald, W. (1993). Premarital cohabitation and marital stability: a test of the unconventionality hypothesis. Journal of Marriage and Family 55, 399-407.
- Kennedy, S., Bumpass, L. (forthcoming). Cohabitation and children's living arrangements: New estimates from the United States. Demographic Research.
- Lichter, D., Qian, Z. (forthcoming). Serial cohabitation and the marital life course. Journal of Marriage and Family.
- Chandra, A., Martinez, G., Mosher, W., Abma, J., Jones, J. Fertility, family planning, and reproductive health of U.S. women: Data from the 2002 National Survey of Family Growth. National Center for Health Statistics. Vital Health Stat 23(25). 2005.
- Mosher, W., Chandra, A., Jones, J. (Sept. 2005). Sexual behavior and selected health measures: Men and women 15-44 years of age, United States, 2002. Vital and Health Statistics #362.
- Raley, K. (1996). A shortage of marriageable men? A note on the role of cohabitation in black-white differences in marriage rates. American Sociological Review 61, 973-983.
- Stets, J. (1993). The link between past and present intimate relationships. Journal of Family Issues, 14, 236-260.
- Teachman, J. (2003). Premarital sex, premarital cohabitation, and the rise of subsequent marital dissolution among women. Journal of Marriage and Family 65, 444-455.
- Teachman, J., Polonko, K. (1990). Cohabitation and marital stability in the United States. Social Forces 69, 207-220.
- U.S. Census Bureau. (2004). Census 2004 Profile. Washington, DC: Public Information Office.