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ABSTRACT

This study investigates the relatively low rates of early marriage and cohabitation among Asian

Americans compared to Whites. With an emphasis on family value socialization and other

precursors measured in adolescence, data from Waves 1 and 3 of Add Health are used to test five

hypotheses. Analyses of early marriage indicate that the Asian-White difference is driven primarily

by differences in adolescent sexual and romantic relationship experiences, and several measures of

family values play a stronger role among Asian Americans than Whites. Asian-White differences in

cohabitation persist net of SES and other adolescent precursors, but differences are attenuated when

parental value socialization, intimate relationship experiences, and educational investments are

controlled. These results are interpreted within a culturally sensitive conceptual framework that

emphasizes independent versus interdependent construals of the self.

Key words: marriage, cohabitation, Asian Americans, culture

Recent studies of union formation have emphasized continuities between adolescence and adulthood (Crissey, 2005; Manning, Longmore, & Giordano, 2007; Plotnick, 2007; Raley, Crissey, & Muller, 2007). Increasingly, scholars argue that the family values and attitudes toward sex and intimate relationships acquired in the teenage years foreshadow union formation expectations and behaviors in the early adult years. Indeed, several studies have shown that patterns of union formation in young adulthood can be predicted from attitudes and experiences in adolescence. For example, romantic relationship experiences at the end of high school increase the likelihood of marriage, whereas nonromantic sexual experiences predict later cohabitation (Raley et al. 2007). Furthermore, racial differences in adolescent values and attitudes toward sexual behaviors and union formation have been reported. For example, when asked about desired ages at marriage and first birth, Hispanic and Black girls desire faster transitions than White or Southeast Asian girls (East, 1998).

Despite efforts to understand differences in union formation patterns across racial/ethnic groups, few studies of marriage or cohabitation have incorporated Asian Americans. Data from the 2000 Census show that the median ages at first marriage for Asian American men and women are higher than those for White Americans: 29 versus 26 for men and 26 versus 24 for women[1]. When compared to other racial/ethnic groups, Asian men have the highest median age at first marriage, whereas Asian women have the second highest (only lower than Black women). Nonetheless, most

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[1] Simmons, T. & Dye, J. L. (2004) What has Happened to Median Age at First Marriage Data? URL:
    http://www.census.gov/acs/www/Downloads/MedAge_revised_final.pptS

Asian Americans eventually marry[2]. The 2006 American Community Survey indicates that among

all individuals ages 15 and above, 30% of Asian Americans had never married, which is only

slightly higher than the figure for Whites (27%), who have the lowest percentage never married

among all racial/ethnic groups. Several exceptions to the scarcity of literature on union formation

among young Asian Americans are studies by East (1998), Glick et al. (2006), and Plotnick (2007).

East and Plotnick look at adolescents' *expectations* for marriage. Glick et al. study the marital

behaviors of Asian young adults, with a specific focus on the effect of educational engagement in

adolescence. However, there are good reasons to believe that the delay in union formation among

Asian young adults is not just due to education, given the cultural values regarding sex and intimate

relationships emphasized in Asian families (Staples and Mirande 1980, Espiritu 2001) and the

relatively low engagement of Asians in romantic relationships in adolescence (Carver et al. 2003).

This article seeks to contribute to the literature on race/ethnicity and union formation in several

ways. *First*, we focus on Asian Americans, a group that is understudied despite the fact that they are

the fastest growing racial minority group in the United States. According to the U.S. Census Bureau,

the Asian American population is projected to grow from 1% of the U.S. population in 1970 to 10%

in 2050 (Martin & Midgley, 2003). Comparisons are made between Asian and White Americans

because of their similar socioeconomic profiles and yet quite different rates of union formation.

Second, we develop a conceptual framework to understand Asian-White differences in values and

behavior, drawing on a theory that emphasizes two distinct perspectives on self-construals

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[2] U.S. Census Bureau (2007) Table S1201. Marital Status of the 2006 American Community Survey. URL:
http://factfinder.census.gov/servlet/ACSSAFFPeople?_submenuId=people_11&_sse=on

(independent versus interdependent). Attention to how values are internalized in culturally diverse

families provides insight into the mechanisms underlying behavioral differences. *Third*, we address

multiple understudied research issues by: (1) focusing on both marriage and cohabitation among

Asian Americans; (2) looking at actual occurrences of marriage and cohabitation, rather than

expectations about unions; (3) simultaneously examining the influences of family values,

adolescents' own sexual and relationship values, adolescents' sexual and relationship experiences,

and educational investments on the transition to first union; and (4) utilizing a nationally

representative sample of a recent cohort of White and Asian youth.

Conceptual Framework

Race and Union Formation

Over the past few decades, the mean age at first marriage and the percentage of never-married

individuals at most ages have been on the rise (Casper & Bianchi 2002). Cohabitation has become

prevalent, whether or not it is followed by marriage. Differences in patterns of union formation

have been reported repeatedly for Whites, Blacks, and Hispanics (Bumpass & Lu, 2000; Manning

& Smock, 1995; Schoen & Cheng, 2006), but because of the limited attention to Asian Americans,

the portrait of their union formation behavior is less complete.

Glick et al. (2006), using the National Education Longitudinal Study (NELS), reported a lower

likelihood of entry into marriage for Asian youth when compared to Whites. However, the

difference between Asians and Whites was non-significant after family socioeconomic status and

generation status were considered. Findings from East's (1998) study indicate that when family

characteristics and socioeconomic background are controlled, Southeast Asian girls prefer later and

more gradual transitions to sexual, marital, and birth events than Hispanic and Black girls. Finally,

Plotnick (2007) found that Asian American adolescents have significantly higher expected and

desired age of marriage than White adolescents. All of these studies accentuate the need to further

explore the factors involved in differences in the timing of union formation between White and

Asian American young adults.

Perspectives on Self-Construal as a Way to Understand Family Influences

The term "self-construal" refers to the awareness and conception of oneself in relation to others,

especially the extent to which one sees how he/she is separated from or connected with others

(Markus & Kitayama 1991). The seminal work of Markus and Kitayama (1991) offers an

explanation for the association between different construals of the self and the process of family

value socialization among Western and Eastern/Asian cultures. They point out two distinct types of

self-construals: independent versus interdependent. The independent view of Western culture sees

the self as "deriving from a belief in the wholeness and uniqueness of each person's configuration

of internal attributes" (p.226). In contrast, the interdependent notion of the self in Asian culture

"entails seeing oneself as part of an encompassing social relationship and recognizing that one's

behavior is determined, contingent on, and, to a large extent organized by what the actor perceives

to be the thoughts, feelings, and actions of *others* in the relationship" (p. 227). This interdependent

view of the self is not only present in East Asian countries where Confucian values prevail, but can

also be found in the Philippines, India, or even Hispanic and African cultures. The concept of

interdependent self-construal resembles aspects of Confucian familism that stress affective and

cognitive identification with one's family and understanding one's responsibilities and obligations

toward his/her family (Cheng 1944). These two distinct views of the self have implications for

family socialization because they motivate individuals' actions and behaviors in dissimilar ways. A

person with an independent self-construal is motivated to do things that realize his or her own

desires or needs, while a person with an interdependent self-construal is motivated toward actions

that promote connection to and meet the expectations of significant others.

Using this framework, one would expect family values to play a role in Asian-White

differences in family formation. Asian parents may hold more conservative values regarding

sexuality and early union formation than White parents. Further, family values may have a stronger

influence on Asian American youth, suggesting an interaction between race and family values in

models of union formation.

Family Value Socialization and Adolescents' Values

Asian culture places strong constraints on young people's premarital sexual behaviors and

cohabitation (Staples & Mirande 1980, Espiritu 2001, Chan 1994). This is true in countries

influenced by the Confucian culture as well as other countries like the Philippines, even though

recent trends indicate a rise in premarital sex and cohabitation in such settings (Jones 2007,

Williams et al. 2007). First- and second-generation Asian American adolescents remain under the

strong influence of the Asian value system because of their exposure to immigrant parents. For

example, Espiritu's (2001) qualitative study of first- and second-generation Filipino daughters and

their parents reveals strong parental disapproval of sex along with strict parental control of daughters' sexuality and dating choices. This causes conflicting emotions in daughters who want to adapt to the U.S. culture and to stay true to their ethnic identity.

Another source of family values is religion. Offspring of more religious parents are more likely to internalize conservative family values than offspring of less religious parents. They may therefore perceive more negative social consequences of early sexual and dating activities, which may deter actual involvement in these activities. Lower involvement in sex and dating decreases the likelihood of cohabitation and marriage in early adulthood (Crissey, 2005; Manning et al., 2007; Meier & Allen, 2007; Raley et al., 2007). At the same time, prior research shows that religiosity has a positive effect on the perceived likelihood of marriage (Crissey 2005, Manning et al. 2007) and a negative effect on cohabitation (Williams et al. 2007, Thornton et al. 1992).

Parental attitudes about dating and sex are also intertwined with parents' aspirations for their children. Asian families place great emphasis on making sure the young excel in school and advance to higher education (Hirschman & Wong 1986), and Asian American youth invest considerable time and energy pursuing educational goals that fulfill the expectations of family members (Asakawa & Csikszentmihalyi 2000), often their parents. As a consequence, they are likely to refrain from seeking sexual or romantic relationships that are considered secondary or inappropriate in adolescence (Espiritu 2001).

We expect parental values to partially explain Asian-White differences in union formation (*Hypothesis 1*). Parents of Asian American adolescents are likely to place greater emphasis on

postsecondary education, to be more religious, and to be more disapproving of adolescent sexual activity than parents of White adolescents. We also expect differences between Asian and White adolescents in their attitudes about sex and family formation, and anticipate that these differences will account partially for differences in union formation behavior (*Hypothesis 2*). If Asian parents hold values that are different from those of White parents or if internalization of family values is deeper among Asians, Asian adolescents should differ from Whites in their perceived social consequences of sex, their motivation to have sex, and their views on premarital pregnancy. These discrepancies may further translate into different union patterns in young adulthood. In addition, given that self-construal theory maintains that Asians adhere more strongly to family values than Whites, we expect parents' and adolescents' values to be related more strongly to union formation among Asian Americans than among Whites (*Hypothesis 3*).

Sexual and Relationship Experiences

Recent studies have investigated the links between romantic relationships and union formation expectations in adolescence and union formation behaviors in young adulthood. Crissey (2005) finds that adolescents who are involved in serious relationships are more likely than others to think that they will get married by age 25. Raley and colleagues (2007) report similar findings, except the outcomes in their study are actual marriage and cohabitation. They show that adolescents who have romantic relationships by the end of high school are more likely to be married and to cohabit in early adulthood than those who do not. In addition, nonromantic sexual relationships in adolescence elevate the risk of cohabitation, but not marriage. Meier and Allen (2007) show that adolescents

who have a history of either "progression to a steady relationship" or "remaining in a stable steady relationship" are significantly more likely to get married, whereas those who never had any relationship by early adulthood are much less likely to cohabit. Similarly, Manning et al. (2007) find that adolescents who have never dated are less likely to expect to cohabit before marriage than adolescents who are currently dating. They also show that sexual activity in adolescence increases the likelihood of expecting the "cohabitation then marriage" pathway instead of the "direct marriage" pathway (Manning et al. 2007). Together, these studies make clear that adolescent relationship experiences are critical precursors of union formation behavior in young adulthood. Thus, it is hypothesized that Asian adolescents' limited experiences in sexual and romantic relationships (Carver et al. 2003, Chris & Hahm, 2006) will partially explain their relatively low rates of forming marital and cohabiting unions (*Hypothesis 4*).

Educational Investments

The relationship between schooling and union formation has been tested extensively (Glick et al. 2006, Thornton et al. 1995). Both school enrollment and greater investment in education are associated with later union formation, especially marriage. Although schooling may have a weaker effect on minority youths for whom socioeconomic advancement is blocked structurally (Edin and Kefalas 2005), this is generally not the case for Asian Americans. Asian Americans have relatively high rates of attending elite universities, getting professional or managerial jobs, and making high income when compared with other minority groups (Hirschman & Wong 1986). Asians' high investments in education should delay their union formation. In fact, Glick et al.'s (2006) study

demonstrated that Asian teens with high educational engagement have a very low predicted probability of marriage.

East's (1998) study further highlights the links between race/ethnicity, education, and union formation. East argues that despite the similar socioeconomic profiles of Southeast Asian and Black girls, the former have higher educational and job aspirations than the latter, and this lowers their desire for early sexual and marital events. Family culture plays a key role in this difference. Asian parents' expectations are also high in comparison to those of White parents. It is thus hypothesized that educational investments contribute to the relatively low rates of early union formation of Asian Americans compared to White Americans (*Hypothesis 5*).

To sum up, to unravel the processes underlying Asian-White differences in the formation of cohabiting and marital unions, we investigate the influence of family value socialization, adolescents' own values and attitudes, early romantic and sexual relationships, and educational investments beyond high school. Throughout our analyses, we control for socioeconomic background because of its well-established role in union formation. It is important to bear in mind that our analysis focuses on early union formation—that is, union formation before age 25.

Research Design

Data

This paper employs data from Waves 1 and 3 of Add Health, a longitudinal study that began with a national sample of adolescents in grades 7-12 in 1994-1995. Students were selected from a sampling frame of 26,666 U.S. high schools, including public, private, and parochial schools. These

10

schools were grouped into strata based on enrollment size, school type, region, urbanity, and

percent White students. Schools were selected using systematic sampling methods and implicit

stratification. Students within each selected school were chosen with a known probability sampling

method. Minority groups including Asians, Cubans, Puerto Ricans and African Americans from

well-educated families were oversampled. Post-stratification adjustments were made on region so

that the sum of school weights would equal the number of schools in each region of the United

States (Harris et al., 2003).

The data were collected mainly through in-home interviews, with extra parent questionnaires in

Wave 1. The first wave of Add Health data was collected between September 1994 and December

1995. The Wave 2 in-home interviews were conducted between April 1996 and August 1996.

Finally, the Wave 3 in-home interviews were conducted between 2001 and 2002.

Sample

The sample selected for the current study is individuals who participated in the Wave 1 and Wave 3

Add Health in-home interviews (n=11,621). We excluded 793 individuals because they lacked the

longitudinal sampling weight for analyses using Wave 1 and Wave 3, resulting in 10,828

respondents. Respondents who were between the ages of 16 and 18 at Wave 1 and who were of

White or Asian race were further selected. There were 4,528 adolescents who met these selection

criteria (3,857 Whites and 671 Asians). Although there were too few Asians to conduct our analyses

separately by national-origin group, we recognize that union formation patterns vary across Asian

subgroups. Thus, we provide descriptive information on cohabitation and marriage for Asian subgroups. Using the seven response categories for the question "what is your Asian background?" at Wave 1, we separate the Asian sample into East Asians (Chinese, Japanese, Koreans), Filipinos, and other Asians (Asian Indians, Vietnamese, other Asian ethnic groups). There were 171 East Asians, 346 Filipinos, and 154 other Asians.

We restrict our analytic sample to individuals ages 16 to 18 at Wave 1 because they were old enough for a sufficient number of marriages and cohabitations to have occurred by Wave 3 (when they were ages 22 to 25). Respondents who were younger were much less likely to have formed a union, especially a marriage. Individuals who were older than 18 and still enrolled in 12th grade at Wave 1 are most likely those who experienced grade retention. They may possess common unobserved characteristics that could introduce biases into the analyses. Second, late adolescence is a time when many adolescents have experienced some level of involvement in intimate relationships, which facilitates investigation of the association between adolescent sexual and romantic relationships and young adult union formation.

Our multivariate analysis is based on a person-year file that includes observations for each year between Wave 1 and the specific union transition being analyzed. If a respondent never experienced any union, the last observation is the year in which the Wave 3 interview was conducted. Some respondents were excluded because they experienced a certain event prior to the Wave 1 interview; these respondents were not at risk of a first union transition between Wave 1 and Wave 3. Twenty seven adolescents had married and 107 adolescents had cohabited by Wave 1. These individuals

were left-censored from the relevant statistical analyses. The multivariate analyses of first marriage and first cohabitation are based on 4501 and 4421 respondents, respectively. These analyses are based on different numbers of individuals because of differences in the number of adolescents experiencing each event before Wave 1.

Variables and Measures

Outcome Variables. Respondents were asked to report the month and year of their first marriage and their first cohabitation in Wave 3. From these dates, century months were calculated for entry into marriage and cohabitation. When both the month and the year were missing, the case was deleted from the analysis. When the month was unknown and the year was available, the case was retained and we assumed that the event occurred in the middle of the year (i.e., in June). The outcome variables were coded '0' until the year in which the event of interest took place. To determine the year of a particular union event, the century month of the event was compared to the century months in which the person year started and ended. If the event fell within the person year, the event variable was coded '1.'

Sociodemographic Control Variables. The sociodemographic characteristics included in this study are age, gender, maternal education, family income, and family structure at Wave 1. Prior studies document that the socioeconomic status of the origin family affects the likelihood of marriage and cohabitation. For example, Schoen et al. (in press) show that among White and Black women, higher maternal education is associated with fewer transitions to cohabitation and marriage in young adulthood. It is also well documented that children who experienced parental divorce or lived

in a stepfamily are more likely to form marital or cohabiting unions early than those from intact two-biological-parent families (Michael & Tuma, 1985). Family structure is a four-category variable: two biological parents, stepfamily, single parent family, and other family.[3]

Predictors. **Sexual/relationship socialization and attitudes** are measured with two sets of variables from Wave 1. The variables in the first set, which pertain to family socialization are: parental college aspirations for the adolescent, parental religiosity, and whether the parent disapproves of sex for the adolescent now. These variables are based on parental reports. Parents' aspirations for their adolescent's education are measured using the question "how disappointed would you be if [respondent] did not graduate from college? Higher disappointment is coded as higher aspirations for the youth to attend and finish college. Parental religiosity is measure by adding three items: (1) How often have you gone to religious services in the past year? (2) How important is religion to you? (3) How often do you pray? Higher scores indicate stronger religiosity (Cronbach's Alpha=0.74). Parental disapproval of sex is measured by the question "You disapprove of [respondent] having sexual intercourse at this time in his/her life," with response values ranging from 1 to 5.

The second set of variables relates to adolescents' own values and attitudes, including the perceived social consequences of sex, motivation to have sex, and whether he/she would consider having children as an unmarried person. Perceived social consequences of sex are measured with a

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[3] It is important to note that the Asian sample is largely made up of first- and second-generation individuals (90% versus 5% for Whites), whereas the majority of Whites are third or higher generation (95% versus 10% for Asians). Because generation status overlaps so fully with race (see Table 1), it was not possible to include it as a predictor.

composite variable based on three items (Cronbach's Alpha=0.69): (1) If you had sexual intercourse, your partner would lose respect for you; (2) If you had sexual intercourse, afterward, you would feel guilty; (3) If you had sexual intercourse, it would upset your mother. Higher values indicate stronger perceived social consequences of sex. The scale for motivation to have sex (Cronbach's Alpha=0.77) was created by adding the following five items: (1) If you had sexual intercourse, your friends would respect you more; (2) If you had sexual intercourse, it would give you a great deal of physical pleasure; (3) If you had sexual intercourse, it would relax you; (4) If you had sexual intercourse, it would make you more attractive to women (or men); (5) If you had sexual intercourse, you would feel less lonely. Finally, "consider having kids as an unmarried person" is a dichotomous variable. This variable is constructed using the question "Regardless of whether you have ever had a child, would you consider having a child in the future as an unmarried person?"

Sexual and romantic relationship experiences are measured with three dichotomous variables constructed from Wave 1 data: ever had a romantic relationship, ever had a sexual experience, and ever had sex with a non-romantic partner. Three questions form the basis for these variables: (1) In the last 18 months, have you had a special romantic relationship with anyone? (2) Have you ever had sexual intercourse? (3) Not counting the people you have described as romantic relationships, have you ever had a sexual relationship with anyone?

Educational investment is measured with two time-varying variables: highest degree attained and school enrollment status at each age. The dates of degree completion (e.g., high school degree and college degree) were matched with the century month of each birthday to determine the highest

degree attained at the beginning of each age. School enrollment status is a dichotomous variable indicating whether a respondent is currently enrolled or not. This variable was constructed with a procedure outlined in Amato et al. (2008).

Missing Data and Complex Survey Design

Missing data were handled with the multiple imputation procedure (Proc MI) in SAS. Five imputed datasets were generated using the Proc MI procedure. Multiple imputation (Rubin 2004) is a procedure that utilizes the Monte Carlo technique to replace missing values with several simulated versions. Each of the simulated complete datasets is analyzed by standard methods, and the results are combined to produce estimates and confidence intervals that incorporate missing data uncertainty (http://www.stat.psu.edu/%7Ejls/mifaq.html - ref). In the analyses that follow, both descriptive statistics and the output for the event history models are the combined outputs from five imputed datasets using Rubin's rules. The complex survey design of Add Health was dealt with by using the SAS-callable SUDAAN program. Appropriate longitudinal sampling weights were applied to the statistical models. In addition, clustering and stratifying variables were taken into account to adjust the standard errors.

Analysis Plan

Descriptive statistics are presented separately for White and Asian respondents. Then, discrete-time event history analyses are presented to examine the roles of sociodemographic variables, family socialization, adolescent values and attitudes, adolescents' sexual and romantic relationship experiences, and educational investments in transitions to first marriage and first cohabitation.

Logistic regression was used to estimate a series of nested discrete-time event history models. Interactions between race (Asian versus White) and each of the six family socialization and adolescent values/attitudes variables were examined to determine whether family influences have a stronger impact on Asians than on Whites. Finally, we utilize the Clogg test (Clogg et al. 1995) to determine whether coefficient changes across models are statistically significant.

Results

Descriptive Statistics

Table 1 presents the weighted means and percentage distributions for all variables. The first panel shows that Asian Americans are significantly less likely to form a first union, especially a cohabitating union, than Whites. Fully 50% of Whites had entered a cohabiting union by Wave 3, compared to only 30% of Asian Americans. The comparable figures for marriage are 29% for Whites and 19% for Asian Americans. Although there are too few cases in specific Asian subgroups to make subgroup distinctions in our multivariate analyses, descriptive information is provided for three subgroups: East Asian, Filipino, and other Asian. As shown in Table 1, there are differences in rates of marriage and cohabitation among these groups. Very few East Asians marry in young adulthood (9%), whereas Other Asians marry at a rate comparable to that of Whites (29%). In addition, Filipinos are more likely to cohabit during young adulthood (33%) than East Asians and Other Asians (28%); however, all Asian subgroups are less likely to cohabit than Whites.

In the second panel, Asian American adolescents have a very different sociodemographic profile than Whites. A higher percentage of Asian American adolescents had mothers who did not

17

complete high school (23% versus 11%) or who completed college (41% versus 26%) than White adolescents. The diversity among Asians is due to the two different streams of immigration from Asia: voluntary and involuntary. Voluntary Asian immigrants are much more likely to have high socioeconomic status than involuntary immigrants who come to the United States because of refugee status or other forms of persecution. Asian American teens are more likely to come from two-biological-parent families (72% versus 60%) and less likely to live in stepfamilies (10% versus 16%) or single-parent families (13% versus 19%) than Whites.

The parents of Asian American adolescents have higher aspirations for their children's postsecondary education and higher levels of religiosity than do the parents of White adolescents. . Group differences in family values are also reflected in the fact that the Asian American youth perceive greater negative social consequences of sex than do White youth. In addition, a much lower percentage of Asian American youth had been involved in romantic or sexual relationships by Wave 1 than White youth. For example, 53% of Whites report having had a sexual experience compared to 32% of Asians.

Finally, the panel for time-varying educational investments demonstrates that Asian American adolescents are less likely to have no degree and more likely to be currently enrolled in school. This pattern was observed for both the transition to first marriage and the first cohabitation data files.

Transition to First Marriage

Table 2 presents discrete-time event history models of the transition to first marriage. The first column shows odds ratios that summarize the bivariate relationships between each predictor and the

transition to marriage. Model 1 includes race, age, and gender, and shows that Asian Americans are much less likely to marry in early adulthood (OR=0.62, p<.05) than Whites. This difference persists even after sociodemographic controls are entered in Model 2 (OR=0.65, p<.05). The other sets of variables (entered in Models 3 through 6) further reduce the difference between Asians and Whites and generally influence marriage in the expected direction. In Model 3, which adds parental values and attitudes, parental disapproval of adolescent sex is related negatively to early marriage, while parental religiosity is related positively to early marriage. In Model 4, stronger motivation to have sex in adolescence is associated with a lower likelihood of entering marriage in early adulthood. This may be due to lower levels of conservatism among those who are strongly motivated to engage in adolescent sex. However, those who actually have sex or a romantic relationship in adolescence are much more likely to marry early than those who do not (as shown in Model 5). This last set of variables is by far the most critical in closing the racial gap in odds of marriage, based on the Clogg test for the significance of changes in coefficients across models (absolute Z >= 1.96). Finally, being in school decreases the risk of early marriage, while completing high school without further education increases the likelihood of marriage.

Interactions between race and each of the measures of family and adolescent values were tested to determine whether values have a stronger influence on the marriage behavior of Asians than Whites. Three interaction terms are significant (Models 7, 8, and 9): Asian by parental disapproval of sex (OR=0.78, p<.05), Asian by high perceived social consequences of sex (OR=0.86, p<.05), and Asian by consider having kids as an unmarried person (OR=2.35, p<.01). All

other things equal, parental disapproval of sex during adolescence and adolescents' own perceptions of the social consequences of sex have stronger dampening effects on early marriage among Asians than Whites. These interactions provide some support for the hypothesis that Asian youth are more likely than White youth to consider their parents' perspective when making choices about forming marital unions. The third interaction term indicates that acceptance of having children as an unmarried person has a more positive influence on marriage among Asians than among Whites, a finding that is not readily interpretable.

Transition to First Cohabitation

Table 3 focuses on entry into cohabitation. As shown in Model 1, Asian American youth are less likely to enter cohabitation in early adulthood than are White youth (OR=0.51, p<.001), and this negative relationship is stronger than that observed for marriage in Model 1 of Table 2. The lower likelihood of cohabitation for Asian Americans persists across models.

Models 2 through 4 show that higher maternal education reduces the odds of forming a cohabiting union in early adulthood, but in Model 5 (which adds adolescent sexual and romantic relationship experience) maternal education is no longer significant. This pattern indicates that maternal education affects cohabitation in part through adolescents' intimate relationship experiences. The full model (Model 6) shows that those most likely to cohabit are individuals from stepfamilies, single-parent families or "other" families, those who indicated in adolescence that they would consider childbearing as an unmarried person, and those who had romantic and sexual relationships in adolescence. Cohabitation is less common among men and women who were raised

by more religious parents and those who were still enrolled in school. According to the Clogg test for the significance of changes in coefficients across models, the Asian-White difference in the odds of cohabitation is reduced significantly by the inclusion of measures of family socialization and adolescent intimate relationship experience. It becomes nonsignificant once the measures of educational engagement are added. Finally, none of the six interaction terms was significant. Contrary to our expectations, family values do not seem to have a stronger influence on the likelihood of early cohabitation among Asian Americans than among Whites.

Conclusions

This study investigated the processes underlying the low rates of early union formation among Asian Americans relative to Whites. Five research hypotheses were proposed and tested. The *first hypothesis* was that parental values partially explain Asian-White differences in union formation. This hypothesis received support in models of cohabitation, but not in models of marriage. The Asian-White difference in cohabitation was significantly reduced when measures of family socialization were added to a model that included only sociodemographic controls. The *second hypothesis* was that differences between Asian American and White youth's values regarding sex partially account for Asian-White differences in the risk of early union formation. This hypothesis was not supported for either marriage or cohabitation.

Hypothesis 3 proposed that parents' and adolescents' values have a stronger influence on union formation among Asian American youth than White youth. This hypothesis was supported for marriage but not cohabitation. Parental disapproval of sex and adolescents' perceptions of the social

consequences of sex are more strongly associated with delayed marriage among Asian Americans than Whites, holding other characteristics constant. Further, Asian adolescents who are accepting of nonmarital childbearing are more likely than their White counterparts, all else equal, to enter marriage early.

Hypothesis 4 received strong support because sexual and romantic relationship experience in adolescence partially explained the Asian-White difference in both marriage and cohabitation. The Asian-White difference went from marginally significant (OR=0.68, p<.10) to non-significant (OR=0.76) for marriage and from an odds ratio of 0.61 (p<.05) to an odds ratio of 0.70 (p<.05) for cohabitation. Both coefficient changes were significant. Finally, *Hypothesis 5* states that educational investments contribute to the relatively low odds of early union formation among Asian Americans compared to White Americans. This hypothesis was supported for cohabitation. The critical feature of education for union formation is remaining in school.

Asian American adolescents grow up learning traditional values that teach them to delay gratification from intimate dyadic relationships and to focus on achieving academically. These family influences are deeply internalized and are reflected in Asian American youth's lower motivation for and involvement in sexual/romantic relationships, which lengthens the time to first marriage. The models show that limited involvement in intimate relationships in late adolescence is a major factor underlying the Asian-White gap in early marriage. In addition, the impacts of parental disapproval of sex and perceived social consequences of sex on marriage are stronger for Asian Americans than Whites. Family value socialization, intimate relationship experiences, and

educational engagement each have unique contributions in explaining Asian-White differentials in entry into first cohabitation. Again, a major factor is romantic and sexual experiences in adolescence. However, evidence for the importance of interdependent self-construals was not found in the models for cohabitation. In contrast to the pattern for marriage, parents' and adolescents' values did not influence the odds of cohabitation more strongly among Asian American young adults than among White young adults.

Finally, the results of this study should prompt researchers to think about the meaning of cohabitation and its influence on later family processes among Asian Americans. Asian Americans who enter a cohabiting union may be even much more non-traditional than Whites who cohabit. It is thus intriguing to consider the quality and stability of marriage among Asian American couples who cohabited premaritally. One might think that the positive relationship between premarital cohabitation and divorce risk might be more pronounced for Asian Americans because of the relative "unconventionality" of cohabitation in the Asian American community. This is an interesting question for future research.

There are several things that might have improved this study. First, there are no variables that measure parental attitudes toward dating, cohabitation, or marriage in the Add Health study. If these variables were available, they would be more direct measures of family influences on attitudes and behaviors regarding the ideal timing and sequence of union formation. In this study, we can only gauge family influences that relate to union formation by looking at parental aspirations for their adolescent's education, parental religiosity, and parents' attitudes about sex. Second, only unions

formed by age 25 can be observed for this cohort of young adults born around the period from 1977

to 1980. A complete understanding of the process of union formation among Asian Americans and

Whites must await the 4th Wave of Add Health data, which will reflect union experiences at later

ages. Third, given the small sample of third-generation Asian American youth in this study, which

leads to very few events of marriage and cohabitation, we could not investigate how generation

status affects the influence of family socialization on union formation. It is likely that the influence

of Asian values is weaker among the more acculturated third-generation Asian American youth,

which may make them have first union patterns that are more similar to those of White Americans.

Due to limitations in sample size and the number of events, we also could not investigate

differences in union formation patterns of Asian subgroups.

    To our knowledge, this is the first empirical study based on a national sample of a recent

cohort of Asian American youth to examine the formation of both marital and cohabiting unions

with a conceptual framework that incorporates multiple sets of predictors. The results reveal that

Asian American young adults are less likely than White youth to enter marriage or cohabitation in

early adulthood. The findings also highlight the importance of value socialization for Asian

Americans' lower likelihood of early marriage, as well as sexual and romantic relationship

experiences for the timing of cohabitation and marriage. Given the rapid growth of the Asian

American population, we hope the current study will elicit further efforts to understand the family

processes and behaviors of this growing minority group in the United States.

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Table 1. Descriptive statistics, White and Asian youths ages 16 to 18 in Wave 1 of Add Health

(Weighted, if not otherwise specified, and multiply imputed data)

	Whites	Asians	East Asian	Filipino	Other Asian
Unweighted N	3857	671	171	346	154
Generation Status - First	50	317	66	196	55
(unweighted) Second	194	281	67	134	80
Third	3613	73	37	16	20
Wave 3 Status					
% ever married	28.51	18.72*	9.33	15.56	28.91
% ever cohabited	49.88	29.84***	27.98	32.56	28.01
Basic Sociodemographics					
Age at Wave 1	16.93	16.92			
Gender (%)					
Males	50.61	53.99			
Females	49.39	46.01			
Maternal Education (%)					
Less than high school	11.09	23.43**			
High School	45.11	23.18***			
Some college	18.17	12.35			
College and beyond	25.63	41.04**			
Family Income (in thousands)	56.83	57.52			
Family Structure (%)					
Two-biological-parent family	59.95	72.43**			
Stepfamily	15.53	10.13*			
Sinlge-parent family	18.51	12.71*			
Other family	6.02	4.73			
Family Socialization					
Parental college aspiration for R	2.14	2.65***			
Parental religiosity	10.44	11.07*			
Parental disapproval of sex for R now	4.19	4.09			
Adolescent Attitudes					
Perceived social consequences of sex	9.38	10.26***			
Motivation to have sex	13.81	13.87			
Consider having kids out of wedlock (%)	23.33	20.44			
Adolescent Behaviors (%)					
Ever had a romantic relationship	69.79	51.13***			
Ever had a sexual experience	52.82	32.37***			
Ever had sex with a non-romantic partner	35.16	17.78***			
Educational Investment (% at age 22)					
Highest degree attained	(1st marriage)		(1st cohabitation)		
No degree	9.95	5.71*	7.92	4.45*	
High school & GED	77.45	76.99	77.29	76.16	
Some college & associate degree	6.90	8.60	8.61	10.51	
College	5.70	8.70	6.18	8.88	
Currently enrolled in school	39.99	50.14**	43.48	52.76***	

T-test against Whites: * <.05; ** <.01; *** <.001

Table 2. Odds ratios of discrete-time event history models predicting the transitions to first marriage,

Add Health Wave 1 & Wave 3 data (weighted and multiply imputed data)

	Binary	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
White (ref.)	--	--	--	--	--	--	--	--	--	--
Asian	0.63*	0.62*	0.65*	0.65*	0.68+	0.76	0.76	1.98	3.53*	0.60*
Age at Wave 1	1.22***	1.22***	1.23***	1.23***	1.25***	1.25***	1.13***	1.13***	1.13***	1.13***
Male	0.53***	0.51***	0.50***	0.48***	0.54***	0.60***	0.58***	0.58***	0.58***	0.58***
Maternal Education (%)										
Less than high school (ref.)	--		--	--	--	--	--	--	--	--
High School	0.91		0.93	0.94	0.91	0.91	0.97	0.97	0.97	0.96
Some college	0.90		0.96	0.98	0.91	0.93	0.99	0.99	0.99	0.99
College and beyond	0.52***		0.60**	0.62**	0.56***	0.57***	0.64**	0.64**	0.65**	0.64**
Family Income (in thousands)	0.99***		1.00**	1.00*	1.00*	1.00*	1.00*	1.00*	1.00*	1.00*
Family Structure (%)										
Two-biological-parent family (ref.)	--		--	--	--	--	--	--	--	--
Stepfamily	1.25*		1.14	1.13	1.14	1.10	1.03	1.04	1.03	1.04
Sinlge-parent family	1.04		0.86	0.89	0.95	0.92	0.89	0.89	0.89	0.89
Other family	1.66**		1.32+	1.25	1.56+	1.52+	1.39	1.40	1.40	1.41
Parental college aspiration for R	0.82+			0.88+	0.88+	0.87+	0.91	0.90	0.91	0.90
Parental religiosity	1.04			1.08**	1.07**	1.07**	1.07**	1.07**	1.07**	1.07**
Parental disapproval of sex for R now	0.90**			0.90**	0.90**	0.91*	0.91*	0.92+	0.91*	0.91*
Perceived social consequences of sex	1.02				1.02	1.06**	1.07**	1.07**	1.07**	1.07**
Motivation to have sex	0.95***				0.97*	0.96**	0.96**	0.96**	0.96**	0.96**
Consider having kids out of wedlock (%)	1.22*				1.10	1.03	1.03	1.03	1.03	0.99
Ever had a romantic relationship	1.81***					1.48**	1.52***	1.52***	1.52***	1.52***
Ever had a sexual experience	1.74***					1.53***	1.42**	1.43**	1.43**	1.42**
Ever had sex with a non-romantic partner	1.36***					1.08	1.05	1.04	1.04	1.05
Highest degree attained										
No degree (ref.)	--						--	--	--	--
High school & GED	2.24***						1.30*	1.30*	1.29*	1.29*
Some college & associate degree	2.60***						1.22	1.22	1.23	1.23
College	2.37***						1.09	1.10	1.09	1.09
Currently enrolled in school	0.35***						0.48***	0.48***	0.48***	0.48***
Asian*parental disapproval of sex								0.78*		
Asian*perceived social consequences of sex									0.86*	
Asian*consider having kids out of wedlock										2.35**
N	4501	4501	4501	4501	4501	4501	4501	4501	4501	4501
Person years	28323	28323	28323	28323	28323	28323	28323	28323	28323	28323

+ <.10; * <.05; ** <.01; *** <.001

Clogg's test of coefficient change				2 vs. 3	3 vs. 4	4 vs. 5	5 vs. 6			
logistic coefficient of Asian			-0.43	-0.43	-0.39	-0.28	-0.28			
differences in coefficient between models($\hat{\delta}$)				0	-0.04	-0.11	0			
Z score for ($\hat{\delta}$)				0	-1.4277	-11.47	0			

Table 3. Odds ratios of discrete-time event history models predicting the transitions to first

cohabitation, Add Health Wave 1 & Wave 3 data (weighted and multiply imputed data)

	Binary	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
White (ref.)	--	--	--	--	--	--	--
Asian	0.51***	0.51***	0.55**	0.58**	0.61*	0.70*	0.71+
Age at Wave 1	1.10***	1.11***	1.12***	1.13***	1.13***	1.13***	1.08***
Male	0.69***	0.68***	0.67***	0.67***	0.60***	0.65***	0.64***
Maternal Education (%)							
Less than high school (ref.)	--		--	--	--	--	--
High School	0.89		0.91	0.94	0.89	0.91	0.95
Some college	0.73**		0.72**	0.77*	0.77*	0.80+	0.85
College and beyond	0.61***		0.68**	0.75*	0.74*	0.79+	0.86
Family Income (in thousands)	1.00***		1.00*	1.00*	1.00*	1.00*	1.00+
Family Structure (%)							
Two-biological-parent family (ref.)	--		--	--	--	--	--
Stepfamily	1.84***		1.84***	1.71***	1.64***	1.55***	1.50***
Sinlge-parent family	1.77***		1.70***	1.59***	1.45***	1.40**	1.39**
Other family	1.92***		1.76***	1.65***	2.17***	2.11***	2.00***
Parental college aspiration for R	0.86**			0.95	0.91	0.92	0.95
Parental religiosity	0.90***			0.92***	0.94***	0.94***	0.94***
Parental disapproval of sex for R now	0.88***			0.95+	0.98	1.00	1.00
Perceived social consequences of sex	0.90***				0.94***	0.98	0.98
Motivation to have sex	1.02+				1.03*	1.02	1.02
Consider having kids out of wedlock (%)	1.59***				1.22**	1.16*	1.15*
Ever had a romantic relationship	1.90***					1.28**	1.32**
Ever had a sexual experience	2.28***					1.48***	1.42***
Ever had sex with a non-romantic partner	2.01***					1.30***	1.28**
Highest degree attained							
No degree (ref.)	--						--
High school & GED	1.39***						1.02
Some college & associate degree	0.79						0.55*
College	1.44						1.04
Currently enrolled in school	0.49***						0.65***
N	4421	4421	4421	4421	4421	4421	4421
Person years	24872	24872	24872	24872	24872	24872	24872

+ <.10; * <.05; ** <.01; *** <.001

Clogg's test of coefficient change				2 vs. 3	3 vs. 4	4 vs. 5	5 vs. 6
logistic coefficient of Asian			-0.60	-0.54	-0.49	-0.36	-0.34
differences in coefficient between models($\hat{\delta}$)				-0.06	-0.05	-0.13	-0.02
Z score for ($\hat{\delta}$)				-3.1333	-1.265	-5.4165	-2.292