AN EXAMINATION OF THE FORMATION AND CHARACTERISTICS OF INTERRACIAL ROMANTIC RELATIONSHIPS AMONG ADOLESCENTS IN THE UNITED STATES

By

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DEDICATION

To my beloved family

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ABSTRACT

In this dissertation I examine the ways in which individual, family and social contextual factors influence the formation and characteristics of interracial romantic relationships among adolescents in the United States. The dissertation comprises three studies, all of which use data from Wave I of the National Longitudinal Study of Adolescent Health (Add Health). The overarching goal of the dissertation is to better understand intergroup relationship among adolescents.

In the first study, I examine whether school socioeconomic status (SES) have any impact on the establishment of interracial relationships. I find that attending a medium-SES school increases the chance of dating interracially for white, Hispanic and Asian teens, while attending a high-SES school decreases the chance of interracial dating for all minority groups (blacks, Hispanics and Asians). The results suggest that although minority teens have more proximity to whites in high-SES schools, they may face more rejection and discrimination than their peers in low-SES schools.

In the second study, I explore the impact of interracial romantic relationships on sexual behavior. The overall findings indicate that differences in the risk of sex and using contraception between interracially and intra-racially dating adolescents are non-existent or minimal for all racial groups (white, black, Hispanic and Asian). Dating a white partner does not increase the risk of sex for minority adolescents (blacks, Hispanics and Asians), but dating a different-race non-white partner does. The results do not indicate that minority teens exchange sex for their white partner's racial status, as social exchange theory would predict.

In the third study, I examine the influence of immigration on interracial relationship formation, and address the extent to which assimilation into U.S. culture affect the interracial experiences of Hispanic and Asian adolescents. The results show that Hispanic teens who are more attached to their own culture are less likely to form romantic relationships with either whites or other non-whites. Asian teens who are more

attached to their own culture, however, are only less likely to form romantic relationships with other non-whites. This result suggests that dating whites might be viewed more positively in the Asian community than in the Hispanic community.

CHAPTER 1

INTRODUCTION

In the past several decades, the U.S. population has become more racially diverse. According to U.S. Census Bureau estimates, the white population declined from 87.1 percent of the total population in 1970 to 67.8 percent in 2003. During the same period, the Hispanic population—the fastest growing racial/ethnic minority group in the United States—surpassed the black population (12.23 percent), becoming the largest racial/ethnic minority group (13.7 percent). Similarly, the number of Asian Americans increased from 1.5 million to 14 million between 1970 and 2003, and the proportion of Asian Americans in the overall population increased from 1 percent to over 4 percent (U.S Bureau of the Census 1970, 2000a, 2005). Due to a new wave of immigration from Latin America and Asia, Hispanics and Asians are projected to account for 25 percent of the U.S. population by 2050 (Kritz and Gurak 2004). Given these demographic trends, it is important for social scientists to understand whether or not racial groups in American society are becoming more open to one another and the extent to which men and women are choosing partners from racial groups other than their own.

In addition to changes in racial/ethnic composition, the United States has undergone changes in romantic behavior patterns. Compared to young people in the 1960s, today's men and women marry at later ages; are more likely to take part in cohabiting relationships; and, on average, experience sexual activity with more partners during adulthood (Bumpass and Lu 2000, Laumann, Gagnon, et al. 1994). These changes are associated with changing attitudes, prolonged post secondary education, increased economic independence for women, and increasingly tolerant views of premarital sexual relationships (Barber 2001, Bumpass and Lu 2000, Cunningham, et al. 2005, Smock 2000, Smock 2004, Thornton and Young-DeMarco 2001). Despite an overall decline in marital unions and a corresponding increase in cohabiting unions, intermarriage rates

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have increased over time (Qian 1997, Qian and Lichter 2007). Since 1960, the number of black-white married couples has increased five times, and the number of Asian-white married couples has increased more than ten times. Since 1970, the number of Hispanics married non-Hispanics has increased three times.

Most studies on intermarriage reveal that the salience of race persists among adults, but that openness to interracial marriage differs across racial/ethnic groups (Kalmijn and Tubergen 2010, Qian and Lichter 2007). National intermarriage rates are about 2 percent for whites, 5 percent for blacks, 37 percent for Hispanics, and 63 percent for Asians (Qian 1997). The social boundary between whites and blacks has remained rigid, while the boundaries between whites and Hispanics and between whites and Asians have relaxed (Qian and Lichter 2007). The patterns of and causes underlying adult intermarriage are well documented; however, scholars know little about whether corresponding patterns exist among adolescent relationships.

The current research, consisting of three studies, examines the extent to which the individual, family and school-level factors influence the formation of interracial romantic relationships among young adolescents in the United States, and the extent to which such romantic relationships influence the sexual practice of the adolescents. The data for the three studies come from the first wave of the Longitudinal Study of Adolescent Health (Add Health) 1995-1996. For the analyses in this dissertation, the data are restricted to the sample of adolescents who reported romantic relationships.

1.1   Motivation for the Research

The current research is motivated by four general observations: First, the romantic experiences of adolescents provide information about how individuals might behave in the future when they participate in adult relationships. According to life course theory, events in one stage of life are shaped by experiences in the preceding stages (Elder Jr., Age Differentiation and the Life Course 1975). The formation of romantic relationships during adolescence is a developmental step along the path to dating, cohabiting, and forming marital relationships in adulthood (Arnett 2000, Furman, Brown and Feiring 1999, Thornton 1990). Researchers have found continuity between adolescent and adult relationship experiences. For example, individuals involved in romantic relationships at the end of high school are more likely to marry and cohabit in early adulthood, and

individuals who participate in non-romantic sexual relationships are more likely to cohabit in early adulthood (Raley, Crissey and Muller 2007). Following this logic, adolescents in interracial relationships may be more inclined to participate in interracial cohabitation and interracial marriage later in life.

Second, racial attitudes have changed over the past four decades. Both the civil rights movement and the elimination of anti-miscegenation laws in the 1960s contributed to changing attitudes. As societal and historical events influenced individual behavior (Shanahan 2000), the proportion of the population who accept interracial romantic relationships increased. Members of the younger generation are growing up in a less racially hostile environment, and hold more tolerant racial attitudes than members of their parent's generation (Schuman, Steeh, et al. 1997). Because attitudes held by individuals are likely to influence their behavior (Barber and Axinn 2005, Schuman, Steeh, et al. 1997), today's adolescents may be more likely to participate in interracial relationships than their counterparts in earlier eras. The existing literature on interracial relationships must be updated and modified to address the behavior of the younger generation.

Third, young people comprise the most racially diverse age group in the U.S. population. The continuous inflow of immigrants has dramatically increased the sizes of minority groups. In addition to increasing numbers, the significant growth of the biracial/multiracial population has led to new racial classifications. The 2000 census allowed the selection of more than one racial category for the first time, and roughly 2.4 percent of the U.S. population self-identified as biracial or multiracial. Multiracial children are products of interracial unions and their growing numbers signal improving racial relationships and the breakdown of racial and cultural distinctions (Alba and Nee 2005). Given this increasing level of racial diversity, understanding the dynamics of inter-group relationships among adolescents is crucial.

Fourth, research on interracial dating is less comprehensive and conclusive than work on intermarriage, even though scholars acknowledge that individuals are more likely to select interracial relationships when they are young or when the relationships are casual and less committed (Blackwell and Lichter 2004, Joyner and Kao 2005, McClintock 2010). Thus, the prevalence of interracial unions may be highest among dating adolescents followed by dating adults, and lastly cohabiting and marrying adults.

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Studying adolescent interracial relationships will further augment the existing literature on interracial relationships.

1.1 Significance of the Three Papers

There are two dimensions of adolescent heterosexual relationships: romance and sex. Of the two, sexual involvement has received more attention from scholars, although this pattern has begun to change recently. This dissertation, consisting of three papers, will enhance the scholarly understanding of interracial romance by identifying two factors—school characteristics and assimilation—that account for the formation of such relationships, and by exploring one specific characteristic associated with these relationships: interracial sexual behavior.

The first paper extends prior studies on adolescent interracial relationships by examining the influence that the school environment has on the establishment of interracial relationships among adolescents, beyond the influence of individual- and family-level factors. Despite individual preferences for same-race partners ("like attracts like"), school may serve as a structural constraint that determines both the pool of available same-race partners and the aggregate level of racial integration. In addition, school socioeconomic status (SES) may play a role in uniting adolescents who have different racial identities but similar class backgrounds. Thus, I examine the influence of both school racial composition and school SES on the establishment of interracial relationships. It utilizes the multi-level logistic regression to investigate the likelihood of engaging in interracial relationships, while capturing the cross-level interactive effects between school and family SES. Separate models are run for each racial and ethnic groups (whites, blacks, Hispanics and Asians) allowing the unique effects for different racial and ethnic groups. The results indicate that, for all racial groups, both factors are strongly related to the likelihood of forming interracial relationships.

The second paper contributes to research on adolescent sexual behavior. As one of the few studies to address this issue, the second paper explores the extent to which sexual behavior among adolescents vary by interracial relationship types. Currently, adolescents tend to experience sexual debut at much younger ages than their counterparts in earlier generations, though there has been a leveling off with regard to age at first intercourse in the most recent studies (Santelli, et al. 2007). Sociologists are concerned

about the contraction of sexually transmitted diseases, including HIV, by young people, as well as the rising number of teenage pregnancies during school years (Centers for Disease Control and Prevention (CDC) 2002, Manlove, et al. 2006, Manlove, Logan, et al. 2008, Manlove, Ryan and Franzet 2007, Manlove, Ryan and Franzetta 2003, Manning, Longmore and Giordano 2005). As the youth population becomes increasingly racially diverse, the formation of interracial relationships is on the rise. The sexual behavior within those relationships may also increase.

Using simple logistic regression modeling and stratifying by four racial/ethnic groups, this study investigates how the two interracial relationship types (those with whites, and those with other non-whites) affect the odds of sexual intercourse and contraceptive use. The overall findings indicate that the difference in sexual practice between interracially-dating and intra-racially dating is non-existent or minimal.

The third paper contributes to the literature on immigrant adolescents and their interracial romantic behavior. Because immigrants contribute appreciably to the growth of the U.S. population, their well-being and adjustment to U.S. society is of great concern. Scholars have found that the influx of Hispanic and Asian immigration provides more pool of available dating partners for the native-born of these two groups. However, during the 1990s, despite the overall increase of intermarriages between minority groups and whites, the intermarriages between foreign-born minorities and whites have not experienced similar increases. The intermarriage rates with whites were declined for foreign-born Hispanics, increased slightly for foreign-born blacks, and moderately increased for foreign-born Asians (Qian and Lichter 2007). These findings suggest that social distance between minority groups and whites might be heightened by immigrant status.

Thus the third paper raised the question about how assimilation of immigrant adolescents is associated with the formation of interracial romantic relationships with whites and/or with other minority groups. Still using the first wave of Add Health data, I limit the analyses to Hispanic and Asian adolescents only because these groups comprise the majority of the immigrant population in the United States. Prior research has demonstrated that, in general, immigrant children are less likely to form romantic relationships compared to their native-born peers (King and Harris 2007); however,

scholars have not yet to explore whether this tendency also applies to the formation of interracial romantic relationships. Additionally, this study reveals the extent to which parent-child relationship and parenting style influence the interracial dating behavior of immigrant children. Understanding how the assimilation of Hispanic and Asian adolescents into U.S. society affects their patterns of interracial relationship formation may help social scientists to more thoroughly understand the double barriers (being as minority and being as foreign-born) for foreign-born minority adolescents to cultivate cross-race relationships.

CHAPTER 2

THE FORMATION OF INTERRACIAL RELATIONSHIPS AMONG ADOLESCENTS: THE INTERACTIVE EFFECTS OF SCHOOL AND FAMILY SES

Scholars have frequently emphasized the developmental role of romantic relationships during adolescence. Both the act of establishing romantic relationships and the nature of particular relationships provide adolescents with opportunities to establish self-esteem, explore their self-identities, and acquire the skills necessary to manage romantic relationships during adulthood (Arnett 2000, P. C. Giordano 2003, Giordano, Manning and Longmore 2006, Raley, Crissey and Muller 2007).

Because of a growing number of immigrants from Latin America and Asia, as well as an increasing number of biracial/multiracial children, the adolescent population in the United States is more racially diverse today than it was several decades ago (Portes and Rumbaut 1996, U.S Bureau of the Census 2005). Interracial romantic relationships among adolescents are, therefore, expected to rise in the years to come, although they remain much less common than intra-racial relationships.

From the life course perspective, entering an interracial relationship during adolescence may increase the chance of dating, cohabiting with, or marrying an interracial partner in the future. Indeed, research has found that forming interracial romantic relationships challenges the stereotypes associated with the partner's racial group, and fosters positive attitudes and feelings toward that group (Joyner and Kao 2000). The more experience a person has dating individuals from another racial/ethnic group, the more likely that person will be to date individuals from that racial/ethnic group later in life (Mok 1999).

Nevertheless, research on adolescent interracial romantic relationship formation is still in its infancy. The few relevant studies currently available have primarily emphasized the characteristics of interracial romance rather than the causes of this type of

relationship formation (Kreager 2008, Vequera and Kao 2005). For adolescents, school factors are vital, because adolescents are in a life stage in which they are very susceptible to influences outside the home. Young adolescents are socially and physically rooted in the schools they attend, and therefore these schools play an important role in the decisions adolescents make. Prior research on adolescence has frequently highlighted the importance of school and neighborhood effects for social outcomes such as academic achievement, friendship formation, delinquent behavior, and teenage pregnancy (Harding 2003, Moody 2001, Pong and Hao 2007, Garner and Raudenbush 1991). However, little is known about whether or not and how school factors influence interracial romantic relationship formation.

The current study is unique in two respects. First, it is one of only a few studies to model the characteristics associated with participating in an interracial (as opposed to an intra-racial) romantic relationship. The current research extends recent developments in theory and research on the correlates of adolescent interracial romantic behavior by moving beyond individual- and family-level factors to include the contextual factors related to the school environment (Joyner and Kao 2005, Vequera and Kao 2005, Wang and Kao 2007). I establish a link between school-level factors and adolescent interracial dating by investigating the influence of school context on relationship formation. Second, I consider the potential moderating impact of family SES on the association between school and interracial dating. The interactive effect of school and family is a new topic in the literature on romantic relationships.

2.1 Background and Significance

Romantic relationships are an important aspect of adolescent development and the transition to adulthood (Furman and Shaffer 2003, Carver, Joyner and Udry 2003). Carver, Joyner and Udry (2003) provided a comprehensive description of adolescent romantic experience using data from Add Health. The authors found that by the time they were 18 years old, 69 percent of boys and 76 percent of girls have had a romantic relationship—a revealing finding for the importance of these relationships in the lives of today's teens. Until recently, however, adolescent romance has received substantially less attention from scholars than adolescent sexual involvement (Longmore, et al. 2009,

Raley, Crissey and Muller 2007). Not surprisingly, interracial romance has received even less attention, primarily because of the paucity of available data.

With regard to love and relationship formation, adolescents are immature and in a stage of experimentation. Despite individual preferences for same-race partners ("like attracts like") (McPherson, Smith-Lovin and Cook 2001), school may serve as a structural constraint that determines both the pool of available same-race partners and the aggregate level of racial integration. Since there is limited research on interracial dating, I am drawing on theories and findings from two related literatures: interracial marriage and interracial friendship. The brief review below focuses on two school characteristics associated with romantic relationship outcomes: school racial composition and school socioeconomic status (SES).

2.1.1 School Racial Composition

Proponents of the opportunity theory assert that, regardless of personal preferences, physical propinquity and the opportunity for interracial contact are the most important factors for establishing interracial marriages (Blau 1977, Fujino 1997, Harris and Ono 2005). Therefore, the relative size of a particular racial group will be inversely related to the group's rate of interracial marriage (Harris and Ono 2005).

For adolescents, the opportunity for interracial contact is largely determined by school racial composition. Adolescents who attend schools with fewer members of their own racial group have a higher chance of meeting members of other racial groups, and may need to cross racial lines to make friends and advance socially (Clark-Ibanez and Felmlee 2004, Davidson, Hofmann and Brown 1978, Doyle and Kao 2007, Moody 2001). Minority individuals who attend predominantly white schools, for example, are more likely to date white students because they have a higher chance of meeting and socializing with them (Wang and Kao 2007), while white teens are less likely to date members of other groups if the school is predominantly white. Consequently, schools in which almost all students are from one racial group provide more opportunities for adolescents from other racial/ethnic groups to interracially date members of the largest group, while limiting the chance for that particular racial group to date interracially.

School racial composition may function as a dating "market" and determine the size and composition of the dating pool available to adolescents. Clearly a teenager will

have more difficulty in dating interracially if their social network consists primarily of same-race individuals. Further, school racial composition may affect the level of racial integration. Schools dominated by a single racial group are less likely to achieve racial integration, compared to schools that are racially diversified, as members of the dominated group and members of other groups may just socialize within their own race. Thus, the school environment is less likely to cultivate positive racial attitudes and increased interracial mixing in one-race dominated schools than the racially diverse schools. Schools with the most diversity may have been associated with the lowest levels of discrimination because those settings may have an even distribution of power across groups (Bellmore, et al. 2012).

Despite these previous findings, a few exceptions in the literature provide a reason to be cautious when drawing conclusions. For example, (Moody 2001) found that friendships remained racially segregated in moderately racially heterogeneous schools. He argued that race might become more salient when a minority group feels threatened by the majority group in moderately mixed schools. Under such circumstances, even when schools are integrated in terms of racial composition at the aggregate level, students may still maintain friendships within their own racial group at the individual level.

2.1.2 School Socioeconomic Status (SES)

In studies of adolescent interracial relationships, scholars have emphasized family SES, but have rarely examined school SES. However, schools with varying levels of social status may provide different school environments for students, which may or may not promote interracial interaction and interracial romantic relationship.

Homophily theory posits that people are more likely to interact with individuals similar to themselves in respect to a variety of qualities and characteristics (McPherson, Smith-Lovin and Cook 2001). Homophily in age, gender, race, education, occupation, and class, has been found to influence the formation of network ties (McPherson, Smith-Lovin and Cook 2001). With regard to intimate relationships, educational homophily in interracial marriages (Kalmijn 1998, Qian and Lichter 2007), and class homophily in friendship formation were found in the U.S society (Laumann 1973, Wright 1997)

Students in high-SES schools may have more homophilous characteristics with one another than students in low-SES schools. On the one hand, it is because students of

high- or medium-SES family backgrounds are more likely to share similar lifestyles. Prior studies have suggested that minority adults from higher-class backgrounds tend to have lifestyles that are more similar to those of whites than to the lifestyles of their minority counterparts from lower-class backgrounds (Qian and Lichter 2007). In keeping with this finding, adolescents from high SES families may tend to share lifestyles that are similar to one another, whereas low-SES students have lifestyles that are more dissimilar from one another. Such homogeneity as a result of class background in high SES schools may trump race to draw adolescents of different race/ethnicity together.

On the other hand, high-SES schools may have more resources to support clubs or extracurricular activities. Minority parents of high or middle class background tend to provide their children with opportunities to be involved in sports, music, art, clubs, etc., compared to poor and working class minority parents; thus, a minority student from a well-off family background attending a high SES schools may be equally likely to participate in extra-curricular activities as a majority student. Participating in these extracurricular activities are found to be more effective to draw students from different racial and ethnic backgrounds together (Hollinan and Teixeira 1987, Moody 2001, Zweigenhoft and Domhoff 1991).

However, minority students may experience more racism and discrimination in high SES- schools, due to negative stereotypes. Higher SES African American adolescents reported more incidents of discrimination than their low SES counterparts, as they were more likely to attend schools in more racially and ethnically diverse neighborhoods than their lower SES counterparts, making these encounters more likely (Bradley and Corwyn 2002). One ethnographic study (Holland 2012) study even showed that at a majority white high school, African American and Latino males have to gain social status through their participation in sports and their appearance and clothing signifying the rap and hip-hop star image to play down negative stereotypes toward them. Yet African American and Latino females cannot use such opportunities to gain social status; it is difficult for them to participate in cheerleading, which is presumably an alternative means for girls to enhance their social status (Holland 2012).

It may also be even more difficult for Asian American students. On the one hand, Asian students are more likely to be targeted because they are perceived to be preferred

by teachers for their better academic performance and low incidence of behavioral problem (Grossman and Liang 2008, Rosenbloom and Way 2008, Bellmore, et al. 2012). If students believe that teachers are promoting cross-race group interactions to benefit Asian students in particular, they may increase their hostilities toward these peers (Bellmore, et al. 2012). On the other hand, it is relatively hard for Asian Americans, especially Asian males, to find a way to gain social status in school and to play down their stereotyped images as nerdy, lacking athleticism, and physically less attractive (Goto 1997).

Studies have found that white students who have had interracial contact (i.e., who have an interracial friend or an interracial romantic partner) showed more positive attitudes toward minority groups than those who had not (Fischer 2011). But white adolescents generally appear to be less interested in seeking cross-race friends in predominately white school as the minority students (Holland 2012).

2.1.3 Interactive Effects of Family SES and School SES

As the family SES of individuals is used as a proxy for school SES (Wang and Kao 2007), the underlying assumption is that an individual's SES is highly correlated with school SES. This is true in many situations, but family SES and school SES are not always closely matched. A mismatch is especially common among minority students. Due to residential segregation, compared to other minority groups, black youth, regardless of family SES, are least likely to attend schools with a high concentration of whites (Jencks and Mayer 1990, Massey and Denton 1993). Hispanic and Asian American youth are more likely than white youth to be immigrants, to reside in immigrant-concentrated neighborhoods/areas, and to attend disadvantaged school districts, even though their families may fare relatively well socially and economically (Portes and Rumbaut 1996, Portes 2004). As a result of residential segregation, school segregation leads to the high concentration of minority students in low-performing economically disadvantaged schools (Orfield and Eaton 1997). Therefore, for many minority students, school SES may be lower than family SES. There are exceptions, for example, some working-class, Asian American parents send their children to high-performing schools (usually high-SES schools), in the hope of increasing their children's chance of attending a good college (Jencks and Mayer 1990, Zhou 1997).

Previous studies have ignored the moderating role of family background. When family SES and school SES do not match, examining the interactive effects of these two characteristics promises interesting results. Prior studies have shown that, compared to their counterparts who attend low-SES schools, children from low-SES families who attend high-SES schools tend to feel inferior and have lower self-esteem, but perform better academically (Jencks and Mayer 1990, Pong and Hao 2007). With regard to interracial students, the threat of both race and class stereotyping may be linked to lower rates of interracial relationships in high-SES schools.

Concerning interracial dating behavior, I expect that, when all other variables are equal, low-SES minority students who attend schools with a higher-SES will be less likely to date interracially, because these students may feel alienated and inferior in the school environment and therefore gravitate toward other students in their own racial group. Meanwhile, they might be rejected as ideal dating partners by majority students, due to negative perceptions of people in both groups.

2.2 Hypotheses

The hypotheses guiding this study are designed to explore the various effects of school factors on interracial dating and how they influence the development and pursuit of interracial romance. I focus on students from four major racial and ethnic groups: white, black, Hispanic and Asian. The discussion in the previous section suggests the following three hypotheses:

Hypothesis 1: Adolescents in all racial/ethnic groups will exhibit a greater tendency to date interracially when the number of same-race students in their school is low.

As mentioned earlier, the students in a school may serve as the dating pool for adolescents, and therefore racial composition may influence the race of chosen partners. A smaller number of same-race students will limit the chance that adolescents will date within their own race, and expand their opportunities to date members of other races. Though the measure of racial composition in the current study sample is simpler than those in other studies—it considers the proportional size of the student's own racial group and the percentage of different race students rather than the percentage of each racial/ethnic group—it is more efficient for directly testing opportunity theory.

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Hypothesis 2a: White adolescents in high-SES or medium-SES schools will have a greater tendency to date interracially than their counterparts in low-SES schools because minority students in high-SES or medium-SES schools are more similar to white students than their counterparts in low-SES schools.

Hypotheses 2b For minority student (black, Hispanic and Asian), who are less likely to attend high-SES schools, attending high-SES schools may decrease their chances of interracial dating, because high-SES schools are also more likely to be predominately white and they are more likely to encounter racial discrimination. Yet, attending medium-SES schools may increase their chances of interracial dating, because medium-SES schools are more racially diverse than low-SES schools.

Hypothesis 3: The association between school SES and interracial dating will be moderated by family SES; the association will be stronger when family SES matches school SES or family SES is higher than school SES, and weaker when family SES is lower than school SES.

2.3   Data and Sample

I use data from Wave I of the National Longitudinal Survey of Adolescent Health (Add Health). Data from Add Health are well suited for the study for several reasons: First, the survey follows a nationally representative sample of adolescents who ranged in age from 11-20 years old and were in grades 7-12 during the 1994-1995 school year; thus, conclusions based on the data are generalizable to the large 1976-1984 birth cohort. Second, Add Health is the only large data set that contains the necessary information about the race of dating partners of U.S. students. Third, the oversampling of minority groups provides enough cases to examine these groups separately; however, although there are substantive ethnic differences within the Hispanic and Asian samples, the data do not include sufficient cases to divide these samples into specific ethnic sub-groups. Finally, the survey includes comprehensive information about school-level characteristics that were provided, directly or indirectly, by students and school administrators; these data allow for a relatively comprehensive assessment of the school-level characteristics that are the focus of the study.

Add Health data were collected from 80 high schools and 52 associated feeder schools (middle schools and junior high schools that send graduates to the sample high

school) selected from all U.S. schools. Students were then randomly selected from the chosen schools for two surveys: the in-school survey and the in-home survey. The In-School survey was administered to students randomly selected from the rosters of all enrolled students in each school. Students who were not in school on the day of interview were not included. The In-School questionnaire included topics such as social and demographic characteristics of respondents, educational and occupational backgrounds of parents, household structure respondents' health status, school activities etc. The In-Home survey was conducted by one to two hours of interviews. The majority of interviews were conducted in respondent's homes, and most data were recorded on laptop computers. The In-Home Interview included detailed information about respondents' romantic partners and activities associated with romantic relationships.

In the first wave, about 90,118 students completed the in-school survey. All students who completed the in-school questionnaire as well as those who did not complete a questionnaire but were listed on a school roster were eligible for selection into the core in-home survey. A total of 20,745 adolescents completed the in-home interview. To take advantage of both the in-school and in-home survey, I limit my analysis to the 15,356 respondents who completed both the in-school and in-home surveys.

I also implemented further sample restrictions. I used the question "In the last 18 months have you had any special romantic relationship with anyone?" Respondents who answered "yes" were included in the sample. Respondents were then asked to list up to three relationships in the past 18 months. If they reported more than one, I used the first listed relationship.[i]

To be consistent with prior studies, racial/ethnic groups were classified into four mutually exclusive categories (Joyner and Kao 2005, Qian 1997, Vaquera and Kao 2005): non-Hispanic white, non-Hispanic black, Hispanic, and Asian American.[ii] Respondents were excluded from the study if they chose "Native American" or "Other," or identified as biracial/multiracial, or if their romantic partners identified themselves as "Other" or biracial/multiracial. This limitation was necessary, because there were too few cases to analyze patterns among those identifying as "Native Americans," and it was impossible to determine the specific racial identification of respondents who marked "Other." The racial identities of "biracial/multiracial" would also have complicated the

analysis of interracial dating patterns, as prior studies usually define interracial dating patterns based on a single race of the respondents and have not yet dealt with the intricacies involved in including biracial and multiracial students in analytical samples (Joyner and Kao 2005, Wang and Kao 2007). For example, researchers have not reached a consensus about whether white-black biracial teens who are dating a white or black partner should be categorized as dating inter-racially, whether white-black biracial teens who are dating other white-black biracial teens should be categorized as dating intra-racially, or whether both types of respondents should be categorized as dating intra-racially. The resulting sample included 12,606 respondents. After further restricting the sample to those who were or had been romantically involved at the time of the survey, the sample size dropped to 6,694 including 3,705 whites, 1,469 blacks, 1,168 Hispanics and 352 Asian Americans.

Since my sample consists of relatively young adolescents (with an average age of about 15 years), who are romantically involved. It is very likely that they are selective to romantic relationships compared to the non-daters. If those involving in romantic relationships are also prone to have interracial partners, there would be selection bias in the estimation, as daters and non-daters are systematically different from one another.

As a result, I made comparisons between daters and non-daters[iii] on all dependent, independent, and control variables (see Table 2-3 and Table 2-4 in the Appendix) to capture some differences between the two groups. Chi-square tests were performed for all categorical variables, and t-tests were performed for all continuous variables. For certain socio-demographic characteristics, there are notable differences between daters and non-daters. In the full sample (Table 2-3 in Appendix), daters tend to be male, older, U.S. born, physically attractive, and less religious, and have lower academic standing. It is consistent with prior findings that older, less religious and lower academic standing adolescents tend to enter romantic relationship at an earlier age than their peers (Colllins, Deborah and Furman 2009, Giordano, et al. 2009). When broken down by racial and ethnic group (Table 2-4 in Appendix), similar patterns were found: white, black, Hispanic, and Asian adolescents who had dated were older, more attractive, and less religious than their same-race non-dating counterparts.

Of the two major independent variables, school racial composition and school SES, daters are selective into romantic relationships. White, Hispanic, and Asian adolescents tend to be non-daters when there are fewer members of their own race in school, while black adolescents do not. It is quite possible that, if they were to date, these groups of non-daters would be very likely to be intra-racial daters. Thus, the proceeding analysis focusing on only daters might actually overestimate the impact of school racial composition, as the non-daters, who would have intra-racial relationships if they dated, are excluded from the study. Moreover, white teens in high-SES schools are more likely to date (either interracial or intra-racially) than their counterparts in medium- or low-SES schools, while Asian teens in medium-SES schools are more likely to date than their counterparts in high- or low-SES schools. It appears that same school settings provide adolescents from different racial/ethnic groups with different levels of opportunity to date.

2.4 Variables

2.4.1 Dependent Variable

Respondents' race could be non-Hispanic white, non-Hispanic black, Hispanic, or Asian, while partners' race could be non-Hispanic white, non-Hispanic black, Hispanic, Native American, or Asian. If a respondent and his or her partner identified as different races, the *relationship type* was coded as interracial, if not, the relationship was coded as intra-racial.

2.4.2 School-Level Independent Variables and Controls

All students in the same school share the same *school racial composition*. Because the information on school racial composition provided by school administrators is limited, I relied on the information provided by the 90,118 students who completed the in-school survey. I aggregated individual responses from the in-school data to create measures of school racial composition. For non-Hispanic white teens, I calculated the *percent white* by using the total number of white students divided by the total number of students in the school. Parallel methods were used to calculate the *percent non-Hispanic black*, *percent Hispanic*, and *percent Asian*.

School SES is another school-level characteristic; a composite measure was generated by using information from five indicators: 1) the proportion of students living

with both parents; 2) the proportion of students with at least one parent holding a college degree or above; 3) the proportion of students with at least one parent with a professional/managerial job; 4) the proportion of students who qualify for free/reduced-price lunch; and 5) the proportion of teachers with master's degrees. The first three indicators were calculated using information from the in-school survey, while the last two indicators used information directly from the survey completed by school administrators. The five indicators were ordered in the same direction, standardized, and summed to generate the final measure of school SES. Cronbach's alpha for the measure is .7063, which indicates good inter-correlation among the five items.[1] To better capture the interactive effects of school SES and family SES on dating behavior, I further classify school SES into three categories: the bottom 25 percent of schools were coded as low-SES schools, the top 25 percent were coded as high SES, and the middle 50 percent were coded as medium SES.

The other two school-level controls are *urbanicity* and *region*. The urbanicity variable was coded as 0=suburban, 1=urban, and 2=rural. Past research suggests that individuals are more likely to form interracial relationships in urban areas than in rural areas (Yancey 2002). Region was coded as 1=West, 2=Midwest, 3=South, and 4=Northeast; this variable is important because different racial and ethnic groups are disproportionately distributed across the United States.

2.4.3 Individual-Level and Family-Level Independent Variables and Control Variables

Family SES is a family-level characteristic, which was generated using information on parental education. Parents' highest education level was measured by a three-category variable: 1=less than high school graduate, 2=high school/some college; 3=college graduate or post-graduate education.[iv] The family SES variable included the same three categories as school SES: 1=low SES, 2=medium SES, and 3=high SES.

The self-explanatory individual-level variables are g*ender* (male and female), *age* (in years), and *nativity* (U.S. born vs. non-U.S. born). Several researchers have identified gender differences in interracial relationship formation among black and Asian

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[1] The reliability increases to 0.7859 if item 5 "proportion of teachers with Master's degree" is dropped.

individuals; in the former group more males enter into interracial marriages than females, while in the latter group more females form interracial marriages than males (Qian 1997, Qian and Lichter 2007). Concerning age effects, Joyner and Kao (Joyner and Kao 2005) found that people become less likely to form interracial relationships as they get older. The impact of nativity is evident for Hispanics and Asians—each of these two groups includes a large proportion of immigrants. Immigrants are less likely than their native-born peers to form interracial relationships.

GPA (grade point average) was based on self-reported English, mathematics, social science, and science scores. I summed and averaged the individual subject scores to generate GPA scores. Prior research has found that romantic relationship formation was negatively correlated with academic achievement because spending a considerable amount of time and energy on romantic involvement limited academic pursuits (Giordano, et al. 2009). However, there is no research on how GPA influences interracial relationship involvement.

Religiosity was measured by church attendance, and included four categories: 0=never; 1=less than once per month; 2=once per month; and 3=once per week. Prior literature on intermarriage has demonstrated that religious individuals are less likely to cross racial boundaries (Colllins, Deborah and Furman 2009). I expect a similar influence on interracial dating among adolescents.

To conduct a multilevel analysis, all individual-level and school-level continuous variables must be centered at the mean for easy estimation and interpretation. All continuous variables were centered, except for physical attractiveness, which was standardized for easy interpretation.

2.5 Model and Analytic Strategy

I used a multilevel logistic regression model to examine the relationship between school-level factors and engaging in an interracial relationship. Multilevel modeling is appropriate because adolescents are embedded in schools. Traditional logistic regression models are insufficient because the basic independence of observations assumption is violated. Students within the same school are no longer independent from one another when compared to students in other schools, because students in the same school may share similar traits, both observed and unobserved.

In addition, to reduce the standard errors of regression coefficients, multilevel models estimate the variance between individuals within the same school and the variance between schools separately (Raudenbush and Bryk 2002). The cross-level interactions between family SES and school SES in the current study require this type of modeling. To investigate the extent to which school-level factors influence adolescents' interracial dating choices, I estimated a series of two-level logistic regression models. In all statistical analyses, I used the appropriate weights provided by Add Health to account for complex sampling design.

For an individual, i, and a school, j, the individual-level model is specified as follows (Raudenbush and Bryk 2002):

$$\eta_{ij} = \log(\frac{p}{1-p}) = \beta_{0j} + \beta_{1j}(FamilySES)_{ij} + \beta_{2j}(Female)_{ij} + \beta_{3j}(Age)_{ij} +$$

$$\beta_{4j}(GPA)_{ij} + \beta_{5j}(U.S.born)_{ij} + \beta_{6j}(Religiosity)_{ij}$$

η_{ij} is the log odds of engaging in an interracial relationship, while p is the predicted probability of engaging in an interracial relationship as opposed to an intra-racial relationship in school j. β_{0j} is the estimated log odds of entering an interracial relationship in school j when all covariates are held at zero (the centered continuous covariates are held at the sample mean, and the categorical variables are held at the reference group). β_{1j} through β_{6j} represent the estimated coefficients of the covariates measuring individual-level characteristics.

There are eight school-level models:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(RacialComposition)_j + \gamma_{02}(SchoolSES)_j + \gamma_{03}(Urbanicity)_j + \gamma_{04}(Region)_j + \mu_j \tag{1}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}(SchSES)_{1j} \tag{2}$$

$$\beta_{2j} = \gamma_{20} \tag{3}$$

- •
- •
- •

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$$\beta_{6j} = \gamma_{60} \tag{7}$$

Equation 1 models the intercept from the individual-level model as a function of school-level characteristics, including racial composition, school SES, urbanicity, and region. μ_j is the variation in school intercepts not captured by these four variables. Equation 2 includes the cross-level interaction term between family SES and school SES; it models the coefficient capturing the relationship between family SES and interracial relationship involvement from the individual-level model as a function of school SES. The final five equations (Equations 3 through 7) estimate the effects of six individual covariates, including gender, age, GPA, nativity, and religiosity. This specification indicates that the effects are the same for all students within each school j.

I conduct my data analysis in two steps: First, I provide descriptive information on all independent and dependent variables. For the key covariates, school SES and family SES, I also present their distribution across the outcome variable in Figure 2-1 through Figure 2-4. Second, I describe the results of the multilevel multivariate analyses. A series of two-level logistic regression models were run separately for non-Hispanic white, non-Hispanic black, Hispanic, and Asian youth. Although the sample sizes were too small to separate the models by gender, I included gender as a control variable in the analytical models.[v] For each racial/ethnic group, Model 1 included all school-level variables, Model 2 added all individual and family variables, and Model 3 added cross-level interaction terms between school SES and family SES to determine whether family SES modifies the association between school SES and interracial dating when all other characteristics are held constant.

2.6 Results

2.6.1 Descriptive Statistics

Table 2-1 presents the unweighted descriptive statistics by race and ethnicity for all variables in the models. The prevalence of interracial dating is 10.30 percent for whites, 10.82 percent for blacks, 30.76 percent for Hispanics, and 29.55 percent for Asians. The higher proportions for Hispanic and Asian students are consistent with prior findings that interracial pairing is inversely related to group size (Harris and Ono 2005, Qian and Lichter 2007, Qian 1997, Vequera and Kao 2005).

Among school-level covariates, the most notable result is that adolescents tend to attend schools with high percentages of same-race students. For blacks, Hispanics, and Asians, the average percentages of same-race students are 31.93 percent, 45.68 percent, and 19.41 percent, respectively; in each case, these are much higher than the group's national-level proportion (which are 12.23 percent for blacks, 13.7 percent for Hispanics, and 4 percent for Asians; U.S. Census Bureau 2003). With respect to school background, about one-third of white youth attended high-SES schools, and about half of black youth and one-third Hispanic youth studied in low-SES schools. Most Asian youth (73 percent) attended medium-SES schools. The results indicate that medium-SES schools are more likely to include students of all four racial backgrounds, and thus are more racially heterogeneous compared to high-SES schools (which are most likely to be predominately white) or low-SES schools (which are most likely to be predominately minority).

Among school control variables, there are some significant patterns. About 50 percent of Hispanic adolescents resided in urban areas, and about 80 percent of Asian adolescents resided in suburban areas. Geographically, Asians are more likely to live in the west, and blacks in the south.

A close examination of the association between school SES and family SES indicates that there is an apparent mismatch between school and family SES for some racial and ethnic groups (see Figure 2-1). White adolescents are most likely to attend high-SES schools and least likely to attend low-SES schools regardless of their family SES backgrounds. Black adolescents, in contrast, are most likely to attend low-SES schools, regardless of their family background. This pattern holds even for black students from high-SES families—roughly 40 percent of this group attends low-SES schools. Both Hispanic and Asian youth are more likely to attend medium-SES schools across all family backgrounds.

There are several interesting descriptive results for individual- and family-level covariates. Over 95 percent of white and black youth are native born, compared to only two-thirds of Hispanic youth and half of Asian youth. Most striking are the differences in physical appearance scores across race: black teens tend to receive the lowest scores from interviewers. Consistent with past findings, Asian adolescents demonstrated the highest academic performance, with an average GPA of 2.92, followed by whites (2.73), blacks

(2.59) and Hispanics (2.49). Academic performance is negatively associated with entry into dating relationships, but its effect on interracial relationship formation remains unclear. In a result that differs somewhat from descriptive statistics in other studies, Asian teens are the most religious, followed by blacks, Hispanics, and whites.

2.6.2 Multilevel Multivariate Analyses

Multilevel multivariate analyses were used to explore school effects on interracial relationship formation. Table 2-2 shows the coefficients from the two-level logistic regression models for each racial/ethnic group; the coefficients represent the log odds of entering into an interracial relationship compared to an intra-racial relationship. Within each group, three models (all weighted) were estimated. The first two models were used to examine Hypothesis 1, that attending a school with more same-race members will decrease respondents' likelihood of interracial dating, and Hypothesis 2a and 2b, that attending a high-SES school will increase the chances of forming an interracial relationship for whites and decrease those for minority groups. Models examined Hypothesis 3 by adding terms to measure the interaction between school SES and family SES are shown in the tables in Appendix; results are illustrated graphically in Figure 2-1 to Figure 2-4. These figures show the relationship between the predicted probability of interracial dating and school SES; three separate bars presented the probability for each family SES level.

For white adolescents, Models 1 and 2 reveal a strong and statistically significant association between interracial relationship formation and the two key measures of school characteristics. In Model 1, which includes only school-level controls, a 1 percent increase in same-race students reduces the log odds of engaging in an interracial dating relationship by 4.38. In Model 2, which includes additional control variables, the negative effect of racial composition was even stronger (-4.99 compared to -4.38). School SES, in contrast, is positively and significantly associated with interracial dating. Again, the magnitude of the coefficients increased from Model 1 to Model 2. The results of Model 2 indicate that attending a medium-SES school rather than a low-SES school improves the odds of interracial dating by 1.46 (=exp(.38)), and attending a high-SES rather than a low-SES school increases the odds of interracial dating by about 1.24 (=exp (0.22); however, when school-level, individual-level, and family-level covariates are controlled,

the difference between attending a high-SES and a low-SES school is not statistically significant. The interactive effects between school and family SES in Figure 2-5 indicate that family SES does not modify the relationship between school SES and the likelihood of dating interracially.

In sum, the results suggest that white adolescents are more likely to date intra-racially when they are surrounded by more members of their own racial group, as suggested by Hypothesis 1. These results are consistent with the notion that attending a school with a higher percentage of same-race students limits the chances of interacting with members of other racial groups. Additionally, school SES has an independent and generally positive influence on white adolescents' likelihood of forming a relationship across racial boundaries, and this association is persistent and similar across different family backgrounds. These findings confirm hypothesis 2a that school SES is an important predictor of interracial romance for whites.

Some patterns are evident with respect to the control variables. Urbanicity is associated with interracial dating when only school covariates are included in Model 1. However, this effect disappears when all individual controls are included. The significant effect of region, however, persists in all three models. Among the individual-level controls, being male, older, and more religious are negatively associated with interracial dating, which confirms previous findings (Joyner and Kao 2005, Vequera and Kao 2005).

For black respondents, just as for white students, a higher percentage of same-race students reduces the likelihood of establishing interracial relationships. From Model 1 to Model 2, the magnitude of the coefficients for percent black decreases but remains statistically significant, suggesting that racial composition is an important predictor net of other controls. Hypothesis 1 is supported. In Model 2, for the black sample, attending a high-SES school is associated with lower odds of dating interracially than attending a low-SES school, while attending a medium-SES school is associated with a higher tendency to date across racial lines than being from a low-SES school when other variables are constant. Hypothesis 2b is partially supported. This pattern may be related to the fact that very few black adolescents attend high-SES schools due to residential segregation. Once they attend those schools, black students themselves may feel less fit and more discrimination, as high SES schools are more likely to be predominately white

schools and the divide between whites and blacks is still strong and sizeable. As prior ethnographic study noted, black students encounter more racism and are more likely to be rejected by people of other races in high-SES schools than their peers in low-SES schools (Holland 2012). Consequently black teens may feel less comfortable to initiate interracial relationship in those schools.

Figure 2-6 shows that family SES modifies the association between school SES and dating behavior, which lends support to Hypothesis 3. Though not statistically significant, the graphs showed that, for schools of all SES levels, high family SES is related to a higher probability of interracial dating. High-class black parents not only had the capacity to intervene and help more often when their children experience discrimination, but also were more likely to interact with school personnel in ways that were acceptable within the social setting of their child's school than were their poor and working class parents (Day-Vines, Patton and Baytops 2003). Thus black teens from high SES families but attending high SES schools may be able to better deal with racism from their peers than their counterparts from medium or low SES families.

Moreover, coming from a high-SES family may provide black adolescents with more exposure to interracial (black-white) couples. Prior findings have indicated that black adults with high family SES are more likely to intermarry with whites who share a similarly high level of education or work in professional jobs. Although none of the black adolescents in the current study identify as mixed race, exposure to parents' friends who are interracially married may encourage these teens to cross racial lines when forming romantic relationships.

Among school controls, living in an urban area reduced the likelihood of interracial dating compared to living in a suburban area, and living in regions other than the West lowered the chance of interracial dating for black respondents. Among individual- and family-level control variables, being older and more religious is associated with lower levels of interracial romantic relationship formation. Female adolescents also showed a lower tendency than males to form interracial relationships, indicating that, similar to the pattern among black adults, there is a gender difference in the interracial dating patterns of black youth.

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The general pattern for Hispanic adolescents echoes some of the results for black adolescents, but diverges from others. Like black youth, across all three models, a higher percentage of same-race students is consistently associated with a lower likelihood of dating interracially. School SES and family SES have contrasting effects on interracial relationship formation in Model 2, when all variables are controlled. Both high and medium school SES are negatively associated with interracial dating, as predicted by Hypothesis 2b, but high family SES has a positive effect. These results may again confirm the notion that the lifestyles of minorities from high or middle family backgrounds are very similar to those of white mainstream families, thus making it easier for these adolescents to date interracially (Qian and Lichter 2007). However, high-SES school environment seems not to provide a friendly social setting for Hispanic teens to be involved in interracial relationships as it for black teens. Though the interaction terms are not statistically significant, Figure 2-7 suggests that family SES does alter the association between school SES and interracial dating, providing some support to Hypothesis 3: high SES family background appears to buffer the negative effects of high SES school background on likelihood of forming interracial relationships for Hispanics.

With respect to school controls, the patterns are less clear. In Model 2, when all variables are held constant, residing in urban areas reduces Hispanic teens' likelihood of dating interracially. Compared to living in the West, residing in the Northeast increases the probability that Hispanic respondents will date interracially, and Hispanics living in the South are least likely to date interracially. Among individual- and family-level controls, being male, and native born decreases the chance of interracial dating.

For Asian American teens, the general pattern varies move from Model 1 to Model 2. The negative association between racial composition and the likelihood of interracial relationships persists, as it is for white, black and Hispanic teens. In Model 1, compared to attending a low-SES school, attending a medium-SES school reduces the log odds of interracial dating by 2.01, while attending a high-SES school reduces the log odds of interracial dating by .664. However, the effects of school SES change from Model 1 to Model 2, when family SES is included in the model: The previously significant coefficient for school SES becomes insignificant, suggesting that for Asian teens, family SES might be a better predictor of interracial dating than school SES.

Higher family SES is associated with a lower likelihood of interracial dating for Asian teens, which contradicts prior findings that high family SES increases the proximity of Asian teens to white adolescents and thus increases the likelihood of their dating whites (Wang and Kao 2007). This is probably associated with the more detailed classification of family SES (three categories of high, medium and low in the present study as compared to the binary categories of high and low in Wang and Kao's article), as well as the distinction made between school and family SES. Figure 2-8 does not show a clear pattern with regard to the interaction effects between family and school SES. The only notable finding is that teens who are from low-SES or medium-SES families but who attend high-SES schools were the least likely to date interracially. It appears that Asian American teens from lower-SES families seem to have most difficulties dating interracially in high-SES schools.

2.7   Discussion

The purpose of this study is to explore the role that school factors play in interracial romantic relationship formation among adolescents. The results confirm all of the hypotheses. First, the empirical evidence supports opportunity theory (Blau 1977, Fujino 1997, Harris and Ono 2005), which states that youth are less likely to date interracially if they are surrounded by more same-race students. The availability of same-race peers may suggest fewer opportunities to interact with students of other races.

Second, school SES is a good predictor of the formation of interracial relationships when school, family, and individual characteristics are controlled. However, the direction of the effects is not uniform across racial/ethnic groups. Compared to attending a low-SES school, attending a medium-SES school is associated with a higher probability of interracial dating for whites. However, compared to attending a low SES-school, attending a high-SES school decreases the likelihood of forming interracial relationships for Hispanics and blacks, and has no impact on interracial dating among white and Asian teens. Prior studies have suggested that, compared to minority students from disadvantaged family backgrounds, those from advantaged family backgrounds are more likely to have mainstream U.S. lifestyles as whites (Qian and Lichter 2007); therefore, one plausible explanation of the analytical results is that in medium SES schools, white students are more similar to minority students (black, Hispanic and Asian)

than they are to minority students in low-SES schools. Such similarity increases the chance of interracial dating for whites.

In contrast, it may be more difficult for black and Hispanic students to interracially date in high-SES schools (compared to low-SES schools) because of perceived racial discrimination, especially if they attend predominately white schools. These results indicate that, for Hispanic and black teens, race matters more in forming romantic relationships in high-SES schools than in low-SES schools.

Moreover, the school SES effect is not universal—its impact is moderated by family SES. I have extended previous work in this area to specify the ways in which school and family background jointly influence partner choice among adolescents. In some ways, for black, Hispanic and Asian American teens, the role of family SES is limited to a moderating factor in interracial partner choice. The findings suggest that even though high school SES may lower the likelihood of minority youths breaking racial boundaries in partner selection, coming from a well-off family background may relax this effect. At the same time, minority students from low-SES families who attend high-SES schools might face double disadvantages, as being minority and being economically disadvantaged, and be rejected by their majority peers as a result of the discrimination against minority and the poor.

There are several limitations of the present study. First, high-SES and low-SES schools are likely to be racially homogeneous. Schools in the former group are likely to be predominantly white, while those in the latter are likely to be predominantly black or Hispanic. This pattern may create general collinearity, as racial variation in these schools is closely related to school socioeconomic status.

Second, the exclusion of non-daters may also bias the estimation of school effects. As shown in Table 2-1 and Table 2-2 in the appendix, white, Hispanic, and Asian adolescents are likely to opt out of dating if there were fewer numbers of people from their own race. These non-daters are more likely to have intra-racial relationships if they were to date. In addition, white adolescents from low-SES schools and Asian adolescents from high-SES schools are more likely to be non-daters; therefore, they are not included in this study. Though it is unclear what factors account for those non-dating, one could expect that the reason white adolescents opt out of dating in low-SES schools may be

because there are fewer members of their race and they are literally "minority" in low-SES schools. Asian adolescents in high-SES schools may opt out of dating, maybe because they experience more perceived discrimination in high-SES schools, which, in turn, prevents their forming interracial friendships or romantic relationships.

Third, Hispanics can be of any racial background, but in this study are "forced" into the category "Hispanic" so that results are consistent with prior studies. The current analyses, therefore, make no distinction between interracial relationships between non-Hispanic whites and Hispanic whites, and interracial relationships between non-Hispanic blacks and Hispanic blacks. These two types of interracial relationships are most likely different, yet the current analyses cannot explore the possible differences.

Finally, racial prejudice toward certain minority groups might exist in some (or all) school environments, and may prevent students in these groups from forming interracial relationships. However, measuring this prejudice quantitatively is quite difficult. Blacks have historically faced significant discrimination in the United States. Residential segregation between whites and blacks persists to this day (Iceland and Wilkes 2006). Asian Americans are quite diverse with respect to national origin, language, religious beliefs, and other cultural traits; however, in the United States they are usually discriminated against as a group. Black females and Asian males, in particular, face exclusion from ideal dating partners, due to stereotypes about them. Future studies should address the extent to which racial prejudice against minority groups prevent students from these groups from establishing interracial relationships using qualitative methods.

In the United States, racial boundaries are still highly related to class boundaries. The current study shows that the high socioeconomic family background of minority adolescents can certainly "buy" them proximity to the majority group, by attending high-SES predominately white schools. However, it doesn't really increase the chance that minority students will be successful in forming interracial relationships. Race still trumps class when forming romantic relationships among minority groups. There must be more school factors, other than racial composition and socioeconomic status that play a role in forming interracial relationships. More qualitative studies are needed to explore issues such as: which characteristics associated with high SES schools prevent such formation

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of interracial relationships; how students, teachers, and classroom dynamics determine the overall school racial climate; and how all of these factors jointly influence interracial interaction.

ENDNOTES

[i] Ideally, all romantic relationships would be included in the analysis and a three-level model (school-individual-relationship) would be estimated. However, a three-level model is unnecessary because less than 36 percent of respondents reported a second relationship, and less than 13 percent reported a third relationship. Among students who reported more than one relationship, only 6 percent had engaged in both types of dating (i.e., reported both interracial and non-interracial relationships). This small proportion will not produce significant results in a three-level model.

[ii] Respondents who marked "Hispanic" are considered Hispanic no matter which race they marked (Qian 1997).

[iii] The total sample including both daters and non-daters included 6,593 white, 2,972 black, 2,123 Hispanic, and 918 Asian-American respondents.

[iv] If the father is absent or missing, the mother's highest education level was used. If both parents' educational level was missing, parental occupation was used. If father's occupation was professional/managerial, it was classified as high family SES; otherwise it was classified as medium family SES. If both parents' occupational information was missing, the case was dropped.

[v] Ideally, I would stratify the models by gender because, among adults, interracial dating patterns have been found to vary by gender for blacks and Asian Americans (Qian 1997). However, some researchers found no gender differences in interracial dating patterns among Asian adolescents (Joyner and Kao 2005).

Table 2-1 Descriptive Statistics for Dependent and Independent Variables by Race and Ethnicity

	White	Black	Hispanic	Asian
Dependent variable				
Interracial dating relationship				
Intra-racial dating	89.70%	89.28%	69.24%	70.45%
Interracial dating	10.30%	10.72%	30.76%	29.55%
Key independent variables				
School racial composition				
Percent own race	60.53%	31.93%	45.68%	19.41%
School SES				
Low SES	12.04%	46.83%	36.56%	10.51%
Medium SES	53.95%	37.85%	51.11%	73.86%
High SES	34.01%	15.32%	12.33%	15.63%
Family SES				
Low SES	43.20%	35.62%	51.99%	28.26%
Medium SES	25.75%	24.59%	30.59%	26.40%
High SES	31.04%	39.80%	17.42%	45.34%
Individual-level control variables				
Female	52.85%	52.83%	48.80%	46.88%
U.S. born	98.81%	97.69%	72.52%	49.15%
Age	15.52	15.43	15.77	16.03
GPA	2.73	2.59	2.49	2.92
Church attendance				
Never	26.35%	16.09%	25.80%	18.00%
< Once a month	22.50%	12.29%	21.31%	15.71%
Once a month	20.03%	24.45%	17.86%	18.00%
Once a week	31.12%	47.17%	35.03%	48.29%
School-level control variables				
Urbanity				
Suburban	56.76%	56.09%	41.18%	78.13%
Urban	16.19%	29.54%	55.65%	19.32%
Rural	27.04%	14.36%	3.17 %	2.56 %
Region				
West	12.65%	12.84%	34.08%	73.58%
Mideast	32.49%	18.37%	6.09%	10.80%
South	36.84%	62.30%	43.86%	8.52%
Northeast	18.03%	6.49%	15.97%	7.10%
Total number of individuals	3,705	1,469	1,168	352

Table 2-2 Multilevel Logistic Regression Estimates of Interracial Relationships by Race and Ethnicity of Respondents

	White		Black		Hispanic		Asian	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Key independent variables								
School racial composition								
Percent own race	-4.38***	-4.99***	-3.95***	-3.82***	-4.18***	-3.27***	-4.42***	-11.48***
	(.258)	(.266)	(.263)	(.318)	(.400)	(.439)	(1.35)	(3.30)
School SES								
Medium vs. low SES	0.077	0.38**	-0.40**	0.39***	-0.80***	-2.12***	-2.01***	-0.20
	(.095)	(.130)	(.136)	(.121)	(.219)	(.255)	(.456)	(.865)
High vs. low SES	0.33**	0.22	-0.59***	-.66***	0.12	-1.52***	-0.664*	0.70
	(.113)	(.163)	(.133)	(.173)	(.281)	(.342)	(.268)	(.784)
Family SES								
Medium vs. low SES		-0.27		-.004		0.54		-1.39***
		(.190)		(.268)		(.278)		(.343)
High vs. low SES		-0.11		.520		0.98*		-1.11*
		(.164)		(.296)		(.399)		(.549)
School-level control variables								
Urbanicity								
Urban vs. suburban	.502***	.109	-.122	-.538***	-.211	.163	.500	-.310
	(.082)	(.092)	(.131)	(.147)	(.199)	(.155)	(.305)	(.452)
Rural vs. suburban	-.523***	.107	.256	-.047	.114	-.332	-.217	.593
	(.108)	(.107)	(.175)	(.202)	(.279)	(.288)	(.389)	(.866)
Region								
Mideast vs. West	.374**	.330**	-.201	-.224	.607*	1.307***	.197	1.338
	(.128)	(.114)	(.212)	(.211)	(.265)	(.241)	(.318)	(1.356)
South vs. West	-.483***	-.636***	-.616**	-.836***	-.687***	.447*	.285	.2593
	(.119)	(.118)	(.214)	(.221)	(.200)	(.184)	(.355)	(1.072)
Northeast vs. West	.048	.329**	-.366	.047	.121	.519	2.634***	1.43**
	(.128)	(.114)	(.214)	(.238)	(.190)	(.282)	(.307)	(.497)
Individual-level control variables								
Female		.475**		-.689*		-.83**		-.2825
		(.168)		(.281)		(.269)		(.641)
Age (centered)		-.160*		-.227*		.128		-1.01**
		(.064)		(.112)		(.081)		(.391)

GPA (centered)		-.053 (.086)		.091 (.171)		.187 (.157)		-.102 (.330)
U.S. born		-.392 (.491)		.440 (1.22)		1.094*** (.278)		.106 (.740)
Church attendance								
<Once a month vs. never		-.310 (.244)		-.969* (.459)		-.519 (.328)		.446 (.543)
Once a month vs. never		-.542* (.246)		-1.025* (.420)		-.699 (.387)		.723 (.826)
Once a week vs. never		-.489* (.217)		-.439 (.325)		-.499 (.451)		-.113 (.820)
Constant	-0.083 (.154)	0.506 (.513)	-0.17 (.215)	-0.231 (1.258)	1.31*** (.331)	0.60 (.720)	1.24S*** (.307)	0.95 (1.13)
Number of schools	105		75		80		37	
Number of individuals	3663		1437		1102		339	

Notes:
1. All models are weighted. Standard errors are included in parentheses.
2. ***indicates p< .01, ** indicates p< .05, and *indicates p< .10.
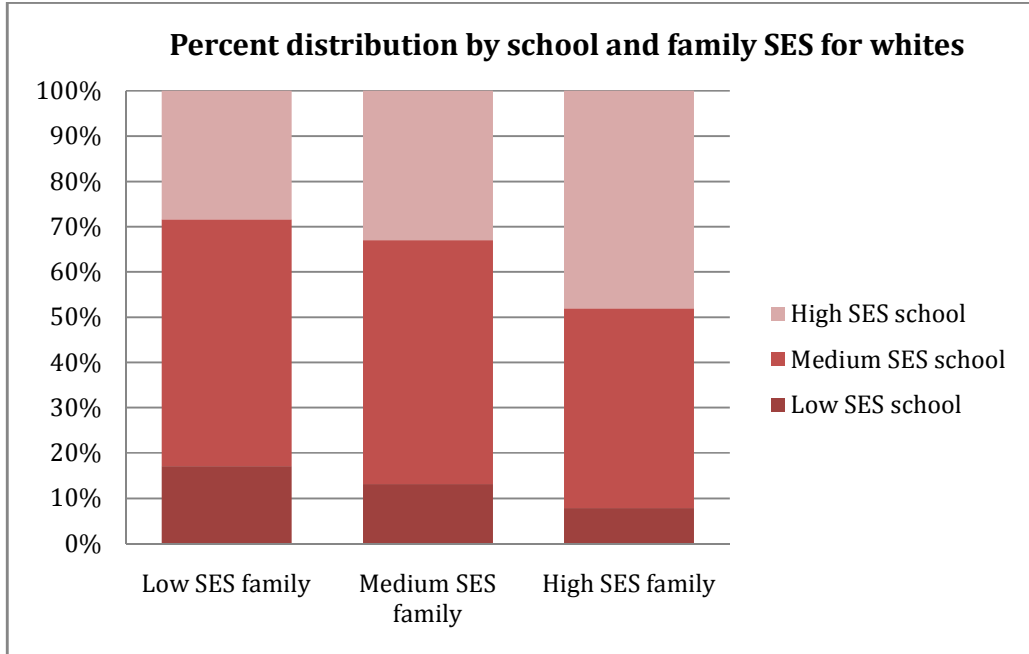
Figure 2-1 Percent distribution for School SES and Family SES for whites
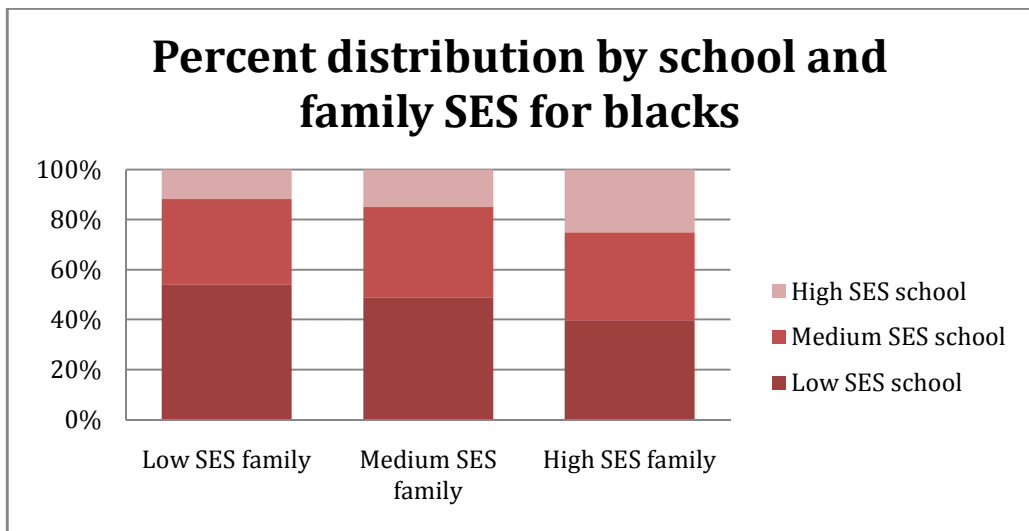
Figure 2-2 Percent distribution for School SES and Family SES for blacks

Percent distribution by school and family SES for Hispanics
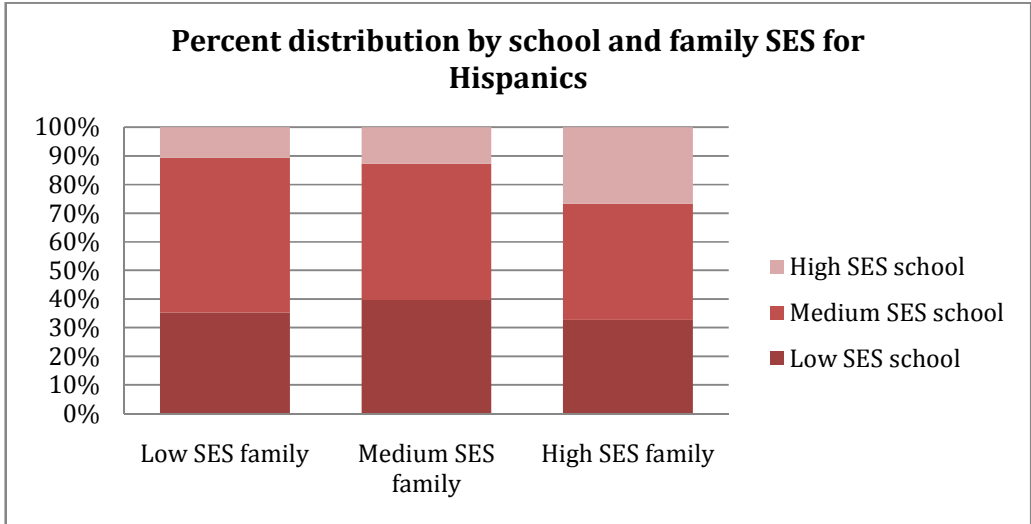
Figure 2-3 Percent distribution for School SES and Family SES for Hispanics

Percent distribution by school and family SES for Asians
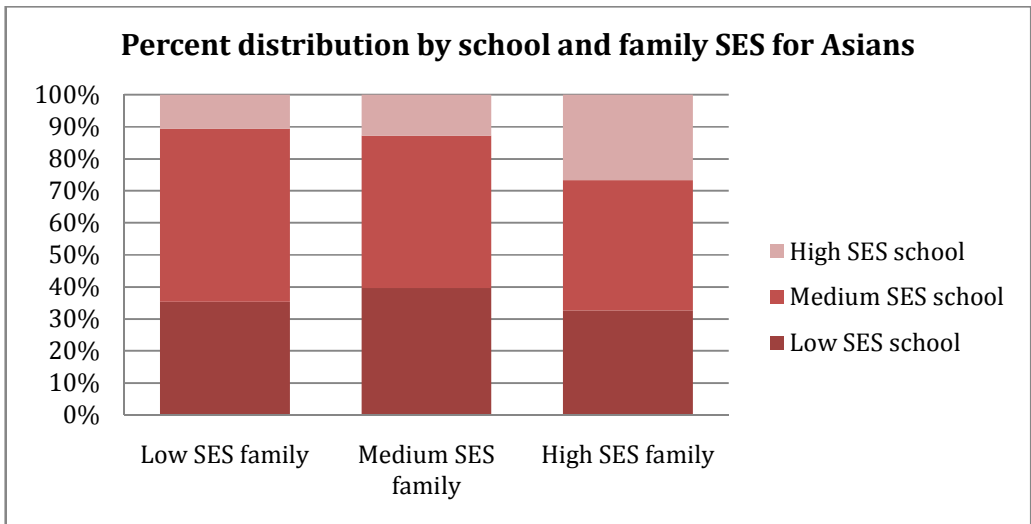
Figure 2-4 Percent distribution for School SES and Family SES for Asians
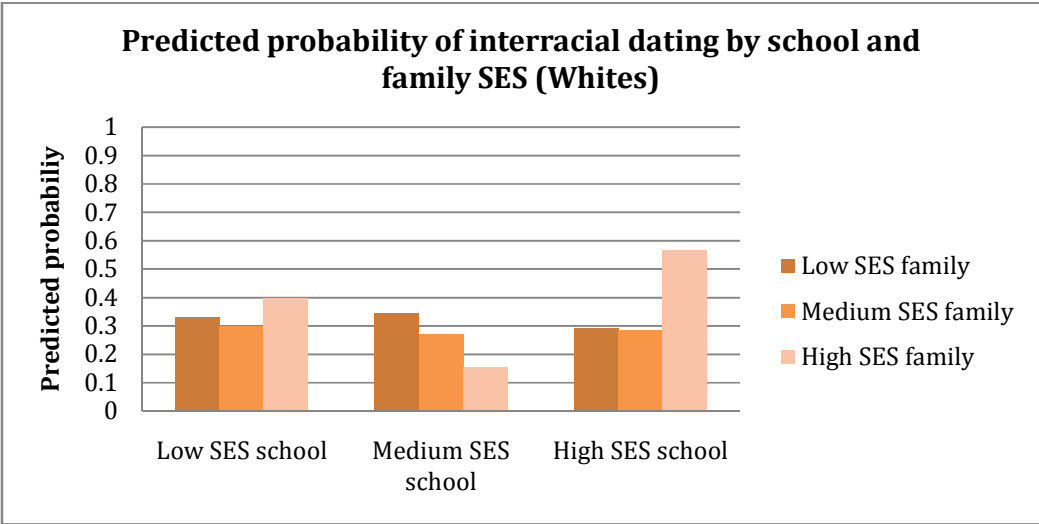
Figure 2-5 Predicted Probability of Interracial Dating for Whites
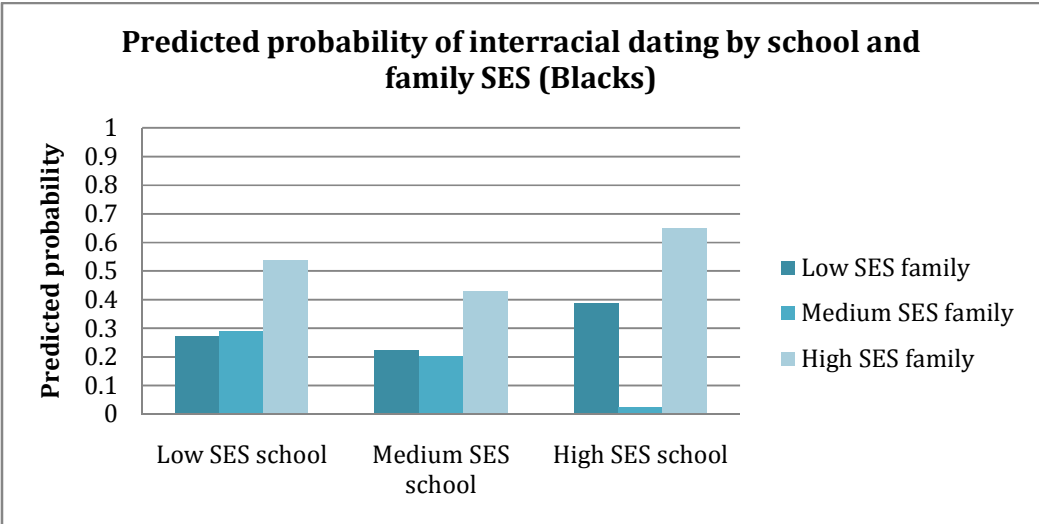
Figure 2-6 Predicted Probability of Interracial Dating for Blacks
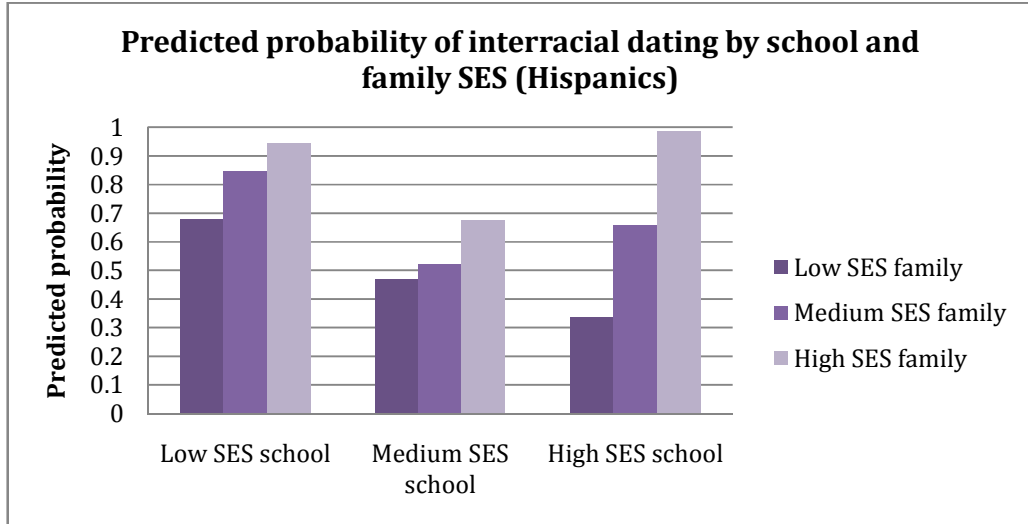
Figure 2-7 Predicted Probability of Interracial Dating for Hispanics
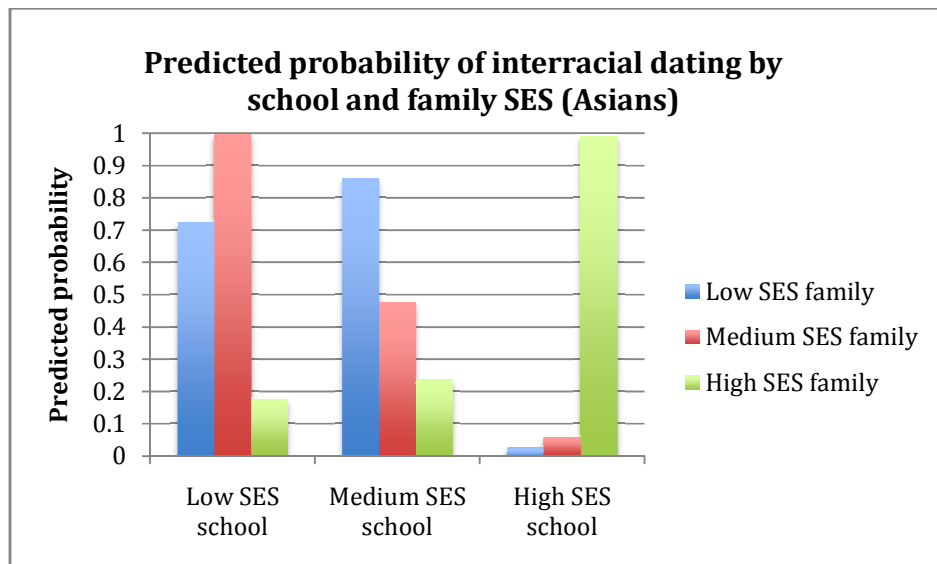
Figure 2-8 Predicted Probability of Interracial Dating for Asians

2.8 Appendix

Table 2-3 Descriptive Statistics for Daters and Non-Daters from All Racial and Ethnic Groups

	Non-Daters	Daters
Key independent variables		
School SES		
Low SES	26.51	23.44%
Medium SES	48.55%	50.03%
High SES	24.95%	26.53%
Family SES		
Low SES	41.67%	42.54%
Medium SES	25.49%	26.30%
High SES	32.84%	31.16%
Individual-level control variables		
Female	49.12%***	51.82%
U.S. born	89.24%***	91.37%
Age	14.69***	15.51
GPA	2.80***	2.72
Church attendance		
Never	21.65***	23.57
< Once a month	15.34***	19.69
Once a month	19.75***	20.51
Once a week	43.26***	36.23
School-level control variables		
Urbanity		
Suburban	56.12	55.02
Urban	26.73	26.17
Rural	17.15	18.81
Region		
West	22.35	19.64
Mideast	23.59	23.65
South	40.09	42.15
Northeast	13.98	14.56
Total number of individuals	5,912	6,694

*** indicates p< .001, ** indicates p< .01, and *indicates p< .05.

Table 2-4 Descriptive Statistics for Daters and Non-Daters by Race and Ethnicity

	White		Black		Hispanic		Asian	
Key independent variables	**Non-dater**	**Daters**	**Non-Daters**	**Daters**	**Non-daters**	**Daters**	**Non-daters**	**Daters**
Racial composition (% own race)	.579***	.611	.32	.329	.433*	.457	.172***	.194
School SES								
Low SES	15.55% ***	11.61%	47.11%	45.95%	36.44 %	36.56%	10.95% *	10.51%
Medium SES	50.10%* **	52.17	37.26%	38.05%	50.68%	51.11%	66.96%*	73.86%
High SES	34.35%***	36.22%	15.64 %	16.00 |%	12.88 %	12.33%	22.08 %*	15.63%
Family SES								
Low SES	43.99%	43.40%	35.69 %	36.16 %	52.00%*	51.87%	27.91%	28.26%
Medium SES	24.27 %	25.64%	22.97%	24.43 %	30.52%*	30.78%	30.04%	26.40%
High SES	31.74%	30.96%	41.34 %	39.41%	17.49%*	17.35%	42.05%	45.34%
Individual-level control variables								
Female	46.50%***	52.85%	54.62%*	52.83%	50.68%	48.80%	45.23%	46.88%
U.S. born	98.55%	98.81%	97.67%*	97.69%	71.20%	72.52%	49.82%*	49.15%
Age	14.47***	15.42	14.62***	15.43	15.16***	15.77	15.21***	16.03
GPA	2.90***	2.83	2.63*	2.586	2.61***	2.49	3.12***	2.92
Church attendance								
Never	25.09***	26.35	14.28**	16.09	19.89***	25.80	26.62 *	18.00
< Once a month	17.76***	22.50	10.81**	12.29	16.79***	21.31	12.59*	15.71
Once a month	18.51***	20.03	21.62**	24.45	22.14***	17.86	17.09*	18.00
Once a week	38.64***	31.12	53.30**	47.17	41.18***	35.03	43.71*	48.29
School-level control variables								
Urbanity								
Suburban	56.34	56.76	60.15 *	56.09	39.06	41.18	73.14*	78.13
Urban	17.14	16.19	25.75*	29.54	57.70	55.65	25.97*	19.32
Rural	26.52	27.04	14.11*	14.36	3.25	3.17	0.88*	2.56
Region								
West	13.06	12.84	37.11	34.08	37.11	34.08	65.72	73.58
Mideast	17.92	18.37	6.71	6.09	6.71	6.09	14.31	10.80
South	62.56	62.30	40.46	43.86	40.46	43.86	11.31	8.52
Northeast	6.46	6.49	15.72	15.97	15.72	15.97	8.66	7.10
Total number of individuals	2,888	3,705	1,503	1,469	955	1,168	566	352

*** indicates p< .01, ** indicates p< .05, and *indicates p< .10.

Table 2-5 Multilevel Logistic Regression Estimates of Interracial Relationships with Interactions by Race

	Whites	Blacks	Hispanics	Asians
Key independent variables				
School racial composition				
Percent own race	-4.163***	-2.728***	-5.145***	-5.22*
	(.231)	(.256)	(.339)	(2.35
School SES				
Medium vs. low SES	.051	-.263	-.875***	.838
	(.279)	(.313)	(.336)	(.735)
High vs. low SES	-.093	.261	-.716	-2.29
	(.293)	(.601)	(.460)	(1.49)
Family SES				
Medium vs. low SES	-.162	.084	.956	4.38***
	(.443)	(.462)	(.508)	(.664)
High vs. low SES	.145	.566	1.056	-1.262
	(.534)	(.446)	(.671)	(.755)
Interaction terms				
Medium fam* medium sch SES	-.180	-.219	-.753	-6.289***
	(.525)	(.607)	(.655)	(.598)
Medium fam* high sch SES	.065	-1.70	.188	-1.780
	(.512)	(1.055)	(.708)	(1.223)
High fam *medium sch SES	-.670	-.090	-.633	-.225
	(.601)	(.559)	(.768)	(.906)
High fam * high sch SES	.215	-.0155	.731	2.719
	(.590)	(1.075)	(1.023)	(1.678)
School-level control variables				
Urbanicity				
Urban vs. suburban	-.0591	-.029	.123	-.252
	(.096)	(.152)	(.137)	(.456)
Rural vs. suburban	.037	-.319*	-.572***	1.916*
	(.116)	(.178)	(.212)	(.815)
Region				
Mideast vs. West	-.641***	-.915***	-.524	.985
	(.122)	(.204)	(.299)	(.904)

South vs. West	-.643***	-.890***	-1.061***	-.6602
	(.112)	(.232)	(.160)	(.776)
Northeast vs. West	-.510***	-.769***	.0754***	1.073*
	(.142)	(.222)	(.137)	(.545)
Individual-level control variables				
Female	.460***	-.502*	-.784**	-.398
	(.166)	(.297)	(.276)	(.594)
Age (centered)	-.083**	-.166**	.126**	-.604***
	(.035)	(.062)	(.047)	(.209)
GPA (centered)	-.049	.132	.223	-.017
	(.662)	(.232)	(.197)	(.394)
U.S. born	-.438	.554	1.144***	.183
	(.510)	(1.29)	(.251)	(.706)
Church attendance				
<Once a month vs. never	-.324	-.913*	-.596	.209
	(.246)	(.469)	(.357)	(.563)
Once a month vs. never	-.524*	-1.07**	-.742	.531
	(.248)	(.401)	(.422)	(.866)
Once a week vs. never	-.542**	-.553	-.614	-.210
	(.015)	(.326)	(.409)	(.765)
Constant	-.705	-.976	.757	.969
Number of schools	105	74	80	37
Number of individuals	3663	1450	1125	339

Notes:

1. All models are weighted. Standard errors are included in parentheses.
2. ***indicates $p < .01$, ** indicates $p < .05$, and *indicates $p < .10$

CHAPTER 3

DO INTERRACIAL ROMANTIC RELATIONSHIPS INFLUENCE ADOLESCENTS' ODDS OF ENGAGING IN SEXUAL INTERCOURSE AND CONTRACEPTIVE USE?

3.1   Introduction

As the population of young people in the United States has become increasingly diverse and Americans have become more accepting of interracial relationships (Powers and Ellison 1995, Schuman, Steeh, et al. 1997), the number of such romantic relationships has grown (Joyner and Kao 2005, Wang and Kao 2007, Yancey 2007). The most common type of interracial unions are those with one white partner and one minority partner, while the alternative type involves partners from two minority groups; both types of relationships help integrate minorities into American society (Alba and Nee 2005, Qian, Glick and Batson 2012).

Despite this shift, cultural differences and societal objections to interracial unions have complicated the integration process (Childs 2005, Harris and Kalbfleisch 2000), especially for adolescents who are still too inexperienced to successfully cope with the additional challenges and sanctions faced in cross-race relationships. Adolescents in interracial unions display somewhat "negative" characteristics compared to their counterparts in intra-racial unions; for example, these teens have more trouble with peers at school (Kreager 2008), remain in stable relationships for shorter periods of time (Wang, Kao and Joyner 2006), and are less likely to show affection in front of friends and family members (Vaquera and Kao 2005).

Research on the characteristics of interracial romantic relationships among adolescents is still in its infancy. One key aspect that scholars have not adequately addressed is the association between interracial relationships and sexual behavior. Understanding the ways that being in an interracial relationship influences the odds of sexual involvement and contraceptive use among adolescents is extremely important

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because research has shown that teenage pregnancy and childbearing lead to a series of negative outcomes later in life, such as lower average educational attainment, reduced chances of obtaining a high-paying job, and a higher likelihood of experiencing marital dissolution during adulthood (Paik 2011, Sabia and Rees 2009)

With regard to sexual involvement and contraceptive use, interracial relationships provide an opportunity to examine the theoretical prediction by social exchange theory. In the literature on adult intermarriage, proponents of social exchange theory state that people from minority groups tend to exchange their own higher social status (e.g. income, education, job prestige, etc.) for their white spouses' "higher" racial status (Blau 1964, Gordon 1964, Gullickson and Fu 2010, Kalmijn 2010). These findings raise the question of whether or not, in the case of interracial dating among adolescents, sex is part of the exchange equation. Whether the interaction between race and gender, which entails the different power dynamics of racial groups and the different preferences for sexual activity between males and females, leads to the higher risk of sexual engagement or risky sexual behavior in adolescent romantic relationships involving a white male and a minority female (Coleman 1966, P. C. Giordano 2003, Sassler and Joyner 2011).

Relationship characteristics are another set of factors that can influence sexual practices. Of particular relevance to interracially dating adolescents are intimacy level and communication about sex-related issues. In general, better communication and a higher level of intimacy are linked to more frequent contraceptive use (Kirby 2001, Manlove, Ryan and Franzetta 2003, Manlove, Ryan and Franzetta 2004). Within interracial unions, racially different partners may experience lower levels of both intimacy and communication compared to intra-racial couples. Thus, interracially dating adolescents may potentially engage in more risky sexual activities compared to their intra-racially dating counterparts.

The current study is informed by the existing scholarly research on social exchange theory, and average racial differences in sexual practices, but takes a unique approach to understanding sexual practices among adolescents. Utilizing logistic regression modeling and data from the National Longitudinal Study of Adolescent Health (Add Health) Wave I, I estimate the risk of sexual intercourse and the risk of contraceptive use among adolescents who are romantically involved. Specifically, I explore the ways in which

participation in an interracial romantic relationship affects the likelihood of: 1) having sexual intercourse, and how this relationship varies by race and gender, and 2) adopting contraceptive use within the sexual relationship, and how the characteristics of relationships moderate this association for white, black, Hispanic, and Asian youth.

3.2 Background

Youth under the age of 20 constitute the most racially and ethnically diverse age group in the United States. The proportion of the population that identifies as a member of a racial or ethnic minority group increased from 32 percent in 1990 to 43 percent in 2008, and the trend is still continuing. By contrast, among people age 20 or over, minorities accounted for only 31 percent of the population in 2008 (Johnson and Lichter 2010). The majority of the growth among minority youth was due to increases in the Hispanic and Asian populations, sometimes referred to as the "new minorities" in comparison to African Americans and American Indians (Frey 2010, U.S Census Bureau 2010). In particular, Hispanics accounted for more than 80 percent of the increase during this period, and Asians accounted for about 18 percent of the growth. Black youth, in contrast, experienced a decline of 0.9 percent over the same period (Johnson and Lichter 2010). These trends may result in an increased number of interracial romantic relationships among adolescents and adults in the years to come.

Interracial unions not only provide a way in which individuals are exposed to different cultures and value systems, but also tend to weaken social boundaries between racial groups and facilitate the assimilation of minority individuals into American society (Alba and Nee 2005, Qian, Glick and Batson 2012). From a life development perspective, adolescence is an important phase that shapes many characteristics of individuals before adulthood. If scholars and policy makers do not fully understand the dynamics of adolescent interracial relationships, they may lose opportunities to identify potential problems in race relations among adults in the future.

The existing literature indicates that racial differences in sexual behavior, social exchange patterns, and relationship characteristics may all have significant impacts on interracial couples' choices about sex. In the following section I evaluate each of these factors and develop hypotheses accordingly.

3.2.1 Racial Differences in Sexual Involvement and Contraceptive Use

Over the past several decades, adolescents in the United States have become sexually active at younger ages: by age 16, about 40 percent of females and 50 percent of males have had sexual experiences; by age 17, the figures are approximately 50 percent for females and 60 percent for males (Centers for Disease Control and Prevention (CDC) 2002).

However, both sexual engagement and the prevalence of contraceptive use differ greatly by race (Fergus, Zimmerman and Caldwell 2007, Giordano, Manning and Longmore 2006). At any given age during adolescence, black teens are twice as likely to have had sex as white teens (Adamczyk and Felson 2006, Santelli, et al. 2000). Hispanics, on the other hand, have lower rates of sexual activity than whites (Aneshensel, et al. 1989, O'Sullivan, et al. 2007, Upchurch, et al. 2001), and Asians have much lower rates of sexual experience than the other three racial groups (Hahm, Lahiff and Ba 2006). In addition, black women progress to sexual activity most rapidly, followed by Hispanic, white, and Asian women (O'Sullivan, et al. 2007, Sassler and Joyner 2011, Cavanagh 2007). In terms of contraceptive use, black teens report more frequent contraceptive use than white teens, while Asian teens report lower levels of contraceptive use and less consistency in use than white teens (Ford, Sohn and Lepkowski 2001, Hahm, Lahiff and Ba 2006, Ku, Sonenstein and Pleck 1994, Manlove, Ryan and Franzetta 2007, Manning, Longmore and Giordano 2000).

Researchers attribute these differences in part to that fact that in different subcultures children acquire different attitudes and values about sexual behavior. Some subcultures are more accepting of early sexual activity than others. For example, scholars have asserted that the high rates of adolescent sexual activity and early out-of-wedlock childbearing among black teens reflect different sexual norms, more open communication between parents and children, and more tolerant attitudes about early childbearing (Staples 1978, O'Sullivan, et al. 2007). Similarly, scholars have argued that Asian American youth are less likely to enter into sexual relationships at early ages because their subculture discourages sexual discourse and adopts more conservative sexual values that condone fewer sexual behaviors among teens (Carver, Joyner and Udry 2003, Okazaki 2002, O'Sullivan, et al. 2007).

These cultural differences highlight the need to stratify the analyses by race in studies of the differential risk of sexual involvement between interracial couples and intra-racial couples. Research that combines all racial groups has concluded that interracially dating youth are more likely to engage in sexual intercourse and more likely to use condoms than their intra-racially dating counterparts (D'Souza 2010, Ford, Sohn and Lepkowski 2001). These findings, however, appear to be overly general because racial differences were not adequately considered. For example, being in an interracial relationship may not increase the risk of sex among black youth, because this group already has the highest prevalence of sexual activity, but may increase the risk of sex among Asian or Hispanic teens, because they have relatively low rates of sexual activity.

3.2.2 Social Exchange Theory and Sexual Involvement

From a social exchange standpoint, relationship development is based on a necessary trading of rewards between partners, as well as the costs associated with involvement and the alterative possibilities (Blau 1964, Gordon 1964). Social exchange theory has provided a helpful explanation of the patterns of intermarriage between whites and blacks (V. K. Fu 2008, Gullickson and Fu 2010, Kalmijn 2010, Qian 1997, Qian and Lichter 2007); research has shown that black husbands have significantly higher levels of education and income than their white wives (Kalmijn 1998, Qian 1997). To some extent, researchers in this field view race as a caste system in which whites are at the top and all minority groups are equally disadvantaged; however, some scholars have argued that blacks are at the bottom of this system while Asians and Hispanics are in the middle (Bonilla-Silva 2004).

Most of the recent research on interracial marriages concludes that social exchange is not the dominant tendency (Kalmijn and Tubergen 2010, Rosenfeld 2008, Rosenfeld 2010). Instead, research has found that intermarried couples tend to be homogamous with regard to education, religion, and social status (Qian 1997, Rosenfeld 2008), and thus supports homogamy theory, which argues that people choose one another based on their similarities. Other scholars have argued that intermarriage is the result of personal preferences, rather than a way of enhancing social status (Yancey 2002). Social status, as measured by educational level or income, might not be the only thing that partners consider when forming relationships; partners in interracial relationships may also

consider characteristics such as physical attractiveness and domestic contributions. The high intermarriage rate between white men and Asian women, which indicates that the cultural stereotype of Asian women as gentle, caring, and submissive makes them more appealing as wives regardless of their economic status, demonstrates the influence of these characteristics (Qian 1997, Yancey 2002, Qian, Blaire and Ruf 2001).

Though far from perfect, social exchange theory does appear to shed light on certain aspects of sexual behavior in adolescent interracial relationships. Sassler and Joyner (Sassler and Joyner 2011) found that among sexually active young adults ages 18-24, white males, on average, wait a shorter time before having sex with a minority partner than with a white partner, indicating the possibility of social exchange involving sex. However, the authors excluded interracial couples that had never had sex from the analysis, leaving some uncertainty about whether the odds of having sex were actually higher in such relationships.

In the study regarding sexual status among gay men, race and ethnicity plays a role in locating individuals within a stratified social system in which white man still enjoy an overall global status advantage over black, Asian, and other minority men because the former is perceived as more attractive and desirable than the latter (Green 2008) Perceptions of unfavorable conditions and low desirability of minority men limit their ability to engage in safer-sex discussion, control of sexual engagement, and initiation of condom use during intercourse (Green 2008). For minority men, unprotected sex is thus exchanged for the high sexual status of white men.

Hypothesis 1: In accordance with social exchange theory, the odds of engaging in sexual intercourse (and the odds of engaging in and contraceptive use, if sexually active) are expected to be higher (lower) for minority teens who date whites partners than for their same-race intra-racially dating peers; and are expected to be lower or the same (higher) for minority teens who date different-race minority partners than their same-race intra-racially dating counterparts.

Social exchange in interracial sexual relationships might involve not only race, but also gender. Power dynamics between racial groups, as well as power dynamics between males and females, may jointly influence whether or not interracial couples will have sex (or will use contraceptives). Empirical evidence shows that while girls expect more

emotional bonding, boys have a greater desire for sex in romantic relationships (P. C. Giordano 2003). Gender differences in preferences concerning sexual activity imply that sex is a commodity that females can exchange for status and/or other resources (Coleman 1966, Sassler and Joyner 2011). In addition, men usually retain greater control over sexual activity within relationships (P. C. Giordano 2003, Kusunoki and Upchurch 2011).

Hypothesis 2: Based on these findings, gender differences are expected with respect to both entry into sexual intercourse and contraceptive use (if sexually active) between interracial couples and intra-racial couples. In line with research that has found unequal racial positions and power dynamics within unions involving white and minority individuals, I expect that for black, Hispanic, and Asian youth, interracial unions involving white partners will have greater gender differences in the rate of sex and contraceptive use than intra-racial unions or interracial unions with minority partners. In other words, while minority females dating white males are expected to have higher rates of sex and lower rates of contraceptive use than their male counterparts dating white females, no such gender differences are expected within intra-racial unions involving two partners from a single minority group or interracial unions involving two minority group partners.

3.2.3 Relationship Characteristics and Contraceptive Use

Research on the sexual behavior of adolescents and young adults has long suggested that partner and relationship characteristics have a strong influence on contraceptive use. With regard to contraceptive use, researchers generally acknowledge that couple heterogamy (e.g., a difference in age or racial/ethnic background) is related to different choices about contraceptive method. Studies have found that young women who are dating older partners are less likely to report using any contraception (DiClemente, et al. 2002, Ford, Sohn and Lepkowski 2001, Kusunoki and Upchurch 2011, Miller, Clark and Moore 1997). Couples of different racial/ethnic backgrounds are more likely to use condoms relative to no use or using a hormonal method (Ford, Sohn and Lepkowski 2001, Kusunoki and Upchurch 2011, Schoureri, Bullock and Dubin 2010). However, a thorough review of the literature did not reveal any studies that distinguished the two types of interracial relationships (those with whites and those with non-whites) among minority group members; further, no study has focused on whether (and if so, how) the

association between being in an interracial relationship and sexual behavior/contraceptive use varies across racial and ethnic groups.

Moreover, characteristics associated with intimacy level and the level of communication about sex-related issues are likely to be of particular importance to interracial couples. Communication about issues related to sex and contraception is important for teens (Manlove, Ryan and Franzetta 2007). Discussing contraception before having sex increases the rate of ever having used contraceptives and consistent contraception use (Kirby 2001, Manlove, Ryan and Franzetta 2003, Manlove, Ryan and Franzetta 2004, Manlove, Ryan and Franzetta 2007, Noar, Carlyle and Cole 2006). Communication about sensitive topics (such as sex and contraceptive use) between partners of different races may be particularly awkward because adolescents may be struggling to adjust to racial differences in other areas of the relationship. As a result, interracially dating teens may be less likely to discuss sex-related issues, making them potentially less prepared when engaging in sexual activities.

A higher level of intimacy between partners is associated with a higher likelihood of engaging in sexual activity, as well as a higher rate of contraceptive use because sexual intercourse is more predictable in these relationships (Manlove, Ryan and Franzetta 2003, Manlove, et al. 2006, Manlove, Ryan and Franzetta 2004, Manlove, Ryan and Franzetta 2007). Within interracial unions, racially different partners may not share the same social and cultural backgrounds, and thus may experience lower levels of intimacy than intra-racial couples. This pattern is consistent with the observation that adolescent interracial couples are less likely to display affection in front of friends and family members, as a result of the perceived stigma of interracial relationships (Vaquera and Kao 2008). To date, there is little research about intimacy levels and communication between adolescent partners in interracial couples. Given the importance of interracial relationships, study on these subjects would certainly improve the understanding of adolescent contraceptive use.

Hypothesis 3: Based on previous research, I hypothesize that relationship characteristics will moderate the association between relationship type and contraceptive use. Specifically, the association will differ by the level of intimacy and the level of communication between partners. I expect that interracial relationship type will have a

weaker influence on engaging in sexual intercourse and contraceptive use among teens who report higher levels of intimacy (and/or who communicate more successful with their partners) in their relationships than their peers who report lower levels of intimacy (and/or who among teens who communicate more successfully with their partners).

3.3 Data And Sample

To evaluate these research hypotheses, I used data from the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative school-based survey of U.S. adolescents who were in grades 7-12 in 1994-1995. For the current study, I restricted the sample to teens that participated in the Wave I in-home interview (n=18,547). I limited the analyses to those who reported heterosexual romantic relationship (n=9,907). Although each respondent in this sample reported at least one romantic relationship and could report as many as three, only 36 percent of respondents reported a second relationship, and less than 13 percent reported a third relationship. Moreover, at this early age, adolescents who have had more than two relationships seem to be fairly consistent in terms of the racial composition of their relationships. Among teens that reported more than two relationships, only 669 respondents (less than 7%) reported engaging in both an intra-racial and an interracial relationship. Because the variation regarding racial composition across relationships is minimal, I used only the first reported relationship for the analysis.

Because the study focuses on interracial relationships, I excluded respondents with missing values on their own race (41 cases) and Hispanic origin (62 cases) or their partners' race (127 cases) and Hispanic origin (235 cases). In addition, because of the complicated nature of the racial categorizations "other" and multiracial, I excluded respondents who described themselves (189 cases) or their partners as "other" race (227 cases) or as identifying with more than two racial categories (369 cases); this procedure is consistent with prior studies (Joyner and Kao 2005, Wang and Kao 2007). Finally, I focused only on those who identified as non-Hispanic white, non-Hispanic black, Hispanic, or Asian American (114 American Indians deleted). Respondents who did not have valid sample weights (59 cases) or relationship-specific information about sexual behavior (175 cases) and contraceptive use (18 cases) were also eliminated.

The final sample comprises 6,940 respondents, including 3,835 non-Hispanic whites, 1,528 non-Hispanic blacks, 1,211 Hispanics, and 366 Asian Americans.

3.3.1 Dependent Variables

I employed two measures, both derived from two questions in the survey about teens' sexual behavior with their partners, to capture adolescent sexual behavior. *Sexual intercourse* is based on the yes/no response of individual respondents to an item about activities with a romantic partner: "We had sexual intercourse." *Contraceptive use (ever)* is based on the question "Did you (or your partner) ever use any method of birth control?" Using the answers to these two questions, I constructed two dichotomous dependent variables: 1) respondent had sexual intercourse within the relationship (1) versus never had sexual intercourse in the relationship (0); and 2) ever used contraception within the relationship (1) versus never used contraception during the relationship (0).

3.3.2 Relationship-Level Variables

The three key relationship-level variables—*interracial relationship type, level of intimacy,* and *communication about sex-related issues*—are described in detail below.

Interracial relationship type is coded differently for white and non-white respondents. For non-Hispanic white respondents, *interracial relationship type* is coded as 1 if the partner is from a racial minority group (interracial), and 0 if the partner is non-Hispanic white (intra-racial). For non-Hispanic black, Hispanic, and Asian respondents, *interracial relationship type* is coded as 1 if the partner is non-Hispanic white (interracial with white), 2 if the partner is from a different-race minority group (interracial with other minority), and 0 if the partner is from the same racial group (intra-racial).

Level of intimacy measures the degree to which respondents have an intimate relationship with their partner. The variable was constructed as a five-item index based on the presence or absence of five couple-like activities in the relationship. The five dichotomous activities were: "I told others we are a couple," "I met my partner's parents," "We went out as a group," "We saw less friends," and " We thought of ourselves as a couple." I summed the items and used the sample mean to center the measure. The Cronbach's alpha is 0.616. [2]

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2 The binary nature of the five items is a limitation of using Cronbach's alpha.

Communication between partners is a dichotomous measure of whether respondents and their partners had discussed contraception or STD ("We talked about contraception or sexually transmitted diseases"). I expect that this type of communication will improve the chances of using contraception. Research has found that interracial/interethnic unions—including marriages and relationships between cohabiting couples—are associated with lower levels of relationship quality than intra-racial/intra-ethnic group unions (Hohmann-Marriott and Amato 2008); thus there may be more obstacles for interracially dating couples to overcome. I expect that interracially dating adolescents may have a lower mean level of communication with their partners regarding sex. Such differences in the communication level within couples may result in differential rates of contraceptive use.

Duration of relationship is calculated in months and collapsed into three categories: 1) relationships that lasted for 4 months or less; 2) those that lasted between 5 and 12 months; and 3) those that lasted longer than 12 months. Because the average age of the respondents in the study is about 16, the average length of relationships is relatively short: about half of all relationships were maintained for about 5-12 months, and fewer than 20 percent lasted longer than 12 months. The length of the relationship is expected to be positively associated with the risk of sex and contraceptive use.

Age difference between the respondent and his/her partner is measured in years and collapsed into three categories: 1) partner is within one year of the respondent's age; 2) partner is one year (or more) younger than the respondent; 3) partner is one year (or more) older than the respondent. The reference group includes individuals whose partners are within one year of the respondent's age. Prior studies have found that age heterogamy is associated with a higher risk of sexual involvement and/or lower risk of contraceptive use. I expect that similar patterns will be observed in both interracial and intra-racial relationships.

3.3.3 Individual-Level Variables

Based on self-designated race and Hispanic status, respondents are divided into four mutually exclusive groups: non-Hispanic white, non-Hispanic black, Hispanic, and Asian. Those who identified as Hispanic are coded as Hispanic, regardless of their race. This classification is consistent with those used in previous studies on interracial

marriage and interracial relationships (Harris and Ono 2005, Joyner and Kao 2005, Kusunoki and Upchurch 2011, Qian and Lichter 2007).

Prior studies have indicated that many individual and family characteristics are associated with sexual engagement and contraceptive use (Adamczyk and Felson 2006, Kirby 2001, Manlove, Ryan and Franzetta 2003, Manlove, Ryan and Franzetta 2007). Thus, I included a number of individual- and family-level control variables, including gender, age, religiosity, family SES, and family structure.

Gender is coded as 0 for male, and 1 for female. Gender differences in sexual engagement imply that sex is a commodity that women can exchange for status and other resources (Coleman 1966). Generally, males are expected to take the lead in initiating dates and sexual intercourse (Katz and Tirone 2009, Laner and Ventrone 2000), while females can either accept or refuse the relationship and/or sex (Baumeister and Vohs 2004). In interracial unions, research has shown that among sexually active young adults, white males have sexual intercourse earlier in relationships with minority females than in relationships with white females (Sassler and Joyner 2011). I expect that the type of relationship—interracial or intra-racial—may influence gender differences in the likelihood of engaging in sexual intercourse within the relationship. In addition, these differences (between males and females) may be greater in interracial unions involving a white partner than in unions involving two different-race minority partners.

Age is coded in years and centered at the sample mean. Age is positively associated with the likelihood of having sex and using contraception. Over time, young people tend to use contraceptives more often and decrease their risky sexual behavior, as they gradually begin to understand the consequences of such behavior, or are more likely to have stable relationships in which sexual behavior becomes more predictable (Fergus, Zimmerman and Caldwell 2007, Manning, Longmore and Giordano 2000).

Religiosity is measured via a question about the frequency of church attendance; responses include four categories: 0=never, 1=less than once per month, 2=once per month, and 3=once per week. Prior literature has shown that religiosity is negatively associated with adolescent sex and positively associated with having fewer sexual partners and using contraception (Manlove, Logan, et al. 2008).

Family SES is based on parental education. This measure is coded as "low" if the parent did not complete high school, "medium" if the parent is a high school graduate or completed some college, and "high" if the parent is a college graduate. Youth from families with higher SES and those whose parents are more educated are likely to have sexual intercourse at a later age and are less likely to engage in risky sexual behavior (Fomby, Mollborn and Sennott 2010, Lammers, et al. 2000, Miller, et al. 1998, Udry, Kovenock and Van Den Berg 1995).

Family structure is coded as 1 for a two-parent family (biological parents, step-parents, or adoptive parents), as 2 for one-parent family, and 3 otherwise. Family structure is associated with both sexual and contraceptive behaviors. Teens from intact families are more likely to delay first sex and have fewer opportunities to engage in sexual activities than teens from other family structures, because they receive more parental supervision (Bersamin, et al. 2008, Fomby, Mollborn and Sennott 2010, Lammers, et al. 2000). In contrast, family disruption or instability increases early entry into romantic relationships as well as sexual activity among adolescents (Bersamin, et al. 2008, Cavanagh, Crissey and Raley, Family Structure History and Adolescent Romance 2008, Longmore, et al. 2009, Manlove, Terry, et al. 2000, Manlove, Logan, et al. 2008).

3.4 Model And Analytic Strategy

Studies of dichotomous outcomes typically use logistic regression models. I run separate logistic regression models (with different independent variables) for the two sexual behavior outcomes (sexual intercourse and contraceptive use) for each racial/ethnic group.

The logistic model predicting the extent to which relationship, individual, and family factors influence adolescents' sexual behavior are specified below:

$$\eta = \log(\frac{P}{1-P}) = \beta_0 + \beta_1 (Relationshiptype)_i + \beta_2 (Relationshiptype * gender)_i +$$
$$\beta_3 (Communication)_i + \beta_4 (Intimacy)_i +$$
$$\beta_5 (relationshipduration)_i + \beta_6 (agedifference)_i +$$
$$\beta_7 (gender)_i + \beta_8 (agecentered)_i + \beta_9 (religiosity)_i +$$
$$\beta_{10} (FamilySES)_i + \beta_{11} (FamStructure)_i$$

where η is the log odds of an individual adolescent, *i*, having sexual intercourse with his or her partner. The probability of having sexual intercourse is p. β_0 is the constant, which is the log odds of having sex when respondents are dating intra-racially and all covariates are held at zero. β_1 to β_{11} are the estimated coefficients of the key independent variable, the interaction term, and the control variables.

I used another logistic model predicting the odds of contraceptive use. The model is specified slightly differently, because they take into account the moderating effects of relationship characteristics (intimacy level and the degree of communication).

$$\eta = \log(\frac{P}{1-P}) = \beta_0 + \beta_1(Relationshiptype)_i + \beta_2(Communication)_i + \beta_3(Intimacy)_i$$
$$+ \beta_4(Relationshiptype * communication)_i + \beta_5(Relationshiptype * Intimacy)_i$$
$$\beta_6(relationshipduration)_i + \beta_7(agedifference)_i + \beta_8(gender) +$$
$$\beta_9(agecentered)_i + \beta_{10}(religiosity)_i + (FamilySES)_i +$$
$$\beta_{12}(FamStructure)_i$$

Where η is the log odds of an individual, *i*, using contraceptives in a sexual relationship. The probability of adopting any contraceptive use is p. β_0 is the log odds of using contraceptives among intra-racially dating individuals who did not communicate with partners about sex-related issues and had an average level of intimacy, while holding all control variables at their centered means (if continuous variables) or at their reference category (if categorical variables). β_1, β_2, and β_3 are the estimated coefficients for the three main covariates measuring relationship characteristics: relationship type (interracial with a white partner or interracial with a non-white partner versus intra-racial), intimacy level (centered at the sample mean), and communication about sex-related issues (yes/no). β_4 and β_5 represent the estimated coefficients for the two interaction terms. β_6 through β_{12} represent the estimated coefficients for all control covariates.

3.4.1 Analytic Strategy

I begin by examining the descriptive statistics for all variables used to estimate the multivariate models (see Table 3-1). I also demonstrate the distribution of interracial

relationships by race and gender in Figure 3-1 and Figure 3-2. Next, I conduct the multivariate logistic regression analyses. Assuming that sexual practices differ across racial groups, I stratify the analyses by race (non-Hispanic white, non-Hispanic black, Hispanic, and Asian). In accordance with my hypotheses, for each racial group, I run logistic regression models to illustrate the influence of interracial relationships on adolescent participation in sexual intercourse and on the odds of contraceptive use (see Table 3-2 and Table 3-3). The two models in Table 3-2 and Table 3-3 test Hypotheses 1, that relationship type and gender will have independent effects on adolescent sexual engagement and contraceptive use. Figure 3-3 through Figure 3-6 (corresponding models are included in Table 3-4 in the Appendix) provide a visual representation of the testing of Hypothesis 2, that there are interactive effects of relationship type and gender on sexual involvement when other control variables are held at zeros (i.e. at their means or reference groups). Figure 3-7 through Figure 3-12 (corresponding models are included in Table 3-5 in the Appendix) show results geographically to test Hypothesis 3: that communication and intimacy level are modifying the association between interracial relationship type and contraceptive use, when other variables are held at zeros (i.e. their means or reference groups).

3.5   Results

3.5.1 Descriptive Results

Table 3-1 presents unweighted descriptive statistics by race for all variables. The percent of respondents in each racial group who reported having sex with their partner in their romantic relationship is as follows: 30.80 percent for whites, 41.88 percent for blacks, 31.46 percent for Hispanics, and 27.32 percent for Asians. Of all adolescents who engaged in a sexual relationship with their romantic partners, the majority (over 70 percent) used some type of contraception.

A large majority of relationships among whites (88.47 percent) and blacks (85.8 percent) are intra-racial, while among Hispanics and Asian Americans only about two-thirds of relationships are intra-racial (66.47% and 65.57% respectively). Among interracially dating youth, Hispanics are most likely to date white partners (19.82 percent) and blacks are least likely to date whites (3.99 percent); Asians are most likely to date partners from other minority groups (21.04 percent), blacks are least likely to date

partners from other minority groups (10.21 percent), and Hispanics fall somewhere in the middle (13.71 percent).

Figure 3-1 and Figure 3-2 demonstrate the gender differences in interracial dating preferences by race. Consistent with prior findings about interracial relationship patterns (Qian 1997, Qian and Lichter 2007, Wang and Kao 2007), when Hispanic and black males are interracially involved, they are more likely than their opposite-gender counterparts to date whites. However, compared to their male counterparts, Hispanic and Asian females are more open to establishing interracial relationships with partners from other minority groups. With the exception of black females, females in each racial/ethnic group appear to be more accepting than males of interracial relationships; this may suggest that social distance across racial groups may be gendered.

Table 3-1 presents the distributions of the relationship characteristic variables by racial/ethnic group; black teens are most likely to communicate with their partners regarding sexual issues (60.67%); in contrast, less than half of white and Asian teens discuss these issues with their partners.[3] However, the average intimacy level is lowest among black teens' relationships (3.44), and highest among white teens (3.889), while Hispanic and Asian teens fall somewhere in between (3.872 and 3.67 respectively). For all racial groups, more than half of the romantic relationships last for 5-12 months. About one third of white and Asian adolescents end their romantic relationships within the first 4 months. For all racial groups, close to half of the relationships involve partners of the same age, and among white, black, and Hispanic teens, about one third have partners who are 2 years older than the respondent.

With regard to the individual and family characteristic variables, the sample is divided approximately evenly between males and females, and the average age is about 16 years old. In this study, black and Asian adolescents are more religious than whites and Hispanics. The distribution of family SES is fairly even for all races except Hispanics—about 67 percent of Hispanics are concentrated in low-SES families. Compared to black respondents, white, Hispanic, and Asian teens are more likely live in two-parent families.

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[3] The correlation between communication regarding sex-related issue and actual sexual involvement is 0.3942.

3.5.2 Multivariate Analysis Predicting Sexual Intercourse

Table 3-2 presents the results of the logistic regression predicting the odds of having sexual intercourse with a partner. The models are weighted. Model 1 includes all individual and family characteristics as well as relationship type to estimate the risk of engaging in sexual intercourse. To estimate the extent to which involvement in a sexual relationship can be attributed to the characteristics of relationships, Model 2 includes all other relationship characteristic variables. Models that included one interaction term between relationship type and gender to capture the interactive effects of interracial relationship type and gender on the risk of sex are shown in Table 3-4 in the Appendix, and are illustrated by Figure 3-3 through Figure 3-6 for white, black, Hispanic and Asian teens.

For white adolescents, the results in Model 1 demonstrate that those in interracial relationships are no more likely to have sex with their partners than those in intra-racial relationships when individual and family factors are controlled; in addition, white females are more likely than their male counterparts to have sex with partners. When relationship characteristics are added in Model 2, the coefficient for relationship type decreases, and remains insignificant.

Communication about sex-related issues increased the odds of having sex by 5.39 times (=exp(1.686)). Intimacy level does not influence sexual behavior, but a longer relationship increases the odds of sexual involvement. Compared to the odds of those who ended relationships within 4 months, the odds of having sex with a partner for adolescents who maintained relationships for 5-12 months or over a year are increased by 2.2 (=exp(0.79)), and 1.3 (=exp(.27)) respectively. Teens whose partners are 2 or more years younger are less likely to be sexually active than their peers whose partners are of the same age. With regard to the control variables, being older, less religious, or from a low-SES are associated with a higher risk of having sex with a partner; this is consistent with prior findings.

For black adolescents, the results of Model 1 and Model 2 suggest that, compared to being in an intra-racial relationship, being in an interracial relationship with whites or other minority partners are associated with a similar likelihood of being sexually involved. Black teens who communicated with their partners regarding sex-related issues

are more likely to have sex (the odds increased by 4.22= exp(1.44)) than those who did not. Being in a relationship with older partners increases the odds of sexual involvement by 1.59 (=exp (.468) compared to being in a relationship lasting for 4 months or less. The results for control variables are straightforward: being younger, more religious, and from a high-SES or two-parent family decreases the likelihood of participating in sexual behavior.

For Hispanics, Model 1 shows no statistically significant association between relationship type and sexual behavior, while Model 2 suggests a positive relationship between being in an interracial union with a minority partner and sexual intercourse. These patterns are contradictory to the social exchange theory. Communication between partners still serves as a strong predictor of engaging in sexual activity for Hispanics, while none of the factors of duration of the relationship, or age difference between partners has an effect on sexual behavior in a statistically significant way. Frequent level of church attendance is a protective factor for Hispanic teens—it is associated with a lower likelihood of being sexually involved within a romantic relationship.

For Asian American adolescents, both Models 1 and 2 show that interracial dating with white does not increase the risk of sexual involvement, while interracial dating with other minority partners is highly related to the likelihood of entering a sexual relationship (the odds are increased by 3.97 (=exp (1.38)) and 5.41(=exp(1.69)), respectively, in Models 1 and 2). Similar to the results for Hispanic teens, among Asian Americans, only communicating with a partner, being older, and being more religious are related to an increased risk of sexual intercourse.

In sum, these results lend no support to hypothesis 1, which states that minority adolescents are more likely to have sex with their white partners, but no more likely to have sex with other minority partners compared to same-race partners. Among all three minority racial groups, interracial dating relationships with whites do NOT increase the odds of sex. Thus, minority adolescents do not generally exchange sex for their white partners' high "racial" status; and they probably could negotiate with their white partners regarding whether or not to have sex just as they do with their same-race partners.

For Hispanic and Asian teens, however, interracially dating teens are more likely to have sexual intercourse with their other-race partners than with their same-race or

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white partners. This appears to be counterintuitive. This is probably related to the fact that though teens who are dating interracially generally receive less support from family members and same-race peers, this situation may be particularly true when they are dating other non-white partners. The racial discrimination and prejudice against minority groups may not only from the majority group, it can also occur between different minority groups. In other word, minority teens that are dating other-minority partners may face the most objection and stigma, thus they may feel more close to their partners. Such closeness may lead to an increase in intimate sexual relationships.

Figure 3-3 through Figure 3-6 display the interactive effects of relationship type and gender on sexual engagement for all four racial groups, while fixing all control variables at zero. The graphs show the predictive probabilities of sex for females and males by the three relationship types (intra-racial, interracial with whites, and interracial with other non-whites). The interaction terms are introduced into the model to test Hypothesis 2, which suggests that being in an interracial relationship with a white partner increases the risk of sexual engagement for minority females more than it does for minority males.

For all four racial groups, there is no gender difference in sexual involvement in same-race relationships, but there is a gender difference when dating other-race partners. Though not all statistically significant[4], the patterns suggest that among blacks, dating whites appears to increase females' risk of sex more than male's risk of sex; this lends support to social exchange theory. However, among Hispanics and Asians who are dating whites, females do not have a higher probability of sexual engagement than males; by contrast, among Hispanics and Asians who are dating other minority partners, females do have a significantly higher probability of sexual engagement than males.

Sassler and Joyner (Sassler and Joyner 2011) found that whites wait a shorter time to have sex if they date minority females, indicating that minority women may trade sexual behavior for higher racial status with their white male partners. However, because the authors focus on sexual relationships and exclude all non-sexual relationships from their analysis, it is plausible that interracial relationships with whites do not increase

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[4] In the models in Table 3-4 in the Appendix, only the interaction terms in figure 3-6 are statistically significant at .05 level.

minority women's entry into sexual relationships overall, but do speed up the pace of sexual involvement once minority women decide to have sex with their partners. The results of the current study indicate that social exchange occurs for black females, but not for Hispanic and Asian females. Indeed, in contrast to social exchange theory, the current findings suggest that dating other-race non-white male partners increases the odds of sexual involvement for both Hispanic and Asian female teens compared to their intra-racially dating counterparts. This pattern may indicate that other-race male minority partners may be more likely than white partners to influence the sexual practices of female minority teens.

3.5.3 Multivariate Analyses Predicting Contraceptive Use

In Table 3-3, I limited the sample to romantically involved adolescents who reported having sexual intercourse with their partners. This reduced the sample to 31 percent of its original size for whites (the sample went from 3602 to 1125); 43.9 percent for blacks (the sample from 1398 to 614); and 34 percent for Hispanics (from 1154 to 393). The Asian American sample went down to 150 cases. This sample size did not contain enough cases to run the corresponding analysis. Thus, two logistic regression models were conducted for the white, black, and Hispanic samples to estimate the impact of interracial relationships on contraceptive use.

For white teens, as shown in Panel 1 of Table 3-3, the results indicate that teens in intra-racial relationships are less likely to use contraceptives compared to their peers in interracial unions. However, the coefficient are not statistically insignificant in Model 1 and Model 2, when all relationship characteristic variables are controlled. Communication about sex-related issues increases the odds of contraceptive use by 2.88 (=exp(1.06)). Being in a relationship lasting 5-12 months increases the odds of contraceptive use by 1.87 (=exp(.63)). Intimacy between partners and the age difference between partners are not significantly related to contraceptive use.

The signs and significance levels of the individual and family control variables are consistent from Model 1 to Model 2. The factors of being older or being from a medium-SES or high-SES (compared to from a low-SES) are associated with a higher likelihood of using contraceptives. These findings are fairly consistent with prior findings

that highlight the importance of the protective effects of family characteristics on sexual behavior among adolescents.

For black teens, in Panel 2 of Table 3-3, the results of Model 1 reveal that, interracial dating with a white partner reduces the odds of using contraceptives by 3.19 (=exp(1.16), while interracial dating with a non-whites partner and intra-racial dating have similar odds. When all relationship-level characteristics are introduced in Model 2, the significance and magnitude of the coefficients for relationship types become small and insignificant, revealing that other relationship variables may predict contraceptive use better than relationship type does. In contrast to the results for white teens, only communication between partners is a statistically significant predictor of contraceptive use among black teens (communication reduces the odds of sex by 1.06 (=exp(.064)). Intimacy level, relationship duration, and age difference do not affect black teens' use of contraception.

Among the individual and family control variables, age, and family SES are significantly associated with contraceptive use among black teens. Older black teens are more likely to use contraceptives than younger black teens. In addition, black respondents from a medium-SES family are more likely to engage in contraceptive use than those from a low-SES family. These findings further confirm the importance of family background on the use of contraceptives among adolescents.

For Hispanic teens, interracial dating is not significantly related to contraceptive use in either of the two models. As discussed in the discussion of Table 3-2, Hispanic teens that date other non-whites are more likely to enter sexual relationships than those who date intra-racially; this association is even stronger for Hispanic females than for Hispanic males. Regression results in Table 3-3 show that once Hispanic adolescents begin a sexual relationship, the race of the partner does not influence the risk of using contraceptives. These findings suggest that Hispanics may be able to better negotiate with other-race partners (either whites or non-whites) about using contraceptives relatively, as Hispanic adolescents' contraceptive use is quite similar to that of other-race adolescents—prior research has demonstrated that Hispanic youth's sexual practices are usually neither as conservative as those of Asian youth, nor as early or as risky as those of black youth (Fergus, Zimmerman and Caldwell 2007). Almost none of the relationship

control variables are statistically significant in Model 2, with the exception of the duration of the relationship. As for individual and family characteristic controls, being older and being from a high-SES family are positively related to contraceptive use.

Figure 3-7 through Figure 3-12 (the corresponding models are presented in Table 3-4 and Table 3-5 in the Appendix) illustrate the results for two interaction terms; these results indicate whether the effects of relationship type on contraceptive use vary by communication level and the level of intimacy for white, black, and Hispanic teens, while all other continuous variables are fixed at zero (their centered means), and all categorical variables are fixed at their reference groups.

Figure 3-7 through Figure 3-9[5] (the corresponding models are presented in Table 3-4 in the Appendix) show that the association between communication and contraceptive use differs by relationship type. For black teens, romantic sexual relationships that include communication regarding sex-related issues between partners are associated with a greater likelihood of contraceptive use than relationships without communication between partners; this association is even stronger among interracial relationships. Such great contrast indicates that communication has a stronger influence on contraceptive use within interracial relationships (with both whites and other non-whites) than within intra-racial relationships. These results support Hypothesis 3, which states that communication with different-race partners (white and non-white) plays a pivotal role in determining contraceptive use, and communication with non-white other-race partners about sensitive topics is actually very effective at increasing contraceptive use. For Hispanic teens, better communication is again associated with a greater probability of contraceptive use within intra-racial and interracial (with non-white partners) relationships; however, such communication seems to be less beneficial (or influential) in interracial relationships with white partners.

Figure 3-10 through Figure 3-12 [6](The corresponding models are presented in Table 3-5 in the Appendix) show the association between intimacy level and contraceptive use by relationship type. For white teens, intimacy level is positively

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[5] According to the models in Table 3-5 in the Appendix, interaction terms for black and Hispanic teens in Figure 3-8 and Figure 3-9 are statistically significant at .05 level

[6] According to the models in Table 3-5 in the Appendix, none of the interaction terms in the models are statistically significant at .05 level.

related to contraceptive use for both those dating same-race partners and those dating different-race partners. For black and Hispanic teens, the effects of intimacy level on contraceptive use are stronger for teens dating white partners. In other words, given the same level of intimacy, Hispanic teens that are dating whites are more likely to use contraceptives compared to their counterparts who are dating same-race partners or non-white minority partners. Again, Hypothesis 3, that the level of intimacy modifies the association between relationship type and contraceptive use, receives some support. White teens generally reported higher levels of intimacy with their partners (results not shown), and thus black and Hispanic teens dating white partners may also enjoy higher levels of intimacy, which in turn would predict a higher likelihood of contraceptive use within their sexual relationships. However, black and Hispanic teens reported relatively low levels of intimacy with their partners, and therefore intimacy may play a minimal role in determining contraceptive use.

3.6 Discussion

The characteristics of adolescents' interracial relationships have drawn recent scholarly attention (D'Souza 2010, Herman and Campbell 2012, Kusunoki and Upchurch 2011, Sassler and Joyner 2011). However, because most of those studies focused on young adults between the ages of 18 and 24, who are more sexually active than young teens, little is known about whether interracial unions increased entry into sex and contraceptive use for those in early adolescence (in the current study, those between 12 and 20 years old with an average age of 15 years old). In addition, these studies have not emphasized the distinction between the two types of interracial unions (i.e., interracial unions with majority group members and interracial unions with other racial/ethnic minority group members), and thus their conclusions do not tease out the diverse impacts of interracial relationships on sexual practice. The current study moves beyond previous analyses of interracial relationships by exploring variation in the effects of interracial unions on sexual behavior among white, black, Hispanic, and Asian American adolescents as well as gender differences in these effects.

In contrast to prior literature, the general finding is that sex and contraception in interracial relationships appear not to be as different from those in intra-racial relationships.

Social exchange theory is not supported, as results showed that dating a white partner was not associated with higher odds of sex for any minority group, but dating other-race non-white partners was associated with higher odds of sex for Hispanic and Asian teens.

As for the interactive effects of gender and relationship type on sexual engagement, only black female teens with white partners appear to be more likely to be sexually involved than their male counterparts, but the results are not statistically significant. Social exchange theory receives very little support from the sexual practices of minority teens.

With regard to contraceptive use, the analyses presented in the previous section provide some support for the hypothesis that interracial relationship type and relationship characteristics (communication and intimacy between partners) independently and jointly influence adolescent sexual practices in at least some models.

Participation in interracial relationships does not affect contraceptive use among white, black, or Hispanic teens when all relationship-, individual-, and family-level factors are taken into account. However, communication between partners is independently linked to the likelihood of contraceptive use for most of the racial and ethnic groups in the analyses. The significant interaction terms between interracial relationship type and communication about sex-related issues in models of contraceptive use confirm the hypotheses that such relationship characteristics modify the way that engaging in an interracial relationship influences sexual practices.

For black adolescents, the influence of an interracial relationship on the risk of contraception is stronger if there is communication about sex-related issues between partners than if such communication is absent, revealing that within interracial relationships communication can be very effective at increasing contraceptive use. Although black teens communicate about sensitive topics less with different-race partners than with black partners (results not shown in the paper), the conversations with different-race partners appear to be more beneficial. Higher levels of intimacy increase the likelihood of using contraception for whites in both intra-racial and interracial relationships. For black and Hispanic teens, the effects of intimacy on the risk of contraceptive use are larger for interracial couples involving white partners than for intra-

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racial couples, which may suggest that intimacy is more meaningful for interracial couples that include white partners, making them more inclined to use contraceptives.

With regard to policy implications, because interracial relationship formation is one way for minority youth to assimilate more easily into mainstream U.S. culture (Qian, Glick and Batson 2012), such relationships should be encouraged. However the different sexual practice by interracial couples should be recognized. For minority teens, the racial and gender differences in the effects of interracial relationships involving whites versus those involving non-whites on sexual practice are evident. The moderating role of relationship characteristics, in particular, that of the communication about sex-related issues, should be emphasized. The current results suggest that teaching teenagers: 1) ways to feel comfortable discussing contraception with individuals from other racial groups, 2) how to make the conversation more constructive, and 3) how to negotiate with partners regarding sexual practices and contraceptive use may together provide an effective way to reduce the sexually risky behavior adopted by some interracially dating teens.

The current study has some limitations. First, all respondents who had not had romantic relationships were excluded from the analysis, and thus the interpretation of the results must be undertaken with caution. The results should not be generalized to youth who are more likely to enter romantic and sexual relationships at later ages. Second, the results may not be generalizable to youths who dropped out of school at an early age (Manlove, Ryan and Franzetta 2003). Recent studies have shown that interracial cohabitation and intermarriage do not occur only among those with high educational levels—these relationships also occur among people with relatively low educational achievement. However, the current findings cannot predict the sexual behavior of high school dropouts. Third, the measures were based on self-reported data. Other researchers have found that males tend to over-report and females tend to under-report sexual behavior (Manlove, Ryan and Franzetta 2007). Because of these limitations, the analyses may overestimate gender differences.

Table 3-1 Descriptive Statistics for Dependent and Independent Variables by Race

	Values	White % or mean	Black % or mean	Hispanic % or mean	Asian % or mean
Dependent variables					
Had sex with partner	0=no, 1=yes	30.80%	41.88%	31.46%	27.32%
Contraceptives, ever use[7]	0=no, 1=yes	86.41%	80.41%	76.81%	68.27%
Relationship characteristics					
Relationship type					
Intra-racial dating		88.47%	85.8%	66.47%	65.57%
Interracial dating with whites		---------	3.99%	19.82%	13.39%
Interracial dating with non-whites		11.53%	10.21%	13.71%	21.04%
Communication about sex	0=no; 1=yes	47.51%	60.67%	53.51%	47.27%
Intimacy level	Scale: 0-5	3.889	3.44	3.7233	3.674
Duration of relationship	< 5 months	29.57%	20.94%	24.53%	30.05%
	5-12 months	53.46%	57.85%	53.51%	50.82%
	>12 months	16.98%	21.2%	21.97%	19.13%
Age differences	within 1 year	43.68%	47.45%	43.93%	45.08%
	partner 1 year younger	25.16%	20.88%	23.2%	27.6%
	partner 1 year older	31.16%	31.68%	31.68%	27.32%
Individual characteristics					
Gender	0=male 1=female	52.28%	54.12%	51.2%	46.99%
Age (years)	Scale: 11-20	16.25	16.3	16.61	16.9
Church attendance	Never	24.93%	14.76%	22.44%	17.49%
	Less than once a month	21.54%	12.05%	21.11%	15.57%
	Once a month	20.59%	24.09%	19.87%	18.03%
	Once a week	32.9%	49.11%	36.58%	48.91%

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[7] Among sexually active adolescents.

Family SES	Low SES	49.65%	46.2%	67.13%	45.08%
	Medium SES	25.24%	27.42%	20.89%	32.24%
	High SES	25.11%	26.37%	11.97%	22.68%
Family structure	Two-parent family	76.22%	50.65%	67.55%	74.59%
	One-parent family	20.6%	43.85%	28.08%	18.85%
	No parent	3.18%	5.5%	4.38%	6.56%
Number of individuals		3,835	1,528	1,211	366

Table 3-2 Logistic Regressions Predicting Sexual Intercourse by Race of Respondent

Relationship characteristics	Whites		Blacks		Hispanics		Asians	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Relationship type (Reference: Intra-racial)								
Interracial w/whites	-------	------	-0.48	-0.37	0.019	0.187	0.152	0.217
Interracial w/ non-whites	0.131	-0.02	-0.18	-0.012	0.57*	0822**	1.38**	1.695***
Communication		1.686***		1.44***		1.33***		3.175***
Intimacy Level		0.036		0.16		0.299**		0.038
Duration of relationship Reference: 0-4 months								
5-12 months		0.79***		0.16		0091		1.06**
>12 months		0.27		-0.17		-0.33		0.658
Age difference Reference: Within 1 year								
Partner> 1 year younger		-0.37***		0.088		-0.58		-0.38
Partner> 1 year older		0.25		0.468*		-0.12		-1.32**
Individual characteristics								
Gender (female)	0.224***	-0.02	-0.028	-0.22	204	0.039	-0.06	0.468
Age (centered)	0.537***	0.468***	0.396***	0.356***	0.409***	0.39***	0.478***	0.371**
Church attendance (Reference: Never)								
Less than once a month	-0.01	0.014	-0.511*	-0.33	-0.41	-0.47	0.426	0.484
Once a month	-0.13	-0.02	-0.4191	-0.41*	-0.14	-0.22	1.403	1.801*
Once a week	-0.78***	-0.64***	-0.203	-0.12	-0.97***	-0.93**	0.795	1.0
Family SES (Reference: Low SES)								

Medium SES	-0.03	-0.006	-0.05	-0188	0.18	0.165	0.464	0.747*
High SES	-0.35***	-0.38***	-0.421**	0.777*	-0.19	0-0.23	-0.06	0.593
Family Structure (Reference: Two-parent family)								
One-parent family	0.2	0.203	-0.19	0.219	-0.103	-0.03	0.485	1.416
No-parent family	0.361	0.337	-0.55*	0.837**	0.514	0.232	1.166	1.327
Constant	-0.89***	-1.93***	0.24	-1.01***	-1.1***	-1.43*	-2.93***	-5.65***
Number of individuals	3,835		1,528		1,211		366	

NOTES: *** indicates p< .01, ** indicates p< .05, and *indicates p< .10.

Table 3-3 Logistic Regression Predicting Contraceptive Use by Race of Respondent

	White		Black		Hispanic	
Relationship characteristics	**Model 1**	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
Relationship type						
Interracial w/Whites	---------	----------	-1.106*	-0.871	0.311	0.246
Interracial w/NW	-0.553*	-0.39	-0.377	-0.119	0.215	0.215
Communication about sex		1.25***		0.656**		0.685
Intimacy Level		0.142		-0.032		0.293
Duration of relationship						
5-12 months		0.94***		0.399		1.193*
>12 months		1.00***		0.431		0.711
Age difference						
Partner 1 year		-0.20		-0.256		0.837
Partner 1 year		-0.36		0.112		0.835
Individual characteristics						
Gender (female)	0.3	-0.029	-0.377	-0.259	-0.465	-0.562
Age (centered)	0.311***	0.188**	0.197*	0.19*	0.337**	0.309*
Church attendance						
<Once a month	0.006	-0.099	-0.076	0.043	0.585	0.797
Once a month	-0.25	-0.418	0.606	0.603	-0.011	-0.047
Once a week	-0.662**	-0.627**	1.091***	1.107***	0.155	0.284
Family SES						
Medium SES	0.517*	0.494*	0.597*	0.576*	-0.352	-0.423
High SES	0.456	0.33	0.385	0.493	0.968	1.14*
Family Structure						
One-parent	-0.355	-0.445*	-0.369	-0.352	1.3***	1.454***
No-parent	-0.245	-0.313	0.266	0.358	0.349	-0.027
Constant	1.54***	0.757		0.146	0.872	-1.04
Number of Individuals	1,125		614		393	

Notes: ***indicates p< .01, ** indicates p< .05, and *indicates p< .10

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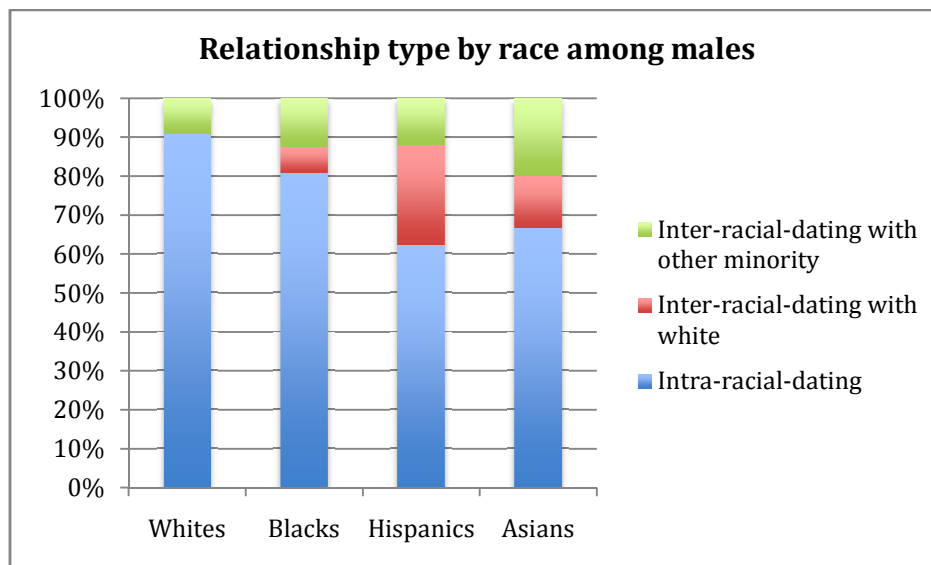
Figure 3-1 Relationship Type by Race among Male Adolescents
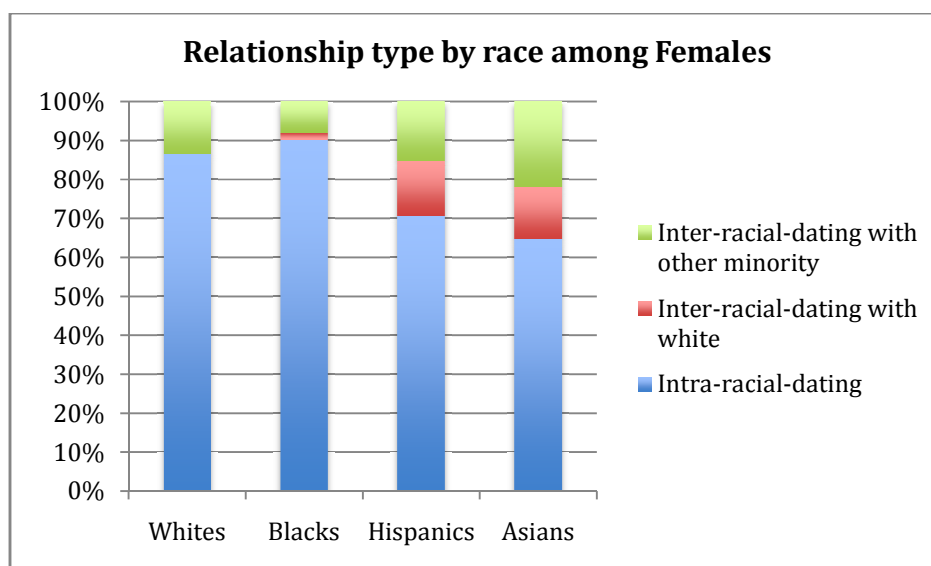
Figure 3-2 Relationship Type by Race among Female Adolescents
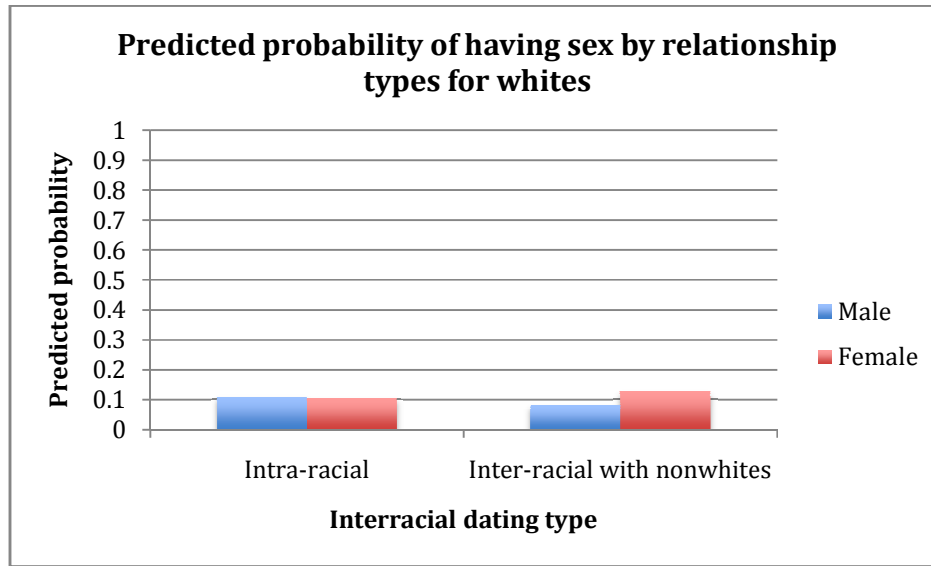
Figure 3-3 Predicted Probability of Having Sex by Relationship Type and Gender for Whites
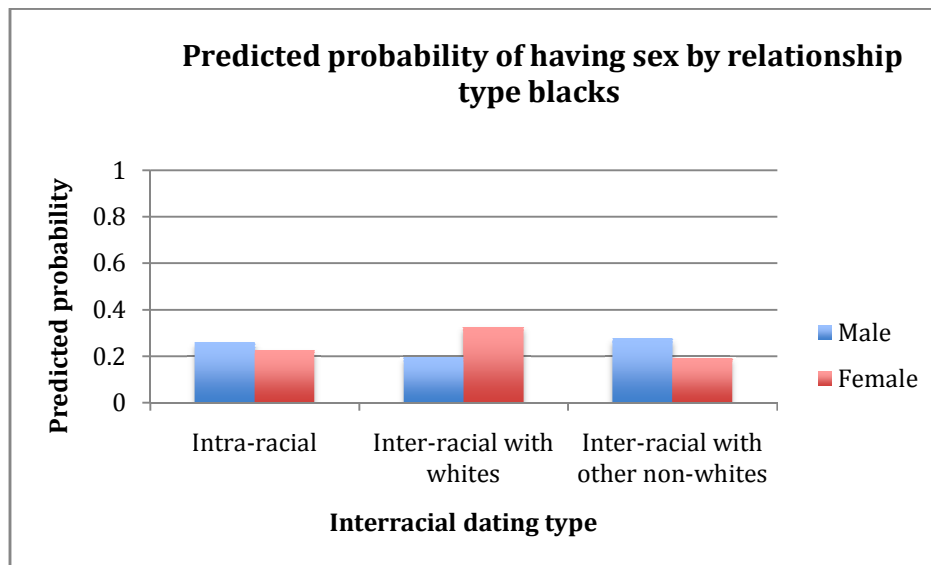
Figure 3-4 Predicted Probability of Having Sex by Relationship Type and Gender for Blacks
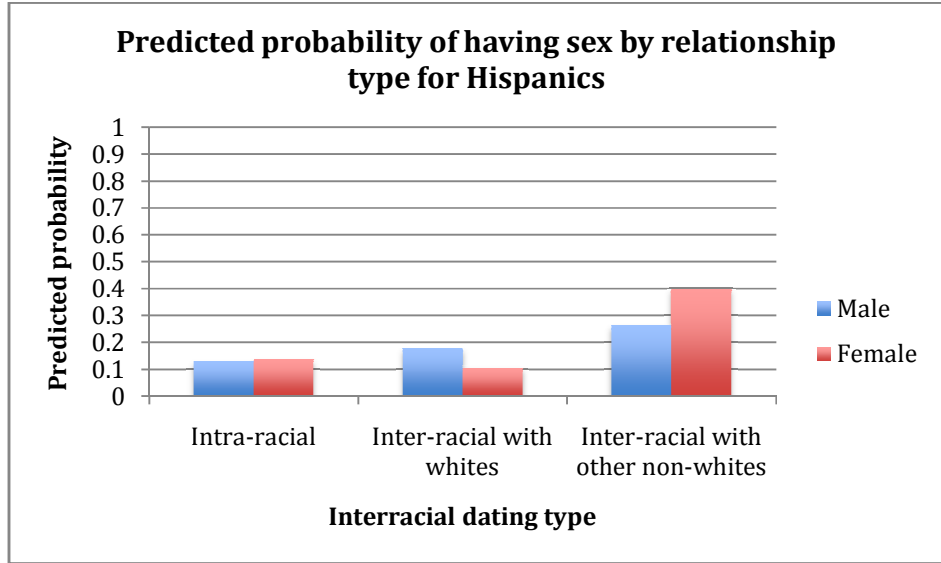
Figure 3-5 Predicted Probability of Having Sex by Relationship Type and Gender for Hispanics
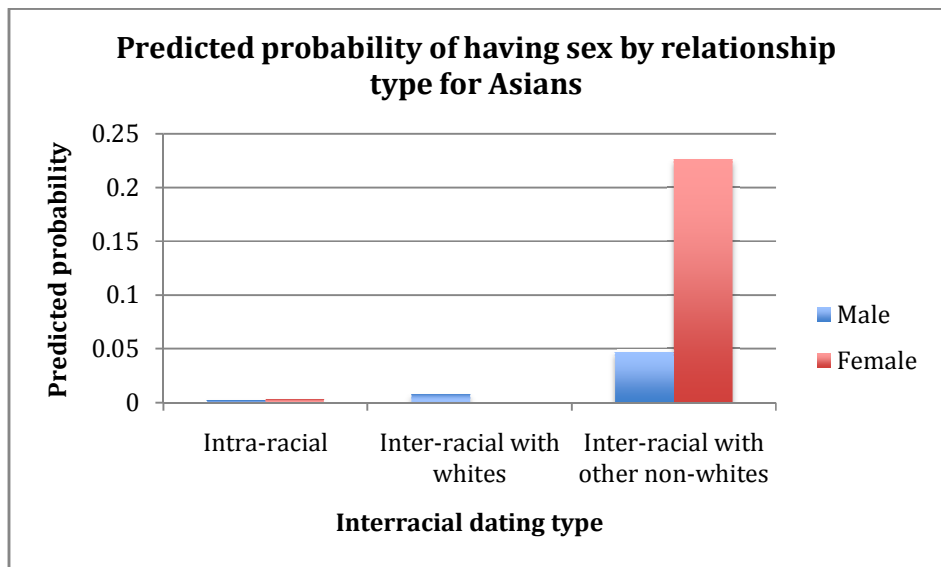
Figure 3-6 Predicted Probability of Having Sex by Relationship Type and Gender for Asians
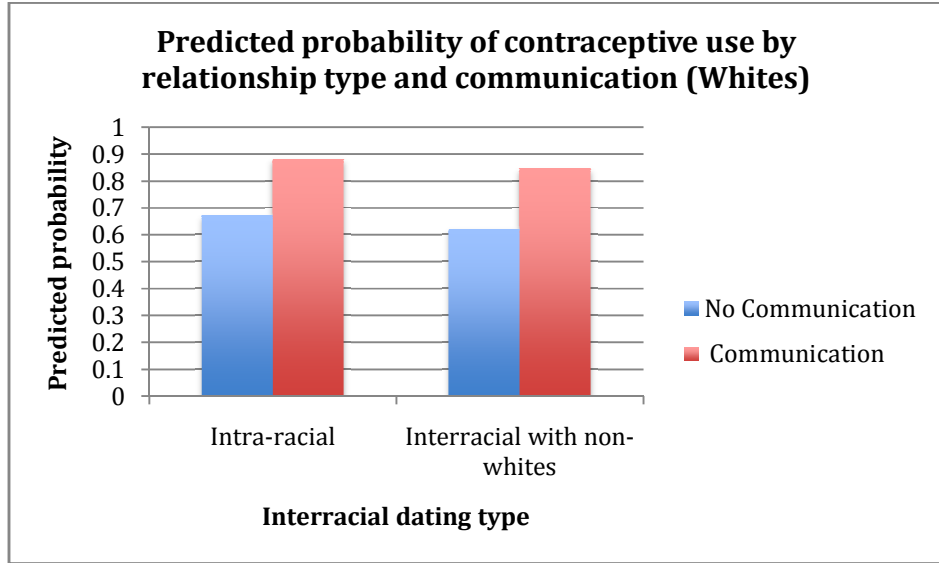
Figure 3-7   Predicted probability of contraceptive use by relationship type and communication (Whites)
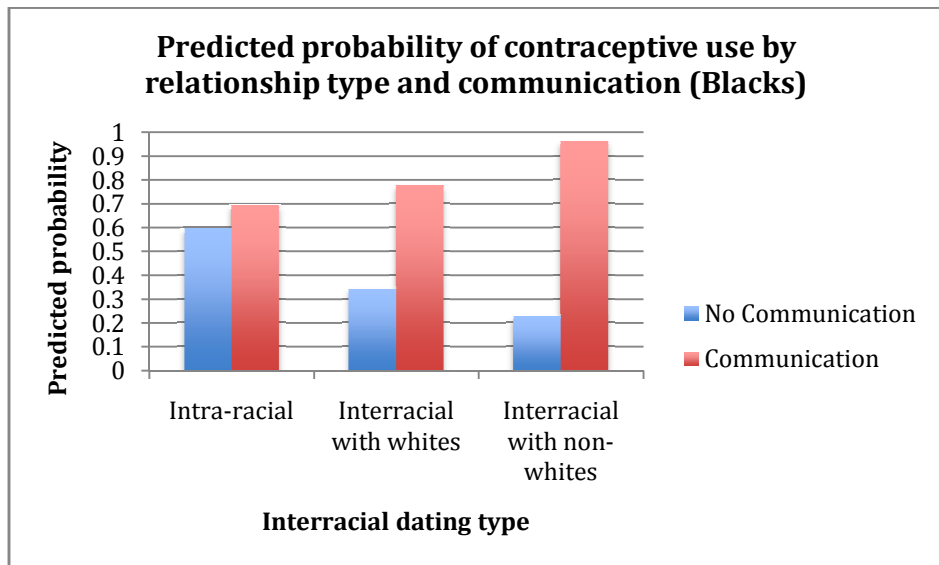
Figure 3-8   Predicted probability of contraceptive use by relationship type and communication (Blacks)
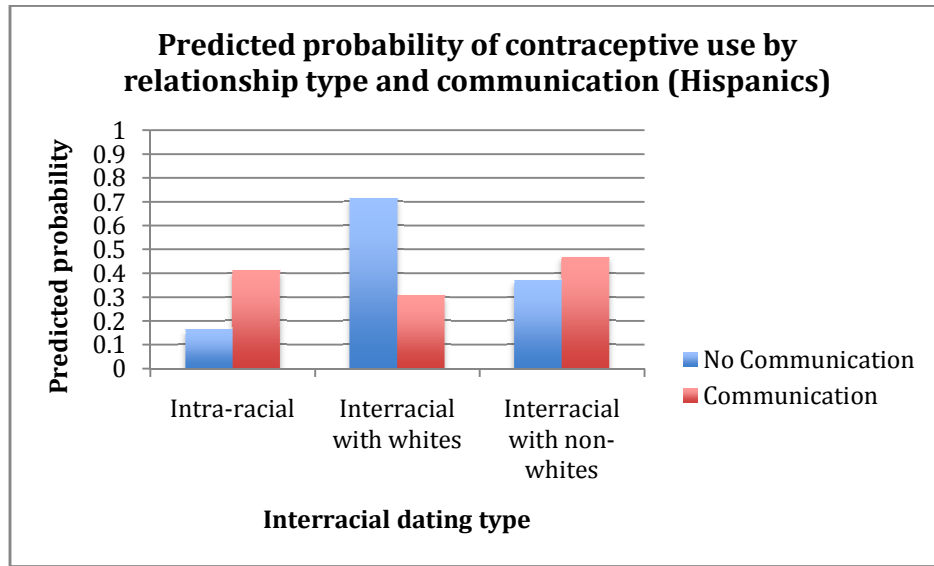
Figure 3-9 Predicted probability of contraceptive use by relationship type and communication (Hispanics)
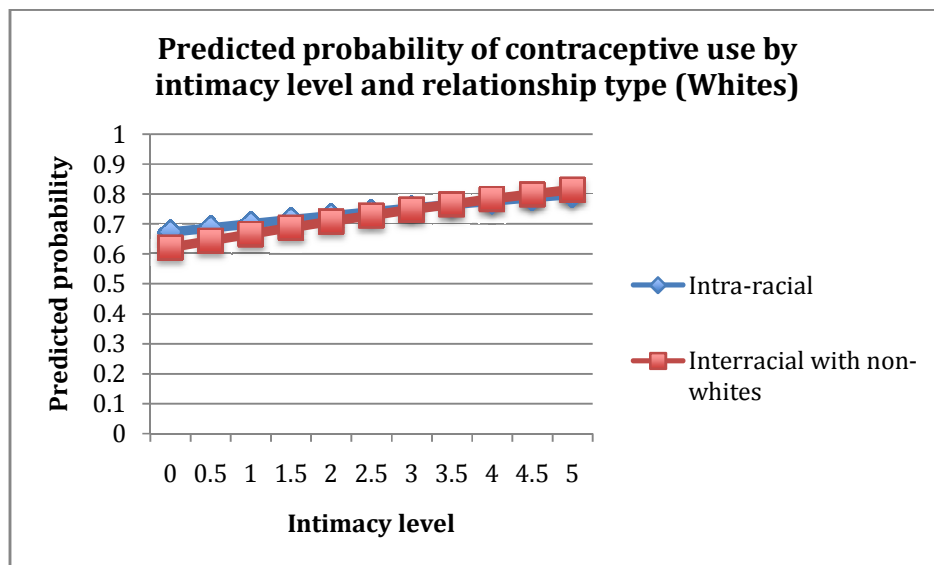
Figure 3-10 Predicted probability of contraceptive use by intimacy level and relationship type (Whites)
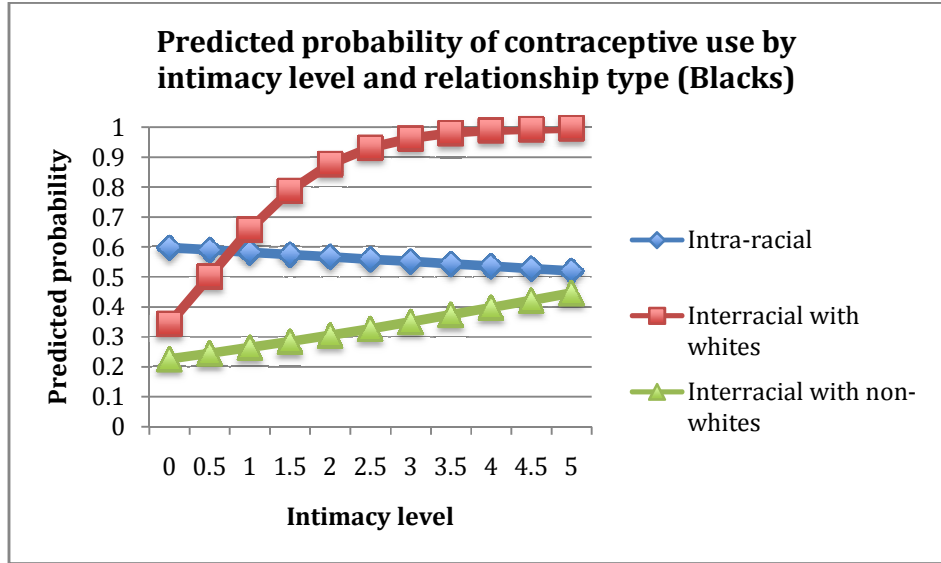
Figure 3-11   Predicted probability of contraceptive use by intimacy level and relationship type (Blacks)
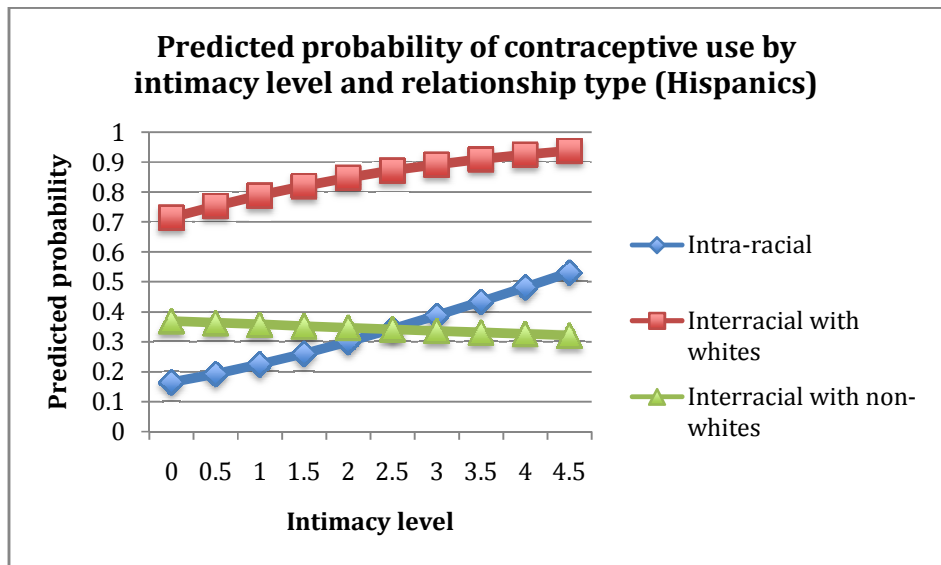
Figure 3-12   Predicted probability of contraceptive use by intimacy level and relationship   type   (Hispanics)

3.6.1 Appendix

Table 3-4 Logistic Regressions Predicting Sexual Intercourse with Interactions by Race of Respondent

	Whites	**Blacks**	**Hispanics**	**Asians**
Relationship characteristics				
Relationship type (Reference: Intra-racial)				
Interracial w/whites	------	-.8*	.483	1.252
Interracial w/ non-whites	-.22	.28	.57	.799
Interaction terms				
Interracial w/ white*female	------	1.48	-.84	-2.72*
Interracial w/non-white* Female	.316	-.6	.396	1.788*
Communication	1.68***	1.46***	1.33***	3.427***
Intimacy Level	.036	-.02	.299	.127
Duration of relationship Reference: 0-4 months				
5-12 months	.79***	.163	.116	1.07**
>12 months	.27***	-.12	.34	.573
Age differences Reference: Within 1 year				
Partner> 1 year younger	-.38**	.1	-.62	-.05
Partner> 1 year older	.256*	-.496	-.2	-1.27*
Individual characteristics				
Gender (female)	-.15	-.48**	.061	.359
Age (centered)	.469***	.339***	.406***	.376**
Church attendance Ref: Never				
Less than once a month	.011	-.39	-.48	.153
Once a month	-.12	-.48*	-.23	1.58***
Once a week	-.64***	-.15	-.96***	.907*

Family SES				
Ref: Low SES				
Medium SES	-.02	-.15	.218	.948**
High SES	-.39	-.55**	-.26	.758*
Family Structure Reference: Two-parent family				
One-parent family	.198	.199	-.004	1.651*
No-parent family	.337	.797**	.262	1.27
Constant	-1.91***	-1.01***	-1.**	-5.98***
Total number of individuals	4,938	1,398	1,154	257

Notes: ***indicates p< .01, ** indicates p< .05, and *indicates p< .10

Table 3-5 Logistic Regression Predicting Contraceptive Use by Race of Respondent with Interactions

	White	Black	Hispanic
Relationship characteristics			
Relationship type			
Interracial dating with whites	------	-1.04	2.55**
Interracial dating with non-whites	-.227	-.813	.544
Communication about sex	-.227***	.416	1.271**
Intimacy Level	.131	-.0637	.389
Interaction terms			
Interracial/w * Intimacy	.067	1.37	.010
Interracial/nw*intimacy		.133	-.218
Interracial * Communication	-.308	1.48	-3.019**
Interracial*nw*communication		2.026*	-.428
Duration of relationship (ref:< 5 months)			
5-12 months	.945***	.398	1.197*
>12 months	.999***	.392	.738
Age difference between partners			
Partner 1 year younger than respondent	-.205	-.293	.874
Partner 1 year older than respondent	-.353	.043	.746
Individual characteristics			
Gender (female)	-.033	-.324	-.548
Age (centered)	.193**	.186*	.329**
Church attendance (Ref: Never)			
Less than once a month	-.0905	-.025	.908
Once a month	-.407	.597	.109
Once a week	-.621**	1.12**	.473
Family SES (Ref: Low SES)			
Medium SES	.503*	.519	-.477
High SES	.339	.574	1.29*
Family Structure (Ref: Two-parent family)			
One-parent family	-.438*	-.316	1.712**
No-parent family	-.289	.574	.017
Constant	.722	.397	-1.628*
Number of individuals	1,125	614	393

Notes: ***indicates p< .01, ** indicates p< .05, and *indicates p< .10

CHAPTER 4

THE ROLE OF IMMIGRATION, ASSIMILATION, AND PARENT-CHILD RELATIONSHIPS IN INTERRACIAL ROMANTIC RELATIONSHIPS AMONG HISPANIC AND ASIAN ADOLESCENTS

Immigrants comprise a growing proportion of the adolescent population in the United States. In 2007, about 24 percent of all children in the United States were immigrants or children of immigrants.[8] The proportions are much higher for certain racial/ethnic groups than for others: 64 percent of Hispanic children and 89 percent of Asian American children are from immigrant families, compared to 8 percent of non-Hispanic white and 13 percent of non-Hispanic black children (Clark, Glick and Bures 2010, U.S Bureau of the Census 2005). The current study thus focuses on the two major racial/ethnic groups that have the highest rates of immigrants: Hispanics and Asians.

Empirical findings concerning the impact of immigration on the behavior of young immigrants are mixed. Some research has indicated that children benefit from immigration when their parents are positively selected and maintain high aspirations for their children. Asian immigrant children, for instance, were found to achieve better academic performance than their native-born peers (Kao and Tienda 1995). Their academic success and later higher status occupations show the immigrant edge in school achievement (Ogbu 1991, Portes and Rumbaut 2001). Certain studies have suggested that youth who are able to draw on the combined resources of the hosting society and their country of origin fare the best. Hispanic bilingual adolescents, who have strong ethnic identification and a positive mainstream orientation, were found to have the highest self-esteem (Phinney, Chavira and Williamson 1992, Feliciano 2001, Gibson 1988).

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[8] Foreign-born immigrant children are referred to as the first generation; children of immigrants, who are native born but whose parents are foreign born, are referred to as the second generation; and those who are native-born and whose parents are native born are referred as the third and higher generation.

However, other research has found that children of immigrants do not fare as well as their native-born peers in terms of social standing in the U.S. (Portes and Rumbaut 2001).

This study expands on previous findings by identifying the specific characteristics of immigrant families that account for the variation in their children's interracial romantic behavior. It is one of the few to highlight the extent to which family is an influence on the interracial dating behavior among adolescents, as family provides a critical context for the healthy development of immigrant children in the new location during a time of transition. Adult and adolescent interracial relationship literature usually emphasizes the unsupportive role of parents to their children's interracial romantic relationships (Wang and Kao 2007, Childs 2005), however little is known how parent-child attachment and parenting style, coupled with immigration and assimilation process, influence the romantic relationship formation of children (Mounts 2000).

As adolescents perceive parents as a better source of information about dating compared to their peers (Wyatt and Carlo 2002) and adolescents usually anticipate parents' reactions before taking action (Wyatt and Carlo 2002). Parents' view about appropriate dating behavior as well as the characteristics of partners, including partners' age, race, etc., may subsequently influence the decisions adolescents make about who they want to date. Immigrant adolescents, in particular, are more bonded to their parents than their native-born peers. Thus, parental influence might be a substantial factor, if not a vital factor, affecting their partner choice.

The present study explored the links between immigration, assimilation and parent-child relationship and romantic behavior. It contributes to a growing body of research on parental role on the adaption of immigrant adolescents into the U. S society.

4.1   Background and Significance

Prior studies have found that, in general, immigrant children are less likely than their native-born counterparts to form romantic relationships (King and Harris 2007). Immigrant children who avoid romantic relationships may do so because they do not want to be involved in an interracial relationship. Because very few countries are as racially and ethnically diverse as the United States, for most immigrant adolescents in the United States participating in an interracial relationship is a new experience. Immigrant adolescents may seek partners from a different race as a way to explore a new culture, or

they may seek partners similar to themselves to reinforce their own racial identity. The latter situation may be more common, because individuals need to overcome many obstacles to build and maintain romantic relationships with other-race partners.

For immigrant children who have lived in the United States for longer periods, romantic behavior and interracial relationship formation may serve as an indicator of adaptation to the new society. For native-born Hispanic and Asian teens, interracial romantic relationships account for a substantial proportion of all heterosexual relationships, in part because of the relatively small sizes of these groups and the relatively high prevalence of interracial marriages among their adult populations (Qian and Lichter 2007, Qian 1997, Vaquera and Kao 2005).

In this section, I first review the literature on the association between assimilation and interracial relationship formation among Hispanics and Asian Americans. Second, I draw on the literature addressing parent-child relationships in immigrant families, to speculate about the ways in which parent-child attachment and parenting style may influence the partner-choice of immigrant adolescents.

4.1.1 Assimilation and Interracial Relationships among Adolescents

In essence, assimilation is a process that brings racial minority groups into mainstream American life (Alba and Nee 2005). Scholars have proposed two contrasting perspectives on assimilation: classical assimilation theory and segmented assimilation theory.

Proponents of classical assimilation theory postulate a straight-line assimilation path through which immigrants acculturate into American middle-class society via structural, cultural, and marital assimilation (Gordon 1964). Classical assimilation theory nicely explains the path of assimilation experienced by early European immigrants to the United States well. However, the theory does not accurately address the assimilation process of immigrants from Asia or Latin America. Advocates of segmented assimilation theory criticize this gap in classical assimilation theory, and propose that different immigrant groups follow different paths of assimilation. In segmented assimilation, immigrants follow three main paths: some integrate into mainstream middle-class culture by following a trajectory of upward mobility; others become part of an impoverished and alienated racial minority group by following a trajectory of downward mobility; and yet

others form their own ethnic enclaves, maintain their traditional cultures, and resist acculturation (Alba and Nee 2005, Portes and Zhou 1993) .

Marital assimilation (i.e., interracial marriage) is usually considered the final stage of the process of assimilation (Gordon 1964, Oropesa and Landale 2004, Qian and Lichter 2001, Rosenfeld 2002). The intermarriage literature has demonstrated that the longer immigrants stay in the host society, the more likely they are to enter interracial marriages. For example, third-generation Hispanics (i.e., native-born Hispanics with native-born parents) are six times more likely than first-generation Hispanics (i.e., immigrant Hispanics) to marry non-Hispanics (Landale, Oropesa and Bradatan 2006). Similar findings have shown that higher-generation Asians are also more likely to marry interracially than first- or second-generation immigrant Asians (Kalmijn 1998, Qian 1997).

In segmented assimilation theory, intermarriage with whites is interpreted as successful upward assimilation into the mainstream culture, whereas intermarriage with non-whites, primarily marriage between low-SES individuals, is viewed as downward assimilation into the underclass (Gonsoulin and Fu 2010, Portes and Zhou 1993).

Therefore, in this theoretical framework, distinguishing between interracial relationships with whites and those with non-whites is important. In particular, if immigrant parents and/or immigrant adolescents themselves view interracial relationships with whites as an upward mobility, while those with other non-whites as downward. This viewpoint may entail some type of racism, and such racism may prevent immigrant adolescents from forming romantic relationships with other non-whites more than it does to those with whites.

Cultural assimilation, usually refers to assimilation to the language, food, style of dress etc. of the host society, while structural assimilation, refers to subordinate group's ability to have equal access to power and privilege in education, jobs, politics, etc. Both are preconditions for marital assimilation; they can be represented by generational status, English acquisition, obtaining a formal education, and holding a middle-class job (Gonsoulin and Fu 2010, Gordon 1964). Examining patterns of adolescent cultural and structural assimilation and the ways these patterns affect relationship formation is therefore important to improve the scholarly understanding of interracial relationship

formation among adolescents. In studies of adolescents, using generational status and English acquisition is easier than using educational and occupation success, because the latter can be difficult to determine at this age.

Language often defines ethnicity and cultural identity, and shapes intra- and intergroup relationships. Within minority groups, a shared language builds strong ethnic relationships, and promotes same-race marriages, regardless of individual preferences (Alba and Nee 2005). In addition, language barriers limit minority group members' interpersonal communication with the English-speaking population. For both Hispanics and Asians, differences between their own culture and white middle-class mainstream culture heighten the social distance between their own racial/ethnic group and whites (Anderson and Saenz 1994), and may consequently limit adolescents' opportunities to form interracial relationships with whites. However, it is unclear how much such differences affect the social distance between Hispanic/Asian groups and other non-white racial group.

4.1.2 The Parent-Child Relationship and Interracial Relationships among Adolescents

Immigration likely brings many challenges to parent-child relationships, for immigrant children, family plays a particularly important role in their lives (Qin 2009, Ahearn and Athey 1991). In particular, good parent-child relationships can help children overcome societal barriers, such as peer discrimination at school or harsh neighborhood environments (Portes and Rumbaut 2001). Specifically, supportive family members, proper parental monitoring, and family harmony are positively related to immigrant children's educational achievement and psychological well-being (Qin 2009).

Although parent-child conflicts are common for all adolescents, immigrant adolescents may experience more parent-child conflicts than their native-born counterparts (Choi, He and Harachi 2008, Portes and Rumbaut 2001, Qin 2009). Immigrant parents may adhere to the cultural beliefs of their country of origin, while their children may endorse the values expressed in U.S. society (Choi, He and Harachi 2008, Chung 2001). This clash may be more serious for immigrants from non-Western cultures. Asian American adolescents, for example, report much higher levels of cultural conflict with their parents than other groups of adolescents (Portes and Rumbaut 1996).

However, if adolescents feel close to their parents and keep a good relationship with their parents, they may anticipate objections from their parents if they date partners of different race; thus, they may hesitate to form such relationships. Moreover, if immigrant parents maintain an authoritarian parenting style, and give their children little freedom, the home situation will contradict the mainstream American values of individualism and independence, and this contradiction may create conflict at home (Buki, et al. 2003, Qin 2009). Such parenting may also reduce the likelihood of interracial dating for adolescents.

In this context, exploring characteristics of parent-child relationships and their interaction with assimilation level is an important step in assessing the relationship between assimilation and interracial dating. The specific ways in which parent-child relationships and immigration influence interracial romantic relationship formation and the mechanisms governing this influence need to be clearly addressed.

In this study, parent-child relationships will be measured by two indicators: how close adolescents feel to their parents, and how much freedom parents give to their adolescents to make decisions about various daily activities. Higher levels of closeness and more decision-making ability indicate better parent-child relationships, but they may predict interracial dating behavior differently. Closeness with parents may predict lower rates of interracial dating, as adolescents may also feel bonded to their own culture and more attracted to members of their own race. Liberal parenting style, however, may predict higher rates of interracial dating for immigrant adolescents, as such parenting is more in accordance with western parenting, and give adolescents more freedom to choose their partners.

4.1.3 Hispanic and Asian Pan-Ethnicity

Although Hispanics are not considered a racial group and Asians are, both are pan-ethnic groups that include members of different ethnic subgroups. Cultural differences across these ethnic subgroups are significant, and therefore I use the term ethnicity only to refer to the subgroups comprising these two racial groups (e.g., Mexican American or Chinese American). I include ethnic subgroups in the analysis because, within both the Hispanic and Asian pan-ethnic groups, these subgroups have different interracial dating patterns. Ignoring these differences may lead to biased analyses.

Pan-ethnicity describes the extent to which people identify as "Hispanic" or "Asian" as opposed to embracing a specific national identity. Prior research has found that Hispanic and Asian pan-ethnicity are both prominent, but the former is somewhat weaker than the latter among native-born individuals (Qian, Blaire and Ruf 2001, Rosenfeld 2001). There are two reasons for this pattern: first, because of physical appearance, many native-born Hispanics identify themselves as either white or black. Such racial identity is usually placed above pan-ethnicity. For instance, a white Mexican Hispanic and a white Cuban Hispanic may be considered as white more often rather than Mexican or Cuban when being considered as a partner. Indeed, some even perceive intermarriage with whites among Hispanics as inter-ethnic rather than inter-racial (Fu and Hatfield 2008). By contrast, Asian Americans rarely identify as white or black, unless they are biracial. Second, although Asian American immigrants are quite diverse with respect to national origin, language, religious beliefs, and other cultural traits, in the United States they are usually lumped together and discriminated against as a group (Espiritu 1992). By contrast, Hispanics are seldom discriminated against as a group (Espiritu 1992, Rosenfeld 2001). Among Asians, members of different ethnic groups also have different rates of interracial marriage or interracial dating (Qian, Blaire and Ruf 2001, Qian and Lichter 2007). Japanese, for instance, has the highest interracial dates among all Asian ethnic groups.

In this study, I consider Hispanic Americans and Asian Americans distinct racial groups, and I categorize their relationships with non-Hispanic whites or non-Hispanic blacks as interracial. Due to the considerable ethnic variation within each racial group, I include Hispanic and Asian pan-ethnic subgroups as controls to reveal the similarities and differences in interracial dating patterns across ethnic boundaries; however, this aspect of the analysis is very limited due to small sample sizes of certain ethnic groups.

4.2 Hypotheses

The main goal of this paper is to investigate how assimilation influences interracial relationship formation among adolescents. I also investigate the ways in which parent-child relationships are associated with the assimilation process and affect romantic relationship formation. Based on the literature discussed above, I developed three hypotheses:

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Hypothesis 1: *More assimilated adolescents are more likely to form interracial relationships (either with whites or with other non-whites) than less assimilated adolescents*. I use both generational status and language spoken at home as measures of assimilation. Adolescents who have a higher generational status and those who speak English at home are predicted to be more likely to form interracial relationships than those with lower generational status and those who speak another language at home.

Hypothesis 2: *Closer parent-child relationships among Hispanic and Asian families are associated with a lower likelihood of interracial relationship (with whites or with non-whites) than more strained parent-child relationships, while a liberal parenting style is associated with a higher likelihood of interracial relationship formation than a more authoritarian parenting style*.

Hypothesis 3*: The quality of parent-child relationships modifies the relationship between assimilation and interracial dating*. Specifically, closer parent-child relationships may make the association between assimilation and interracial dating weaker than more strained parent-child relationships, and a liberal parenting style may make the association stronger than the authoritarian parenting style.

4.3 Data

To evaluate these hypotheses, I used data from Wave 1 of the National Longitudinal Study of Adolescent Health (Add Health) because 1) the oversampling of Hispanic and Asian ethnic groups means the data contain enough cases to study the two groups and different ethnic groups within each group, and 2) the data set allows an examination of assimilation theory because it provides information on nativity for both parents and adolescents as well as detailed information about parent-child relationships.

I restricted the sample to self-identified Hispanics or Asian Americans, those who completed both in-school and in-home surveys in Wave 1, and those who reported at least one heterosexual romantic relationship. Respondents were then asked to list up to three relationships in the past 18 months. If they reported more than one, I used the first listed relationship.[9] Regardless of which race they marked, respondents' race is defined

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[9] Ideally, all romantic relationships would be included in the analysis and a two-level model (individual-relationship) would be estimated. However, a two-level model is unnecessary because less than

as Hispanic if they marked "yes" in response to the question "Are you of Hispanic or Latino origin?" All biracial/multiracial respondents and those whose partners are biracial/multiracial were eliminated. The resulting sample contained 1,137 Hispanics, including 321 first-generation, 448 second-generation, and 368 third and above generation adolescents; and 351 Asians, including 179 first-generation, 126 second-generation and 46 third-generation adolescents.

4.4 Variables

4.4.1 Dependent Variable

The measure of *interracial dating status* grouped relationships into three categories: if a respondent and his or her partner identified as different races and the partner was white, the relationship type was coded as interracial with white; if a respondent and his or her partner identified as different races and the partner was non-white, the relationship type was coded as interracial with non-whites; all other relationships were coded as intra-racial.

4.4.2 Key Independent Variables

Two indicators of assimilation were used: *generational status* and *English spoken at home.* Generational status includes three categories, based on three questions regarding the birthplace of respondents and one or both of their parents. The first-generation category includes foreign-born individuals who answered "no" to the question "Were you born in the United States?" regardless of their parents' nativity status; the second-generation group includes individuals born in the United States who have at least one foreign-born parent; the third and above generations refer to individuals born in the United States who have two native-born parents.

Rather than using English proficiency, I used *language spoken at home* as a measure of assimilation/acculturation. The variable is based on a question regarding language spoken at home: "What language do you usually speak at home?" (1=English, 2=Spanish, 3=Other—please record language). For simplicity, I recoded the responses as

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36 percent of respondents reported a second relationship, and less than 13 percent reported a third relationship. Among students who reported more than one relationship, only 6 percent had engaged in both types of dating (i.e., reported both interracial and non-interracial relationships). This small proportion will not produce significant results in a two-level model.

1) English and 2) other (Spanish for Hispanics and Asian language for Asians). Speaking a foreign language at home may suggest a stronger attachment to the country of origin and less acculturation into American culture compared to those who speak English at home. Adolescents with higher levels of acculturation also tend to have a higher likelihood of dating interracially.

Parent-child relationship is measured by two indicators. The first is *closeness to parents*, which is based on two questions that measure "how close you feel to your mom" and "how close you feel to your dad;" responses range from 1 ("not close at all") to 5 ("extremely close"). The two responses were summed. The second indicator is *decision-making*, which is based on a series of seven questions about whether "your parents let you make decisions about" 1) the time you must be at home on weekend nights, 2) the people you hang around with, 3) what you wear, 4) how much television you watch, 5) which television programs you watch, 6) what time you go to bed on week nights, and 7) what you eat. I generated an index by recoding all scores in the same direction and summing the seven responses. The Cronbach's alpha is .622. For both variables, higher scores reflect a better parent-child relationship.

4.4.3 Other Control Variables

Family SES was generated based on information about parental education and parental job prestige. Parents' highest education level was measured by a three-category variable: 1=less than high school graduate, 2=high school/some college; 3=college graduate or post-graduate education. If the father is absent or missing, the mother's highest education level was used. If both parents' educational levels were missing, parental occupation was used. If father's occupation was professional/managerial, it was classified as high family SES; otherwise it was classified as medium family SES. If both parents' occupational information was missing, the case was dropped. The variable was classified into three categories: 1=low SES, 2=medium SES, and 3=high SES.

Family background plays an important role in the process of assimilation. Individuals from high-SES families assimilate into the new environment at a faster pace than those from low-SES families, because families with high SES have more social and financial resources to cope with the hardships encountered in the new environment. Hispanic immigrants tend to be concentrated in the lower SES levels, while Asian

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American immigrants are more evenly spread across the entire social strata (Clark, Glick and Bures 2010, Portes and Rumbaut 2001, Kritz and Gurak 2004). Immigrant adolescents from low-SES family backgrounds may face additive burdens: cultural separation and social isolation from the host society, and economic hardship. Family economic strains might create additional stress for immigrant adolescents and contribute to feelings of inferiority. Therefore, a disadvantaged family background may lower the chances of a particular individual initiating an interracial romance.

Ethnicity was coded according to respondent's self-reported ethnic background. Hispanic teens were asked: "What is your Hispanic or Latino Background?" The responses included Mexican/Mexican American, Chicano/Chicana, Cuban/Cuban American, Puerto Rican, Central/South American, and other Hispanic. Asian teens were asked: "What is your Asian background?" The responses included Chinese, Filipino, Japanese, Asian Indian, Korean, Vietnamese, and other. To ensure a sufficient sample size for multivariate analyses, Hispanic ethnicity was coded as Mexican, Cuban, or other Hispanic, and Asian ethnicity was coded as Chinese, Filipino, or other Asian.

The other variables are g*ender* (male and female) and *age* (based on respondents' birth date and measured in years, ranging from 12 to 20 years old). In accordance with prior findings, Asian female adolescents are expected to have higher interracial dating rates than their male counterparts (Wang and Kao 2007). Age is negatively related to the formation of interracial relationships among adolescents (Joyner and Kao 2005).

GPA (grade point average) was based on self-reported English, mathematics, social science, and science scores. I summed and averaged individual subject scores to generate GPA scores.

Religiosity was measured by church attendance, and included four categories: 1=never, 2=less than once per month, 3=once per month; and 4=once per week. Prior literature on interracial dating has demonstrated that religious individuals and individuals with religious family backgrounds are less likely to cross racial boundaries.

4.5 Model and Analytic Strategy

I conducted separate analyses for Hispanic and Asian American adolescents, because the two groups follow different assimilation processes and have different interactions with other racial groups. I used multinomial logistic regression models to

predict interracial relationship formation with whites and interracial relationship formation with non-whites (compared to non-interracial relationship formation) as a function of assimilation level, quality of parent-child relationship, and other control variables.

The multinomial logistic models predicting the extent to which individual and family factors influence adolescents' interracial dating choices are specified below:

$$\log(\frac{Pi(y=m)}{1-Pi(y=m)}) = \beta_0 + \beta_1(Generation)_i + \beta_2(Language)_i + \beta_3(Closeness)_i +$$
$$\beta_4(Decision\_making)_i + \beta_5(Language*Closeness)_i +$$
$$\beta_6(Language*Decision\_making)_i + \beta_7(Ethnicity)_i + \beta_8(Gender)_i +$$
$$\beta_9(Age)_i + \beta_{10}(GPA)_i + \beta_{11}(\text{Re}ligiosity)_i$$

Where Pi is the predicted probability of an individual adolescent, i, being in an outcome category m (m=interracially dating a white partner or interracially dating a non-white partner) as opposed to the reference category (0=intra-racially dating). β_0 is the constant, which is the estimated log odds of an outcome category when all covariates are held at zero. β_1 through β_5 are the coefficients of the key independent variables, including generational status, language spoken at home, and parent-child relationship. β_6 and β_7 are the coefficients of the terms for the interaction between language spoken at home (cultural assimilation) and parent-child relationship. β_8 through β_{11} are the coefficients for a set of covariates measuring individual and family characteristics, including ethnicity, gender, age, GPA, and religiosity.

I estimated four separate models. The first model includes respondents' generational status and all individual and family control variables, and the second model adds language spoken at home. The purpose of the first models is to examine how structural assimilation influences dating behavior among adolescents. The purpose of the second model is to test how cultural assimilation influences dating behavior. The third model includes parent-child relationship variables, and the fourth model adds terms for the interaction between parent-child relationships and generational status. The results of the first three models are shown in Table 4-2 for Hispanic teens and Table 4-3 for Asian teens. The results of the fourth model is presented in Table 4-4 for Hispanic teens and

Table 4-5 for Asian teens in Appendix, and are illustrated graphically in figures to show whether the quality of parent-child relationships modifies the association between cultural assimilation (language) and interracial dating. The fourth model examines whether or not differences in parent-child relationships strengthen or weaken the association between rates of assimilation and chances of forming interracial dating relationships.

4.6   Results

In Table 4-1, I present descriptive data on the distribution of all variables by generation for Hispanics and Asian teens in romantic relationships. Table 4-2 and Table 4-3 show results from multinomial logistic regression models for Hispanics and Asian American teens, respectively.

4.6.1   Descriptive Statistics

Table 4-1 presents descriptive statistics, including means and percentage distributions for dependent and independent variables by race and generational status. Third-generation Hispanic and Asian teens are most likely to date interracially (half are in interracial romances), while those in the first generation are least likely to form such relationships (about 30 percent of Hispanic teens and 24 percent of Asian teens form such relationships). Generally speaking, compared their Asian American counterparts, interracially dating Hispanic adolescents are more likely to form interracial relationships with whites. Close to 90 percent of third-generation Hispanic adolescents speak English at home, whereas only 14 percent and 40 percent of first- and second-generation Hispanics speak English at home. The corresponding figures for Asian teens are 90 percent for the third generation, and 40 percent and 70 percent, respectively, for the first and second generations.

Hispanic teens are concentrated in low-SES families, with very few differences across generations. Among Asian teens, first-generation families tend to fare better than second- and third-generation families. As expected, third-generation Hispanic and Asians have better parent-child relationships than their first- and second-generation peers. Specifically, native-born adolescents with native parents receive more freedom from their parents to make decisions about various activities and feel closer to their parents than their immigrant peers.

Among the control variables, the Hispanic category is dominated by Mexican and Cuban respondents, and the Asian category is primarily Filipinos. Males and females are roughly equally distributed across generational groups for both Hispanics and Asians. The third-generation group is somewhat younger than the first- and second-generation groups. Consistent with prior studies, the third-and-over generation has the lowest academic performance among all Hispanic and Asian adolescent teens. Somewhat unexpectedly, the third-generation group is rated less attractive by the interviewers compared to those in the first and second generations. Although third-generation teens should dress more similarly to American adolescents than those in the first and second generations. Asian teens from higher generations tend to be less religious, while Hispanic teens in higher generation tend to be more religious.

4.6.2 Findings from Multinomial Logistic Models

Table 4-2 and Table 4-3 present the results of multinomial logistic models for Hispanic and Asian teens that estimate the effects of assimilation on the different types of interracial dating, net of social and demographic covariates. The left panel, which includes the results of a series of three progressively more complex models, represents the outcome of interracially dating a white partner versus dating intra-racially, while the right panel presents the results for interracially dating a non-white partner compared to dating intra-racially.

4.6.2.1   Hispanic Teens

The results in the left panel of Table 4-2 show there is no difference in the likelihood of interracially dating a white partner versus dating a same-race partner across generational status in Model 3, after controlling for a set of individual and family variables including ethnicity, gender, age, GPA, religiosity, and family SES. These results are consistent with prior findings that, in general, generational status does not significantly influence Hispanic teens' interracial dating patterns (Wang and Kao 2007). Nevertheless, speaking a foreign language at home is strongly associated with a reduced likelihood of interracially dating a white partner. In Model 2, the odds of Hispanic youth who do not speak English at home dating a white partner compared to dating a same-race partner race are about one-tenth ($0.09=\exp(-2.34)$) the odds of their peers who speak English at home. This effect is persistent throughout the three models, and remains

statistically significant. These results lend support to Hypothesis 1 that speaking another language at home reflects strong ethnic relationships, and promotes same-race romantic relationships. In addition, the language barrier maybe one obstacle to dating whites. Parent-child relationship characteristics, neither closeness to parents nor parental approval of adolescent decision-making predict the likelihood of interracially dating a white partner.

With respect to the control variables, Hispanic females are less likely than Hispanic males to interracially date whites. More frequent attendance at church reduced the odds of interracial dating with whites, which confirms prior findings that religiosity generally prevents youth from forming interracial relationships. High family SES did increase the chance of interracially dating whites for Hispanics, which is not consistent with prior studies (Wang and Kao 2007).

The model results in the right panel of Table 4-3, illustrate that generational status does not have any impact on Hispanic teens' likelihood of interracially dating other non-whites when all controls are held constant. Similar to the models estimating the probability of interracially dating whites against intra-racially dating (in the left panel), speaking foreign language at home also reduced the chance of interracially dating a non-white partner. As mentioned earlier, speaking foreign language serves as an indicator of heritage and culture and close attachment to one's own culture, and thus it appears to enhance intra-racial romantic relationship formation among Hispanic teens against.

More interestingly, the characteristics of parent-child relationships, both closeness and approval of adolescent decision-making, positively influence Hispanic youth's interracial dating patterns. Having closer parent-child relationships and more freedom to make their own decisions increases the odds of dating other minority teens by 1.31(=exp(.272)) and 1.65(=exp(.50)), respectively (shown in Model 3). These results suggest that although minority parents' close relationships with their children and liberal parenting style play a minimal role in affecting the formation of relationships between Hispanic teens and white teens, they play an important positive role in affecting the likelihood of their children forming romantic relationships with other minority teens. These results are contradictory to Hypothesis 2.

Among the control variables, one slightly unexpected result is that family SES increases Hispanic teens' chances of interracially dating other non-whites. Prior studies have found evidence that family SES increases Asian teens' chances of dating whites, yet have provided no evidence about Hispanic teens (Wang and Kao 2007). The current study suggests that family SES does increases Hispanic teens' likelihood of interracially dating, however, only for relationships between Hispanics and other minority teens. Due to residential segregation between Hispanic and whites, Hispanics, who have become the second largest minority group in the U.S, may reside geographically closer to other minority groups with similar level of family SES backgrounds than to white majority group with similar level of family SES. Thus the socioeconomic advantage does not increase their likelihood of dating whites, but dating other non-whites. The positive association between parent-child relationship and interracial dating with other non-whites suggest that Hispanic parents might be open to dating other minority members, and may not view that as downward assimilation.

Interaction terms between assimilation level (language spoken at home) and parent-child relationship are demonstrated graphically in Figure 4-1 through Figure 4-4. Separate lines are plotted by language spoken at home (English vs. Spanish). All other variables are fixed at zero (reference group for categorical variables, and means for continuous variables, which are all centered).

Figure 4-1 and Figure 4-2[10] show how the association between interracial dating (either with whites or with other non-whites) and parental closeness varies by language spoken at home (assimilation level). In Figure 4-1, overall, speaking English at home is associated with a higher probability of dating whites than speaking Spanish at home. Yet, the association between parental closeness and dating whites is almost flat for Hispanic teens who speak English at home (and are presumably more assimilated), but is positive for Hispanic teens who speak Spanish at home. These findings imply that closeness to parents has a stronger effect for Hispanic teens who are less assimilated (i.e., who speak Spanish at home). In Figure 4-2, the two lines are almost overlapping, meaning the

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[10] The interaction terms for Figure 4-1 and Figure 4-2 are not statistically significant at the 0.1 level.

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association between parental closeness and interracially dating non-white partners is almost the same for teens regardless of their assimilation level.

Thus, Hypothesis 3 received partial support. Results indicated that among less assimilated Hispanic teens, the parent-child relationship facilitates interracial romantic relationships with whites more than it does among their more assimilated peers. However, the fact that parent-child relationships do not exert an impact on Hispanic teens' likelihood of forming interracial relationships with other non-whites suggests the limited role of family.

Figure 4-3 and Figure 4-4[11] show how the association between a liberal parenting style (allowing adolescents to make decisions about their daily activates) and interracial dating (either with whites or with other non-whites) vary by language spoken at home (assimilation level). In Figure 4-3, among those who speak English at home, Hispanic teens whose parents allow them to make decisions about their daily activities are more likely to date whites than those whose parents do not give them such independence. But among those who speak Spanish at home (less assimilated), parental approval of decision-making does not increase the likelihood of dating whites. In Figure 4-4, the association between parental approval of decision making and dating other non-whites does not vary by assimilation level—the two lines are almost parallel—which implies that parenting style plays a similar role in predicting the likelihood of dating members other minority groups for Hispanic teens regardless of their assimilation level.

Contrary to the results for parent-child relationships, a liberal parenting style seems to have a stronger positive influence on the chances of crossing racial boundaries to date whites among more assimilated Hispanic teens than among less assimilated Hispanic teens. A liberal parenting style may be more in accordance with mainstream U.S. parenting styles, thus making those teens more similar to others in the United States. However, similar to parent-child relationships, a liberal parenting style does not increase the likelihood of dating other non-white teens. Hypothesis 3 is again partially supported.

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[11] The interaction terms for Figure 4-3 is statistically significant at 0.1 level, but for Figure 4-2 is not statistically significant at 0.1 level

4.6.2.2   *Asian teens*

In the left panel of Table 4-3 the results show that generational status is not associated with interracially dating whites throughout three models. Assimilation characteristics, parent-child relationships have insignificant impacts on Asian teens' formation of interracial relationships with whites. Among the control covariates, age is negatively associated with dating whites in all models. Filipino teens are less likely than Chinese teens to have interracial relationships with whites. No other control variables are statistically significant predictors of interracial romance for Asian teens.

The results in the right panel show that speaking a foreign (Asian) language at home reduces the probability of interracially dating a non-white partner among Asian teens. This effect is significant in all models when control variables are held constant. These results imply that the social distance between racial minority groups may be particularly large if Asian teens are more attached to their own culture. As for the effects of parent-child relationships, Asian teens who are allowed to make their own decisions about daily activities are less likely to form interracial relationships with other minority teens—a pattern that is completely different from the results for Hispanic teens.

Figure 4-5 and Figure 4-6[12] are graphical representations of the interactions for Asian teens. Figure 4-5 shows that the association between parental closeness and dating a white partner is negative for Asian teens who speak English at home (and are presumably more assimilated), but positive for Asian teens who speak an Asian language at home. These findings imply that a closer parent-child relationship increases the likelihood of dating a white partner for Asian teens who are less assimilated, but not for Asian teens who are more assimilated. Prior research has found that Asian immigrant parents have more conflicts with their children than native-born Asian parents. Thus, for Asian American children, having good relationships with their immigrant parents may help them better adjust to U.S. society, which in turn makes them more open to the idea of interracial relationships (especially with whites) than their peers who have strained relationships with their parents. Additionally, Asian parents seem to be more open about interracial relationships with whites than with other non-whites. It is also possible that

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[12] The interaction terms for Figure 4-5Figure 4-6 is statistically significant at .05 level, but for Figure 4-6 is not statistically significant at .05 level

those less assimilated teens pick up some viewpoints from their parents, and view dating whites as a way to upward assimilation in U.S. society. This may be another form of racial discrimination.

Figure 4-6 shows that the association between parental closeness and dating a different-race non-white partner does not change by the assimilation level (whether Asian teens speak English at home or speak Asian languages at home). It appears that strong attachment to Asian parents increase the likelihood of interracial dating with other non-minority group, regardless of the ethnic ties to Asian culture/community.

As with the results for Hispanic teens, the results for Asian teens suggest that the effects of parental closeness on dating a white partner are different from those on dating a different-race non-white partner. The effects of parental closeness on forming a relationship with a white partner are stronger for less assimilated teens (i.e., teens who speak Spanish or an Asian language at home). As for forming relationships with non-whites, the effects of parental closeness are about the same for both more assimilated and less assimilated teens. It indicates that for both Asian and Hispanic teens, dating whites would be "upward" assimilation and viewed more positively by parents, thus the close parent-child relationships among Hispanic and Asian teens reinforce this viewpoint.

Figure 4-7 and Figure 4-8[13] show how the association between a liberal parenting style (allowing adolescents to make decisions about their daily activates) and interracial dating (either with whites or with other non-whites) varies by the language spoken at home for Asian teens. In Figure 4-7, among those who are speak English at home, Asian teens whose parents give them more freedom to make decisions about their daily activities are about as likely to date whites as those whose parents do not give them such independence. The same pattern is observed for Asian teens who speak an Asian language at home. As shown in Figure 4-8, the association between parental approval of decision making and dating other non-whites do not vary much by language spoken at home, although the two lines do converge slightly as the level of freedom given by parents increases.

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[13] The interaction terms for Figure 4-7 is statistically significant at 0.1 level, but for Figure 4-8 is statistically significant at 0.1 level

This pattern implies that, regardless of what language is spoken at home, parenting style plays a similarly unimportant role in predicting interracial dating with other minority groups for Asian teens. Unlike Hispanic teens, Asian teen's interracial relationships with other non-whites seem to be very unlikely to be affected by their parents' authoritarian style. Parents giving more freedom do not increase Asian teens' choice of romantic partners of a different race. Asian parents and their children who have high levels of conversation may be focusing on academic performance rather than friendship or romantic relationships, as romantic relationships at earlier ages are still discouraged in Asian culture. Thus, even when Asian youth have more independence in their lives, these factors do not increase their likelihood of dating interracially.

4.7 Discussion

Using the lens of interracial relationship formation, the research illustrates how immigration status, assimilation, and parent-child relationships are associated with interracial relationship formation among Hispanic and Asian youth.

Unlike the adult intermarriage literature, adults of second or third generation enter interracial marriages at higher rates than those of first generation (Gordon 1964, Gonsoulin and Fu 2010, Qian, Blaire and Ruf 2001), higher-generation adolescents are found not to enter interracial romances at higher rates than their lower-generation peers. However, strong ties to one's own culture, measured by the foreign language spoken at home, does.

When interracial relationship types are further broken down into dating whites and dating other non-whites, the results suggest that the ties to Hispanic culture prevents Hispanic teens from entering relationships with either whites or other minority group members. However, such ethnic ties to Asian culture/family only prevent Asian teens from entering interracial relationships with other minorities. These patterns may suggest two reasons. 1) Asians, compared to blacks or Hispanics, are geographically segregated from white population to a lesser degree, thus attachment to Asian culture may be less likely to predict the likelihood of forming interracial romantic relationship with whites for Asian teens than it for Hispanics, as they still have higher chance to live closer to whites. For Hispanic teens, who may be more geographically segregated from white and other racial/ethnic groups, attachment to Hispanic culture/community may impair their

chance to communicate with members of other race/ethnicity. 2) The view that interracial dating with whites is considered as an upward assimilation while interracial dating with other minorities may be embraced more positively by Asian communities than by Hispanic communities. Such viewpoint may suggest another kind of racism between minority groups.

Prior studies have found that parent-child relationships are less harmonious for immigrant adolescents than for native-born adolescents, especially when immigrant adolescents are assimilated into the U.S. culture while their parents maintain their own culture and customs. Although the closer the parent-child relationship and the more freedom parents allow their children are not independently associated with the greater the likelihood of dating a white or another non-white partner. The current investigation provides partial support for the hypothesis that parent-child relationship quality moderates the association between assimilation and interracial romance for Hispanic youth. The significant interactive effects suggest that the effects of parent-child closeness on forming a relationship with a white partner are stronger for less assimilated teens (i.e., teens who speak Spanish or an Asian language at home). These results suggest that strong ethnic attachment reduced less assimilated adolescents' likelihood of interracial dating, their close parent-child relationship strengthened such negative effects. It appears that both Hispanic and Asian parents whose children speak foreign language at home are less objective to interracial relationships involving a white partner than those parents whose children speak English at home.

A liberal parenting style does not independently increase the likelihood of dating whites or other non-white teens for Hispanic and Asian teens. However, a liberal parenting style appears to increase the chance of interracial dating whites among more assimilated Hispanic teens than among the less assimilated. But liberal parenting style does not affect Asian teen's interracial dating patterns. In part, it's because Asian parents and their children who have high levels of conversation may be not focusing on romantic relationships. Thus, even when Asian youth have more independence in their lives, these factors do not increase their likelihood of dating interracially.

There are several limitations of this study; I mention three here. First, the study is limited by the measurement of parent-child relationship quality. More nuanced results

could be obtained if the survey had asked questions about specific conversations between parents and children about romantic partners, romantic relationships, and other activities associated with these relationships. Second, the temporal order of parent-child relationship and formation of romantic relationship could be reverse, since they were measured at the same time of the survey. Though it is unlikely, parent-child relationship could be jeopardized if parents are unhappy with their children's interracial romantic relationships. Parents may give their children little freedom to do what they want, which may make adolescents feel less close to their parents. It would be better if parent-child relationships were measured at time earlier than the romantic relationships occur. Third, the small size of the Asian sample and the small number of interracial relationships between Asians and members of other minority groups may reduce the significance of the results.

Table 4-1 Descriptive Statistics for the Dependent Variable and Independent Variables by Race

	Hispanic			Asian		
	1st Gen	2nd Gen	3rd Gen	1st Gen	2nd Gen	3rd Gen
Dependent Variable						
Intraracial-dating	80.37%	78.13%	50.00%	75.42%	68.25%	58.70%
Interracial-dating w/ whites	12.46%	10.94%	35.87%	11.17%	13.49%	15.22%
Interracial-dating w/non-whites	7.17%	10.94%	14.13%	13.41%	18.25%	26.09%
Key Independent Variables						
English spoken at home	14.33%	39.29%	89.13%	43.02%	77.78%	95.65%
Family SES						
Low SES	49.48%	54.26%	52.25%	24.69%	32.48%	30.23%
Medium SES	34.15%	29.68%	27.33%	27.78%	25.64%	23.26%
High SES	16.38%	16.06%	20.42%	47.53%	41.88%	46.51%
Parent-child relationship						
Closeness	5.04	5.15	5.336	5.29	5.09	5.41
Decision-making	8.39	8.31	8.437	8.40	8.29	8.695
Control Variables						
Ethnicity						
Hispanics						
Mexican	27.41%	35.04%	44.54%	--	--	--
Cuban	36.76%	26.34%	4.10%	--	--	--
Other Hispanic	35.83%	38.62%	51.37%	--	--	--
Asians						
Chinese				15.64%	19.84%	11.11%
Filipino				57.54%	51.59%	15.56%
Other Asian				26.82%	28.57%	73.33%
Gender (Male)	51.71	47.77	54.35	52.51%	53.17%	56.52%
Age	16.18	15.70	15.47	16.37	15.79	15.36
GPA	2.49	2.51	2.487	2.98	2.95	2.67
Church attendance						
Never	28.71%	22.92%	25.14%	17.42%	16.00 %	26.09%
< Once a month	19.56%	20.67%	23.22%	17.42%	14.40%	13.04%
Once a month	17.03%	21.57%	15.57%	15.73%	22.40%	15.22%
Once a week	34.70%	34.83%	36.07%	49.44%	47.20%	45.65%
Total number of Individuals	321	448	368	46	126	179

Table 4-2 Multinomial logistic models predicting interracial dating for Hispanic teens

	Interracial dating with whites compared to intra-racial dating			Interracial dating with non-whites compared to intra-racial dating		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Key Independent Variables						
Assimilation						
Generation status						
2nd generation	.598 (.498)	.547 (.504)	.511 (.530)	.631 (.496)	.523 (.437)	.554 (.469)
3rd generation	2.10*** (.406)	.956** (.427)	.801* (.457)	.940* (.527)	.004 (.582)	-.323 (.620)
Foreign language spoken at home		-2.34*** (.364)	-2.37*** (.374)		-1.587*** (.464)	-1.63*** (.429)
Parent-child relationship						
Closeness			.026 (.124)			.272* (.145)
Decision-making			.206* (.121)			.503*** (.144)
Control Variables						
Ethnicity						
Cuban (vs. Mexican)	-.251 (.733)	-.314 (.675)	-.405 (.684)	-.253 (.906)	-.319 (.948)	-.508 (.937)
Other Hispanic (vs. Mexican)	-.0329 (.373)	.0169 (.349)	.033 (.349)	. 965* (.495)	.974** (.477)	1.037** (.511)
Gender (Male)	-.712** (.354)	-.690* (.356)	-.645* (.384)	.155 (.331)	.160 (.353)	.377 (.379)
Age	.023 (.104)	.072 (099)	.029 (.104)	.055 (.123)	.082 (.116)	-.0218 (.120)
GPA	.269 (.245)	.119 (.233)	.077 (.234)	-.027 (.219)	-.098 (.234)	-.293 (.230)
Church attendance						

|						
< Once a month	-1.083** (.503)	-1.195** (.511)	-1.23** (.491)	-.355 (.584)	-.408 (.607)	-.450 (.576)
Once a month	-.932** (.570)	-.922 (.568)	-.942 (.573)	.192 (.578)	.302 (.564)	.322 (.578)
Once a week	-1.072* (.547)	-1.135** (.534)	-1.06 (548)	-.921 (.696)	-.948 (.692)	-.730 (.724)
Family SES						
Medium SES (vs. low)	-.187 (.244)	-.116 (.253)	-.106 (.259)	1.057** (.499)	1.12** (.507)	1.219** (567)
High SES (vs. low)	.944 ** (.442)	.753* (.449)	.920** (.395)	1.582*** (.587)	1.377** (.637)	1.75 (.664)
Constant	-.882 (.551)	.457 (.627)	-.842 (1.447)	-3.453 *** (.823)	-2.348*** (.834)	-7.61*** (2.07)
Total number of individuals	947			947		

*p<.10 ** p<.05 *** p<.01

**Table 4-3 Multinomial logistic models predicting interracial dating for Asian teens**

	Interracial dating with whites compared to intra-racial dating			Interracial dating with non-whites compared to intra-racial dating		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Key Independent Variables						
Generation status						
2nd generation	1.22 (.769)	1.011 (.784)	.976 (.776)	.597 (.537)	.132 (.580)	.190 (.567)
3rd generation	-.53 (1.147)	-.785 (1.16)	-.906 (1.25)	.533 (.615)	-.230 (.704)	-.199 (.643)
Foreign Language spoken at home		-.626 (.732)	-.701 (.768)		-1.739** (.685)	-1.89** (.739)
Parent-child relationship						
Closeness			-.099 (.247)			.189 (.149)
Decision-making			.047 (.178)			-.332** (.156)
Control Variables						
Ethnicity						
Filipino (vs. Chinese)	-2.66* (1.47)	-2.72* (1.44)	-2.71* (1.39)	.634 (1.034)	.435 (1.028)	.415 (1.079)
Other Asian (vs. Chinese)	-.856 (.983)	-.724 (.934)	-.610 (.907)	1.984** (.944)	1.92** (.826)	1.85** (.879)
Gender (Male)	.400 (.680)	.474 (.736)	.564 (.780)	.229 (.436)	.652 (.412)	.789* (.456)
Age	-.498** (.271)	-.486* (.264)	-.509* (.261)	-.220 (.149)	-.265* (.151)	-.306** (.149)
GPA	-.295 (.402)	-.303 (.409)	-.337 (.397)	.0269 (.313)	.039 (.302)	.032 (.365)
Church attendance						
< Once a month	1.506* (.866)	1.470* (.854)	1.437* (.818)	.916 (.858)	.912 (.778)	.656 (.886)

Once a month	.889 (.925)	.779 (.886)	.759 (.889)	.445 (.853)	.173 (1.025)	-.214 (1.21)
Once a week	.539 (.656)	.546 (.655)	.477 (.569)	.505 (.885)	.598 (.949)	.057 (1.01)
Family SES						
Medium SES (vs. low)	-.950 (.598)	-.978 (.667)	-1.16* (.684)	-.350 (.877)	-.591 (.791)	-.485 (.784)
High SES (vs. low)	.180 (.710)	.169 (.728)	.232 (.703)	-.458 (.522)	-.521 (.589)	-.619 (.622)
Constant	-1.34 (.932)	-1.04 (1.00)	-.458 (2.61)	-2.70 *** (.912)	-2.15 (.912)	-1.78 (1.82)
Total number of individuals	304			304		

***p<.10 ** p<.05 * p<.01
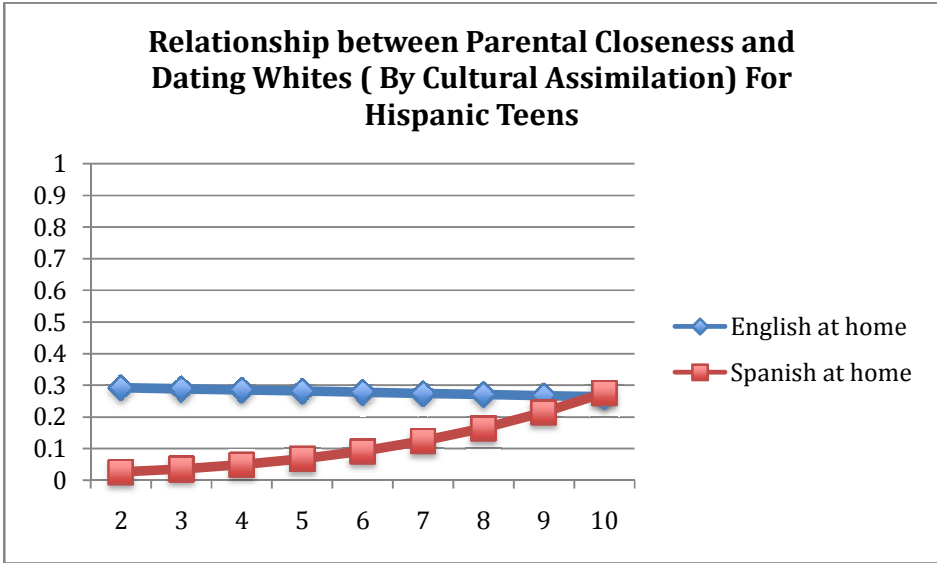
Figure 4-1 Predicted probability of dating whites by parental closeness and language spoken at home for Hispanic teens
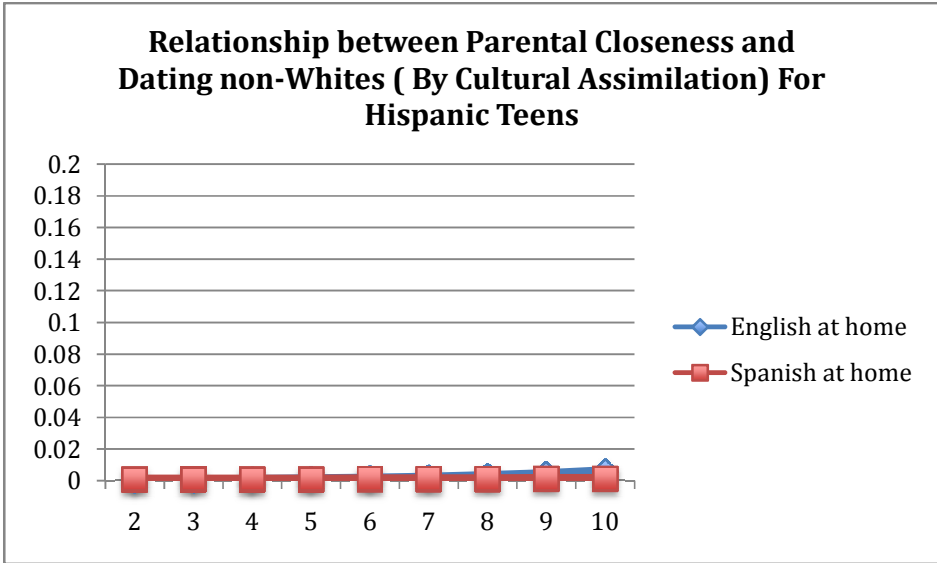
Figure 4-2 Predicted probability of dating non-whites by parental closeness and language spoken at home for Hispanic teens*
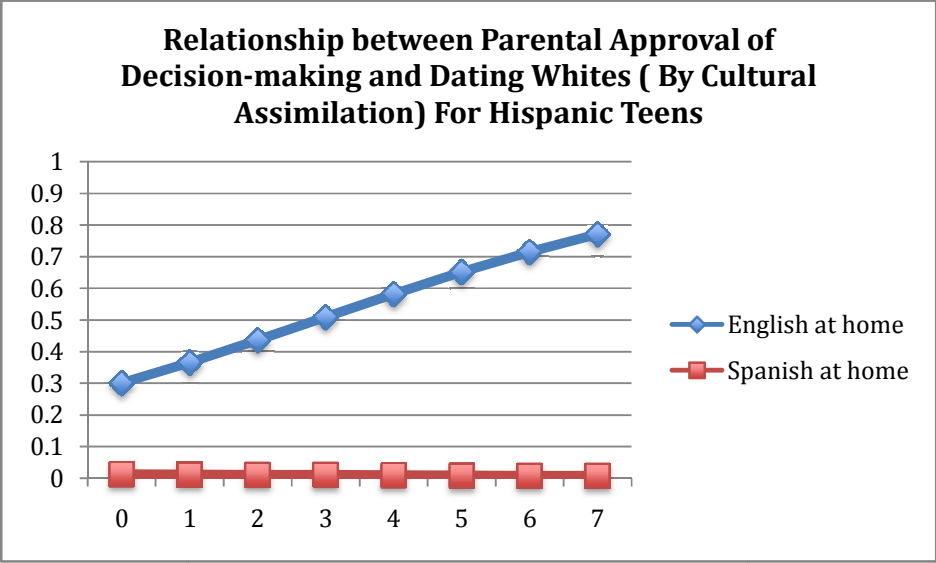
Figure 4-3 Predicted probability of dating whites by parenting style and language spoken at home for Hispanic teens *
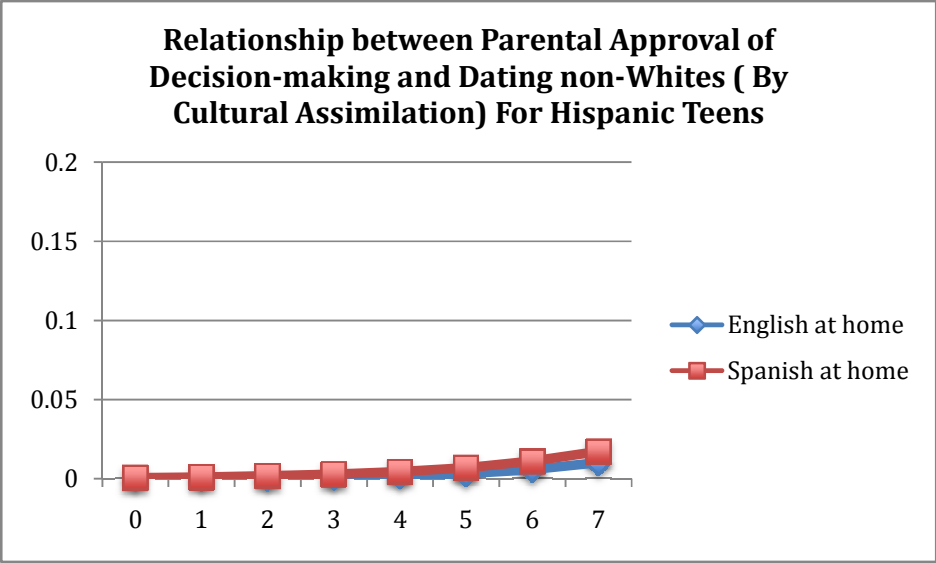

Figure 4-4 Predicted probability of dating non-whites by parenting style and language spoken at home for Hispanic teens
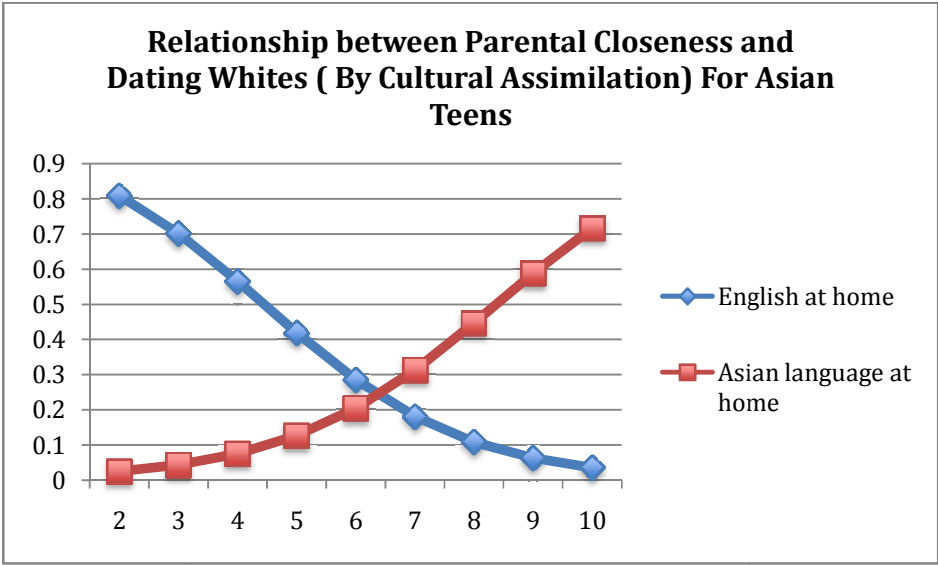
Figure 4-5 Predicted probability of dating whites by parental closeness and language spoken at home for Asian teens
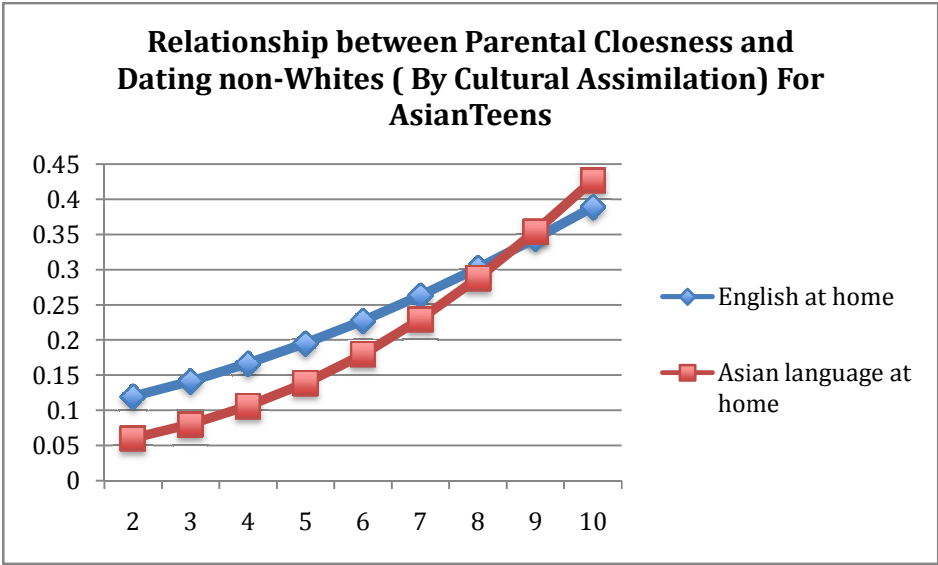

Figure 4-6   Predicted probability of dating non-whites by parental closeness and language spoken at home for Asian teens
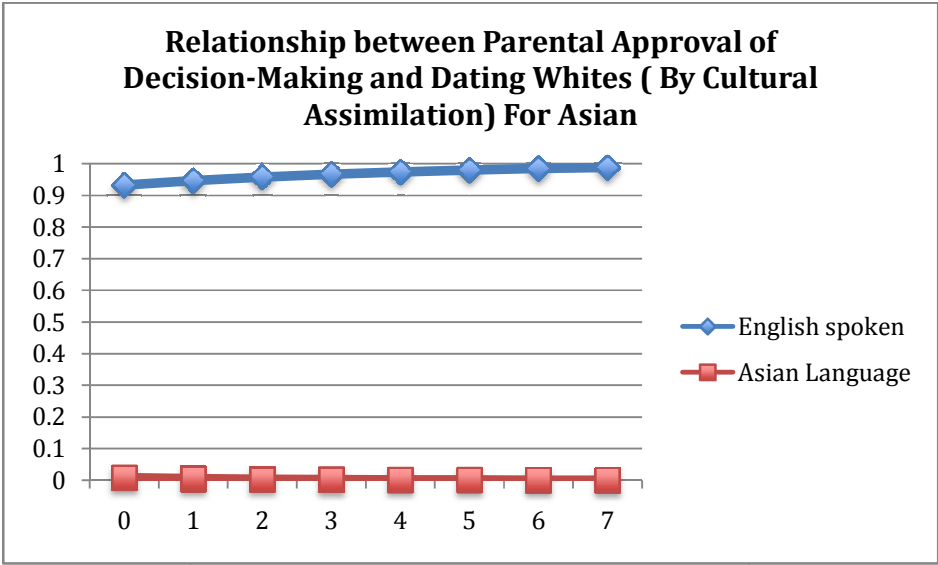
Figure 4-7 Predicted probability of dating whites by parenting style and language spoken at home for Asian teens *
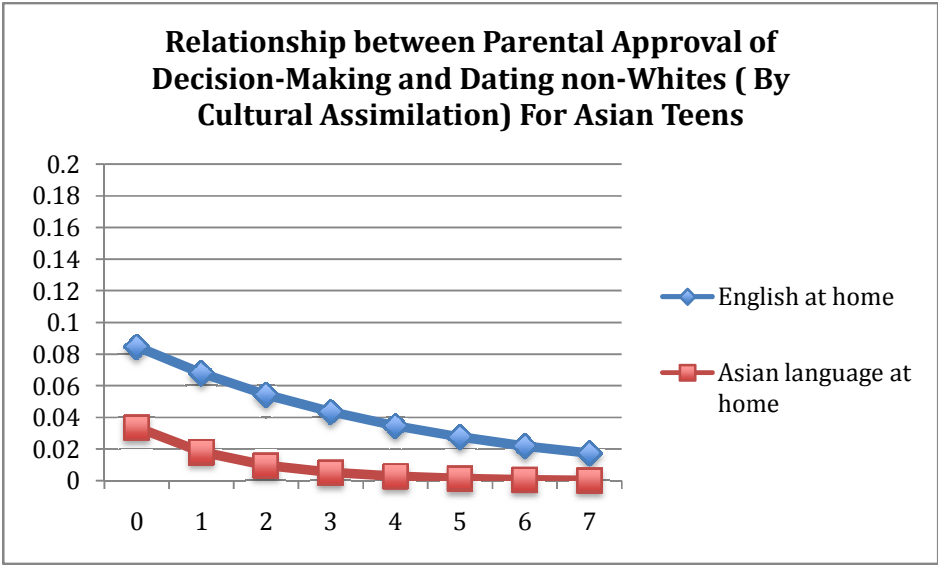

Figure 4-8 Predicted probability of dating non-whites by parenting style and language spoken at home for Asian teens
*

4.8   Appendix

Table 4-4 Multinomial logistic models predicting interracial dating for Hispanic teens with interactions

	Interracial dating with whites compared to intra-racial dating	Interracial dating with non-whites compared to intra-racial dating
Key Independent Variables		
Generation status		
2nd generation	.534 (.525)	.517 (.448)
3rd generation	.805* (.46)	-.413 (.620)
Foreign language spoken at home	-3.42 (2.50)	1.33 (2.90)
Parent-child relationship		
Closeness	-.018 (.145)	.341* (.183)
Decision-making	.294 ** (.145)	. .562** (.187)
Interaction terms		
Language* closeness	.349 (.241)	-.283 (.293)
Language* decision-making	-.369* (.206)	-.112 (.250)
Control Variables		
Ethnicity		
Cuban (vs. Mexican)	-.421 (.703)	-.464 (.926)
Other Hispanic (vs. Mexican)	.041 (.343)	1.072** (.514)
Gender (Female)	-.676* (.39)	.376 (.359)
Age	.026 (.106)	-.026 (.118)
GPA	.071 (.240)	-.320 (.229)
Church attendance		
< Once a month	-1.35*** (.508)	-.449 (.594)
Once a month	-1.05 * (.615)	.306 (.546)
Once a week	-1.138 ** (.557)	-.754 (.732)
Family SES		
Medium SES (vs. low)	-.169 (.273)	1.273** (.583)
High SES (vs. low)	.974 ** (.396)	1.839*** (.688)
Constant	-.844 (1.58)	-8.512*** (2.47)
Total number of individuals	947	947

*p<.10 ** p<.05 *** p<.01

Table 4-5 Multinomial logistic models predicting interracial dating for Asian teens with interactions

	Interracial dating with whites compared to intra-racial dating	Interracial dating with non-whites compared to intra-racial dating
Key Independent Variables		
Generation status		
2nd generation	1.092 (.619)	.085 (.575)
3rd generation	-1.05 (1.17)	-.363 (.686)
Foreign language spoken at home	-7.412 (4.541)	-.972 (3.089)
Parent-child relationship		
Closeness	-.592*** (.242)	.193 (.185)
Decision-making	.256* (.196)	-.236 (.140)
Interaction terms		
Language* closeness	1.162** (.44)	.113 (.386)
Language* decision-making	-.632** (.303)	-.391 (.305)
Control Variables		
Ethnicity		
Filippino (vs. Chinese)	-3.23*** (1.32)	.440 (1.114)
Other Asian (vs. Chinese)	-.738 (.844)	1.834* (.927)
Gender (Female)	.740 (.702)	.855** (.427)
Age	-.505** (.252)	-.333** (.146)
GPA	-.464 (.369)	.005 (.354)
Church attendance		
< Once a month	1.21 (.734)	.693 (.887)
Once a month	.785 (.858)	-.219 (1.22)
Once a week	.411 (.612)	1.21 (1.014)
Family SES		
Medium SES (vs. low)	-1.44 ** (.707)	-.400 (.707)
High SES (vs. low)	.531 (.739)	-.499 (.61)
Constant	2.63 (2.76)	-2.38 (2.43)
Total number of individuals	301	301

*p<.10 ** p<.05 *** p<.01

CHAPTER 5

CONCLUSION

This dissertation contributes to the scholarly understanding of the ways in which adolescents make choices about interracial romantic relationships, and how sexual behavior within such relationships differs from sexual behavior in intra-racial relationships. The three studies examine the unique individual, family, and school factors that influence the formation of interracial romances among adolescents, as well as the ways in which sexual practices differ between interracial and intra-racial relationships. Two of the three studies focus on interracial relationship formation, and the third focuses on the sexual outcomes of these relationships.

Although the three studies focus on key elements of the adolescent environment (e.g., school socioeconomic status, family factors, and immigrant status) and key relationship characteristics (e.g., relationship quality), each study also examines moderating variables that influence the effects that these factors have on interracial romance formation or interracial sexual behavior. In general, the association between these factors and the behavioral outcomes is modified by one or two individual/family factors. Some of those individual factors, such as family socioeconomic background, are beyond the control of adolescents, while others, such as relationship quality or parent-child relationship, can be remedied through the efforts of parents or children. Each study recognizes that although the effects of social context may be fixed, individuals retain agency and can resist negative outcomes through their efforts.

In the second chapter, I find that interracial dating behavior among adolescents does not fully reflect interracial coupling among adults. The analyses demonstrate that adolescents are particularly susceptible to school and family effects.

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First, the findings lend support to opportunity theory, which states that the availability of same-race peers limits the chances of interacting with members of other racial groups (Blau 1977, Fujino 1997, Harris and Ono 2005).

Second, school SES is also a good predictor of interracial relationship formation, although its effects are mixed—compared to a low school SES, a medium school SES is associated with a high probability of interracial dating for whites and blacks, but a high school SES is associated with a low probability of interracial dating for blacks, Hispanic and Asian teens. It implies that attendance at a higher-SES school yields different romantic outcomes for members of different racial/ethnic groups. This pattern is partially due to structured disadvantages—many minority adolescents have been deprived of the opportunity to attend better schools and live a mainstream middle class lifestyle, which makes it difficult for these young people to interact with members of other races—but at the same time, the results reflect the fact that the differences between white and non-white adolescents in interracial dating behaviors persist even when adolescents in these groups are in the same school environment.

Third, although high school SES lowers the likelihood of minority youths choosing a partner of a different race, coming from a well-off family diminishes this effect and coming from a low-SES family strengthens the effect, which suggests that family background serves as an important factor in the formation of interracial relationships. It suggests that young minority people from low-SES families may face disadvantages of being minority and having a low SES family background and might encounter more racial discrimination from the majority group. Because adolescent romantic behavior has consequences for later-life outcomes (Elder Jr. 1998, Joyner and Kao 2005, Mok 1999), these findings suggest that, from an early age, minority children face social obstacles (such as lower levels of school or family SES) and racial discrimination that prevent them from forming interracial relationships, which potentially explains the rigid social distance between certain racial groups observed in adult interracial unions.

In Chapter 3, I find that for minority adolescents (blacks, Hispanics, and Asians), dating a white partner does not increase the risk of sex, but dating a

different-race non-white partner does increase the risk of sex for some minority groups (Hispanic and Asian teens). Such findings do not lend support to Social Exchange theory. With regard to contraceptive use, engaging in an interracial relationship does not affect contraceptive use among white, black, or Hispanic teens. However, communication between partners regarding sex-related issues is linked to the likelihood of contraceptive use for most of the racial and ethnic groups in the analyses. The significant interaction terms between interracial relationship type and communication (and intimacy) in models of contraceptive use reveals that within interracial relationships communication can be very effective at increasing contraceptive use. This suggests that sex education programs should recognize the obstacles that different-race partners may face, and should address these obstacles by helping teenagers feel comfortable discussing contraception with individuals of other racial backgrounds, as well as making these conversations more effective

In Chapter 4, I find evidence of the influence of immigration on patterns of interracial relationship formation among adolescents and the moderating role of parent-child relationship. With respect to the two measurements of assimilation (i.e., generational status and language spoken at home), the results showed that generational status does not increase the likelihood of interracial dating by Hispanic and Asian adolescents, yet ethnic ties to their own culture (measured by language spoken at home) reduces the likelihood.

Hispanic teens, who are more attached to their own culture, are less likely to form romantic relationships with either whites or other non-whites. However, only Asian teens that are more attached to their own culture are less likely to form romantic relationships with other non-whites. And the close parent-child relationships even strengthened such association. The less residential segregation between Asian and whites compared to that between Hispanic and whites may partially explained these patterns. Moreover, the different views regarding interracial relationships with whites (viewed positively as upward assimilation) versus those with other non-whites (viewed negatively as downward assimilation) may reflect a different type of racial discrimination against other racial minorities among Asians, as well as a greater social distance between Asian and other minority groups. Understanding the

significance of parental influences on romantic outcomes among Hispanic and Asian immigrants may help scholars and policy makers address how to help immigrant children better adjust to U.S. society.

In sum, this dissertation contributes to the scholarly understanding of adolescent interracial romantic and sexual behavior. Future research on adolescent interracial romantic relationships should continue to recognize the differences in interracial romantic and sexual behavior across minority groups, as well as the variation in the influence of individual, family, and school factors on relationship formation for different racial/ethnic groups.

Future studies should examine several aspects of interracial romance and sexual behavior: First, changes in interracial dating behavior over time are a prime area of investigation for future studies. The current studies focused on teens in early adolescence (ages 12-20), and how individual, family, and social contextual factors affect adolescents' romantic partner choice. Because Add Health data followed these teens into adulthood, seeing how interracial romantic behavior changes in late adolescence and early adulthood would be of great interest. More importantly, it would be beneficial to discover whether these individual, family, and contextual factors still exert a significant impact on dating behavior or whether the effects of these factors become minimal.

Racial attitudes are a second promising area of study. Currently available data do not contain any information regarding individuals' attitudes toward the formation of interracial relationships (friendships or romantic relationships) or their preferences regarding the race of romantic partners, nor is there information about the attitudes of peers or parents on these issues. However, these racial attitudes might be directly related to partner choice for adolescents and young adults. In the future, researchers should conduct qualitative interviews to examine how individuals' attitudes toward interracial relationship formation (as well as the attitudes of peers and family members) influence their romantic behavior.

A third focus for future research is the influence of social networks, specifically, the extent to which the characteristics of an individual's own social network, such as the racial composition of friends and/or acquaintances, influences

their interracial romantic behavior. For example, does an individual's friend list on Facebook actually reflect the racial composition of that individual's network and to what degree does the diversity within the friend list influence participation in interracial friendships and interracial romantic relationships?

A fourth and final area for further study is relationship quality. Among adolescents, studies have shown that interracial romantic relationships are shorter-lived than intra-racial relationships, and the former are associated with less affectionate public displays than the latter. However, more studies are needed to address other dimensions of these relationships, such as the levels of happiness, satisfaction, closeness, intimacy, and conflicts. Again, qualitative interviews would be ideal.

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