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# Romantic Relationship Experiences from Late Adolescence to Young Adulthood: The Role of Older Siblings in Mexican-Origin Families

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## Abstract

Youth's experiences with romantic relationships during adolescence and young adulthood have far reaching implications for future relationships, health, and well-being; yet, although scholars have examined potential peer and parent influences, we know little about the role of siblings in youth's romantic relationships. Accordingly, this study examined the prospective longitudinal links between Mexican-origin older and younger siblings' romantic relationship experiences and variation by sibling structural and relationship characteristics (i.e., sibling age and gender similarity, younger siblings' modeling) and cultural values (i.e., younger siblings' familism values). Data from 246 Mexican-origin families with older ($M$ = 20.65 years; $SD$ = 1.57; 50% female) and younger ($M$ = 17.72 years; $SD$ = .57; 51% female) siblings were used to examine the likelihood of younger siblings' involvement in dating relationships, sexual relations, cohabitation, and engagement/marriage with probit path analyses. Findings revealed older siblings' reports of involvement in a dating relationship, cohabitation, and engagement/marriage predicted younger siblings' relationship experiences over a two-year period. These links were moderated by sibling age spacing, younger siblings' reports of modeling and familism values. Our findings suggest the significance of social learning dynamics as well as relational and cultural contexts in

understanding the links between older and younger siblings' romantic relationship experiences among Mexican-origin youth.

**Keywords**

adolescence; culture; Mexican-origin families; romantic relationships; siblings; young adulthood

## Introduction

During adolescence and young adulthood, the formation of romantic relationships is a salient developmental task (Roisman, Masten, Coatsworth, & Tellegen, 2004) that has far reaching implications for future relationships, health, and well-being (Reis, Collins, & Berscheid, 2000). The majority of older adolescents (70%) and young adults (75%) in the U.S. are involved in romantic relationships (Carver, Joyner, & Udry, 2003), ranging from casual dating (8%) to marriage (20%; Scott, Steward-Streng, Manlove, Schelar, & Cui, 2011). The family of origin has a significant influence on romantic relationship experiences during adolescence and young adulthood (Bryant & Conger, 2002). This work has primarily focused on the role of parents (Bryant & Conger, 2002; Tyrell, Wheeler, Gonzales, Dumka, & Millsap, 2015), however, and little is known about *siblings' roles* in adolescents' and young adults' romantic relationships.

Siblings are central figures in family life and serve as role models for both positive and negative behaviors (East, 2009; McHale, Updegraff, & Whiteman, 2012). Studies of children and adolescents have found similarities between older and young siblings in many domains, including peer competence (Whiteman, McHale, & Crouter, 2007a), deviant behaviors (Snyder, Bank, & Burraston, 2005; Whiteman et al., 2007a), alcohol use (Trim, Leuthe, & Chassin, 2006; Whiteman, Jensen, & Maggs, 2014a), and sexual behaviors (McHale, Bissell, & Kim, 2009). Behavioral geneticists note that sibling similarities are not fully explained by shared genetics (Natsuaki et al., 2009), implying that nonshared environmental influences, including social influences may contribute.

Building on social learning theory (Bandura, 1977) and cultural-ecological frameworks (García Coll et al., 1996), and addressing gaps about the role of sibling socialization in the literature, we examined Mexican-origin siblings' romantic relationship experiences during late adolescence (younger siblings, about age 18) and young adulthood (younger siblings at about age 20, older siblings at about ages 21-23). Using data from a longitudinal study of Mexican-origin families with at least two offspring, we addressed two aims: (a) to *describe* Mexican-origin older and younger siblings' involvement in romantic relationship experiences (i.e., dating relationship, sexual relations, cohabitation, engagement, marriage) and how these vary by age, gender, and nativity; and (b) to examine *longitudinally*, the associations between older siblings' romantic experiences and those of younger siblings, as well as the potential moderating roles of sibling (i.e., age and gender similarity, younger siblings' modeling) and cultural (i.e., younger siblings' familism values) factors.

A focus on the role of siblings in the romantic relationship experiences among Mexican-origin youth is warranted for several reasons. First, Mexican Americans are a large and

rapidly growing segment of the U.S. population, that are younger than both the U.S. population and Latinos overall (*mdn* age = 25 versus 37 and 27, respectively; Pew Hispanic Center, 2013). Second, Latino youth marry at a younger age (U.S. Census Bureau, 2008), have high fertility rates (Pew Hispanic Center, 2013), and bear children at younger average ages than other ethnic groups in the U.S. (Baca Zinn & Wells, 2000). Third, for individuals of Mexican descent, older sisters and brothers may be particularly influential role models because siblings spend a significant amount of time together during adolescence (Updegraff, McHale, Whiteman, Thayer, & Delgado, 2005). Consequently, it is critical for researchers to develop a better understanding of sibling processes that link to the development of Mexican-origin youth's romantic relationships, efforts that, more broadly, contribute to a literature that has paid limited attention to cultural diversity (Bryant, 2006).

## Describing Mexican-Origin Youth's Romantic Relationship Experiences

Understanding the nature of romantic experiences during late adolescence and young adulthood can shed light on the distinctive developmental contexts of intimate relationships. Most work on Latino and, more specifically, Mexican-origin populations has primarily focused on sexual behaviors, with little known about involvement in other aspects of romantic relationships (Raffaelli & Iturbide, 2009). Furthermore, the limited research on Mexican-origin youth's romantic relationship experiences highlights variability as a function of age, gender, and nativity. For example, scholars found that Mexican-origin older adolescents are more likely to be involved in dating relationships than younger adolescents (Tyrell et al., 2015). National trends show that older youth are more likely to initiate sexual intercourse, cohabitate, and become engaged and marry than younger adolescents (CDC, 2013; Rose-Greenland & Smock, 2013). Moreover, sexual socialization within the family typically is consistent with traditional gender role norms (e.g., emphasis on delay of sexual initiation for girls; Raffaelli & Iturbide, 2009); thus, we examined variation in romantic experiences by gender. There is also an emphasis in Latino culture on machismo (e.g., importance for Latino men to have many sexual partners) and marianismo (e.g., importance of female virginity and motherhood; Cauce & Domenech-Rodríguez, 2002). As individuals who are born in Mexico may emphasize traditional gender roles more strongly than more acculturated or U.S.-born individuals (Raffaelli & Iturbide, 2009), we also examined variation by nativity. Our study extends a small literature by using an ethnic homogenous design to examine within-group variability among Mexican-origin older adolescents and young adults' romantic relationship experiences moving beyond sexual intercourse, to the prevalence of involvement in dating relationships, cohabitation, engagement, and marriage.

## Social Learning Processes and Sibling Similarity

Older siblings and relationships with those siblings may play a role in shaping youth's romantic relationship experiences. According to a social learning framework, individuals are more likely to observe and imitate models who are powerful, nurturing, and share similar characteristics (Bandura, 1977)—three qualities that are often characteristic of older siblings. Given power and status differences as a function of age (Miller & Maruyama, 1976), as well as older siblings' roles as leaders within the family (Furman & Buhrmester, 1992; McHale, Crouter, & Whiteman, 2003), older siblings typically possess greater power than their younger brothers and sisters. Indeed, Mexican-origin immigrant parents often

expect older siblings to take on caregiving roles for younger siblings and shoulder more household responsibilities (Orellana, 2003). As such, younger siblings may see older siblings as nurturing and salient models. Consistent with these notions, research indicates that older siblings act as models and sources of advice for younger siblings, particularly in late adolescence (Tucker, Barber, & Eccles, 1997). In fact, given their recent experiences in dating and romantic relationships, older siblings may be especially influential on nonfamily issues (Tucker, McHale, & Crouter, 2001), such as dating norms or sexual activity (McHale et al., 2009; Widmer, 1997). Indeed, research in the area of sexual relations has found positive links between older and younger siblings' behavior in nationally representative (McHale et al., 2009; Widmer, 1997) and within Latino samples, including ours (East, Felice, & Morgan, 1993; Whiteman, Zeiders, Killoren, Rodriguez, & Updegraff, 2014b). The present study extends this work by examining the prospective longitudinal links between Mexican-origin older and younger siblings' romantic experiences (i.e., involvement in dating relationships, sexual relations, cohabitation, engagement, marriage) from late adolescence to young adulthood.

Although most research on the influence of older siblings is rooted in social learning principles, investigators generally have not assessed modeling processes directly. Instead, scholars base inferences about modeling and imitation on correlations between siblings' behaviors (Whiteman, Becerra, & Killoren, 2009). Recently, more direct tests of social learning principles have shown that younger siblings' reports of modeling their older siblings' behaviors relate to greater similarity between siblings in a variety of health risk domains, including alcohol-related cognitions and behaviors, deviant behaviors, and sexual risk behaviors (Whiteman, Bernard, & McHale, 2010; Whiteman et al., 2014a; Whiteman et al., 2014b ). The present study builds on this work by assessing younger siblings' modeling of their older siblings' behaviors and testing whether modeling moderates the longitudinal links between older and younger siblings' romantic relationship experiences. Additionally, we explored whether structural characteristics of the sibling relationship, including age spacing and gender composition, moderated these associations. As noted, a social learning framework posits modeling processes are more pronounced when siblings are more similar compared to less similar. Thus, siblings close in age and same-gender dyads may be more likely to model one another than siblings further apart in age (Trim et al., 2006) and mixed-gender sibling dyads (Whiteman et al., 2007a).

## The Role of Culture in Sibling Similarity

A cultural-ecological perspective (García Coll et al., 1996) emphasizes that adolescent development occurs in context, including both familial and cultural contexts. In particular, cultural values and orientations shape interactions between family members. For individuals of Mexican descent, an important cultural value is familism, which highlights the importance, for example, of family support and obligations and treating the family as a social referent (Cauce & Domenech-Rodríguez, 2002; Knight et al., 2010). In Mexican-origin adolescent sibling dyads (using data from the present study), familism values have been associated with more intimate sibling relationships (Updegraff et al., 2005). Furthermore, sibling roles and expectancies may vary as a function of familism values. Youth who endorse higher levels of familism values, for example, may be more likely to use

their older siblings as a referent for behavior (Sabogal, Marín, Otero-Sabogal, Vanoss Marín, & Perez-Stable, 1987). In this study, we extend prior work by examining the moderating role of familism values in the associations between older and younger siblings' romantic relationship experiences, testing the hypothesis that longitudinal associations between older and younger siblings' romantic relationship experiences will be stronger for younger siblings who report stronger familism values.

## Current Study and Hypotheses

This study builds on existing work on romantic relationships from adolescence to young adulthood. Our *first aim* was to describe older and younger Mexican-origin siblings' involvement in romantic relationship experiences (i.e., dating relationship, sexual initiation, cohabitation, engagement, marriage) in late adolescence (about 18) and young adulthood (about 20-23) and test for differences by age, gender, and nativity. We hypothesized that a greater proportion of older youth would report ever having sex, cohabiting, and/or being engaged or married. We also hypothesized that a higher proportion of male and U.S.-born youth would report ever having sex or cohabiting, whereas we anticipated a higher proportion of female and Mexico-born youth to report being engaged or married. We did not hypothesize differences in overall dating relationship status, however, given prior research suggesting 70% to 80% of adolescents reported being in a relationship within the past year (Carver et al., 2003; Tyrell et al., 2015), with no gender differences in their status (Tyrell et al., 2015).

Our *second aim* was to examine the longitudinal associations between older and younger siblings' romantic relationship experiences, and to test the role of sibling (i.e., age and gender similarity, modeling) and cultural (i.e., familism values) factors as moderators of these associations. First, we hypothesized positive links between older and younger siblings' involvement in romantic relationship experiences. Second, we hypothesized that the links between older and younger siblings' involvement in romantic relationship experiences would be stronger when sibling dyads were closer in age, of the same gender, and when younger siblings reported high levels of sibling modeling. Third, we hypothesized younger siblings who endorse stronger familism values would be more similar to their older siblings as compared to those who endorse weaker familism values. To address potential third-variable influences, we examined several potential covariates, including intimacy with older sibling because siblings may have experiences that are more similar when they have closer relationships (McHale et al., 2009), and parents' relationship quality (i.e., marital, parent-youth) because parents' relationships are potential sources of romantic relationship modeling within the broader family context (Bryant & Conger, 2002). We also examined sociocultural variables as potential covariates that may be linked with Mexican-origin youth's relational experiences including younger siblings' nativity, younger and older siblings' gender, family socioeconomic status (SES), parents' and older siblings' familism values, and sibling co-residence (Raffaelli, Kang, & Guarini, 2012).

# Method

## Participants

The data came from a longitudinal study conducted from 2002 to 2010 with 246 Mexican-origin families recruited from a southwestern metropolitan area (Updegraff et al., 2005). Criteria for participation included: (a) mothers to self-identified as Mexican-origin; (b) a 7th grader was living in the home and was not learning disabled; (c) an older sibling was living in the home (in all but two cases, the older sibling was the next oldest child in the family); (d) biological mothers and biological or long-term adoptive fathers were living in the home (all non-biological fathers had been in the home for a minimum of 10 years); and (e) fathers were working for pay at least 20 hours/week. Most fathers (i.e., 93%) also were of Mexican origin. We recruited the participating families through five school districts and five parochial schools that served ethnically and linguistically diverse communities in a southwestern metropolitan area. There were 421 eligible families (23% of initial rosters; 32% of those contacted and screened for eligibility); 67% agreed to participate, 23% refused, and 10% were unreachable.

Based on the goals of the current study, we used data from Phases 1, 3, and 4 of the larger study (Phase 2 included only younger siblings' data). At the initial data collection (Phase 1), families represented a range of education and income levels, from poverty to upper class. The percentage of families that met federal poverty guidelines was 18.3%. Median family income was $40,000 (for two parents and an average of 3.79 children). Mothers and fathers had completed an average of 10 years of education ($M$ = 10.34; $SD$ = 3.74 for mothers, and $M$ = 9.88; $SD$ = 4.37 for fathers). Most parents were born outside the U.S. (71% of mothers and 69% of fathers), and 66% of mothers and 68% of fathers completed their interviews in Spanish. Youth were most likely to be born in the U.S. (62%), and most completed the interview in English (83%). Younger (51% female) and older (50% female) siblings were 12.77 ($SD$ = .58) and 15.70 ($SD$ = 1.60) years of age, respectively. The gender composition of sibling dyads was sister-sister ($n$ = 68), sister-brother ($n$ = 55), brother-sister ($n$ = 57), and brother-brother ($n$ = 66).

Interviews were conducted again five years later (i.e., Phase 3) when younger siblings were 17.72 years ($SD$ = .57) and older siblings were 20.65 years old ($SD$ = 1.57) and seven years later (i.e., Phase 4) years later when younger siblings were 19.60 ($SD$ = .66) and older siblings were 22.57 years of age ($SD$ = 1.57). At Phase 3, 54% of siblings were living together, and 88% of younger and 60% of older siblings were living with their parents. At Phase 4, 42% of siblings were living together, and 69% of younger and 56% of older siblings were living with their parents. Seventy-five percent ($n$ = 185 families; 180 mothers, 152 fathers, 153 older siblings, 173 younger siblings) of the families participated at Phase 3 and 70% ($n$ = 173 families; 162 mothers, 138 fathers, 152 older siblings, 161 younger siblings) of the families participated at Phase 4. At Phase 1, non-participating families at Phase 3 ($n$ = 61) and Phase 4 ($n$ = 73), compared to participating families, reported lower family SES (Phase 3: $M$ = -.32, $SD$ = .75 vs. $M$ = .10, $SD$ = .83; Phase 4: $M$ = -.36, $SD$ = .78 vs. $M$ = .14, $SD$ = .82); more children (Phase 3: $M$ = 4.19, $SD$ = 2.23 vs. $M$ = 3.65, $SD$ = 1.31; Phase 4: $M$ = 4.23, $SD$ = 2.18 vs. $M$ = 3.60, $SD$ = 1.25); and fewer maternal years

living in the U.S. (Phase 3: $M = 10.06$, $SD = 9.59$ vs. $M = 13.33$, $SD = 8.39$; Phase 4: $M = 10.42$, $SD = 9.14$ vs. $M = 13.35$, $SD = 8.59$).

## Procedures

Interviewers collected data during home interviews lasting an average of three hours for parents and two hours for youth. Bilingual interviewers conducted interviews individually using laptop computers in English or Spanish. Interviewers read all questions aloud to participants to account for variability in reading levels. We obtained informed consent or assent (youth under age 18) from all participants included in the study. Honorariums for each family were $100 at Phase 1 and $125 at Phase 3. At Phase 4, each family member received $75.

## Measures

We used data collected from mothers, fathers, and younger and older siblings. All measures were forward- and back-translated for local Mexican dialect and reviewed by a third translator. The research team resolved discrepancies.

**Romantic relationship experiences (Phases 3, 4)—**Siblings reported on romantic relationship experiences including dating relationship, sexual initiation, cohabitation, engagement, and marital status. Youth reported on their romantic relationship status with the following question, “Are you currently involved with a romantic partner (lasting at least 1 month) or engaged or married?” Youth reported on initiation of sex with the following question, “Have you ever had sexual intercourse?” We created the involvement in a dating relationship, sexual relations, cohabitation, and engagement/marriage variables by coding events as 0 = *no* or 1 = *yes*. Because of the small percentage of youth engaged or married (Phase 3 younger siblings: 1.7% engaged, 2.9% married; Phase 3 older siblings: 6.6% engaged, 9.2% married; Phase 4 younger siblings: 5.0% engaged, 6.2% married; Phase 4 older siblings: 10.8% engaged, 20.9% married), we combined the two to represent romantic relationships beyond dating relationships.

**Sibling modeling (Phase 3)—**We assessed younger siblings' modeling of their older siblings' behaviors with an 8-item measure developed by Whiteman, McHale, and Crouter (2007b). Younger siblings rated items such as “My older sibling sets an example for how I should behave,” using a 5-point scale (1 = *Never*, 5 = *Always*). Items were averaged with higher scores indicating greater modeling of older siblings' behaviors by younger siblings ($\alpha = .87$).

**Familism values (Phase 3)—**Family members rated their familism values using a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*) on 16-items (e.g., “Family provides a sense of security because they will always be there for you”) developed by Knight et al. (2010). We averaged items such that higher scores indicated greater familism values (mothers', fathers', and older and younger siblings' $\alpha = .77, .83, .88$, and .86, respectively).

**Background information and covariates (Phases 1, 3)—**Parents reported on number of children, family income, years of education, years in the U.S., and nativity status

of all family members. From Phase 1, using both siblings' gender, a measure of *dyad gender composition* was created (0 = *mixed-gender dyad*, 1 = *same-gender dyad*). Also from Phase 1, we created a measure of *sibling age spacing* (in years) by subtracting mothers' reports of older vs. young siblings' ages. Phase 3 *family SES* was a composite score created by standardizing mean levels of mothers' and fathers' education attainment and household income ($\alpha = .76$). A measure of *sibling residence* was created from younger and older siblings' reports of if they were living with their respective sibling (0 = *not residing together*, 1 = *co-residence*) at Phase 3.

## Plan of Analysis

To address our *first aim* of describing Mexican-origin siblings' romantic relationship experiences during late adolescence and young adulthood, we first examined the proportion of older and younger siblings who reported differing forms of romantic relationship involvement and then tested for variation in involvement as a function of sibling birth order, age, gender, and nativity using chi-squared analyses.

To address our *second aim* of examining the associations between older and younger siblings' involvement in romantic relationship experiences and the role of sibling (i.e., age and gender similarity, younger siblings' modeling) and cultural (i.e., familism values) factors in these associations, a series of probit path models were estimated. We estimated a model for each of the four dependent measures of younger siblings' relationship involvement (dating, sexual relations, cohabitation, and engagement/marriage at Phase 4). We used Mplus 7.3 (Muthén & Muthén, 1998-2014) with the weighted least squares and missing values estimator (WLSMV), including auxiliary variables from Phase 1 (i.e., family SES, total number of siblings, maternal years in the U.S., younger siblings' familism values) to improve estimation of missing data (Enders, 2010). Moderators and covariates were included in all models (see Figure 1). Nativity status (0 = *born in the U.S.*, 1 = *born in Mexico*), gender (0 = *males*, 1 = *females*), gender composition (0 = *mixed-gender dyad*, 1 = *same-gender dyad*), and sibling residence (0 = *not residing together*, 1 = *co-residence*) were dummy coded. We centered all other variables to reduce multicollinearity. Odds ratios (OR) were computed as the exponent of the beta coefficient ($e^x$) for all estimates. ORs reflect change in odds of a given outcome given a one-point change in the independent variable; OR = 1 indicates no change in odds, OR < 1 indicates reduced odds (e.g., OR = .80 means odds are reduced by 20% or 1/5), and OR > 1 indicates increased odds (e.g., OR = 1.80 means odds are increased by 80%, OR = 2 means odds are increased by 100%, or doubled). For parsimony, we examined correlations between potential covariates with any of the dependent variables to determine which to include in final models (Spector & Brannick, 2010). Significant covariates included younger siblings' nativity, gender, older siblings' gender, family SES, and sibling co-residence. We estimated the model including the full set of proposed covariates (available from first author) and the final model with only the significant covariates; the pattern of findings was the same in both models and thus we report results from the parsimonious models.

To test the moderating role of sibling (i.e., age and gender similarity, younger siblings' modeling) and cultural (i.e., younger siblings' familism values) factors, terms created by the

interaction of each potential moderator and older siblings' romantic relationship involvement (e.g., younger siblings' modeling X older siblings' dating relationship status) were included in the path models. The final models included only significant interactions, as retaining interactions that are not significant increases standard errors. We conducted follow up analyses for significant interactions as outlined by Aiken and West (1991), including testing for significant simple slopes for dichotomous moderators using multiple group models or +1 *SD* above and -1 *SD* below the mean for continuous moderators.

## Results

We organized the results around the research aims. We begin by describing Mexican-origin siblings' involvement in romantic relationship experiences during late adolescence and young adulthood (Aim 1; see Table 1). Then we present results pertaining to the second aim, namely longitudinal associations between older siblings' romantic relationship experiences at Phase 3 and younger siblings' at Phase 4 as well as variation by sibling and cultural factors. Table 2 shows descriptive statistics and bivariate correlations for all continuous variables.

### Describing Mexican-Origin Youth's Engagement in Romantic Relationship Experiences

Consistent with hypotheses, chi-squared analyses revealed that at age 18 (Phase 3), a higher proportion of male, as compared to female, younger siblings reported ever having sex (see Table 1). Additionally, a higher proportion of female younger siblings, compared to male younger siblings, reported being in a dating relationship, cohabitating, and being engaged or married. There were nativity differences at age 18 only for sexual relations, with a higher proportion of Mexico-born youth, as compared to U.S.-born, ever having sex. Further, at age 20 (Phase 4), a higher proportion of female and Mexico-born younger siblings, as compared to male and U.S.-born younger siblings, reported being engaged or married. There were no gender or nativity differences for younger siblings' relationship status. At age 21 (Phase 3), no gender or nativity differences emerged for older siblings. At age 23 (Phase 4), a higher proportion of female as compared to male older siblings, reported being in a dating relationship and being engaged/married. Furthermore, a higher proportion of U.S.-born older siblings, as compared to Mexico-born, reported having sexual relations. In contrast, a higher proportion of Mexico-born older siblings reported cohabiting and being engaged or married as compared to U.S.-born older siblings. Lastly, the proportion of youth involved in romantic relationship experiences increased over time. The only exception was that the proportion of older siblings in dating relationships was greater at age 21 (Phase 3) compared to age 23 (Phase 4).

### Associations between Older and Younger Siblings' Romantic Relationship Experiences

**Dating relationship—**This model explained a significant proportion of variance ($R^2$ = .17, $p$ = .03) for younger siblings' dating relationship status at age 20 (Phase 4; see Table 3, Model 1). As hypothesized, a positive association between older siblings' dating relationship status at age 21 (Phase 3) and younger siblings' relationship status at age 20 emerged. Specifically, having an older sibling in a dating relationship at age 21 was associated with a

42% increase in younger siblings' odds of being in a dating relationship two years later, at age 20. There were no significant moderators of this effect.

**Initiation of sex—**This model explained variance ($R^2$ = .33, $p$ = .06) in younger siblings' initiation of sex by age 20 (Phase 4; see Table 3, Model 2). Sibling modeling at Phase 3 was positively associated with later younger siblings' later sexual initiation. Consistent with hypotheses, however, this main effect was qualified by a significant interaction between older siblings' initiation of sex by age 21 (Phase 3) and sibling modeling (Phase 3). Tests of the simple slopes indicated that under conditions of high levels of sibling modeling, older siblings' sexual initiation by age 21 was associated with a 1260% increase in younger siblings' odds of initiation of sex by age 20 (two years later), Logit $b$ = 2.61, $SE$ = 1.18, $p$ = .03; OR = 13.60. Conversely, there was no association under conditions of low levels of sibling modeling, Logit $b$ = -3.41, $SE$ = 2.07, $p$ = .10; OR = .03.

**Cohabitation—**This model explained a significant proportion of variance ($R^2$ = .22, $p$ = .004) in younger siblings' cohabitation status at age 20 (Phase 4; see Table 3, Model 3). In support of our hypothesis, older siblings' cohabitation at age 21 (Phase 3) was associated with 39% greater odds of younger siblings' cohabitation two years later at age 20. Younger siblings' familism values, however, moderated this effect. Inconsistent with our hypothesis, follow-up tests revealed that when younger siblings reported low familism values, those with an older sibling who was cohabitating at age 21 had a 1035% increase in the odds of cohabitation two years later at age 20 (Phase 4), Logit $b$ = 2.43, $SE$ = 1.05, $p$ = .02; OR = 11.36. Under conditions of high familism values, there was no association, Logit $b$ = -.22, $SE$ = .96, *ns*; OR = .80.

**Engaged/married—**This model explained a significant proportion of variance ($R^2$ = .76, $p$ = .006) in younger siblings' engagement/marital status at age 20 (Phase 4; see Table 3, Model 4). There was a main effect of gender, such that younger sisters and younger siblings with older sisters had 34% and 37% greater odds, respectively, of being engaged or married at age 20 compared to younger brothers or younger siblings with older brothers, respectively. Higher family SES was associated with a 30% decrease in odds of being engaged or married at age 20. Younger siblings who were age 18 and resided with their older sibling had 27% showed decreased odds of being engaged or married two years later at age 20. Sibling age spacing moderated the association between older siblings' engagement/marital status at age 21 and younger siblings' status two years later at age 20. Consistent with hypotheses, the follow-up analyses revealed that when siblings were closer in age (< 1.5 years), older siblings being engaged or married at age 21 was associated with a 1013% increase in the odds of younger siblings being engaged or married two years later, $b$ = 2.41, $SE$ = 1.06, $p$ = .02; OR = 11.13. There was no association for those with greater age spacing, $b$ = .23, $SE$ = 1.28, *ns*; OR = 1.26.

## Discussion

Research has highlighted the importance of youth's involvement in romantic relationships as a developmental task of adolescence and young adulthood (Roisman et al., 2004). Also well documented is the significance of family experiences for individuals' later romantic

relationship development (Bryant & Conger, 2002). Yet, we know little about contributions of the family beyond the parent-child relationship, including the potential importance of *siblings* for youth's development of romantic relationships (Bryant & Conger, 2002; Conger & Little, 2010). Informed by social learning (Bandura, 1977) and cultural-ecological (García Coll et al., 1996) perspectives, this study advanced the current literature in three important ways. First, we examined romantic relationship experiences among Mexican-origin youth, who are a large, young, and growing ethnic minority group in the U.S. (Pew Hispanic Center, 2013) that has been relatively absent from the normative developmental literature on romantic relationships (Bryant, 2006). Second, we examined five domains of romantic relationship involvement (i.e., dating, sex, cohabitation, engagement, and marriage) across a critical transition period from adolescence to young adulthood (Roisman et al., 2004). Finally, we studied key aspects of Mexican-origin youth's cultural (i.e., familism values) and sibling relationship (i.e., sibling behavior, modeling, gender and age similarity) contexts, and provided one of the first empirical examinations of the unique role of older siblings' romantic relationship experiences for those of younger siblings. We found age, gender, and nativity differences in youth's involvement in dating relationships, sexual relations, cohabitation, and engagement/marriage. Supporting social learning principles, older siblings' experiences were longitudinally related to and explained a moderate to large amount of variance in younger siblings' romantic relationship experiences. These “sibling influences,” however, depended on sibling structure, modeling, and familism values.

## Describing Mexican-Origin Youth's Experiences in the Domain of Romantic Relationships

Our descriptive results support the idea that youth increase their involvement in behaviors related to romantic relationships (i.e., greater proportion of involvement in dating, sexual relations, cohabitation, engagement, and marriage) from late adolescence to young adulthood. The only exception was older siblings' greater involvement in dating relationships at age 21 than age 23; a pattern that may be the result of a larger number of older siblings being engaged or married by age 23. Across all domains of romantic relationship experiences we examined, youth reported higher levels of involvement in young adulthood (i.e., older siblings at age 23) compared to late adolescence (i.e., younger siblings at age 18), including a moderate difference in dating relationships (48% versus 62%), a large difference in sexual relations (54% versus 89%), a moderate difference in cohabitation (9% versus 36%), and a moderate difference in being engaged/married (5% versus 32%). By age 23, about two-thirds of youth were in dating relationships; the majority had initiated sexual relations, and a smaller percentage had begun to cohabitate, become engaged, or marry.

Notably, rates for dating relationship status and sexual initiation were consistently lower in this sample than in prior work, whereas rates for cohabitation and marriage were similar for women. In a Mexican-origin sample drawn from the same geographic region as the current sample, but of lower economic status and not necessarily two-parent families, on average, close to 80% of Mexican-origin adolescents reported being involved in a romantic relationship at age 17 (Tyrell et al., 2015); national findings suggest about 70% of 18 year olds are involved in romantic relationships (Carver et al., 2003). National data also suggest that, for the majority of youth, sexual onset is likely to occur during adolescence (74% of Latino young adults report having had sex as a teen; Pew Research Center, 2009; 64% of

high school seniors; CDC, 2013). These differences may reflect sampling differences between studies with Mexican-origin youth, such as socioeconomic differences (Tyrell et al., 2015) or differences in study design (Carver et al., 2003; CDC, 2013; Pew Research Center, 2009), both of which could partially explain variability in involvement rates. Conversely, involvement rates for women for cohabitation and marriage in this sample were similar to data from a nationally representative sample of young women (Amato et al., 2008). These patterns also reflect national trends suggesting that cohabitation is common and often precedes marriage in young adulthood (Rose-Greenland & Smock, 2013). Taken together, the pattern suggests the need for future studies to examine individual and contextual factors that contribute to romantic relationship experiences. Overall, however, the findings are consistent with the idea that traditional Mexican cultural norms and values support the delay of dating and sexual initiation in favor of committed romantic relationships (Cauce & Domenech-Rodríguez, 2002).

Results also revealed moderating effects for gender and nativity for some but not all domains of relationship involvement. In contrast with a study of Mexican American adolescents (ages 12-17; Tyrell et al., 2015), we found gender differences in involvement in dating relationships at ages 18 and 23, with a greater proportion of females than males in relationships. This might suggest that, as youth move into late adolescence and young adulthood, women begin to focus on romantic relationships more so than men, with the ultimate goal of family formation. This notion is consistent with literature on traditional Mexican gender roles that emphasize the importance of couple relationships for women (Cauce & Domenech-Rodríguez, 2002). Yet, we did not find differences by nativity (not examined in Tyrell et al., 2015). These findings add to the limited literature on Latino youth's romantic relationship experiences and suggest the need for future research to examine the role of gender role attitudes in youth's involvement in romantic relationship experiences.

Turning to sexual experiences, in late adolescence (age 18), gender and nativity differences were evident, with significantly more male and Mexico-born youth than female and U.S.-born youth reporting ever having sex. At age 23, there were also nativity differences, such that a greater proportion of U.S.-born youth report ever having sex than Mexico-born youth. Data from the CDC (2013), in contrast, indicate no gender differences for high school seniors who have had sex (65% of males; 63% of females). Thus, the gender difference in sexual initiation among Mexican-origin females in this study is striking. Our findings are consistent, however, with work on Latinos suggesting that girls experience stronger gender-related socialization about sexual involvement and the use of stricter parental controls as compared to boys (Cauce & Domenech- Rodríguez, 2002; Raffaelli & Iturbide, 2009). Furthermore, the nativity differences at age 18 were novel given that Latino immigrant youth (as compared to U.S.- born counterparts) were less likely to engage in sex in a national sample (i.e., Add Health; Raffaelli et al., 2012). Of note, our findings for youth at age 23 mirror previous findings. The discrepant findings for adolescent females and U.S.-born youth may reflect sample differences such as variation related to Latino subethnic group differences (i.e., the current study included only Mexican-origin youth of varying generational status and the national sample study included multiple Latino subgroups) or

data collection method relating to self-presentation (e.g., anonymous surveys vs home interviews).

Lastly, we found nativity and gender differences in proportions of youth who were cohabiting and engaged or married during this developmental period. Consistent with Pew Hispanic Center (2013) findings that native-born Mexicans in the U.S. are more likely to be married than U.S.-born Mexicans (58% vs. 34%), the Mexico-born young adults (ages 20, 23) in our sample were more likely to be engaged or married than U.S.-born young adults. In addition, at age 23, a greater proportion of Mexico-born youth than U.S.-born youth were cohabiting. It is possible that Mexican-origin youth, as compared to U.S.-born youth, place more importance on families or procreation. This pattern is noteworthy given the overall delays in marriage trends nationally (U.S. Census Bureau, 2014a); in contrast, Latino youth, in general, marry several years younger than the national average (26 versus 28 years, respectively), and Mexico-born youth in the current sample marrying even earlier in young adulthood. Moreover, the finding of a greater proportion of young women than men reported cohabiting (age 18) and being involved in engaged/marital (ages 18, 20, 23) relationships may reflect an emphasis placed on women's roles related to family formation/responsibilities within Mexican culture (Cauce & Domenech-Rodríguez, 2002). Together, these descriptive findings highlight the importance of studying patterns *within e*thnic groups, thereby acknowledging the heterogeneity that exists within samples of Mexican-origin adolescents and young adults in their romantic relationship experiences. Our findings underscore the importance of gender and nativity, and suggest the need for additional research that identifies other factors that account for variation within this population in youth's romantic and sexual relationships.

### Social Learning Processes, Culture, and Romantic Relationships

In general, our findings underscore the important role of older siblings' romantic relationship experiences as these relate to their younger sisters' and brothers' romantic involvement in young adulthood. For example, controlling for individual, family, and sociocultural factors, a large main effect indicated that, if older siblings were in a romantic relationship at about age 21, younger siblings were more likely to be in a romantic relationship at about age 20. This effect suggested that Mexican-origin youth's sibling context accounted for a moderate amount of variance in younger siblings' romantic relationship status at age 20. Consistent with social learning/modeling processes (Bandura, 1977), youth may profit from the opportunity to observe their older siblings' romantic relationship experiences and see the benefits in well-being that come with being in a romantic relationship (Kamp Dush & Amato, 2005), thus making it more likely that they will seek out a romantic partner. Additionally, siblings in young adulthood frequently disclose to one another about their romantic relationship experiences (Dolgin & Lindsay, 1999). Younger siblings, more so than older siblings, are more likely to disclose information and to receive advice from older siblings (Dolgin & Lindsey, 1999). Therefore, older siblings who have romantic partners may give their younger siblings advice about relationships and encourage their involvement, resulting in similarities between siblings.

The associations between older and younger siblings' romantic relationship experiences also differed based on domain of romantic relationship experience and were moderated by structural and relational/cultural factors: Social learning dynamics involving sibling characteristics, modeling, and endorsement of familism values emerged as conditions under which connections between older and younger siblings' romantic relationship experiences arose. For example, results for the likelihood of being engaged or married accounted for a large portion of variance and were consistent with social learning tenets. Specifically, when siblings were closer in age and older siblings were engaged or married by about age 21, younger siblings were more likely to be engaged or married in young adulthood (age 20). These findings are consistent with the social learning tenet that individuals are more likely to model others who are most similar to themselves (i.e., close in age). Alternatively, siblings who are closer in age may be experiencing these transitions at the same time (Conger & Little, 2010). Making these transitions at the same time may increase closeness among siblings as they can relate to one another via shared life experiences. Nevertheless, young adults in this study were several years younger than both the overall and Latino national norms for age at first marriage for both women and men, norms that do not consider birth order; thus, older siblings' early entry into marriage may be particularly significant.

Results for the likelihood of ever having sex also showed that our targeted predictors also yielded a large effect size, and supported social learning explanations of sibling similarity: When youth reported greater modeling of their older siblings, older siblings' sexual initiation predicted a higher likelihood of younger siblings' sexual initiation in young adulthood. These findings are consistent with social learning principles as well as our previous work showing that, under conditions of high levels of modeling, older siblings' risky sexual behaviors helped to explain younger siblings' sexual risk (Whiteman et al., 2014b). Additionally, recent work shows that, for siblings close in age, modeling was associated with younger siblings sharing more friends with their older brothers and sisters (Whiteman et al., 2014a). As such, older siblings introducing their younger siblings to potential sexual partners (Whiteman et al., 2009) may enhance sibling similarities. Interestingly, when youth reported lower levels of modeling, older siblings' sexual initiation was associated with a *lower* likelihood of youth's sexual initiation by age 20. This pattern may reflect the process of differentiation as another pathway of influence. Specifically, younger siblings who report lower levels of modeling may also de-identify or try to be different from their older siblings (Whiteman et al., 2014a). In this way, younger siblings may learn from their older siblings' potentially negative sexual experiences and make different choices in an effort to avoid similar negative outcomes (East, Slonim, Horn, Trinh, & Reyes, 2009). Future research would benefit from increased attention to processes of differentiation as well as documenting the valence of siblings' sexual experiences.

The results for cohabitation revealed moderate effect sizes and underscored the importance of cultural context: The role of older siblings' experiences differed as a function of younger siblings' endorsement of the cultural value of familism. Specifically, when youth reported low familism values, they were more likely to cohabit in young adulthood when older siblings cohabited, but for youth with higher familism values, their older siblings' cohabitation did not predict their own. In addition to seeing their older siblings' cohabiting relationship as an option for themselves, youth's low familism values may reflect weak

family attachment (Cauce & Domenech-Rodríguez, 2002), making younger siblings less inclined to remain in their family home. Moreover, because they may not endorse traditional views regarding family such as the importance of marriage as an institution and the expectation of marriage preceding cohabitation, youth may instead choose to cohabit with a partner, especially when their older sibling is in a cohabiting relationship.

At the most general level, our findings are consistent with the idea that older siblings play a role in their younger siblings' romantic relationship experiences. For younger siblings' romantic relationship status and likelihood of being engaged or married, results documenting direct associations between older and younger siblings were consistent with social learning processes. For the likelihood of sexual debut and cohabiting, context also was important (Knight et al., 2010). Specifically, younger siblings' reports of modeling were significant moderates of the links between older and younger siblings' sexual involvement. For cohabitation, in contrast, familism values played a moderating role. Together, these findings point to the importance of older siblings' romantic relationship experiences for those of Mexican-origin adolescents' and young adults' romantic relationship experiences and they underscore the significance of social learning dynamics and relational and cultural *context* in understanding these associations.

## Limitations and Directions for Future Research

To our knowledge, this study was the first to examine older siblings' role in young siblings' romantic relationship experiences across the transition from adolescence to adulthood. However, it is important to interpret the results of this study with its limitations in mind. First, we only examined the associations between older and younger siblings' relationship experiences across a two-year period. Future research should continue to examine the role of older siblings throughout young adulthood and investigate links with other non-traditional siblings (e.g., cousins, stepsiblings) and family transitions (e.g., childbearing and divorce). Furthermore, because of the correlational nature of our study, we were not able to make any conclusions about the causal nature of the associations we examined. It would be important for future research, for example, to examine changes in older and younger siblings' relationship experiences over time for a better understanding of these linkages. Second, self-reported modeling only moderated older siblings' roles in sexual initiation, but not in other romantic relationship experiences. Thus, our measure of sibling modeling, in general, may not have captured behaviors specific to romantic relationship experiences. Future research should include a more specific measure of modeling siblings' romantic relationship experiences, rather than a general measure as we used in our study. Third, once older siblings leave the home, contact between siblings becomes more voluntary (Conger & Little, 2010), and some youth may be unaware of their older brothers' and sisters' experiences, introducing greater variability into the sibling modeling process. Including frequency of sibling contact, relationship maintenance behaviors, and disclosure as processes that may help to account for sibling modeling and, in turn, lead to sibling similarities, is an important next step. Fourth, the sample for this study included youth who grew up in predominantly married, two-parent households with at least two siblings. Though a large percentage of Mexican-origin family households in the U.S. include two parents (65%; U.S. Census

Bureau, 2014b), it is important for future research to examine sibling influence processes in other family structures (e.g., single-parent families).

## Conclusion

Romantic relationships provide both immediate and long-term benefits to individuals (Kamp Dush & Amato, 2005; Reis et al., 2000), yet little is known about romantic relationship experiences of Mexican-origin youth in late adolescence and young adulthood, a large and rapidly growing population in the U.S. (U.S. Census Bureau, 2014b). Our findings that more Mexican-origin young men than women reported ever having sex and that women and individuals born in Mexico were more likely to be cohabiting, engaged, or married compared to men and individuals born in the U.S. may reflect the importance of traditional gender roles and cultural values in youth's romantic relationship experiences. Moreover, we found that, controlling for a range of individual and background characteristics, older siblings' involvement predicted younger siblings' romantic relationship status, sexual initiation, cohabitation, and engagement/marriage over a two year period, but that these linkages varied as a function of social learning dynamics (e.g., reflected in age spacing; siblings' reports of modeling) and familism values. As such, psycho-educational programs aimed at supporting transitions to adulthood for Mexican-origin youth should capitalize on the potential power of older siblings as role models and sources of support as youth are making the transition into adulthood. For instance, older siblings have relationship experiences and can offer advice, especially when they have close relationships, are closer in age, and have stronger familism values. Beyond their role as models, older siblings can also serve as foils to help younger sisters and brothers learn from their experiences and improve their own romantic relationship experiences. Future research should continue to examine the *processes through which* growing up with an older sibling in Mexican-origin families has implications for later romantic relationship formation, a central task during young adulthood.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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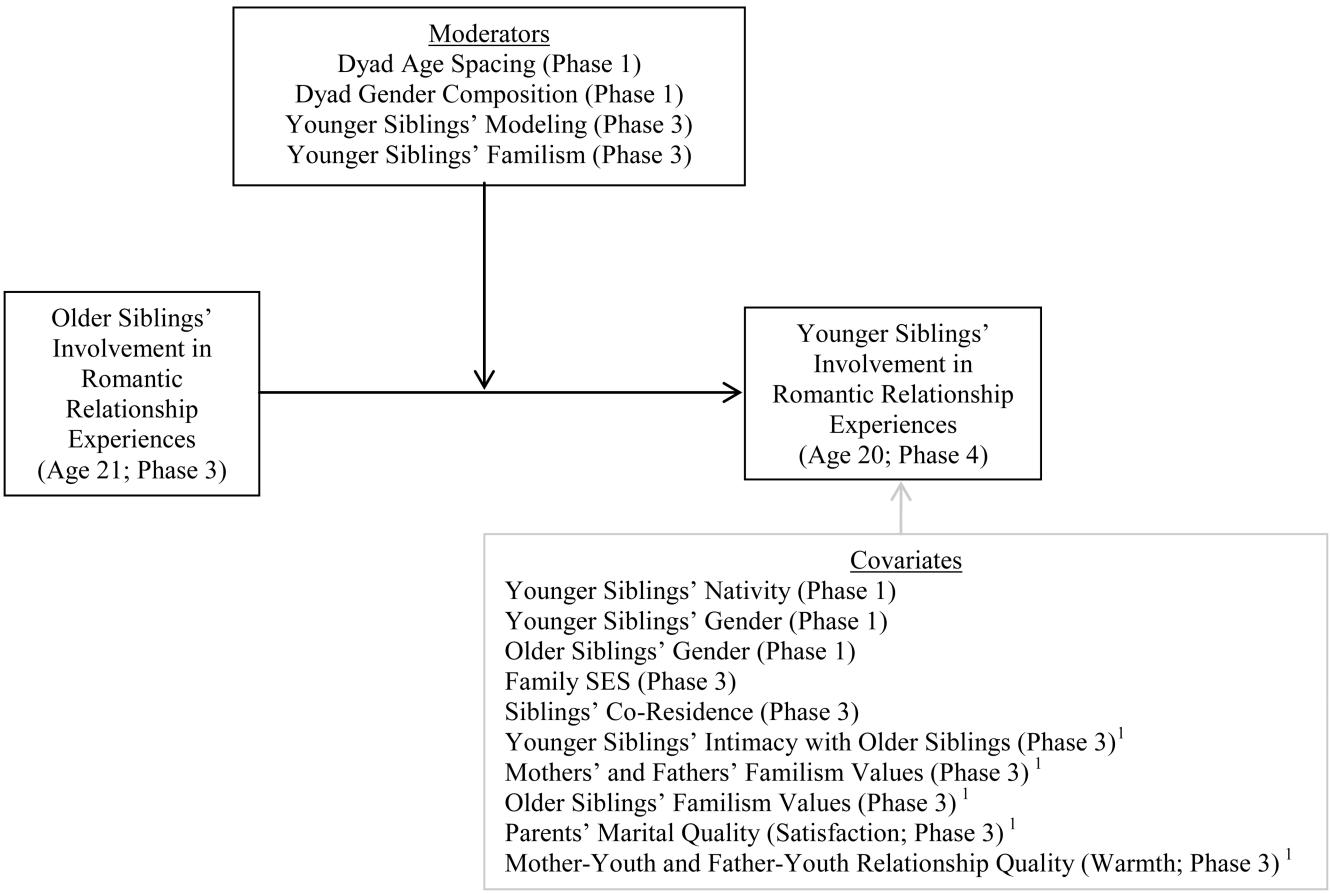


**Figure 1. Conceptual model of older siblings as role models for younger siblings' involvement in romantic relationship experiences with variation by the sibling context after accounting for the greater family context**

*Note*. [1]Not included in final parsimonious model presented, as these covariates were not significantly related to the dependent variables.

**Table 1**

**Proportion of Respondents Involved in Romantic Relationship Experiences by Age, Gender, Nativity**

| | Age 18 (Phase 3; Younger Siblings; *n* = 173) | | | | | Age 20 (Phase 4; Younger Siblings; *n* = 161) | | | | | Age 21 (Phase 3; Older Siblings; *n* = 152) | | | | | Age 23 (Phase 4; Older Siblings; *n* = 148) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Variables** | **F** | **M** | **UB** | **MB** | **FS** | **F** | **M** | **UB** | **MB** | **FS** | **F** | **M** | **UB** | **MB** | **FS** | **F** | **M** | **UB** | **MB** | **FS** |
| Dating | 54.3$^{a}$ | 40.0$^{b}$ | 43.6 | 56.1 | 47.7$^{e}$ | 62.7 | 51.3 | 44.8 | 60.7 | 57.1$^{f}$ | 72.2 | 60.3 | 62.9 | 71.4 | 66.4$^{e}$ | 72.7$^{a}$ | 50.7$^{b}$ | 60.9 | 63.9 | 62.2$^{f}$ |
| Sexual relations | 44.2$^{a}$ | 64.8$^{b}$ | 50.0$^{c}$ | 60.4$^{d}$ | 53.5$^{e}$ | 73.0 | 85.3 | 78.7 | 79.2 | 78.9$^{f}$ | 79.4 | 84.1 | 83.5 | 79.3 | 81.8$^{e}$ | 88.6 | 88.7 | 93.2$^{c}$ | 82.8$^{d}$ | 88.6$^{f}$ |
| Cohabit | 12.8$^{a}$ | 3.8$^{b}$ | 6.9 | 12.3 | 8.7$^{e}$ | 19.3 | 17.9 | 16.2 | 23.2 | 18.6$^{f}$ | 34.2 | 24.7 | 25.8 | 34.9 | 29.6$^{e}$ | 40.3 | 31.0 | 28.7$^{c}$ | 45.9$^{d}$ | 35.8$^{f}$ |
| Engaged/ married | 7.4$^{a}$ | 1.3$^{b}$ | 3.4 | 7.0 | 4.6$^{e}$ | 16.9$^{a}$ | 5.1$^{b}$ | 6.7$^{c}$ | 19.6$^{d}$ | 11.2$^{f}$ | 20.3 | 11.0 | 14.6 | 17.5 | 15.8$^{e}$ | 41.6$^{a}$ | 21.1$^{b}$ | 26.4$^{c}$ | 39.3$^{d}$ | 31.8$^{f}$ |

*Note*. F = female youth. M = male youth. UB = U.S.-born youth. MB = Mexico-born youth. FS = full sample. Proportions identified by sequential superscripts within a row and age group are significantly different. Φ can be interpreted as a measure of effect size; values of .1 - .3 are considered a small to medium effects, .3 - .5 medium to large effects and > .5 large to very large effects (Cohen, 1992).

$^{a,b}$Gender differences (chi-square tests): *Age 18*: dating relationship status, $\chi^2(1) = 3.52$, $p = .061$, $\Phi = .14$; initiation of sexual relations, $\chi^2(1) = 6.64$, $p = .010$, $\Phi = .21$; cohabitation, $\chi^2(1) = 4.36$, $p = .037$, $\Phi = .16$; engaged/married, $\chi^2(1) = 3.78$, $p = .052$, $\Phi = .15$. *Age 20*: initiation of sexual relations, $\chi^2(1) = 3.23$, $p = .072$, $\Phi = .15$; engaged/married, $\chi^2(1) = 5.58$, $p = .018$, $\Phi = .19$. *Age 23*: dating relationship status, $\chi^2(1) = 7.62$, $p = .006$, $\Phi = .23$; engaged/married, $\chi^2(1) = 7.12$, $p = .008$, $\Phi = .22$.

$^{c,d}$Nativity differences (chi-square tests): *Age 20*: engaged/married, $\chi^2(1) = 6.19$, $p = .013$, $\Phi = .20$. *Age 23*: initiation of sexual relations, $\chi^2(1) = 3.55$, $p = .060$, $\Phi = .16$; cohabitation, $\chi^2(1) = 4.60$, $p = .032$, $\Phi = .18$; engaged/married, $\chi^2(1) = 2.76$, $p = .097$, $\Phi = .14$.

$^{e,f}$Age differences (e.g., age 18 compared to age 20 for younger siblings): *Younger siblings*: dating relationship status, $\chi^2(1) = 10.27$, $p = .001$, $\Phi = .27$; initiation of sexual relations, $\chi^2(1) = 29.46$, $p = .000$, $\Phi = .49$; cohabitation, $\chi^2(1) = 5.23$, $p = .022$, $\Phi = .19$; engaged/married, $\chi^2(1) = 8.21$, $p = .004$, $\Phi = .24$. *Older siblings*: dating relationship status, $\chi^2(1) = 13.87$, $p = .000$, $\Phi = .33$; initiation of sexual relations, $\chi^2(1) = 32.15$, $p = .000$, $\Phi = .55$; cohabitation, $\chi^2(1) = 27.52$, $p = .000$, $\Phi = .47$; engaged/married, $\chi^2(1) = 20.25$, $p = .000$, $\Phi = .40$.

**Table 2**

**Correlations, Means, and Standard Deviations for Study Variables (N = 246 families)**

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. YS nativity | - | | | | | | | | | | | | | | | | |
| 2. YS gender | -.06 | - | | | | | | | | | | | | | | | |
| 3. OS gender | .09 | .14 | - | | | | | | | | | | | | | | |
| 4. Family SES (P3) | -.38* | .11 | .14 | - | | | | | | | | | | | | | |
| 5. Sibling residence (P3) | .19 | .03 | -.03 | .03 | - | | | | | | | | | | | | |
| 6. Sibling age spacing (years) | -.17* | -.10 | .10 | .09 | -.18* | - | | | | | | | | | | | |
| 7. Dyad gender composition | -.07 | -.00 | .03 | -.04 | .02 | -.01 | - | | | | | | | | | | |
| 8. YS modeling (P3) | .06 | .26* | .20* | .20* | -.20† | .06 | .11 | - | | | | | | | | | |
| 9. YS familism values (P3) | -.19† | .11 | -.01 | .12 | -.09 | .09 | -.03 | .21* | - | | | | | | | | |
| 10. OS dating (P3) | .13 | -.01 | .20 | -.09 | -.37* | .07 | -.19 | .14 | -.07 | - | | | | | | | |
| 11. OS sexual relations (P3) | .00 | -.08 | -.11 | .07 | -.43* | .30† | -.14 | -.09 | -.03 | .54* | - | | | | | | |
| 12. OS cohabit (P3) | .13 | .07 | .17 | -.16 | -.59* | .33* | -.26* | -.05 | -.11 | .86* | .71* | - | | | | | |
| 13. OS engaged/ married (P3) | .23 | .06 | .24 | -.07 | -.39* | .17 | -.24† | -.01 | -.01 | .72* | .56† | .70* | - | | | | |
| 14. YS dating (P4) | .09 | .18 | .01 | -.04 | .07 | -.03 | .07 | -.13 | -.11 | .41* | .02 | .07 | -.06 | - | | | |
| 15. YS sexual relations (P4) | .01 | -.27† | .07 | .03 | .03 | .15 | -.19 | -.24* | -.21 | .37* | .18 | .03 | -.07 | .48* | - | | |
| 16. YS cohabit (P4) | .16 | .03 | -.06 | -.15 | -.09 | -.13 | -.09 | -.08 | -.07 | .74† | .30 | .37* | .21 | .83* | .39* | - | |
| 17. YS engaged/ married (P4) | .38* | .40* | .29† | -.39* | -.34* | -.09 | -.16 | -.19 | .00 | .49* | .42 | .53* | .36† | .73* | .07 | .66* | - |
| *M*/Proportion (for response = 1) | .38 | .51 | .50 | .00 | .54 | 2.94 | .55 | 2.89 | 4.14 | .66 | .82 | .30 | .16 | .57 | .79 | .19 | .11 |
| *SD* | | | | .75 | | 1.55 | | .83 | .47 | | | | | | | | |

*Note*. YS = younger sibling. OS = older sibling. SES = socioeconomic status. Nativity: 0 = U.S. born, 1 = Mexico born. Gender: 0 = males, 1 = females. Sibling residence: 0 = not residing together, 1 = co-residence = 1. Dyad gender composition: 0 = mixed gender, 1 = same gender. Romantic relationship experiences: 0 = no, 1 = yes.

† $p < .10$.

* $p < .05$.

**Table 3**

**Results of Probit Analyses for Younger Siblings' Involvement in Romantic Relationship Experiences at Age 20 (N = 246 families)**

| | Phase 4 Dating Relationship (Model 1) | | | | Phase 4 Initiation of Sexual Relations (Model 2) | | | | Phase 4 Cohabitation (Model 3) | | | | Phase 4 Engagement/ Marriage (Model 4) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Variables** | ***b*** | ***SE*** | ***β*** | ***OR*** | ***b*** | ***SE*** | ***β*** | ***OR*** | ***b*** | ***SE*** | ***β*** | ***OR*** | ***b*** | ***SE*** | ***β*** | ***OR*** |
| *Covariates* | | | | | | | | | | | | | | | | |
| YS nativity (Mexico born = 1) | .10 | .23 | .05 | 1.05 | -.05 | .28 | -.02 | .98 | .21 | .24 | .10 | 1.10 | .41 | .28 | .20 | 1.22 |
| YS gender (females = 1) | .38* | .19 | .19 | 1.21 | -.30 | .23 | -.15 | .86 | -.05 | .25 | -.03 | .97 | .59* | .27 | .30 | 1.34 |
| OS gender (females = 1) | -.07 | .20 | -.03 | .97 | .21 | .24 | .11 | 1.11 | -.18 | .25 | -.09 | .91 | .63* | .28 | .31 | 1.37 |
| Family SES (P3) | .04 | .15 | .03 | 1.03 | .13 | .18 | .10 | 1.10 | -.02 | .19 | -.01 | .99 | -.47* | .22 | -.35 | .70 |
| Sibling residence (co-residence = 1; P3) | .18 | .21 | .09 | 1.09 | .25 | .28 | .13 | 1.13 | .04 | .27 | .02 | 1.02 | -.64* | .28 | -.32 | .73 |
| *Moderators* | | | | | | | | | | | | | | | | |
| Sibling age spacing (in years) | .00 | .06 | .00 | 1.00 | .08 | .08 | .12 | 1.13 | -.14† | .07 | -.21 | .81 | .09 | .11 | .14 | 1.14 |
| Dyad gender composition (same = 1) | -.00 | .20 | -.00 | 1.00 | -.28 | .23 | -.14 | .87 | -.05 | .23 | -.03 | .97 | -.37 | .27 | -.18 | .83 |
| YS modeling (P3) | -.22 | .14 | -.18 | .84 | -1.26* | .51 | -1.05 | .35 | -.10 | .15 | -.08 | .92 | -.30 | .24 | -.25 | .78 |
| YS familism values (P3) | -.12 | .26 | -.06 | .94 | -.26 | .36 | -.12 | .89 | .48† | .28 | .23 | 1.26 | .02 | .31 | .01 | 1.01 |
| *Independent Variable* | | | | | | | | | | | | | | | | |
| OS romantic experience[1] (P3) | .75* | .21 | .35 | 1.42 | .12 | .30 | .05 | 1.05 | .71* | .30 | .33 | 1.39 | .43 | .41 | .16 | 1.17 |
| *Interaction Terms* | | | | | | | | | | | | | | | | |
| OS sexual initiation X YS modeling | | | | | 1.28* | .65 | .95 | 2.59 | | | | | | | | |
| OS cohabitation X YS familism | | | | | | | | | -1.38* | .44 | -.37 | .69 | | | | |
| OS engagement/marriage X age spacing | | | | | | | | | | | | | -.77* | .33 | -.53 | .59 |
| $R^2$ | .17* | .08 | - | | .33‡ | .17 | - | | .22* | .07 | - | | .76* | .27 | - | |
| Adjusted $R^2$ | .12 | | | | .28 | | | | .16 | | | | .75 | | | |

*Note.*

[1]Refers to the outcome of interest as indicated in the title of the model column. YS = younger siblings. OS = older siblings. P3 = Phase 3. $R^2$ and adjusted $R^2$ can be interpreted as measures of effect size; values of .02 - .13 are considered a small to medium effects, .13 - .26, medium to large effects and > .26, large to very large effects (Cohen, 1992).

† $p < .10$.

‡ $p = .06$.

* $p < .05$.