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Longitudinal Associations among Parental Acceptance, Familism Values, and Sibling Intimacy in Mexican-Origin Families

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Abstract

Prospective associations among parent-adolescent acceptance and familism values in early and middle adolescence and sibling intimacy in late adolescence and young adulthood were assessed in 246 Mexican-origin families. Older sibling gender and sibling gender constellation were investigated as moderators of these associations. Sibling intimacy was stable over time and younger siblings with older sisters reported higher levels of sibling intimacy than those with older brothers. As predicted, stronger familism values were associated with greater sibling intimacy, but this link was evident only for older sisters and for girl-girl dyads. The links from mother- and father-acceptance to sibling intimacy also depended on the gender constellation of the sibling dyad: higher levels of maternal warmth were associated with greater sibling intimacy for older sisters and girl-girl sibling pairs but higher levels of paternal warmth were linked to greater sibling intimacy only for older siblings in mixed-gender sibling dyads. Findings are consistent with prior research on the role of gender in family relationships but extend this work to encompass the effects of both parents' and siblings' gender, as well as the role of sociocultural values in parents' socialization influences.

Keywords

Adolescence; familism values; Mexican-origin families; parent-adolescent relationship quality; sibling intimacy; young adulthood

Siblings are important sources of emotional support in late adolescence and young adulthood (Kim, McHale, Osgood, & Crouter, 2006; Tucker, Barber, & Eccles, 2001), and strong emotional ties between siblings are linked to psychosocial and physical health benefits in adulthood (Cicirelli, 1995). A body of research identifies parent-child relationship qualities and family dynamics that are associated with the development of emotionally close sibling relationships in primarily European American families (McHale, Updegraff, & Whiteman, 2012). A smaller group of studies focused on ethnic minority families in the U.S. documents the role of cultural values in the development of close and supportive sibling relationships (see Updegraff, McHale, Killoren, & Rodríguez, 2010, for a review). The present study contributed to research on sibling relationships by examining how parent-adolescent relationship qualities and familism values in early and middle adolescence were linked to siblings' intimacy (i.e., support, emotional closeness, advice and guidance) in late adolescence and young adulthood in a sample of predominantly immigrant Mexican-origin families.

There are at least three important reasons to investigate the predictors of sibling intimacy in late adolescence and young adulthood in Mexican-origin families. First, siblings are central figures in the lives of Mexican-origin youth, who grow up with more siblings than youth from other cultural groups (U.S. Census Bureau, 2013), and who spend substantial time together (Updegraff, McHale, Whiteman, Thayer, & Delgado, 2005). Second, in the context of immigration to the U.S., Mexican-origin siblings may be primary sources of information and support as youth transition from adolescence to young adulthood, because siblings are likely to have knowledge of U.S. culture norms and settings (e.g., education, romantic relationships) to which parents are less privy (Updegraff et al., 2010). Third, research on Mexican-origin families emphasizes their strong values regarding family interdependence and support (Sabogal, Marín, Otero-Sabogal, Vanoss Marín, & Perez-Stable, 1987); thus, identifying the correlates of close sibling relationships may be particularly important in this cultural context.

These demographic trends and family cultural dynamics, coupled with limited research on normative family and developmental processes among ethnic minority youth (McLoyd, 1998; Umaña-Taylor, 2009), led us to address three study goals. Drawing on a family systems perspective and social learning processes, our first goal was to examine mother- and father-adolescent acceptance in early and middle adolescence as predictors of sibling intimacy in late adolescence and young adulthood. With data from Mexican-origin sibling pairs, we examined these associations from early to late adolescence for younger siblings and from middle adolescence to young adulthood for older siblings. Grounded in ecological and sociocultural perspectives, our second goal was to examine familism values in early and middle adolescence as a predictor of sibling intimacy in late adolescence and young adulthood. Our final goal was to test older sibling gender and sibling gender constellation as moderators of these associations.

Links from Parent-Adolescent Acceptance to Sibling Intimacy

A family systems perspective (Cox & Paley, 1997; Minuchin, 1974) provides an overarching framework for our first goal of examining parent-adolescent acceptance as a predictor of

sibling intimacy during late adolescence and young adulthood. From this perspective, families are comprised of interrelated subsystems (e.g., parent-child, sibling, marriage), which are embedded within the larger family context (Cox & Paley, 1997; Minuchin, 1974). A family systems perspective directs attention to linkages between subsystems—such as the connections between parent-child and sibling relationships (Cox & Paley, 1997).

A social learning perspective was the basis for our hypotheses about the associations between parent-adolescent acceptance and sibling intimacy. Social learning theorists propose that individuals generalize behaviors that are learned and practiced in a particular setting (Bandura, 1977). Thus, youth may apply the social interactional styles learned in relationships with parents to their sibling exchanges. Consistent with this perspective are associations between parent-child acceptance and both emotional closeness and prosocial behavior in European American families (e.g., Brody, Stoneman, & McCoy, 1994; Kim et al., 2006).

An important contribution of this study is attention to how mothers' and fathers' acceptance may be differentially linked to sibling intimacy, given that fathers' roles have been neglected relative to mothers' in research on ethnic minority and immigrant families (Parke & Buriel, 2006). Among European American families, Kim and colleagues (2006) found that maternal acceptance (but not paternal acceptance) covaried with sibling intimacy over time. The authors explained that youth might be more sensitive to changes in maternal acceptance due to mothers' primary caregiver role. Similar associations may emerge in Mexican-origin families because of the emphasis on traditional gender roles and mothers' greater involvement in parenting and caregiving responsibilities as compared to fathers' (Cauce & Domenech-Rodríguez, 2002). Alternatively, given the importance placed on family values in this cultural group (Sabogal et al., 1987), fathers may play a significant role in sibling intimacy within Mexican-origin families. Thus, we tested whether acceptance from *both* mothers *and* fathers, as measured in early and middle adolescence, predicted sibling intimacy in late adolescence and young adulthood. We expected that maternal acceptance would be more strongly linked to sibling intimacy than paternal acceptance.

Social learning research on modeling processes highlights that observational learning varies as a function of the characteristics of the model, such that imitation is more likely when models are high in status and when their characteristics are more similar to those of the learner (Bandura, 1977). Findings from a study of family influences on gender development (McHale, Updegraff, Helms-Erikson, & Crouter, 2001) were consistent with these principles in showing that older siblings were more likely to model the qualities of their parents than to model the qualities of their younger siblings, whereas younger siblings were more likely to model the qualities of their older siblings than those of their parents. This pattern led us to predict that, in the context of the present study, we would find stronger links between parent-youth acceptance and sibling intimacy for older as compared to younger siblings.

The Role of Familism Values in Sibling Intimacy

The recognition that sibling relationships must be understood within the larger cultural context in which they are embedded (Weisner, 1993) was the basis for our second goal: to

investigate whether siblings' familism values in early and middle adolescence predicted sibling intimacy in late adolescence and young adulthood. Familism values, defined as an emphasis on emotional support and interdependence among family members, are a key feature of Mexican culture (Cauce & Domenech-Rodríguez, 2002; Sabogal et al., 1987). Investigators have proposed that strong familism values may enhance youth's human and social capital, which in turn, are linked to more positive family relationships and individual well-being (Fuligni, Tseng, & Lam, 1999; Updegraff et al., 2005). Prior cross-sectional work with Latino youth shows that familism values are associated with family relationships, such that stronger familism values were associated with more positive relationship quality (Fuligni et al., 1999). Using data from the first phase of the present study, we also documented cross-sectional associations between youth's familism values and their reports of sibling intimacy (Updegraff et al., 2005). Accordingly, we anticipated that strong familism values in early and middle adolescence would be linked to closer sibling relationships in late adolescence and young adulthood.

The Moderating Role of Older Sibling Gender and Sibling Gender Constellation

A substantial body of research reveals that sibling gender and gender constellation of the sibling dyad have implications for sibling relationship qualities and for parenting and family dynamics (Kim et al., 2006; McHale, Crouter, & Whiteman, 2003). In Mexican-origin families, there is evidence that gender is a particularly salient feature of family life and plays a role in shaping family relationship dynamics and family roles and responsibilities (Azmitia & Brown, 2002; Valenzuela, 1999). Thus, our third goal was to test older sibling gender and sibling dyad gender constellation as moderators of the links from parent-adolescent acceptance and familism values in early and middle adolescence to sibling intimacy in late adolescence and young adulthood.

Moderating Role of Older Sibling Gender.

Social learning theory and research on gender and cultural socialization guided our expectations that older sibling gender would moderate links from parent-adolescent acceptance and familism values to sibling intimacy. As noted, social learning theorists argue that individuals are more likely to imitate models who are similar to them (Bandura, 1977). Consequently, there may be a stronger association between *maternal* acceptance and sibling intimacy for dyads that include sisters and between *paternal* acceptance and sibling intimacy for dyads that include brothers. Research on gender and cultural socialization has provided evidence that girls place greater emphasis on relationship ties (Maccoby, 1998; Valenzuela, 1999); have more intimate interpersonal relationships (Galambos, Berenbaum, & McHale, 2009), are more likely to serve as sources of support, advice, and information (Tucker, Barber, & Eccles, 1997); and spend more time with family and have more family responsibilities (e.g., kin-keeping, caregiving) than do boys (Fuligni & Masten, 2010; Valenzuela, 1999). Older sisters, in particular, are likely to take on family responsibilities, such as caregiving for younger siblings (Zukow-Goldring, 2002). Thus, we expected that the associations linking both parental acceptance and familism values to sibling intimacy would be stronger in families with sisters than with brothers.

Moderating Role of Sibling Gender Constellation.

We also considered whether sibling gender constellation (i.e., girl-girl, boy-boy, and mixed-gender dyads) moderated the associations between parent-adolescent and sibling relationship qualities. Prior work with European American (Kim et al., 2006) and Dutch families (Derkman, Engels, Kuntsche, van der Vorst, & Scholte, 2011) failed to detect differences in the linkages between parent-adolescent and sibling relationship qualities as a function of the gender constellation of the sibling dyad. Sibling gender constellation may be particularly important in Mexican-origin families, however, because of the salience of gender in family relationships and dynamics (Cauce & Domenech-Rodríguez, 2002). Based on the social learning principle (Bandura, 1977) that individuals are more likely to imitate models who share their characteristics, we expected that the links between maternal acceptance and sibling intimacy would be stronger for girl-girl as compared to mixed-gender and boy-boy pairs. Similarly, we expected that paternal acceptance would be most strongly associated with sibling intimacy in boy-boy pairs versus mixed-gender and girl-girl dyads. We also explored the potential moderation of gender constellation on the link between familism values and later sibling intimacy. Given prior work suggesting that girls place more emphasis on relationship ties than boys (Valenzuela, 1999) and have stronger orientations to family and greater family responsibilities (Fuligni & Masten, 2010; Zukow-Goldring, 2002), we expected stronger associations between familism values and sibling intimacy for girl-girl dyads as compared to mixed-gender and boy-boy dyads. Importantly, this study extends prior cross-sectional findings (Updegraff et al., 2005) by examining these relations across time.

The Present Study

In sum, this study addressed three goals: (a) to examine the associations between mother- and father-adolescent acceptance in early (younger siblings) and middle adolescence (older siblings) with sibling intimacy in late adolescence (younger siblings) and young adulthood (older siblings); (b) to investigate familism values in early and middle adolescence as a predictor of sibling intimacy in late adolescence and young adulthood; and (c) to test the moderating roles of older sibling gender and sibling dyad gender constellation on the links from parental acceptance and familism values to sibling relationship intimacy. We anticipated that associations between maternal (compared to paternal) acceptance and sibling intimacy would be stronger, especially for older siblings. Further, we hypothesized stronger links between maternal acceptance and sibling intimacy for dyads with older sisters, and for girl-girl dyads, and between paternal acceptance and sibling intimacy for dyads with older brothers and for boy-boy dyads. Moreover, we expected that familism values in early and middle adolescence would be positively associated with sibling intimacy five years later (i.e., late adolescence and young adulthood), especially for dyads including older sisters and for girl-girl dyads. We included sibling intimacy in early and middle adolescence to examine the role of parental acceptance and youth familism values in sibling intimacy in late adolescence and young adulthood, beyond the stability in sibling intimacy.

Method

Participants

The data came from a longitudinal study of 246 Mexican-origin families recruited from a southwestern metropolitan area (Updegraff et al., 2005). Criteria for participation at Phase 1 were as follows: (1) mothers were of Mexican origin; (2) a 7th grader and older sibling was living in the home and not learning disabled; (3) biological mothers and biological or long-term adoptive fathers lived at home (all non-biological fathers had been in the home for a minimum of 10 years); and (4) fathers worked at least 20 hours/week. Most fathers (i.e., 93%) also were of Mexican origin.

To recruit families, letters and brochures describing the goals of the study (in Spanish and English) were sent to families with Latino 7th graders in public and parochial schools. Follow-up telephone calls were conducted by bilingual staff to determine each family's eligibility and interest in participating in the project. A total of 1,851 letters were sent to families of Latino origin with a seventh grader, but for 396 families, the contact information was incorrect and repeated attempts to find updated information were unsuccessful; an additional 146 families refused to be screened for eligibility. Eligible families included 421 families (31% we contacted and screened), and 284 of these families (67%) agreed to participate in the study, 95 (23%) refused, and 42 families (10%) moved before we completed the recruitment process. Those who agreed but did not participate in the final sample ($n = 38$) were families that we were unable to locate or with whom we were unable to complete a home interview after repeated attempts. A total of 246 families participated at Phase 1.

At Phase 1 (P1), 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%, a figure similar to the 18.6% of two-parent Mexican-origin families living in poverty in the county from which the sample was drawn (U.S. Census Bureau, 2000). 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. Thirty-eight percent of younger siblings and 47% of older siblings were born outside the U.S., and 83% of younger siblings and 82% of older siblings were interviewed in English. Younger siblings and older siblings were 12.55 ($SD = .58$) and 15.49 ($SD = 1.57$) years of age, respectively, at P1. The average age spacing between siblings was 2.96 years ($SD = 1.63$). The breakdown of the gender composition of sibling dyads was as follows: girl-girl dyads ($n = 68$), girl-boy dyads ($n = 55$), boy-girl dyads ($n = 57$), and boy-boy dyads ($n = 66$).

Interviews were conducted again five years later (referred to here as Phase 2; P2) when younger siblings were 17.72 years of age ($SD = .57$) and older siblings were 20.65 years of age ($SD = 1.57$); over 75% of the families participated ($n = 185$), a rate comparable to other studies that include Mexican-origin families (e.g., Fuligni & Witkow, 2004). Those who did not participate could not be located ($n = 44$), had moved to Mexico ($n = 2$), or refused to

participate ($n = 15$). Non-participating families at P2 ($n = 61$) compared to participating families reported significantly lower income at P1 ($M = \$37,632$; $SD = \$28,606$ and $M = \$59,517$; $SD = \$48,395$ for non-participants and participating families) and lower maternal education ($M = 9.48$; $SD = 3.45$ and $M = 10.62$; $SD = 3.80$ for non-participants and participating families), but otherwise did not differ from participating families in demographic characteristics. We controlled for family socioeconomic status (a composite of parent education and family income) in our analyses to account for differences in participating and non-participating families.

Procedures

Data were collected during home interviews at P1 and P2, which lasted an average of three hours for parents and two hours for youth. Interviews were conducted individually using laptop computers by bilingual interviewers in English or Spanish. All questions were read aloud to participants to account for any potential variability in reading levels.

Measures

We used information 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. Discrepancies were resolved by the research team.

Background information (P1).—Parents reported on family income, years of education, nativity status of all family members, and number of years living in the U.S. Family socioeconomic status (SES) was a composite score created by standardizing and averaging mothers' and fathers' educational attainment and household income, after transforming income ($\alpha = .76$). Youth gender was dummy coded as 0 = males and 1 = females. Sibling dyad gender composition was dummy coded as two variables with the girl-girl dyads being the reference category: (1) *boy-boy dyads versus girl-girl dyads*, coded as 1 = boy-boy dyads; 0 = girl-girl dyads, 0 = mixed-gender dyads; and (2) *mixed-gender dyads versus girl-girl dyads*, coded as 1 = mixed-gender dyads; 0 = girl-girl dyads, 0 = boy-boy dyads.

Parental acceptance (P1).—Mothers and fathers rated their acceptance with older and younger siblings (at separate points in the interview) using the 8-item acceptance subscale of the Children's Reports of the Parent Behavior Inventory (CRPBI; Schwarz, Barton-Henry, & Pruzinsky, 1985) at P1. A sample item is "I speak to (child's name) in a warm and friendly voice." Items were rated on a scale ranging from 1 (*Almost never*) to 5 (*Almost always*) with higher scores indicating greater acceptance. Cronbach's alphas were .84 and .82 for mothers' reports of older and younger siblings, respectively, and .86 and .81 for fathers' reports of older and siblings, respectively.

Familism values (P1).—Older and younger siblings rated their familism values using a 16-item scale developed by Knight et al. (2010) for Mexican-origin adolescents and adults. The familism scale captures three aspects of familism: a) family support and closeness (e.g., "It is important for family members to show their love and affection to one another"); b) family obligation, (e.g., "If a relative is having a hard time financially, you should help them out if you can"); and c) family as referent (e.g., "It is important to work hard and do your

best because your work reflects on the family”). Adolescents rated items using a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Cronbach’s alphas for older and younger siblings were .90 and .87, respectively.

Sibling intimacy (P1 and P2).—The 8-item *intimacy* subscale was created by Blyth and Foster-Clark (1987). Older and younger siblings reported on levels of intimacy (i.e., emotional closeness, support, advice and guidance) in their relationship at P1 and P2. A sample item is “How much do you go to (sibling’s name) for advice or support?” Cronbach’s alphas were .83 and .81 for older and younger siblings at P1, and .82 and .86 for older and younger siblings at P2.

Results

To test the hypothesized associations predicting sibling intimacy in late adolescence and young adulthood, we estimated two sets of models: (a) the first set included the main effects of mother and father acceptance and youth familism values at P1 predicting sibling intimacy at P2 (i.e., goals 1 and 2), and (b) the second set included multiple group models to test for moderation effects of older sibling gender and gender constellation of the sibling dyad (i.e., goal 3). We included data for both younger and older siblings in the same path analysis models using Mplus 6.11 (Muthén & Muthén, 2008-2010) and adjusted for the clustered nature of the data as described below. Full information maximum likelihood (FIML) estimation was used in all models. Model fit was assessed with the chi-square statistic, standardized root mean square residual (SRMR = .08), root mean square error of approximation (RMSEA = .08), and the comparative fit index (CFI = .95). Together, these fit indices provide a good assessment of the fit of models with our sample size ($N < 250$; Hu & Bentler, 1999).

Means, standard deviations, and correlations are in Table 1. Preliminary analyses revealed substantial stability, overall, in sibling intimacy across five years, $r = .45$ and $r = .37$ for older and younger siblings, respectively, in the face of a mean level increase in intimacy over time (older siblings: $t(135) = 2.52$, $p < .05$; younger siblings: $t(150) = 2.56$, $p < .05$). Further, female younger siblings reported the highest mean levels of sibling intimacy at P1 and both older and younger sisters scored higher in intimacy than brothers at P2 (see Table 1).

Goals 1 and 2: Predicting Sibling Intimacy in Late Adolescence and Young Adulthood

In addressing the first and second goals, the main effects model included the following P1 independent variables separately for older and younger siblings: (a) individual-level predictors: mothers’ and fathers’ reports of acceptance with youth, and youth’s familism values; (b) individual-level covariate: sibling intimacy at P1; and (c) family-level covariates: family SES and sibling gender constellation (i.e., two dummy codes with girl-girl dyads as the reference group). The dependent variable was P2 sibling intimacy. To correct for the clustered nature of the data (i.e., two siblings nested within families), the models were estimated with the following: (a) all of the independent variables were allowed to correlate, and (b) the disturbance terms of older and younger siblings’ P2 dependent variables were correlated. We begin by discussing findings for older siblings and then discuss effects for

younger siblings (although both were included in the same analytic models). For ease of interpretation, the figure displaying the results shows the standardized path coefficients after accounting for the effects of all other paths in the model.

The fit of the main effects model was good (see Figure 1). The model accounted for significant variance in P2 sibling intimacy for older siblings, $R^2 = .24$, $p < .001$, and younger siblings, $R^2 = .30$, $p < .001$. For *older siblings*, sibling intimacy at P1 (i.e., middle adolescence) was significantly associated with sibling intimacy five years later in young adulthood. As hypothesized, P1 maternal acceptance and familism values were associated with increased sibling intimacy during young adulthood. Of note, the different pattern of associations for mothers' and fathers' acceptance with intimacy was not significantly different as tested by a chi-square difference test comparing a model with the paths from mothers' and fathers' acceptance to intimacy constrained to be equal to one another to a model with the paths freely estimated, $\chi^2(1) = 1.76$, *ns*. For the control variables, SES was associated with increased sibling intimacy, and girl-girl dyads reported more intimacy than boy-boy dyads. For *younger siblings*, sibling intimacy at P1 (i.e., early adolescence) was significantly associated with sibling intimacy in late adolescence (i.e., P2 for younger siblings). Replicating the findings for older siblings, SES was associated with increased sibling intimacy. Lastly, sibling gender constellation was associated with younger siblings' intimacy, such that girl-girl dyads reported more intimacy than boy-boy dyads.

Moderation by Older Sibling Gender and Sibling Gender Constellation

To address the moderating roles of older sibling gender and gender constellation of the sibling dyad (i.e., goal 3), we tested a series of multiple group path models, first assessing differences as a function of older sibling gender, and next assessing differences as a function of gender constellation of the sibling dyad (i.e., boy-boy dyads and mixed-gender dyads as compared to girl-girl dyads). These models included the same parameters and correlations as the main effects models (described above), except sibling gender constellation was removed from the model as a control variable. We tested for moderation by the grouping variable of interest when a path coefficient was significant for one group and not another group. Path coefficients were tested one at a time by comparing the fit of the model in which the path coefficient of interest was constrained to be equal across groups to the model in which they were free to vary across groups. Evidence of moderation is described below when the constrained model (e.g., equality constraints on a parameter across older siblings' gender) resulted in a significant change in the χ^2 , $p < .05$, and fit indices indicated that the unconstrained model fit significantly better than the constrained model (Kline, 1998).

Older Sibling Gender as a Moderator.—The unconstrained multiple group model testing older siblings' gender as a moderator had good fit, $\chi^2(16) = 21.92$, *ns*, CFI = .94, RMSEA = .06 (90% CI [.00, .11]), SRMR = .04. The model accounted for significant variance in sibling intimacy for older sisters ($R^2 = .27$, $p < .01$) and older brothers ($R^2 = .20$, $p < .05$) and for younger siblings with older sisters ($R^2 = .27$, $p < .01$) and younger siblings with older brothers ($R^2 = .17$, $p < .05$). For *older siblings*, older sibling gender moderated the link between mother-adolescent acceptance at P1 and sibling intimacy at P2, $\chi^2(1) = 4.29$, $p < .05$. This association was positive for older sisters, $\beta = .36$, $p < .01$, but not

significant for older brothers, $\beta = .01$, *ns*. The different pattern of associations for mothers' and fathers' acceptance with intimacy was not significantly different, $\chi^2(1) = .19$, *ns*. Older sibling gender also moderated the link between familism in middle adolescence and sibling intimacy in young adulthood, $\chi^2(1) = 3.80$, $p < .05$. Again, the association was significant and positive for older sisters, $\beta = .45$, $p < .01$, and non-significant for older brothers, $\beta = .09$, *ns*. Turning to *younger siblings*, older sibling gender moderated the P1-P2 sibling intimacy link, $\chi^2(1) = 4.19$, $p < .05$. Specifically, P1 and P2 intimacy scores were positively associated for younger siblings with older sisters, $\beta = .47$, $p < .001$, but non-significant for younger siblings with older brothers, $\beta = .14$, *ns*. No other significant moderation effects emerged for younger siblings.

Sibling Gender Constellation as a Moderator.—The unconstrained multiple group model testing gender constellation of the sibling dyad as a moderator had good fit, $\chi^2(24) = 25.67$, *ns*, CFI = .98, RMSEA = .03, (90% CI [.00, .10]), SRMR = .05. The model accounted for significant variance in sibling intimacy for older siblings in girl-girl dyads ($R^2 = .44$, $p < .001$) and mixed-gender dyads ($R^2 = .32$, $p < .01$), but not in boy-boy dyads ($R^2 = .15$, *ns*), and for younger siblings in girl-girl dyads ($R^2 = .35$, $p < .001$) and mixed-gender dyads ($R^2 = .19$, $p < .05$), but not in boy-boy dyads ($R^2 = .10$, *ns*). For *older siblings*, gender constellation moderated the link between mother-adolescent acceptance in middle adolescence and sibling intimacy in young adulthood, such that the boy-boy, $\chi^2(1) = 8.85$, $p < .01$, and mixed-gender dyads, $\chi^2(1) = 12.08$, $p < .01$, were significantly different from the girl-girl dyads. The association was positive and significant for girl-girl dyads, $\beta = .76$, $p < .001$, but not for boy-boy, $\beta = -.01$, *ns*, or mixed-gender dyads, $\beta = .04$, *ns*. Gender constellation also moderated the link between father-adolescent acceptance in middle adolescence and sibling intimacy during young adulthood, such that the mixed-gender dyads were significantly different from the girl-girl dyads, $\chi^2(1) = 8.04$, $p < .01$. The association was significant and positive for mixed-gender dyads, $\beta = .26$, $p < .05$, but not for girl-girl dyads, $\beta = -.22$, *ns*. A follow-up test of whether this moderation effect differed for boy-girl versus girl-boy dyads revealed no difference between these groups, $\chi^2(1) = 1.04$, *ns*. Lastly, gender constellation moderated the link between youth's familism in middle adolescence and sibling intimacy during young adulthood such that the mixed-gender dyads were significantly different from the girl-girl dyads, $\chi^2(1) = 4.99$, $p < .05$. The association was significant and positive for girl-girl dyads, $\beta = .58$, $p < .05$, but not for mixed-gender dyads, $\beta = .09$, *ns*. For *younger siblings*, no significant effects of moderation emerged.

Discussion

This study investigated how both mothers' and fathers' acceptance and youth's familism values in early and middle adolescence were associated with sibling intimacy in late adolescence and young adulthood and examined sibling characteristics as moderators of these associations. Our study is unique in that we considered how parent-adolescent relationships in early and middle adolescence predicted sibling intimacy in late adolescence and young adulthood, beyond the stability of sibling intimacy across a five-year period. In testing these associations, we drew on the perspectives of mothers and fathers and of older and younger siblings, and we focused on Mexican-origin youth, a young and rapidly

growing segment of the U.S. population (U.S. Census Bureau, 2013), about whom little is known regarding normative family processes (McLoyd, 1998; Umaña-Taylor, 2009). Our findings revealed complex associations that varied by sibling gender and gender constellation of the dyad.

An important contribution of our study was the focus on both maternal and paternal acceptance as predictors of sibling relationship quality in late adolescence and young adulthood. Our findings revealed that parent-adolescent acceptance was associated with sibling intimacy *only for older siblings* in this sample. That is, for older siblings we found some evidence that, when parents reported accepting and close relationships with them, those older siblings reported greater intimacy with their younger siblings five years later. In contrast, there were no associations between mothers' and fathers' reports of acceptance with younger siblings and younger siblings' ratings of intimacy with their older siblings. With respect to birth order, given the importance of the age hierarchy in Mexican-origin families (Keefe & Padilla, 1987), older siblings may be more likely to look to their parents as role models, whereas younger siblings may look up to older siblings. Such influence patterns were evident in prior research on modeling in European American families (McHale et al., 2001) and are consistent with social learning principles (Bandura, 1977). Additionally, further supporting the salience of the age hierarchy between siblings, younger siblings report greater sibling intimacy than older siblings (Kim et al., 2006) and are more likely to seek support and advice from older siblings than vice versa (Tucker et al., 1997), although this depends on the issues with which siblings need guidance (Tucker, McHale, & Crouter, 2001). Therefore, for older siblings to seek support and guidance from younger siblings, it may depend on the issue at hand as well as the hierarchical nature of their relationship.

Importantly, the associations between parental acceptance and sibling intimacy varied as a function of gender. *Maternal* acceptance was associated with sibling intimacy for older sisters, and particularly for older sisters with younger sisters. That is, when mothers reported higher levels of acceptance with older sisters in middle adolescence, older sisters reported closer relationships with their younger siblings in young adulthood. Further, when considering the role of gender constellation, associations between maternal acceptance and sibling closeness emerged for older sisters with younger sisters, but not for older sisters with younger brothers. Because girls are more relationship-oriented than boys (Maccoby, 1998), there may be greater relationship quality spillover for older sisters than older brothers. Also, girls are more likely to identify with and model the behaviors of their mothers than their fathers by virtue of their shared gender and warmer relationships (Bandura, 1977).

A different pattern emerged linking *paternal* acceptance to sibling intimacy: when fathers reported higher levels of acceptance in middle adolescence, older siblings in mixed-gender dyads reported closer sibling relationships five years later. Unlike mothers' acceptance, fathers' acceptance had implications for both boy-girl and girl-boy dyads. Having a son may pull fathers into being more involved within the sibling relationship, such that their level of acceptance influences both daughters and sons, but given girls' greater orientation to relationships, sisters may play a necessary role in orchestrating sibling intimacy. Further, fathers who exhibit high levels of warmth to older siblings in mixed-gender dyads may display *less* gender differentiated treatment of siblings, which in turn, may promote more

positive relationships between sisters and brothers. That is, gender dynamics in families with mixed-gender pairs and close father-older sibling relationships may reflect norms (e.g., more egalitarian relationships, less gender differentiated roles) that promote close brother-sister relationships. An important next step will be to directly examine mechanisms linking paternal and maternal acceptance to sibling intimacy in mixed-gender dyads. That neither maternal nor paternal acceptance accounted for boy-boy intimacy is an issue that requires further study. It may be that boys' greater autonomy and involvement in the world outside the home mitigates the effects of parental influences.

Taken together, findings linking maternal acceptance to older sisters' intimacy with younger sisters, and in contrast, paternal acceptance to older sisters' intimacy with younger brothers and older brothers' intimacy with younger sisters illustrates that family gender dynamics are highly nuanced. Researchers have noted quantitative and qualitative differences in the nature of mother-adolescent versus father-adolescent relationships (Crockett, Brown, Russell, & Shen, 2007; Parke & Buriel, 2006), and our findings suggest that the mechanisms linking acceptance and sibling closeness may be different for mothers versus fathers. Relationship linkages for maternal acceptance and girls' sibling intimacy and paternal acceptance and intimacy in mixed-gender sibling pairs are consistent with social learning theory. Findings for paternal acceptance and mixed-gender sibling pairs may be further explained by gender dynamics within the family. Furthermore, we were unable to identify correlates of close relationships between brothers. Given the emphasis on shared activities and interests as a basis for boys' relationships (Maccoby, 1998), it may be important to examine whether shared activities in family dyads (father-adolescent, boy-boy), rather than feelings of intimacy, promote close ties among boy-boy pairs in future work.

Turning to younger siblings, those with older sisters reported the highest levels of sibling intimacy in late adolescence, which is congruent with research on European American adolescent and young adult siblings (Kim et al., 2006; Stocker, Lanthier, & Furman, 1997). These findings are consistent with work showing that women and girls are more relationship-oriented (Maccoby, 1998) and that relationship intimacy is higher when dyads include a female partner (Galambos et al., 2009). Further, young women, more so than young men, have been shown to experience a sense of family obligation (Fuligni & Pedersen, 2002), provide daily assistance to the family and frequent caregiving of younger siblings (Zukow-Goldring, 2002), and spend leisure time with family members (Fuligni & Masten, 2010). All of these family dynamics may play into younger siblings' intimacy with their older sisters. Additionally, as younger siblings are progressing through adolescence, their older sisters may serve as sources of advice and support (Tucker et al., 1997), given older sisters' greater orientation to relationship intimacy and recent transition through the same developmental time period. This may be particularly true for Mexican-origin youth, who look to their older siblings when they need assistance in negotiating school and peer contexts, areas in which recent immigrant parents may be less knowledgeable (Updegraff et al., 2010).

In addition to investigating the roles of both mothers and fathers in adolescents' sibling relationships and building on prior cross-sectional work (Fuligni et al., 1999; Updegraff et al., 2005), we examined familism values as a predictor of sibling intimacy. After controlling

for P1 sibling intimacy, familism values positively predicted sibling intimacy in young adulthood, though only for older sisters. Concerning close sibling relationships, having an older sister who places high value on the importance of family appears to be beneficial for their younger siblings in late adolescence. Our findings further suggest that familism may impact sibling relationships differently for boy-boy and mixed-gender dyads compared to girl-girl dyads. For example, boys with high familism values may spend more time in shared activities with their siblings, stand up for their siblings more frequently, and show more loyalty towards their siblings than boys with low familism values. Examining *how* familism may impact boys' relationships with their siblings is an important next step.

Limitations and Future Directions

The limitations of our study provide directions for future research. First, our sample included two-parent Mexican-origin families living in the southwest, limiting the generalizability of our findings. Future research should examine interrelations among family relationships in different family structures and geographic locations. Second, we investigated associations between parent-adolescent and sibling relationship quality in late adolescence and young adulthood. Continuing to examine linkages among relationship qualities in Mexican-origin families later in development is important for understanding how family dynamics are linked over the life course. Third, we investigated mothers', fathers', and adolescents' perceptions of one dimension of parent-adolescent and sibling relationship ties. Examining other relationship qualities such as conflict, involvement, and disclosure is important for future work. Fourth, exploring the bidirectional nature of associations between parent-adolescent and sibling relationship qualities (Derkman et al., 2011), and how these associations unfold over time is a crucial next step in understanding siblings' roles in family dynamics.

In the face of these limitations, our study contributed to the literature in several ways. First, we found that relationships with parents in adolescence have implications for late adolescents'/young adults' relationships with their siblings, above and beyond stability in sibling relationship quality. Second, our results supported previous research showing that younger siblings with older sisters (compared to those with older brothers) reported the most intimate relationships. Third, our findings highlighted the contribution of familism values in sisters' intimacy. Finally, our study underscored the importance of including parent gender and sibling dyad gender constellation when investigating dyadic relationship qualities in Mexican-origin families.

Conclusion

As we have noted, Mexican-origin youth represent a young and rapidly growing segment of the U.S. population (U.S. Census Bureau, 2013), and a group for whom we know little about normative family processes or about longitudinal changes in family relationships (McLoyd, 1998; Umana-Taylor, 2009). An important step in building a foundation of knowledge regarding family dynamics within different cultural contexts is to understand how they change over key developmental periods. Our findings indicate the importance of gender (parent, older sibling, sibling dyad gender constellation) in the associations between parental acceptance in early/middle adolescence and sibling intimacy in late adolescence/young

adulthood. Additionally, older sisters' familism values during late adolescence fostered more intimate relationships with their younger siblings, particularly their sisters, in young adulthood. Future work should continue to investigate interdependence among Mexican-origin family relationships over the life course, with an emphasis on individual, family, and cultural characteristics that moderate these associations.

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Figure 1.

Main effects model with standardized coefficients (standard errors). Fit: $\chi^2(8) = 10.77$, *ns*; CFI = .97; RMSEA = .04, 90% CI [.00, .09]; SRMR = .02. Sibling gender constellation dummy codes (girl-girl dyads as the reference group): (1) *boy-boy dyads*, coded as 1 = boy-boy dyads; 0 = girl-girl dyads, 0 = mixed-gender dyads; and (2) *mixed-gender dyads*, coded as 1 = mixed-gender dyads; 0 = girl-girl dyads, 0 = boy-boy dyads.

†*p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

Table 1
Correlations and Descriptive Statistics of Younger and Older Siblings' Reports of Study Variables

Variables	1	2	3	4	5	6	7	8	9
1. P1 Family SES	-	.11	-.13*	.01	.05	.10	.09	.10	.23*
2. Youth gender	.04	-	-.62*	-.55*	-.02	.05	-.05	.27*	.25*
3. Boy-boy dyads	-.13*	-.61*	-	-.55*	.04	-.06	.03	-.20*	-.27*
4. Mixed-gender dyads	.01	.54*	-.55*	-	-.04	.03	.02	-.06	-.05
5. P1 Youth familism values	.08	.02	.03	.01	-	.21*	.26*	.16*	.14
6. P1 Maternal acceptance	.14*	.06	-.09	.06	.27*	-	.43*	.33*	.18*
7. P1 Paternal acceptance	.15*	-.04	-.00	.00	.33*	.49*	-	.31*	.20*
8. P1 sibling intimacy	.13*	.23*	-.22*	-.05	.21*	.38*	.34*	-	.46*
9. P2 sibling intimacy	.21*	.27*	-.20*	.00	.24*	.29*	.24*	.38*	-
<i>Mean (SD)</i>									
Older siblings	.00 (.83)	.50 (.50)	.27 (.44)	.46 (.50)	4.23 (.60)	4.32 (.60)	4.04 (.67)	3.30 (.78)	3.50 (.71)
Younger siblings	.00 (.83)	.51 (.50)	.27 (.44)	.46 (.50)	4.26 (.52)	4.32 (.57)	4.11 (.59)	3.37 (.73)	3.51 (.79)
Female older siblings	.03 (.87)	-	-	.45 (.50)	4.25 (.49)	4.31 (.62)	4.06 (.68)	3.48 (.82)	3.71 (.70)
Male older siblings	-.03 (.78)	-	.54 (.50)	.46 (.50)	4.22 (.69)	4.33 (.57)	4.03 (.66)	3.12 (.69)	3.31 (.65)
Female younger siblings	.09 (.85)	-	-	.46 (.50)	4.25 (.51)	4.32 (.58)	4.08 (.60)	3.56 (.72)	3.71 (.77)
Male younger siblings	-.10 (.63)	-	.55 (.50)	.45 (.50)	4.27 (.53)	4.32 (.55)	4.14 (.58)	3.17 (.68)	3.30 (.75)

Note. $N = 246$ families. Correlations for younger siblings are presented above diagonal and correlations for older siblings are presented below the diagonal. P1 = Phase 1; P2 = Phase 2. Gender: 0 = males, 1 = females. Sibling gender constellation dummy codes (girl-girl dyads as the reference group): (1) *boy-boy dyads*, coded as 1 = boy-boy dyads; 0 = girl-girl dyads; and (2) *mixed-gender dyads*, coded as 1 = mixed-gender dyads; 0 = girl-girl dyads, 0 = boy-boy dyads.

* $p < .05$.