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Adolescent Sibling Relationships in Mexican American Families: Exploring the Role of Familism

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Abstract

To address a significant gap in the literature on normative processes in minority families, the authors studied adolescents' sibling relationships in two-parent Mexican American families and explored connections between sibling relationship characteristics and familism. Participants were 246 adolescent Mexican American sibling pairs who participated in (a) home interviews during which adolescents described their sibling relationships and familism values and (b) a series of 7 nightly phone calls during which adolescents reported their daily activities, including time spent with siblings and family members. Siblings described their relationships as both intimate and conflictual, and daily activity data revealed that they spent an average of 17.2 hr per 7 days in shared activities. Sibling relationship qualities were linked to familism values and practices, and stronger patterns of association emerged for sisters than brothers. Discussion highlights the significance of studying the processes that underlie within-group variations among families of different cultural backgrounds.

Keywords

sibling relationships; Mexican American families; adolescence; familism

Sisters and brothers are a prominent part of family life in Mexican American households. According to U.S. census data, because of higher fertility rates and larger family sizes, Mexican American children grow up with more siblings than do their European American counterparts (U.S. Census Bureau, 2000). Further, a growing literature on the characteristics of Mexican American families highlights cultural values, beliefs, and practices that may promote close relationships between sisters and brothers. Specifically, an emphasis on family support and loyalty and on interdependence among family members, captured in the construct of *familismo* or familism and thought to characterize Mexican American family life (e.g., Baca Zinn, 1994; Caucé & Domenech-Rodríguez, 2002; Marín & Marín, 1991), means that sibling relationships may be an especially influential part of children's and adolescents' lives in this cultural setting.

In the face of their prominence in family life, the nature of sibling relationships in Mexican American families is an uncharted area of research. Mexican Americans comprise 67% of Latinos; they are the largest ethnic minority group in the United States today. Further, there has been a rapid growth in the Latino population in recent years, with a 188% increase between 1990 and 2000 (U.S. Census Bureau, 2000). Despite these demographic trends, estimates are that only 5% to 10% of published articles in family and developmental journals focus on Latino youth and families, and fewer than 2% of these investigations examine normative family and developmental processes (Hagen, Velissaris, & Nelson, 2004; McLoyd, 1998). Scholars in the area of minority youth and families also have called for ethnic-homogeneous designs (e.g., McLoyd, 1998), designs that promote understanding of the diversity of experiences within cultural groups and the cultural and ecological factors that give rise to within-group variations in family processes. The present study answers the call for research on normative family dynamics and analysis of within-group diversity among minority populations in its examination of Mexican American adolescents' sibling relationships. Specifically, the goals of this study were (a) to describe adolescents' sibling relationships in two-parent, Mexican American families as a function of family structure (e.g., sibling gender constellation) and cultural and background characteristics (e.g., parents' education, income, birthplace) and (b) to explore the links between sibling relationship characteristics and adolescents' familism.

Describing Mexican American Adolescents' Sibling Relationships

Our first goal was to provide descriptive information about adolescents' sibling relationships in two-parent Mexican American families. Relationships between sisters and brothers are emotionally intense (Dunn, 1993) and include both positive and negative affective experiences. Research conducted primarily on European American families consistently highlights the degree of emotional closeness and the extent of negativity or conflict as salient dimensions of the sibling relationship (Furman & Buhrmester, 1985; Stocker & McHale, 1992). Sisters' and brothers' temporal involvement, in contrast, is a less well studied dimension of sibling relationships but may be particularly important to consider in Mexican American families. Cross-cultural work has revealed that siblings are a salient part of children's social milieu across a range of cultural settings and that, in non-Western cultures, siblings spend significant amounts of time together when older siblings serve as caregivers (Weisner, 1989). Examinations of European American samples have documented that siblings are children's most frequent out-of-school companions in middle childhood (McHale & Crouter, 1996), and one time diary study reported that European American adolescent sibling pairs spend approximately 10 hr per week together (Tucker, 2004). Consistent with a cultural emphasis on family support and companionship (Baca Zinn, 1994; Cauce & Domenech-Rodríguez, 2002; Vega, 1990) and on the responsibilities of older siblings as caregivers (Valenzuela, 1999; Weisner, 1989), and research on European American families, this study described Mexican American adolescents' sibling relationships along three dimensions: intimacy, negativity/conflict, and temporal involvement.

Sibling relationship dynamics have been linked to the structural characteristics of the sibling dyad, including birth order, sibling age spacing, and sex constellation of the sibling dyad in European American families (e.g., Buhrmester, 1992). Sibling dyads that include older sisters and same-sex siblings, particularly sister-sister pairs, for example, are noted for higher levels of warmth and support relative to other dyads (e.g., Buhrmester, 1992). Findings on conflict are mixed, though some studies have suggested that brother-brother pairs fight most often in European American families (e.g., Cole & Kerns, 2001). Dyad constellation differences also may be apparent in Mexican American families, given the centrality of gender in Mexican family life (Cauce & Domenech-Rodríguez, 2002) as well as research on small samples of Mexican Americans that documents sex-typed sibling roles (Jaramillo & Zapata, 1987; Valenzuela, 1999). These patterns led us to our first hypothesis, that Mexican American

adolescents would spend more time with their same-sex siblings than with opposite-sex siblings and would report greater intimacy and less conflict with sisters as compared with brothers.

Central to our goal of describing Mexican American adolescents' sibling relationships was consideration of the cultural and ecological factors that are linked to within-group variability. Drawing on a cultural–ecological perspective (McAdoo, 1993), we considered both the cultural and socioeconomic background characteristics that may underlie relationship dynamics in ethnic minority families. We expected that siblings may be closer and spend more time together when families had closer ties to Mexican culture, given the emphasis on interdependence among family members (Marín & Marín, 1991; Vega, 1990). It is important to note, however, that the centrality of family relationships in Mexican American culture also may be attributed to economic disadvantage and marginalization (Baca Zinn, 1994). Economic disadvantage may foster tight family bonds when family members rely on one another for basic needs (Baca Zinn, 1994). We examined parents' immigration history, indexed in terms of place of birth and years living in the United States, and family income and parents' education as cultural and economic background characteristics that might be linked to sibling relationship characteristics. Our second hypothesis was that sibling relationships would be characterized by greater intimacy and involvement in families with close ties to Mexico and fewer economic resources.

Exploring the Links Between Familism and Sibling Relationship Quality

Our second goal was to explore the role of Mexican American adolescents' familism values and practices in their sibling relationship experiences, that is, to move beyond family structure and status characteristics to examine cultural processes that might explain variation in sibling experiences. Familism has been described as a key feature of Latino culture, in general, and Mexican American culture, in particular (Marín & Marín, 1991). Anecdotal writings on the importance of family support for Mexican Americans have been substantiated by a growing body of empirical work. Sabogal, Marín, Otero-Sabogal, Vanoss Marín, & Perez-Stable (1987), for example, found that, in comparison to individuals of European American descent, Latino adults, including those of Mexican origin, endorsed higher values of family support, obligations to family members, and using family members as referents. Within-group analyses of Latinos who differed in generation status revealed that values regarding family support did not differ across generations but that values regarding family obligations and the use of families as referents were stronger for Latino adults who were foreign born. Fuligni, Tseng, and Lam (1999) focused on an ethnically diverse sample of adolescents and documented that, in comparison to European American youth, Mexican American adolescents (as well as those from other Latino backgrounds and Asian descent) placed significantly greater value on family assistance, support, and future obligation. These findings were consistent across generation with one exception: Values regarding the importance of future assistance of family members were stronger in first-generation youth as compared with third-generation youth (Fuligni et al., 1999). In the present study, we examined the links between parents' birthplace and years in the United States and adolescents' familism to provide further information about within-group variations.

Investigators have noted that familism is a multidimensional construct that includes both values and behaviors (e.g., Baca Zinn, 1994; Sabogal et al., 1987). Familistic values emphasize family support, solidarity, and obligations, and familistic behaviors focus on involvement with nuclear and extended family. To index adolescents' familism values, the present study used a self-report measure that included items on emotional support, family obligations, and family members as referents. We also measured familism practices, operationalized as siblings' time spent in the company of parents and adult kin (e.g., uncle, grandmother).

A conceptual model of the role of familism in interpersonal relationship processes was proposed by Gaines, Ríos, and Buriel (1997) and suggests that each dyad member's familistic orientation contributes to positive affect and respect in the relationship. Fuligni et al.'s (1999) findings support this model, showing that adolescents' values about the importance of assisting and respecting family were associated with perceived cohesiveness with parents and siblings after controlling for adolescents' ethnicity. In the present study, our third hypothesis was that adolescents' familistic values would be associated with more harmonious and involved sibling relationships. Keefe (1984) identified high levels of visitation, close proximity, and regular interaction as familistic behaviors that characterized Latino families; accordingly, we tested a fourth hypothesis: that siblings' time spent with parents and adult kin would be linked to more positive and involved sibling relationships.

Comparing Sisters and Brothers

We expected that, given cultural norms with regard to gender, different patterns may emerge for sisters and brothers. Although characterizations of Mexican American families as rigidly traditional are inaccurate (e.g., Baca Zinn, 1994), there is evidence that gender is an organizing feature of family roles and responsibilities in the culture (e.g., Azmitia & Brown, 2002; Valenzuela, 1999) and may have implications for the differential socialization of sons and daughters. Valenzuela (1999), in a study of family settlement patterns, found that girls provided more assistance to families and assumed greater responsibilities than did boys. There is also some evidence that parents are more protective of daughters, restricting and monitoring their activities outside the home more than they do with sons (Azmitia & Brown, 2005). This pattern of greater emphasis on home life and family obligations for daughters led us to expect that girls would report higher levels of familistic values and practices than would boys and that there may be stronger associations between familism and sibling relationship qualities for girls.

In sum, our first goal was to provide descriptive information about Mexican American adolescents' sibling relationships, considering the role of sibling dyad characteristics and cultural and ecological factors. As part of this first goal, we hypothesized that same-sex sibling pairs would spend more time together and that adolescents with sisters would report greater intimacy and less conflict than would those with brothers (Hypothesis 1) and that siblings would be closer if parents were born in Mexico, had spent fewer years in the United States, and had more limited economic resources (Hypothesis 2). Our second goal was to explore the role of familism in an effort to consider how variability in cultural values is linked to sibling relationship dynamics. We anticipated that familistic values and behaviors would be associated with closer and more involved sibling relationships (Hypotheses 3 and 4). We considered whether different patterns may emerge for girls and boys and expected that familism may be more strongly linked to girls' sibling relationship qualities than to those of boys.

Method

Participants

The data came from a study of family socialization and adolescent development in Mexican American families. The 246 participating families were recruited through schools in and around a southwestern metropolitan area. Given the goal of the larger study—to examine normative family and gender role processes in Mexican American families with adolescents—criteria for participation were as follows: (a) mothers were of Mexican origin, (b) seventh graders were living in the home and were 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 lived at home (all nonbiological fathers had been in the home for a minimum of 10 years), and (e) fathers worked at least 20 hr per week. Most fathers (i.e., 93%) also were of Mexican origin.

Bilingual recruitment materials were developed in consultation with the project's Latino advisory board, which included parents and professionals in the community, and provided feedback on recruitment materials and strategies. To recruit families, letters and brochures describing the project (in both English and Spanish) were sent to families, and follow-up telephone calls were made by bilingual staff to determine each family's eligibility and interest in participation. Families' names were obtained from five school districts and five parochial schools. Schools were selected to represent a range of socioeconomic situations, with the proportion of students receiving free or reduced lunch varying from 8% to 82% across schools. Letters were sent to 1,851 families with a Hispanic seventh grader who was not learning disabled. For 438 families (24%), the contact information was incorrect, and repeated attempts to find updated information were unsuccessful. An additional 42 (2.4%) families moved between the time of the initial screening and final recruitment contact, and 8% refused to be screened. Eligible families included 21% of the initial rosters (and 29% of those we were able to screen); of those who were eligible, 75% agreed to participate and 64% completed interviews.

Families represented a range of education and income levels (from poverty to upper class). The percentage of families who met federal poverty guidelines was 18.3%, a figure similar to the 18.6% of two-parent Mexican American families living in poverty in the county from which the sample was drawn. The median family income was \$40,000 (for two parents and an average of 3.39 siblings). Mothers and fathers had completed an average of 10 years of education ($M = 10.34$, $SD = 3.74$, for mothers; $M = 9.88$, $SD = 4.37$, for fathers). Most parents had been born outside the United States (70%); this subset of parents had lived in the United States an average of 12.4 ($SD = 8.9$) years and 15.2 ($SD = 8.9$) years, for mothers and fathers, respectively. About two thirds of the parents were interviewed in Spanish. With respect to siblings, the sample included 68 sister-sister pairs, 55 sister-brother pairs, 57 brother-sister pairs, and 66 brother-brother pairs. The majority of siblings were full biological pairs ($n = 234$; 95%). The average spacing between siblings was $M = 2.96$ years ($SD = 1.63$, range = 1–9). The total number of siblings living in the household averaged 3.39 ($SD = 1.20$, range = 2–8). Older siblings were 15.7 ($SD = 1.6$) years old, on average, 47% had been born outside the United States, and 82% were interviewed in English. Their younger siblings averaged 12.8 ($SD = .58$) years of age, 38% had been born in Mexico, and 83% were interviewed in English.

Procedures

Data were collected using two procedures. First, in home interviews lasting an average of 3 hr for parents and 2 hr for adolescents, family members reported on their family relationships and cultural values and backgrounds. Interviews were conducted individually with laptop computers by bilingual interviewers; questions were read aloud because of variability in parents' and adolescents' reading levels.

During the 3 to 4 weeks following the home interviews, families were telephoned on seven occasions (5 weekday evenings and 2 weekend evenings) and reported on their activities during the day of the call; siblings participated in all seven calls, and parents participated in four calls each. Using a cued-recall strategy (McHale, Crouter, & Bartko, 1992), adolescents reported on their involvement in 86 daily activities, including how long each event lasted and who else participated. Pilot work was conducted to ensure that the phone call procedure captured the range of daily activities in which Mexican American families engaged. Ten families were excluded from analyses because of incomplete phone data. Families were paid a \$100 honorarium for their participation in the home interview and an additional \$100 for participating in phone interviews.

Measures

All measures were forward and back-translated into Spanish for Mexican dialect in the local area by two separate individuals. All final translations were reviewed, and discrepancies were resolved. Focus groups and pilot work were conducted to ensure the cross-ethnic and language equivalence of existing measures and the telephone procedure.

Background Information—Parents reported on their education, income, and immigration status.

Sibling Relationship Quality—Both siblings described their intimacy with the target sibling on an eight-item index (Blyth & Foster-Clark, 1987); items were rated on a 5-point scale ranging from 1 (*not at all*) to 5 (*very much*); higher scores signified greater intimacy. Cronbach's alphas were .83 and .85 for older siblings and .80 and .84 for younger siblings, in English and Spanish, respectively.

Sibling negativity was assessed with five items from Furman and Buhrmester's (1985) Network Relationship Inventory. Items were rated on a 5-point scale ranging from 1 (*not at all*) to 5 (*very much*); higher numbers indicated more negativity. Cronbach's alphas were .92 and .90 for older siblings and .89 and .87 for younger siblings, in English and Spanish, respectively.

Siblings' temporal involvement was measured by the number of minutes siblings participated in activities together across 7 days. Specifically, during the phone calls, siblings reported on the durations of, and companions in (e.g., target sibling, parents, extended family), their daily activities. The number of minutes siblings spent in activities together, regardless of who else was present, was aggregated across the seven calls to measure siblings' total temporal involvement. A second variable, siblings' dyadic time, was indexed by time spent in shared activities that involved only the sibling pair (no one else present). Siblings' reports of their total involvement and dyadic time were highly correlated, $r = .90$, $p < .001$, and $r = .83$, $p < .01$, respectively; therefore, average scores were created for the analyses. A square root transformation was applied to both variables to correct for skewness.

Familism—We included two measures of familism: siblings' self-reported familistic values and siblings' time spent with parents/adult kin. Older and younger siblings completed the 17-item Familism subscale of the Mexican American Enculturation/Acculturation Scale (MAAS; Knight et al., manuscript in preparation). This subscale includes three conceptual domains: (a) support/closeness (b) family obligations, and (c) family as referent. Five of the 17 items are from Sabogal et al. (1987) and the remaining items were developed through focus-group work with Mexican American parents and adolescents. This focus-group work was conducted with Mexican American families from different geographic locations (e.g., border towns and rural and metropolitan areas in the southwest). Families were asked to describe values specific to Mexican culture and provided input on specific items. Older and younger siblings rated the items on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*); items were averaged to create the scale scores. Cronbach's alphas were above .86. Older and younger siblings' reports of familism were correlated, $r = .19$, $p < .05$.

From the phone data, we calculated a measure of adult-kin–sibling time or time siblings spent in activities with one or both parents or an adult relative (e.g., grandparent, aunt, uncle, godparent). The two siblings' reports were highly correlated, $r = .90$, $p < .001$, and thus, an average sibling score was created. A square root transformation corrected for skewness.

Results

Results are organized around our two goals: (a) to describe sibling relationship characteristics of adolescents in two-parent Mexican American families and (b) to examine the connections between adolescents' familism and the qualities of their sibling relationships.

Describing Mexican American Adolescents' Sibling Relationships

Structural Family Characteristics—Our first step was to conduct a series of 2 (older sibling sex) $\times$ 2 (younger sibling sex) mixed-model analyses of covariance (ANCOVAs) with sibling as the within-subjects factor, siblings' reports of intimacy and conflict as dependent variables, and age spacing as a covariate. For the analyses of total temporal involvement and dyadic time, no within-subjects factor was included because we used siblings' average reports. Age spacing was included as a covariate given the range in this sample (i.e., 1 to 9 years). Tukey's follow-up tests were conducted using Bonferroni adjustment for Type I error. Effect sizes were calculated with the d statistic for between-group comparisons; $d = .20$ is a small effect, $d = .50$ is a moderate effect, and $d = .80$ is a large effect (Cohen, 1988). We used ϵ to index effect sizes for within-subjects and mixed-model effects; these are interpreted similarly to Pearson's r (Cohen, 1988). For descriptive purposes, unadjusted means and standard deviations by sibling sex constellation are shown in Table 1.

Intimacy: Siblings reported moderately high levels of sibling intimacy, averaging 3.33 ($SD = 0.64$) on a 5-point scale. We found main effects for both older and younger siblings' sex, $F(1, 241) = 9.59, p < .01, \epsilon = .19$, and $F(1, 241) = 19.76, p < .001, \epsilon = .25$, respectively; on average, siblings reported closer relationships when the dyad included a sister.

Negativity: With respect to siblings' reports of negativity, ratings were slightly above the scale midpoint, averaging 3.12 ($SD = 0.75$) on this 5-point scale. Means can be found in Table 1. No significant effects emerged.

Temporal involvement: Turning to siblings' total temporal involvement, results reveal that siblings spent an average of 17.20 hr together across the 7 days of phone calls. Of that time, an average of 2.07 hr was spent by dyads without others present (i.e., in dyadic time). Analysis of siblings' total time revealed an Older Sibling Sex $\times$ Younger Sibling Sex interaction, $F(1, 227) = 9.72, p < .01, \epsilon = .19$; sister–sister pairs spent significantly more time together than did mixed-sex pairs. (Means for all four dyads are shown in Table 1.) In addition, the covariate (age spacing) was significant, $F(1, 231) = 44.26, p < .01$. Age spacing was negatively related to siblings' total time, $r = -.40, p < .01$, such that the greater the age spacing, the less time they spent together. For siblings' dyadic time, there also was an Older Sibling Sex $\times$ Younger Sibling Sex interaction (see Table 1), $F(1, 227) = 24.26, p < .001, \epsilon = .30$, and the covariate was significant, $F(1, 227) = 11.25, p < .001$; same-sex pairs spent more time together than did mixed-sex pairs, and siblings closer in age spent more time together, $r = -.21, p < .01$.

We also examined the correlations between sibling relationship qualities and number of children in the household, given that most families had more than two siblings. The number of children in the household was negatively related to dyadic time, $r = -.16, p < .05$.

Family Background and Cultural Characteristics—Next, we assessed links between sibling relationship qualities and parents' birthplace, years living in the United States, and education levels and family income. First, we conducted a series of analyses of variance (ANOVAs) with mothers' birthplace (United States vs. Mexico) as the independent variable, sibling relationship qualities as the dependent variables, and family income as a covariate (to take into account differences in income in U.S.- vs. Mexican-born families). Parallel analyses

were conducted for fathers' birthplace, excluding the five fathers who were not born in the United States or Mexico. Siblings reported more conflict when fathers were born in the United States ($M = 3.27$, $SD = .79$), as compared with when they were born in Mexico ($M = 3.07$, $SD = .73$), $F(1, 238) = 4.08$, $p < .05$, $d = .26$, and siblings spent more dyadic time together when fathers were born in Mexico ($M = 2.27$ hr, $SD = 2.59$) as compared with when they were born in the United States ($M = 1.59$ hr, $SD = 2.20$), $F(1, 229) = 7.74$, $p < .05$, $d = .28$. A similar pattern emerged for mothers' birthplace, with siblings spending more dyadic time together when mothers were Mexican born ($M = 2.24$ hr, $SD = 2.63$) versus when they were United States born ($M = 1.67$, $SD = 2.16$), $F(1, 233) = 4.89$, $p < .05$, $d = .24$. The interaction between sibling and mothers' birthplace was significant for siblings' reports of intimacy, $F(1, 243) = 4.93$, $p < .05$, but the follow-up tests were not. The number of years mothers and fathers lived in the United States was not associated with sibling relationship quality. Next, we performed correlations between parents' education levels and family income and sibling relationship qualities. Only family income was linked to sibling qualities, with positive associations with sibling intimacy for older siblings, $r = .18$, $p < .01$, and for younger siblings at trend level, $r = .11$, $p < .08$.

Links Between Familism and Sibling Relationship Qualities

To address our second goal, we conducted a series of hierarchical regressions separately for older and younger sisters and brothers. Control variables included family income in models predicting intimacy, number of children in household in models predicting dyadic time, and sibling age spacing in all models. To test the links between familistic values and sibling relationship qualities, the first step in each model included control variables and siblings' sex. The second step included each sibling's report of familistic values, and the third step included the interaction between siblings' sex and familistic values. Parallel models were conducted that examined the role of adult-kin-sibling time, with siblings' average reports of adult-kin-sibling time in the second step. All variables were centered and significant interactions were followed up according to Aiken and West (1991). Siblings' total temporal involvement was not used as a dependent measure in these analyses because of its conceptual and statistical overlap with adult-kin-sibling time. There was no evidence of multicollinearity of any of the predictors.

Preliminary Analyses—Preliminary analyses were conducted to determine whether familism values and adult-kin-sibling time were linked to parents' birthplace and years living in the United States. The ANOVAs with parents' birthplace as the between-groups factor were not significant. Correlations between parents' years living in the United States and familism revealed one significant correlation that was small in magnitude: fathers' years in the United States was negatively related to adult-kin-sibling time, $r = -.15$, $p < .05$. We also tested for sex differences in familism values and practices. There were no sex differences in siblings' familism values, with average ratings of 4.22 for older siblings, and 4.26 for younger siblings, on this 5-point scale. A t test showed that adult-kin-sibling time was higher for families with older sisters ($M = 13.28$, $SD = 8.01$) as compared those with older brothers ($M = 11.05$, $SD = 7.46$), $t(234) = 2.27$, $p < .05$. On average, adult-kin-sibling time was 12.17 ($SD = 7.81$) hr across the seven calls.

Familistic Values and Sibling Relationship Qualities

Older sisters: The first step in the model regressing older sisters' sibling intimacy on familistic values was significant, $F(3, 119) = 3.97$, $p < .01$, $R^2 = .07$, with family income and younger siblings' sex as significant predictors, and the second step in the model represented a significant increase in the variance, $F(5, 117) = 5.92$, $p < .001$, $R^2 = .17$, for the final model (see Table 2). Older sisters reported higher levels of sibling intimacy when their families had higher incomes, when they had sisters, and when both they and their younger siblings reported higher levels of

familistic values. No additional predictors emerged in the third step. As shown in Table 2, the first step in the model with sibling negativity as the criterion was not significant, but the second step was, $F(4, 118) = 3.66, p < .01, R^2 = .08$, with older sisters' and their younger siblings' reports of familistic values negatively associated with sibling negativity; higher levels of familism were associated with lower levels of sibling negativity. The model regressing older sisters' dyadic time on familistic values was significant for the first step only, $F(3, 116) = 8.08, p < .01, R^2 = .15$ (see Table 2), with older sisters spending more time with younger sisters, as compared with brothers, and more time with siblings closer in age.

Younger sisters: The first step in the model regressing younger sisters' intimacy on familistic values was not significant, but the second and third steps were, $F(5, 119) = 2.97, p < .01, R^2 = .07$, and $F(7, 117) = 2.82, p < .01, R^2 = .09$, respectively (see Table 3). In the final model, younger sisters' and older siblings' familistic values were positively associated with younger sisters' intimacy. Familistic values were not associated with negativity in the next set of models. The first step in the model regressing dyadic time on familism values was significant, $F(3, 118) = 11.41, p < .001, R^2 = .21$, with the number of children in the household, $\beta = -.21, p < .05$, age spacing, $\beta = -.35, p < .001$, and sibling sex, $\beta = -.36, p < .001$, significantly associated with dyadic time. Younger sisters spent more time with older siblings when there were fewer children in the household, when they had sisters, and when they had siblings closer in age. No additional significant variables emerged in remaining steps.

Older brothers: The first step in the model regressing older brothers' intimacy on familistic values was not significant, but the second step was, $F(5, 117) = 2.64, p < .05, R^2 = .06$. Having a sister, $\beta = -.19, p < .05$, and stronger familistic values, $\beta = .18, p < .05$, were linked to higher levels of intimacy. The third step revealed a significant interaction between younger siblings' sex and younger siblings' familistic values but did not account for a significant increase in the variance; thus, we did not follow up on this interaction. The models regressing sibling negativity on familistic values were not significant, but the first step in the model with dyadic time as the criterion was significant, $F(3, 113) = 8.47, p < .001, R^2 = .16$. When there were fewer children in the household, $\beta = -.33, p < .001$, and when older brothers had younger brothers, $\beta = .31, p < .001$, they spent more dyadic time with younger siblings. No additional associations emerged.

Younger brothers: The first step in the model regressing sibling intimacy on familistic values was not significant. The second step in the model was, $F(5, 115) = 2.49, p < .05, R^2 = .06$, with older siblings' familistic values being positively associated with younger brothers' sibling intimacy, $\beta = .29, p < .01$. No interactions emerged in Step 3. The model including sibling negativity was not significant. Younger brothers' dyadic time was associated with older siblings' sex in the first step, such that younger brothers spent more time with older brothers than with older sisters, $\beta = .22, p < .05, F(3, 111) = 4.99, p < .01, R^2 = .10$; no additional significant findings emerged in later steps.

Familistic Practices and Sibling Relationship Qualities—In describing these regressions, we do not discuss findings in the text that have been described in previous models (e.g., age spacing and sibling sex effects).

Older sisters: The first and second steps in the model regressing sibling intimacy on adult-kin-sibling time were significant, $F(3, 116) = 3.85, p < .05, R^2 = .07$, and $F(4, 115) = 4.05, p < .01, R^2 = .09$, respectively (see Table 4); although the second step did not represent a significant increase in variance explained, results show that older sisters reported higher levels of intimacy when they spent more time with their siblings in the company of adult kin. No additional findings emerged in the third step. The model regressing sibling negativity on adult-

kin-sibling time was not significant, but the model with dyadic time as the criterion was, $F(3, 115) = 7.97, p < .01, R^2 = .15$, for the first step, and $F(4, 114) = 10.38, p < .01, R^2 = .24$, for the second step, representing a significant increase in the variance explained (see Table 4). Time spent with adult kin was positively related to the time siblings spent alone in activities. No interactions were significant in Step 3.

Younger sisters: Turning to the role of adult-kin-sibling time in younger sisters' sibling relationship qualities, the models regressing intimacy and negativity on adult-kin-sibling time were not significant. As can be seen in the lower half of Table 3, the first step in the model regressing younger sisters' dyadic time on adult-kin-sibling time was significant, $F(3, 117) = 11.21, p < .001, R^2 = .20$. The second step represented a significant increase in the variance, $F(4, 116) = 11.93, p < .001, R^2 = .27$, with adult-kin-sibling time being positively related to dyadic time. The third step also was significant, $F(5, 115) = 10.73, p < .001, R^2 = .29$, with the increase in variance explained approaching significance (see Table 3). The interaction between older sibling sex and adult-kin-sibling time was significant. The positive association between adult-kin-sibling time and sibling dyadic time emerged only for younger sisters with older sisters, $\beta = .31, t = 4.04, p < .001$.

Older and younger brothers: In the models predicting sibling intimacy, negativity, and dyadic time from adult-kin-sibling time, no new predictors emerged for older or younger brothers.

Discussion

Describing Mexican American Adolescents' Sibling Relationships

A primary purpose of this study was to begin to fill a significant gap in the literature on normative family and developmental processes in ethnic minority families (García Coll et al., 1996; McLoyd, 1998). Our findings reveal that siblings reported feelings of closeness as well as conflict and negativity, a pattern that is consistent with research on European American sibling relationships and that highlights the importance of both positive and negative dimensions of the sibling relationship (Furman & Buhrmester, 1985; Stocker & McHale, 1992). We also found that Mexican American adolescent siblings spent a substantial amount of time in shared activities (i.e., an average of 17 hr across 7 days), considerably more time than they spent with parents and other adult kin (i.e., about 12 hr per 7 days). Their involvement was also higher than what was reported for a sample of European American siblings (i.e., 10 hr per 7 days; Tucker, 2004), although it is important to note that the latter study used a somewhat different time frame for daily activity reports and, more generally, that cross-ethnic group comparisons are inevitably confounded by other factors (e.g., social class, geographic location; McLoyd, 1998). Overall, the salience of sibling relationships, as indexed by the degree of closeness adolescents described and the extent of time spent in daily activities, is consistent with cross-cultural analyses that highlight the centrality of siblings in the everyday lives of youth (Weisner, 1989) and with conceptual frameworks that emphasize the salience of family support and interdependence in Mexican American families (Marín & Marín, 1991; Vega, 1990).

We expected that sex differences would emerge in Mexican American adolescents' sibling relationships, given gender norms in Mexican American family life (Jaramillo & Zapata, 1987; Valenzuela, 1999) and findings from prior research on European American samples (e.g., Buhrmester, 1992). Consistent with the study's first hypothesis, we found that adolescents reported closer relationships with sisters and siblings closer in age and that same-sex pairs spent more time together than did mixed-sex pairs. This pattern highlights the important role of sisters and same-sex siblings as confidantes and daily companions in Mexican American

families (e.g., Jaramillo & Zapata, 1987; Valenzuela, 1999). Intervention programs aimed at promoting youth and family well-being or ameliorating risk in Mexican American samples should capitalize on sisters' emerging kin-keeper role. Research on Mexican American samples highlighting the special family responsibilities and roles of daughters (Jaramillo & Zapata, 1987; Valenzuela, 1999), in combination with our findings, suggests that girls may serve as an important source of social support for family members.

We found little evidence in support of our second hypothesis, that cultural and family background characteristics would be linked to the qualities of adolescents' sibling relationships in this sample of predominantly first-generation youth. Sibling pairs spent more time together when parents were born in Mexico and reported less conflict when fathers were born in Mexico, but the effects were small. Further, cultural background characteristics were not related to adolescents' familistic values and practices. This pattern is consistent with the call for scholars interested in ethnically diverse samples to move beyond social address or status characteristics to examine the processes underlying development and family relationships (McLoyd, 1998). Although we also anticipated that siblings would be closer in families with fewer economic resources, we found that family income was positively correlated with sibling intimacy. Because economic stress and strain may have negative implications for family relationship quality (e.g., Conger & Elder, 1994), sibling relationships may be closer when families have more financial resources (and, consequently, less economic strain and pressure).

Links Between Familism and Sibling Relationship Qualities

Our second goal was to investigate cultural processes that may explain variations in sibling relationships. Similar to what has been done by previous researchers interested in cultural processes (e.g., Fuligni et al., 1999), we examined adolescents' self-reports of their familism values. In addition, however, we operationalized familism in terms of adolescents' day-to-day family practices, reasoning that family time would reflect the strength of family ties and mark cultural socialization opportunities as well. Supporting our third and fourth hypotheses, familism was associated with siblings' feelings of intimacy and closeness and showed some links with siblings' dyadic time, especially for sisters. These modest findings suggest the possibility that familistic values and practices may serve as protective factors for Mexican American youth.

Gender norms in Mexican American families may mean that familism values are expressed differently by girls versus boys. Familism is a multidimensional construct that includes feelings of obligation, respect and support (e.g., Sabogal et al., 1987), and familistic behaviors or practices (Baca Zinn, 1994). Whereas sisters and brothers differed on the measure of familism practices used here (i.e., time spent with adult kin), we did not find gender differences in the measure of familism values. Girls may express their familism values through their intimacy with and time spent with family members, but boys may display their familism values in different ways. One possibility is that boys' achievements outside the home better reflect their orientation toward family (e.g., achievements that can win their families' pride and contribute to the family economy). In future research, it will be important to expand the operationalization of familism practices to more traditionally masculine domains and to include additional dimensions of the sibling relationship (e.g., respect, protectiveness) in an effort to better capture brothers' experiences.

We found very few correlates of sibling conflict/negativity in the present study. This dimension of the sibling relationship may have links to family and cultural processes other than those we assessed. Our measures of familism captured dimensions of support and obligations and the extent that members spent time in shared activities, experiences that may be most likely to foster positive relationship qualities. Dimensions of family life that tap stress and strain and negativity in family interactions may be more closely linked to sibling conflict. Further, given

high levels of interdependence in Mexican American families (Marín & Marín, 1991; Vega, 1990), future work should consider the extent to which conflict in other family dyads (e.g., parent–child, marital) may spill over to the sibling relationship.

Limitations and Future Directions

Our findings provide information about a specific group of Mexican American families (i.e., two-parent, predominantly immigrant, families with adolescents) at one point in time. This study represents an important first step in describing normative processes in Mexican American families, but additional research is needed that would, for example, examine sibling relationships in different family structures (e.g., single-parent, Mexican American families), in different geographic locations, and at other developmental periods. Developmental changes in sibling relationships and family dynamics have been documented in European American families (e.g., Buhrmester, 1992), but much more information is needed on the development of sibling relationships in other cultural and ethnic groups. In the present study, adolescent siblings reported on their familistic values and the qualities of their sibling relationships. Future studies should expand our work using multimethod (e.g., observations) and multiinformant approaches (e.g., parent interviews) to assessing sibling and family relationship dynamics to address concerns about shared method and source variance.

In sum, our modest findings suggest that siblings are central figures in the lives of these adolescents and, thus, that a fruitful direction for future research will be to explore siblings' role in adolescent development in this cultural context. Another important direction for research on Mexican American families will be to explore the links between sibling relationships and other family dynamics. Our data documented connections between the involvement and intimacy dimensions of sibling relationships and family time (i.e., time adolescents spend together with parents and other adult kin), but other family relationship dynamics (parent–adolescent warmth and conflict, marital processes) will be important to explore.

Sibling relationships have been a relatively neglected area of study in the family and developmental literatures; theoretical biases that mark parent–child relationships as primary (e.g., the functionalist tradition in family research, the ethological/analytic tradition within child development), and empirical work that has focused almost exclusively on European American samples, are the likely bases for this neglect. By studying cultural groups in which sibling experiences are more salient—because families include more siblings, because siblings' roles are more clearly defined, and because relationships throughout the family are deemed important—researchers may gain new insights into the nature and significance of sibling relationships.

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Table 1

Means (and Standard Deviations) of Sibling Relationship Variables as a Function of Birth Order and Sex Constellation of the Sibling Dyad

Relationship	Intimacy	Negativity	Total temporal involvement (in raw hours)	Sibling dyadic time (in raw hours)
Older sister-younger sister dyads (<i>N</i> = 68)				
Older sibling	3.64 (0.78)	3.25 (0.93)	20.34 (11.43)	2.39 (2.62)
Younger sibling	3.68 (0.74)	3.06 (0.93)	20.96 (12.12)	3.12 (3.23)
Older sister-younger brother dyads (<i>N</i> = 57)				
Older sibling	3.24 (0.68)	3.04 (1.01)	14.31 (8.13)	1.44 (1.80)
Younger sibling	3.42 (0.67)	3.17 (0.82)	14.91 (8.54)	1.29 (1.68)
Older brother-younger sister dyads (<i>N</i> = 55)				
Older sibling	3.27 (0.83)	3.30 (0.95)	15.94 (9.74)	1.53 (2.43)
Younger sibling	3.20 (0.74)	3.13 (0.93)	15.57 (10.49)	1.30 (1.48)
Older brother-younger brother dyads (<i>N</i> = 66)				
Older sibling	3.01 (0.69)	3.03 (0.86)	17.31 (11.73)	2.51 (2.86)
Younger sibling	3.13 (0.65)	3.03 (0.90)	17.44 (12.02)	2.65 (3.31)

Note. For total temporal involvement and sibling dyadic time, scores were calculated by averaging the two siblings' reports.

Table 2

Summary of Hierarchical Regression Models Regressing Older Sisters' Sibling Relationship Qualities on Control Variables and Familistic Values (N = 122)

Variable	Model 1			Model 2		
	B	SE B	β	B	SE B	β
Sibling intimacy						
Family income	.32E ⁻⁵	.14E ⁻⁵	.19*	.31E ⁻⁵	.14E ⁻⁵	.19*
Age spacing	-.03	.04	-.05	-.01	.04	-.03
Younger sibling sex	-.32	.15	-.19*	-.37	.14	-.22*
Older sibling familistic values				.33	.13	.21*
Younger sibling familistic values				.42	.14	.25**
		$R^2 = .07^*$			$R^2 = .17^{**}$	$\Delta R^2 = .10^{**}$
Sibling negativity						
Age spacing	.01	.05	.02	.01	.05	.01
Younger sibling sex	.04	.17	.02	.08	.16	.04
Older sibling familistic values				-.46	.16	-.26**
Younger sibling familistic values				-.37	.17	-.20*
		$R^2 = -.02$			$R^2 = .08^{**}$	$\Delta R^2 = .10^*$
Dyadic time						
Children in household	-.08	.05	-.14	-.08	.05	-.13
Age spacing	-.14	.04	-.30***	-.14	.04	-.29***
Younger sibling sex	-.42	.14	-.26**	-.44	.14	-.27***
Older sibling familistic values				.20	.13	.13
Younger sibling familistic values				.23	.14	.14
		$R^2 = .15^{**}$			$R^2 = .17^*$	$\Delta R^2 = .02$

Note. Younger siblings' sex was dummy coded such that girls = 0 and boys = 1.

* $p < .05$.

** $p < .01$.

Table 3

Summary of Hierarchical Regression Models Regressing Younger Sisters' Sibling Intimacy on Control Variables and Familistic Values (N = 124) and Younger Sisters' Sibling Time on Control Variables and Adult-Sibling Time (N = 120)

Variable	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
<i>Predicting intimacy</i>									
Family income	.47E ⁻⁶	.12E ⁻⁵	.04	.26E ⁻⁶	.11E ⁻⁵	.02	.31E ⁻⁶	.11E ⁻⁵	.02
Age spacing	.01	.04	.03	.01E ⁻¹	.04	.03E ⁻¹	.08E ⁻¹	.04	.02
Older sibling sex	-.25	.13	-.18	-.24	.12	-.17	-.24	.12	-.17
Younger sibling familistic values				.35	.12	.25**	.51	.18	.37**
Older sibling familistic values				.10	.09	.10	.35	.17	.33 *
Older Sibling Sex × Younger Sibling Familistic Values							-.28	.25	-.15
Sibling Familistic Values							-.35	.20	-.27
									$\Delta R^2 = .02$
<i>Predicting dyadic time</i>									
Family income	-.14	.06	-.21 *	-.15	.06	-.22**	-.16	.05	-.23**
Age spacing	-.17	.04	-.34**	-.14	.04	-.26**	-.14	.04	-.26**
Older sibling sex	-.60	.14	-.37**	-.52	.13	-.32**	-.53	.13	-.32**
Adult-sibling time				.19	.06	.28**	.31	.08	.43**
Older Sibling Sex × Adult-Sibling Time							-.23	.11	-.23 *
									$\Delta R^2 = .02+$
									$R^2 = .20$ **
									$\Delta R^2 = .07$ **
									$R^2 = .29$ **

Note. Younger and older siblings' sex was dummy coded such that females = 0 and males = 1.

* $p < .05$.

** $p < .01$.

Summary of Hierarchical Regression Models Regressing Older Sisters' Sibling Relationship Qualities on Control Variables and Adult-kin-Sibling Time (N = 119)

Note. Younger siblings' sex was dummy coded such that boys = 0 and girls = 1.

$$p < .01$$