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FAMILIAL AND CULTURAL INFLUENCES ON SEXUAL RISK BEHAVIORS AMONG MEXICAN, PUERTO RICAN, AND DOMINICAN YOUTH

Vincent Guilamo-Ramos, Alida Bouris, James Jaccard, Catherine Lesesne, and Michelle Ballan

The present study examined the relationship among acculturation, *familismo*, and HIV-related adolescent sexual risk behavior. Data were collected from Latino mother-adolescent dyads to permit parent and adolescent analyses of *familismo* for predicting oral, vaginal, and anal sexual behaviors. A random sample of 702 Latino eighth-grade students and their mothers was recruited from New York City. The sample included Mexicans (n = 203), Puerto Ricans (n = 239), and Dominicans (n = 260). Acculturation was unrelated to sexual behavior, but adolescent *familismo* was related to girls' but not boys' sexual behavior. The most important facet of *familismo* was subjugation to the family, which was negatively associated with girls' sexual behavior. The implications for HIV prevention programs for Latino youth are discussed.

Recent epidemiological data indicate that Latino youth are disproportionately affected by HIV/AIDS (Hall et al., 2008). For Latino adolescents in the United States, the leading cause of HIV infection is sexual behavior (Rangel, Gavin, Reed, Fowler, & Lee, 2006). According to the 2007 Youth Risk Behavior Survey, 52% of Latino high school students have had vaginal sexual intercourse and 17% have had more than four sexual partners in their lifetime (Centers for Disease Control and Prevention [CDC], 2008b). Additionally, only 61% of Latino youth used a condom at their last act of intercourse and Latino high school students were significantly less likely than their White peers to have been taught about HIV/AIDS at school (CDC, 2008b). Given that Latino youth are now the largest ethnic minority adolescent group in the United States (Ramirez & De la Cruz, 2002), these data underscore the need for a program of HIV prevention research focused on the unique needs of Latino youth.

Vincent Guilamo-Ramos and Michelle Ballan are with the School of Social Work, Columbia University, New York. Alida Bouris is with the School of Social Service Administration, University of Chicago. James Jaccard is with the Department of Psychology, Florida International University, Miami. Catherine Lesesne is with the Centers for Disease Control and Prevention (CDC), Atlanta, GA.

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Address correspondence to Vincent Guilamo-Ramos, PhD, Associate Professor, School of Social Work, Columbia University, 1255 Amsterdam Ave., New York, NY 10027; email: rg650@columbia.edu.

Much of the extant literature on HIV/AIDS among Latino youth has tended to examine Latinos in aggregate form. However, a recent CDC report on HIV/AIDS among Latinos aged 13 and older residing in the United States indicated that there were differences in HIV transmission based on place of birth (Espinoza et al., 2007). For example, Latino men born in United States, Central America, South America, Mexico, or Cuba were most likely to contract HIV via same-sex sexual behavior whereas the leading cause of infection for Latinos born in Puerto Rico was high-risk heterosexual behavior for women and injection drug use for men (Espinoza et al., 2007).

Currently, the reasons underlying these differences are not well understood. Heterogeneity in modes of HIV transmission can result from numerous factors, including differences in acculturation among Latino subgroups (Espinoza et al., 2007). Although a large body of research has highlighted the role of acculturation on the sexual decision making of diverse groups of Latinos (for a review, see Afable-Munsuz & Brindis, 2006), the research has yielded inconsistent results on the relationship between acculturation and sexual risk behavior. Whereas some studies find positive relationships between acculturation constructs and sexual risk taking (Kaplan, Erickson, & Juarez-Reyes, 2002), others find inverse relationships (Fraser, Piacentini, Rossem, Hien, & Rotheram-Borus, 1998), and still others, curvilinear relationships (Guilamo-Ramos, Jaccard, Pena, & Goldberg, 2005).

One reason for inconsistent results is that acculturation has been measured in diverse ways across studies (for a review, see Afable-Munsuz & Brindis, 2006). The most frequently used measures focus on proxies for acculturation, such as country of birth, length of residence in the United States and whether English or Spanish is spoken in the home. The use of such proxies has been criticized by numerous researchers, who argue that acculturation is a complex construct that should be measured in ways that respect its multidimensional character (Abraído-Lanza, Armbrister, Flórez, & Aguirre, 2006; Cabassa, 2003). More nuanced measures that have been developed to address this issue assess attitudinal and behavioral dimensions such as preferred social relations (e.g., does one prefer to socialize with Latinos or members of other ethnic groups?), language use with peers, and language preferences for music, television, and other media (e.g., Barona & Miller, 1994; Marín, Sabogal, Van Oss Marín, Otero-Sabogal, & Pérez-Stable, 1987).

Taken together, these measures represent a marked improvement over proxy measures of acculturation, as they attempt to assess attitudinal and behavioral aspects of acculturation in social contexts that may shape a range of health behaviors, including sexual behavior. Despite this, many studies employ analytic strategies that create a single, composite measure of acculturation, thereby limiting our ability to understand how specific dimensions of acculturation may relate to health behavior (Abraído-Lanza et al., 2006). In contrast, the present study explores the relationship between acculturation indices and youth sexual risk taking using a multidimensional perspective.

FAMILISMO

Even when considered multidimensionally, acculturation is a somewhat distal and abstract concept that one might not expect to predict specific behaviors. A more promising approach is to focus on the extent to which Latinos embrace specific Latino values (Deardorff, Tschann, & Flores, 2008). One important Latino cultural

value that has been well-documented in the empirical literature is *familismo* (Sabogal, Marín, Otero-Sabogal, & Van Oss Marín, 1987). By mapping more specific cultural constructs onto behavior, we gain a better sense of what aspects of Latino culture (and the acculturative influences that lead individuals to embrace or reject those specific values) may potentially impact sexual risk taking (Bourdeau, Thomas, & Long, 2008). The present study adopts this approach and focuses on the Latino construct of *familismo*.

To date, *familismo* has been understudied as a factor impacting sexual behavior in Latino youth. The lack of attention is surprising given the importance of the family for understanding Latino adolescent development and involvement in risk behavior more generally (Guilamo-Ramos, Jaccard, Dittus, & Bouris, 2006). The cultural value of Latino *familismo* emphasizes interdependent relationships in the family system (Contreras, Mangelsdorf, Rhodes, Diener, & Brunson, 1999). Latino *familismo* values closeness and interconnectedness between immediate and extended family members (Marín & Gamba, 2003), as well as loyalty and solidarity in the family system (Marín & Van Oss Marín, 1991). In addition, *familismo* refers to the responsibility and obligations that family members feel toward each other (Sabogal et al., 1987), in part reflecting the collectivistic orientation in Latino culture (Magana, 1999). Research has suggested that *familismo* influences both attitudinal and behavioral norms (Rodriguez & Kosloski, 1998; Sabogal et al., 1987). For example, the embracement of *familismo* has been associated with sexual decisionmaking among adult Latino men (Muñoz-Laboy, 2008). Specifically, Muñoz-Laboy (2008) found that bisexual Latino males reported that being close to their family and caring about their family's opinions influenced their decisionmaking when selecting sexual and romantic partners. In addition, Flores, Eyre, and Millstein (1998) found that Latino youth who embraced the concept of *familismo* were more likely to prefer romantic partners who valued family and having children.

Like acculturation, *familismo* is a multidimensional construct, although it has been treated unidimensionally in empirical work. To date, key dimensions identified in the literature include family support, connections between family members, perceptions of the family as a behavioral and attitudinal referent, family honor, and feeling obligated toward one's family (e.g., Lugo Steidel & Contreras, 2003; Sabogal et al., 1987). In the present study, we explore four specific dimensions of *familismo* as they relate to adolescent sexual risk taking, namely, (a) mother and adolescent perceptions of family connectedness, (b) mother and adolescent perceptions of family support, (c) the feelings mothers and adolescents have about preserving family honor, and (d) the extent to which both mothers and adolescents are willing to subjugate their own needs to the needs of the family (e.g., Lugo Steidel & Contreras, 2003). Making distinctions between different *familismo* dimensions is important because if *familismo* is related to sexual risk taking, it is useful to know which aspect of *familismo* underlies the relationship.

THE BASIS OF ADOLESCENT FAMILISMO

The present research focuses on early adolescents in eighth grade. If *familismo* is relevant to adolescent sexual risk taking, it is important to understand the development of *familismo*. One source of embracement of *familismo* is maternal socialization. There are at least two processes by which mothers can encourage *familismo* in their children. The first is by communicating to their children explicit rules and expecta-

tions about how the adolescent is to behave vis-à-vis *familismo*-related behaviors. Independent of this, the mother can serve as a role model by engaging in *familismo*-related behaviors herself. For example, mothers may comport themselves in public in ways that are thought to maintain family honor and may communicate their reasons for doing so to their adolescent child. In addition, mothers may organize family life in ways that maximize both immediate and extended family connections and relationships (e.g., maintaining rules about having family meals together or scheduling regular family events and celebrations). In both instances, mothers are engaging in behaviors that emphasize the importance of the family in the adolescent's life. The present research explores these two mechanisms by examining the relationship between adolescent *familismo,* on the one hand, and maternal expectations and the mother's own embracement of *familismo,* on the other hand.

GENERALIZABILITY OF EFFECTS

It is important to test the generalizability of effects across gender, family structure, and Latino ethnicities. With respect to gender, we predict that *familismo* will be more predictive of sexual behavior for adolescent girls as opposed to boys because of well-known socialization emphases on having children and building families for girls relative to boys (Flores et al., 1998). In addition, we hypothesize that mothers will be more influential in socializing girls as opposed to boys with respect to *familismo* based on previous research with Latino families showing that mothers spend more time with daughters than with sons and that the mother-adolescent relationship is more influential on daughter's health and well-being than sons (e.g., Updegraff, Delgado, & Wheeler, 2008). In addition, it also is useful to explore if mother's socialization efforts surrounding the cultural value of *familismo* are moderated by other important variables in the family system. In the present study, we explored the potential moderating effect of family structure and adolescent gender. These analyses were pursued because it is theoretically possible that family socialization processes are stronger in dual-parent households relative to single-parent households, by virtue of the fact that there are two parents transmitting messages about the importance of family to the adolescent child. This leads to the hypothesis that embracement of *familismo* will be higher among youth living with both parents compared with youth living with one parent. In addition, we explored if adolescent gender further qualified this relationship, leading to the hypothesis that the effect of family structure on the relationship between maternal and adolescent *familismo* would be stronger for girls relative to boys.

We do not have a strong theory to generate predictions about differential effects of *familismo* on sexual risk taking as a function of Latino ethnicity. However, even in the absence of such theory, it is important to test the generalizability of effects across ethnic groups. Recent studies have observed important differences in health status among Mexicans, Puerto Ricans, Dominicans, and Cubans in the United States (Weinick, Jacobs, Stone, Ortega, & Burstin, 2004; Zsembik & Fennell, 2005). In addition, differences in health have also been observed between Latinos in the United States who identify as Mexicans and those who identify as Mexican American (Barger & Gallo, 2008). Concomitantly, researchers are advocating for pan-ethnic research to explicitly examine potential subgroup differences (Zsembik & Fennell, 2005). This approach is especially important for designing effective HIV prevention programs for Latino youth, as the presence of subgroup differences would indicate

that intervention messages need to be tailored for different ethnic subgroups. Thus, we tested the generalizability of effects across three of the largest Latino ethnic subgroups in the United States: Mexicans, Puerto Ricans, and Dominicans.

In sum, the present study documents base rates for a range of HIV-related sexual risk behaviors for Latino eighth graders from three distinct Latino ethnicities in the United States. The sexual risk behaviors on which we focus are vaginal, oral, anal, and same-gender sexual behaviors, as well as condom use at last intercourse, having regular sexual activity in the past 12 months, having two or more lifetime sexual partners, and pregnancy history. In doing so, the study examines the relationship between these behaviors and parent and adolescent acculturation, as well as parent and adolescent embracement of *familismo*. The research approaches these Latino constructs using dimensional analyses that decompose overall acculturation and *familismo* into underlying components and then relates these components to sexual risk behavior. The generalizability of effects across gender and Latino ethnicity is tested.

METHOD

RESPONDENTS AND PROCEDURES

A random sample of 702 Latino eighth grade students and their mothers was recruited from the South Bronx community of New York City. New York City remains the epicenter of the nation's HIV/AIDS epidemic (New York City Department of Health and Mental Hygiene [NYCDOHMH], 2008b), and the Bronx is New York City's poorest borough (U.S. Census Bureau, 2006). As of 2006, 30% of the city's perinatally infected HIV-positive children and adolescents resided in the Bronx (NYCDOHMH, 2007). In addition, data on HIV and AIDS from 2006 indicate that approximately 25% of the city's HIV diagnoses and approximately one third of the city's AIDS-related deaths occurred among Bronx residents (NYCDOHMH, 2008b). In response to the high rates of HIV/AIDS in the Bronx, the NYCDOHMH recently began an initiative to test all Bronx residents, including adolescents, for HIV (NYCDOHMH, 2008a).

Only eighth-grade Latino students identifying as Dominican (n = 260), Puerto Rican (n = 239), or Mexican (n = 203) were enrolled in the study. Data were collected for two cohorts separated by a year with 300 dyads in the first cohort and 402 dyads in the second cohort. Assessments for the first cohort occurred from May through August 2006; assessments for the second cohort occurred from May through September 2007. There were no effects of cohort status in any of our analyses, so this design facet is ignored from this point on.

Bilingual recruiters contacted 843 parents or legal guardians via telephone to invite the target adolescent and mother to a school-based data collection event. Eighty-three percent of contacted dyads were recruited into the study. Families were given multiple opportunities to attend a data collection event. Recruiters administered a refusal bias survey to obtain key demographic variables such as age, marital status, socioeconomic status, and ethnic subgroup; families who agreed to participate and families who refused were demographically similar.

In the present study, a resident mother was defined as the adult female who resided in the house and was primarily responsible for caring for the target adolescent. We focused on resident mothers rather than resident fathers for several reasons. First, previous research conducted with the target sample indicated that approxi-

mately half of the homes were headed by a single adult female. Given that statistical modeling is complicated by nonrandom missing data, e.g., father data missing from single-mother households, it seemed wiser to recruit mothers. In addition, Costigan and Cox (2001) have suggested there are nontrivial selection effects among fathers who participate in research studies. Finally, studies have suggested that mothers are more influential on adolescent sexual behavior than are fathers (DiIorio, Kelley, & Hockenberry-Eaton, 1999).

Adolescents completed assent forms and mothers completed consent forms for themselves and permission forms for their adolescent. All forms were written in English and Spanish. Bilingual project staff reviewed consent forms with families to ensure that informed consent was obtained. A research incentive of $25 was given to each family for completing the survey. Institutional review board approval was obtained from Columbia University.

Data were collected via self-administered questionnaires available in English and Spanish. The questionnaires were translated using the forward-backward method (e.g., Marín & Van Oss Marín, 1991). Several steps were taken to encourage truthful responding. Instructions were orally reviewed and respondents were informed that their answers were confidential. Additionally, respondents were instructed to skip any question that they were uncomfortable answering. Mothers and adolescents completed their questionnaires in separate rooms and did not have to answer sensitive questions in a face-to-face context. Gender-specific variants of the same survey were given to adolescent males and females. The measures presented here reflect the female version; please contact the first author for a full description of the measures.

MEASURES

Latino Ethnicity. Mothers and adolescents were asked to indicate their Latino/Hispanic subgroup. The response categories were Puerto Rican, Mexican, or Dominican.

Vaginal Sexual Intercourse. Adolescents were given a developmentally appropriate definition of vaginal sexual intercourse: "By sexual intercourse, we mean 'going all the way' or the 'act by which babies are made.' Sexual intercourse is when a male inserts his penis into a female's vagina." Adolescents were then asked: "Have you ever had sexual intercourse?" (0 = no, 1 = yes).

Oral Sex. Adolescents reported if they had ever given or received oral sex, for example, "Has a male ever put his mouth on your vagina (also known as cunnilingus or oral sex)?" and "Have you ever put your mouth on a male's penis (also known as fellatio or oral sex)?" (0 = no, 1 = yes). Thus, two indicators of oral sex were created: (a) having given oral sex to an opposite sex partner and (b) having received oral sex from an opposite sex partner.

Anal Sex. A single item assessed anal sex with an opposite sex partner: "Has a male ever put his penis in your rectum or butt (also known as anal sex)?" (0 = no, 1= yes).

Same-sex sexual behavior. Same-sex sexual behavior was measured with one item: "Have you ever had any sexual experience of any kind with another female?" (0 = no, 1 = yes).

Condom Use at Last Intercourse. Adolescents were asked to report if they had used a condom or other form of contraception at their last act of vaginal sexual intercourse. Given our interest in preventing HIV-infection, sexually active adolescents who indicated that they had used a condom were assigned a score of 1, while sexually active adolescents who indicated using another form of contraception (e.g., oral contraception, withdrawal/"pull-out" method, rhythm method, another method of birth control, or no birth control), were assigned a score of 0.

Regular Sexual Activity in the Past 12 Months. All sexually experienced youth were asked to report on their sexual activity in the past 12 months with the question "How often have you had sexual intercourse in the past 12 months?" Responses were scored on a 5-point scale (1 = never, 2 = less than once a month, 3 = once a month, 4 = two or three times a month, and 5 = once a week or more). From these response options, a dichotomous measure of regular sexual activity was derived, with 0 = infrequent or no sexual activity in the past 12 months and 1 = having sexual intercourse at least once a month or more in the past 12 months.

Number of Sexual Partners. One item assessed the number of lifetime sexual partners for youth who had indicated that they had engaged in vaginal sexual intercourse: "With how many people have you ever had sexual intercourse?" The four response categories were 1 = 1 person, 2 = 2 persons, 3 = 3 persons, and 4 = 4 or more persons.

Pregnancy History. Adolescent females were asked to indicate if they had ever been pregnant; for males, the item asked about having ever fathered a pregnancy (0 = no, 1 = yes).

Acculturation. The Short Acculturation Scale for Hispanics (SASH; Marín et al., 1987 was used to assess mother's level of acculturation. Twelve items measured three dimensions of acculturation: (a) ethnic social relations (e.g., "Your close friends are . . . "), (b) media use (e.g., "In what languages are the TV programs you usually watch?"), and (c) language use (e.g., "In general, what languages do you read and speak?"). The response metric for ethnic social relations was 1 = all Latinos/ Hispanics, 2 = more Latinos than Americans, 3 = about half and half, 4 = more Americans than Latinos, 5 = all Americans; for language and media use, it was 1 = only Spanish, 2 = more Spanish than English, 3 = both equally, 4 = more English than Spanish, 5 = English. The alpha coefficients for the ethnic social relations scale, media use scale, and language use scale were .89, .87, and .84, respectively.

Adolescent acculturation was assessed with the Short Acculturation Scale for Hispanic Youth (Barona & Miller, 1994), a 12-item scale assessing three domains of acculturation: ethnic social relations, familial language use, and extrafamilial language use. Examples for each subscale were: Your close friends are . . . "; (b) "What languages do your parents speak to you in?"; and (c) "What languages do you read and speak?" The metric was the same as the SASH. The alpha coefficients for the ethnic social relations scale, familial language use scale, and extrafamilial language use scale were .80, .70, and .88, respectively.

For both mothers and adolescents, scores on a dimension were the average response to items within that dimension and ranged from 1 to 5, with higher scores indicating greater levels of maternal and adolescent acculturation.

Familismo. A 19-item scale assessed maternal and youth embracement of *familismo* (Lugo Steidel & Contreras, 2003). Four dimensions were measured: familial support, familial interconnectedness, familial honor, and subjugation of self for the family. All items were scored on a 5-point scale with responses ranging from strongly disagree (1) to strongly agree (5). Scores on each dimension were the average response to items within the dimension and ranged from 1 to 5, with higher scores reflecting a stronger *familismo* orientation. Sample items were (a) "A person should spend time with her parents on a regular basis," (b) "A person should live near her parents," and (c) "A person should be a good person for the sake of her family." For mothers' responses, the alpha coefficients for the familial support scale, familial interconnectedness scale, familiar honor scale and subjugation of self scale were .78, .80, .67 and .47, respectively. For adolescents' responses, the alpha coefficients for the familial support scale, familial interconnectedness scale, familiar honor scale and subjugation of self scale were .77, .75, .58 and .61, respectively.

Maternal expectations about familismo. The *familismo* scale was adapted to develop a measure of perceived maternal expectations about *familismo*. Specifically, for each item on the scale, a parallel question was asked of adolescents phrased in terms of a maternal expectation (e.g., "My mother expects me to always help with the support of my younger brothers and sisters," and "My mother wants me to value the time I spend with my relatives"). Adolescents completed the questions on a 5-point scale with responses ranging from 1 = strongly disagree to 5 = strongly agree. An expectation score was derived for each *familismo* dimension by averaging items within each dimension, with scores on each dimension ranging from 1 to 5. The alpha coefficients were .84 for familial support, .82 for familial interconnectedness, .60 for family honor, and .70 for familial subjugation.

Religiosity. A single item assessed the importance of religion to parents and adolescents. The item stated, "How important is religion to you? Responses were scored on a 4-point scale (1 = not at all important, 2 = somewhat important, 3 = quite important, 4 = very important) and were scored so that higher scores reflecting greater levels of religiosity.

DATA ANALYSIS

Preliminary analyses examined ethnic subgroup differences on demographic characteristics, predictor variables, and adolescent sexual behaviors. A Holm-modified Bonferroni method was used to control for experiment-wise error rates when making formal statistical comparisons between the three ethnic subgroups (Jaccard & Guilamo-Ramos, 2002). This is a "step-down" procedure that adjusts for multiple contrasts and is more powerful than the traditional Bonferroni test (Jaccard, 1998; Jaccard & Guilamo-Ramos, 2002).

The primary model used logistic regression to predict dichotomously defined sexual outcomes as a function of predictors associated with *familismo*. Exponents of the logistic coefficients represent odds ratios, which for continuous predictors, are analogous to multiplicative constants that indicate the factor by which the odds of engaging in the behavior change with each one unit increase in the predictor. For example, an odds ratio of 2.0 indicates that for each one unit increase in the continuous predictor, the odds of engaging in the sexual outcome increase by a multiplicative factor of 2.0 (i.e., it doubles). Interaction effects were tested using product term strategies as described in Jaccard (2001). Product terms were formed by multiplying

TABLE 1. Descriptive Statistics for Adolescent Respondents, Entre Familias Study, 2006-2007

	Mexican (n = 203)	Puerto Rican (n = 239)	Dominican (n = 260)
Mean age	13.25	13.25	13.40
Percentage male	49.75	41.42[a]	52.31[a]
Percentage born in the US	56.22[a]	69.03[a,b]	52.70[b]
Percentage mostly speak Spanish in the home	58.63[a]	47.29[a,b]	65.00[b]
Mean religion importance	2.93[a]	2.67[a]	2.82
Mean familial support	4.10	3.86	3.81
Mean familial interconnectedness	4.39[a]	4.07[a]	3.86
Mean familial honor	3.53	3.44	3.80
Mean subjugation of self	4.16	3.90	3.67
Mean language use	3.50	3.77[a]	3.21[a]
Mean media use	1.85[a]	2.50[a,b]	1.36[b]
Mean ethnic social relations	2.07[a]	2.54[a,b]	2.08[b]
Mean perception maternal familial support	3.87	3.66	3.90
Mean perception maternal familial interconnectedness	4.26	3.99	3.95
Mean perception maternal familial honor	3.52	3.36	3.73
Mean perception maternal subjugation of self	4.13	4.12	4.21

Note. Groups within a row with a common superscript are statistically significantly different when controlling for experiment-wise error rates with the Holm-modified Bonferroni test.

the focal independent variable by the theoretically plausible moderator variable. A formal test of statistical significance was evaluated by examining the p value based on a log likelihood test. For continuous outcomes, ordinary least squares regression was used. Interaction effects within the context of ordinary least squares regression were evaluated using similar product terms strategies.

RESULTS

Tables 1 and 2 present descriptive statistics and a demographic profile of the sample.

BASE RATES FOR HIV-RELATED SEXUAL RISK BEHAVIOR

Table 3 presents the percent of adolescents who have engaged in each of nine HIV-related sexual risk behaviors as a function of gender and Latino ethnicity. Overall, the base rates of each sexual behavior were low. As a general trend, there were gender differences, with boys being more likely to engage in sexual risk behavior than girls. For example, 17.5% of Puerto Rican, 13.9% of Dominican, and 13% of Mexican boys reported having ever had vaginal sexual intercourse. In contrast, 5.2% of Puerto Rican, 10.9% of Dominican, and 4.9% of Mexican girls reported that vaginal sexual intercourse had occurred. Vaginal sexual intercourse was more common than oral sex and anal sex. Anal sex was uncommon among Latina girls but was close to 10% among Puerto Rican and Dominican boys. There tended to be no notable differences in sexual risk behavior as a function of Latino ethnicity,

TABLE 2. Descriptive Statistics for Parent Respondents, Entre Familias Study, 2006-2007

	Mexican (n = 203)	Puerto Rican (n = 239)	Dominican (n = 260)
Mean age	39.95[a]	39.73[b]	41.25[a,b]
Percentage born in the US	3.47[a]	29.82[a,b]	4.67[b]
Percentage mostly speak Spanish in the home	36.95[a]	24.70[a,b]	44.99[b]
Mean religion importance	3.69[a]	3.02[a]	3.34[a]
Mean familial support	4.43[a]	3.85[a]	3.96
Mean familial interconnectedness	4.86[a,b]	4.60[a]	4.38[b]
Mean familial honor	4.00[a]	3.29[a,b]	3.85[b]
Mean subjugation of self	4.17	4.03	3.91
Mean language use	1.57[a]	3.18[a,b]	1.90[b]
Mean media use	1.66[a]	3.14[a,b]	1.42[b]
Mean ethnic social relations	1.66[a]	2.75[a,b]	1.94[b]

Note. Groups within a row with a common superscript are statistically significantly different when controlling for experiment-wise error rates with the Holm-modified Bonferroni test.

although Dominican girls tended to show a pattern of elevated risk activity relative to Puerto Rican and Mexican girls on most behaviors.

RELATIONSHIP OF ACCULTURATION TO RISK BEHAVIORS AND *FAMILISMO*

The measures of the three dimensions of adolescent acculturation (ethnic social relations, media use, and language use) tended to show nonsignificant correlations with each of the risk behaviors when analyzed separately by gender. Of the 54 correlations, only two were statistically significant at the .05 alpha level, which is within what one would expect by chance. This pattern of lack of association also was observed when the correlations were examined for the different Latino ethnicities. Thus, adolescents' global acculturation was not meaningfully associated with sexual risk behavior. In addition, the correlations between adolescent *familismo* and adolescent acculturation were low, ranging from an absolute r of .01 to .16, suggesting that acculturation was not associated with adolescents' embracement of *familismo*.

RELATIONSHIP OF RISK BEHAVIOR TO *FAMILISMO*

Because of low base rates or small sample sizes for purposes of parameter estimation, analyses were not pursued for same-sex sexual activity, having experienced a pregnancy, and the use of a condom at one's last intercourse. As noted, the general acculturation measures were uniformly unrelated to all risk behaviors, so they were excluded from the prediction equations. The sample was fairly uniform in terms of SES and age, so these variables also were not included in prediction equations. Interactions between the *familismo* dimensions, gender, and ethnicity were tested. Only interactions between the *familismo* dimensions and gender reached statistical significance in selected equations. Results of the logistic regressions for each criterion are presented in Table 4, separately for males and females. To conserve space, only the exponents of the coefficients for the *familismo* predictors from the equations are presented.

There were two notable trends. The first is that the *familismo* constructs generally were not predictive of risk behaviors for adolescent males as opposed to females. The second is that for adolescent females, the subjugation dimension was the most

TABLE 3. Percent of Adolescents Engaging In Sexual Risk Behaviors, Entre Familias Study, 2006-2007

	Females			Males		
Variable	**Puerto Rican (*n* = 140)**	**Dominican (*n* = 124)**	**Mexican (*n* = 102)**	**Puerto Rican (*n* = 99)**	**Dominican (*n* = 136)**	**Mexican (*n* = 101)**
Had vaginal intercourse[a]	5.2	10.9	4.9	17.5	13.9	13.0
Had regular sex past 12 months[†]	3.7	7.1	2.9	10.3	11.7	8.0
Did not use condoms last intercourse[b, c]	28.9	42.9	75.0	35.3	36.8	50.0
Received oral sex[a]	3.0	6.2	3.0	10.8	11.3	6.1
Gave oral sex[d]	1.5	1.8	1.0	7.1	9.5	1.4
Had anal sex[d]	0.8	3.2	1.0	9.6	8.8	4.0
Had same-gender sex of any kind[c]	0.8	0.0	1.0	0.0	0.7	0.0
Had 2 or more partners[a]	3.7	7.1	2.9	11.3	11.7	6.0
Ever been/made someone pregnant[a]	0.0	0.0	1.9	5.2	2.9	4.2

*Regular sex defined as having had vaginal sexual intercourse at least once monthly. [a]Pattern of statistical significance is overall percentage for males > overall percentage for females, but within ethnicity, gender contrast is only significant for Puerto Ricans; interaction between gender and ethnicity was not significant. [b]Analysis included only adolescents who had engaged in sexual intercourse; approximate *n* per group is 15, hence there is low statistical power when comparing groups. [c]No contrasts are statistically significant. [d]Pattern of statistical significance is overall percentage for males > overall percentage for females, but within ethnicity, gender contrast is only significant for Puerto Ricans and Dominicans; interaction between gender and ethnicity was not significant.

consistent predictor of risk behavior such that higher levels of subjugation were associated with lower levels of risk behavior.

PARENTAL INFLUENCES ON *FAMILISMO*

To explore the relationship among adolescent *familismo*, maternal *familismo*, and maternal expectations about adolescent *familismo*, we regressed each dimension of adolescent *familismo* onto the perceived expectations of the mother on that dimension and the mother's *familismo* score on that dimension, using ordinary least squares regression. Table 5 presents the results separately for males and females. It can be seen that the maternal variables predicted adolescent *familismo* well for girls but not for boys. In all cases for girls, the tendency was for adolescent embracement of *familismo* to be predicted by maternal expectations that the daughter behave in a way consistent with *familismo* as opposed to the mother's own level of *familismo* per se. For boys, the only aspects of adolescent *familismo* associated with maternal expectations were family connectedness and family honor. The same method was used to examine if the effect of maternal *familismo* on adolescent *familismo* varied as a function of family structure and adolescent gender. Neither the three-way interaction for family structure by gender nor the two-way interaction for family structure was significant.

DISCUSSION

The present research studied sexual risk behaviors during early adolescence in a sample of Latino youth enrolled in the eighth grade. The vast majority of research on Latino youth has been conducted with older adolescents in high schools. A focus on early adolescence is important from a prevention standpoint because it not only identifies dynamics that are operating *before* sexual activity becomes common and but also identifies adolescents who may transition to sexual activity early and may thus be at higher risk for negative health outcomes in later adolescent years (Moore et al., 2004).

Numerous studies have explored acculturation influences on adolescent sexual risk behavior, but as a collection, this literature is replete with inconsistent results. The present research emphasizes instead a strategy that focuses on dimensional analyses of specific Latino values and how these values/dimensions relate to sexual risk taking. The goal is to isolate those specific aspects of Latino culture that are most relevant to reducing HIV-related sexual risk behaviors. The construct of *familismo* was the focus of the current research, a construct that has received surprisingly little attention in HIV literature. Several intriguing results emerged.

First, our study documented base rates for nine sexual risk behaviors for Latino, middle school youth living in the inner city of a large urban area (New York City). Rates of sexual risk behaviors were uniformly higher for boys than girls but were comparable across the three Latino subgroups. To be sure, there were some trends in ethnic differences, such as the tendency for Dominican girls to engage in more risky sex than Puerto Rican or Mexican girls (see Table 3). However, overall, there were no strong and noteworthy differences between the different Latino ethnicities. The one possible exception was the much higher rates of noncondom use in Mexicans as opposed to Dominicans and Puerto Ricans, but our sample size was too small to document these differences in a reliable fashion. Future research should follow-up this result.

TABLE 4. Logistic Regression Predicting Risk Behaviors from Familismo Dimensions, Entre Familias Study, 2006-2007

	Support OR (95% CI)	Interconnectedness OR (95% CI)	Honor OR (95% CI)	Subjugation OR (95% CI)
Females				
Had vaginal intercourse	1.36 (0.43–4.32)	1.48 (0.62–3.53)	0.49 (0.22–1.08)	0.36* (0.15–0.83)
Had regular sex past 12 months	1.20 (0.30–4.76)	2.32 (0.79–6.76)	0.59 (0.24–1.43)	0.33* (0.12–0.88)
Received oral sex	2.74 (0.61–12.3)	4.25 (0.91–17.8)	0.49 (0.21–1.13)	0.39* (0.15–0.98)
Gave oral sex	2.98 (0.40–12.3)	2.04 (0.42–9.90)	0.76 (0.21–2.69)	0.10* (0.02–0.54)
Had anal sex	1.46 (0.18–12.1)	2.58 (0.54–12.2)	0.72 (0.20–2.67)	0.13* (0.02–0.73)
Had two or more partners	1.10 (0.28–4.33)	2.12 (0.77–5.87)	0.71 (0.29–1.78)	0.24* (0.08–0.67)
Males				
Had vaginal intercourse	2.12 (0.92–4.95)	0.89 (0.43–1.86)	1.21 (0.72–2.03)	1.12 (0.67–1.86)
Had regular sex past 12 months	1.57 (0.59–4.16)	0.75 (0.32–1.75)	1.69 (0.88–3.22)	1.06 (0.59–1.90)
Received oral sex	4.08* (1.31–11.8)	0.63 (0.25–1.61)	0.89 (0.48–1.67)	1.12 (0.59–2.13)
Gave oral sex	1.76 (0.50–6.24)	0.58 (0.19–1.67)	1.94 (0.84–4.49)	0.96 (0.46–1.98)
Had anal sex	2.69 (0.81–8.86)	0.53 (0.19–1.48)	1.31 (0.62–2.78)	1.52 (0.71–3.26)
Had two or more partners	1.71 (0.66–4.45)	0.77 (0.34–1.75)	1.32 (0.72–2.42)	1.03 (0.58–1.82)

Note. OR = odds ratio; CI = 95% confidence intervals. *$p < .05$.

TABLE 5. Ordinary Least Squares Regression Coefficients Predicting Adolescent Familismo from Parent Variables, Entre Familias Study, 2006-2007

	Females			Males		
Adolescent Outcome	**B for Mother Expectations**	**B for Mother *Familismo***	**Multiple *R***	**B for Mother Expectations**	**B for Mother *Familismo***	**Multiple *R***
Support	0.32*	-0.02	0.40*	0.04	0.1	0.13
	(0.23–0.41)	(0.13–0.08)		(-.04–0.13)	(-.02–0.22)	
Connectedness	0.36*	-0.07	0.41*	0.11*	-0.15	0.17*
	(0.27–0.45)	(-.20–0.05)		(0.01–0.20)	(-.30–0.01)	
Honor	0.32*	0.1	0.36*	0.24*	0.12	0.29*
	(0.20–0.33)	(-.02–0.23)		(0.12–0.37)	(-.02–0.25)	
Subjugation	0.28*	0	0.35*	0.04	0.1	0.12
	(0.19–0.37)	(-.11–0.11)		(-.06–0.15)	(-.03–0.22)	

Note. B = unstandardized regression coefficient; 95% confidence intervals for unstandardized coefficients are in parentheses. *$p < .05$.

A common belief in the popular press is that oral sex is widespread in middle school youth. Nationally representative studies indicate that 47% of Latino females and 53% of Latino males aged 15–19 years old have either given or received oral sex (Lindberg, Jones, & Santelli, 2008). In the present study, the rates were not notably high (around 5% to 10%), which may reflect the younger age of our sample. Indeed, research with middle school youth in California has found that 8% of students reported engaging in oral sex (De Rosa et al., 2006). In the present study, oral sex was less common than vaginal sexual intercourse. Overall, we found that 18% of the sample had engaged in vaginal intercourse, anal sex, or oral sex. Anal sex was infrequent for adolescent girls, but approached 10% for Dominican and Puerto Rican boys (see Table 3). This finding is consistent with research in national studies with older adolescents aged 15-19 years old, where 9.5% of Latina females and 16.1% of Latino males report that they have engaged in anal sex (Lindberg et al., 2008). Given that both oral and anal sex have been identified as risk factors for infection with HIV and other sexually transmitted infections (Halperin, 1999; Hawkins, 2001), these results underscore the importance of early prevention efforts for Latino youth.

Our research found that general acculturation for both parents and adolescents showed weak and nonsignificant associations with adolescent sexual risk taking. This was despite the fact that we used state-of-the-art measures of acculturation, made distinctions between different dimensions of acculturation, and had a fairly large sample size. In some ways, the result was not surprising because acculturation is an abstract, distal construct relative to sexual behavior. In social science research, there is a well-known principle called the principle of correspondence/specificity (Ajzen & Fishbein, 1977; Fishbein & Ajzen, 1975). The principle states that if one wants to predict a specific behavior, then the kinds of variables that will provide the best predictability are those that are directly tied to, and focus on, that behavior. More abstract and distal constructs, such as acculturation, can influence behavior, but the strength of their relationships with specific behaviors will be weaker and more inconsistent, as their effects work through immediate mediators that are more directly tied to the behavior.

The findings of the present study suggest that acculturation is a construct that has this distal-like quality. Other research examining the role of the Latino cultural constructs on adolescent sexual behavior has observed similar results. For example,

Villarruel, Jemmott, Jemmott, and Ronis (2007) found that Latino *familismo*, gender roles, and religiosity were not directly related to Latino adolescents' intentions to use condoms. Rather, more proximal constructs such as parental and partner approval of condom use, self-efficacy to use condoms, and expectancies about condoms were significantly associated with adolescents' condom use intentions (Villarruel et al., 2007). In addition, a separate study we conducted found that acculturation was related to Latino adolescents' intentions to engage in sex via its influence on factors such as adolescents' perceptions of maternal approval of dating, romantic relationship status of the adolescent, and the preferences adolescents had surrounding their ideal romantic partner (Guilamo-Ramos et al., 2009). Together, these three constructs are all more closely related to adolescent sexual behavior than the more global construct of acculturation. In general, the measurement of Latino cultural constructs has not been connected to a specific behavior but has tended to occur in a more global context. Future research should explore how specific cultural constructs work vis-à-vis a focused behavior of interest.

The current research emphasized a more specific Latino construct, namely *familismo*, and within that construct, we made distinctions between four facets of *familismo*, namely family support, family interconnectedness, family honor, and the subjugation of oneself to the family. As predicted, we found that *familismo* constructs were more predictive of sexual risk taking for adolescent girls than for adolescent boys. Of the four dimensions, the dimension that was the most consistent predictor of sexual risk behavior for girls was subjugation to the family (see Table 4). This result is important because other studies of *familismo* have tended to not conduct dimensional analyses, but instead have relied on overall *familismo* "scores" that collapse across the different dimensions. The latter approach presents several problems. First, when one mixes into an overall score dimension not predictive of outcomes with dimensions that are predictive of outcomes, the effects of the latter will become obscured as they are "weighted down" by the noise of the nonpredictive dimensions. This can lead to underestimates of the importance of *familismo*. Second, even if the overall *familismo* score is found to be associated with behavior, it may be the case that only a subset of facets of *familismo* is relevant. Without a more fine-grained dimensional analysis, practitioners may think they can address any aspect of *familismo* to impact sexual risk behavior when, in fact, this is not the case.

It is interesting that the aspect of *familismo* that was related to sexual behavior for adolescent girls was subjugation of the self to the family. The three items used to assess this aspect of *familismo* were (a) "A person should respect her older brothers and sisters," (b) "A person should be a good person for the sake of his or her family," and (c) "Children should obey their parents without question, even if they believe they are wrong." Lugo Steidel and Contreras (2003) stated that this dimension of *familismo* "reflects the belief that a person must be submissive and respect the family rules" (p. 325). We question if subjugation and submission are the proper terms to describe this aspect of *familismo* and believe that the subscale may be more reflective of respect for one's family, respect for parents and parental authority, and the value of being a good person not only for oneself, but also for the sake of the family. The emphasis on parental respect and authority has been observed in previous research with Latino youth (e.g., Baer, Prince, & Velez, 2004; Guilamo-Ramos et al., 2007). Future research should explore how this aspect of Latino *familismo* is maintained across adolescence, as some studies have shown that Latino adolescents' reports of family cohesion may change over time (Baer & Schmitz, 2007).

Another important result in our research was the finding that mothers who communicate formal standards to their children about how they are expected to behave and orient themselves to the different *familismo* dimensions are more likely to have children who orient toward those dimensions in ways that the mother expects. Simple role modeling is not sufficient, as evidenced by the generally low correlations between mother *familismo* scores and adolescent *familismo* scores. Rather, specific and clear parental expectations are required on the part of the parent to gain behavioral compliance. This is consistent with the idea that communicated maternal expectations, rather than modeling, is an important source of *familismo* embracement on the part of adolescent girls. We found no support for the hypothesis that the relationship between maternal and adolescent *familismo* would be qualified by family structure. Future research should continue to explore if family composition shapes the nature and extent of family socialization processes for Latino adolescents.

Taken together, our results have several applied implications for the development of family-based HIV prevention programs for Latino youth. First, few ethnic subgroup differences emerged. If these results are replicated in other studies, this finding suggests that prevention programs aimed at common sexual risk taking determinants may be equally effective for Dominican, Puerto Rican, and Mexican adolescents. In addition, our results suggest that prevention programs should pay particular attention to Latino boys, who appear to engage in elevated rates of risk behavior relative to their Latina peers. Although acculturation was not related to sexual behavior, the results indicate that it may be important for family-based HIV prevention programs to incorporate elements of *familismo* that emphasize the importance of parental respect and good behavior in the context of family relationships that are characterized by high levels of closeness, connectedness and support. To be clear, we are not recommending that programs emphasize subjugation of the self as a prevention strategy. Rather, programs should work with parents to help them foster adolescent respect for parental rules and decision making. Finally, the overall pattern of results indicates that parents can influence their adolescent's embracement of *familismo* but that parents need assistance in developing effective strategies to communicate clear behavioral expectations to their child.

As with any study, one must interpret our results within the methodological constraints under which the study was conducted. The analytic framework was correlational in nature, so strict causal inferences are not possible. The measures were self-reports and may have bias. To be sure, responses were confidential and we did not find any significant associations between our measures and a measure of social desirability tendencies that was included as a subsequent methodological check. Nevertheless, one must be cautious because of the self-report nature of the measures. For some indices of adolescent sexual behavior, statistical power was too low to examine these behaviors in detail. Although most adolescents were abstinent, a small percentage of youth were engaging in vaginal, oral, and anal sex. Future research should attain larger samples of middle school youth in order to more fully explore the range of coital and noncoital behaviors that occur among early adolescents. Our sample was limited to New York City youth in the South Bronx, so the results may not generalize to other populations. Finally, measurement error can bias parameter estimates and this must be taken into account as well. The reliability estimates (coefficient alphas) for the subjugation scales were somewhat low, but this should serve

to yield underestimations of its effects, given the broader pattern of unreliabilities. Despite these limitations, the results of the study are intriguing and offer useful directions for future research.

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