The transition to becoming sexually active is an important part of adolescent development (Tolman & McClelland, 2011). Many sexual behaviors (e.g., making out, oral sex, vaginal sex) commonly happen for the first time during adolescence (London, 2008). Once adolescents of Mexican origin become sexually active, they may encounter more challenges than other adolescents living in the U.S. (Driscoll, Biggs, Brindis, & Yankah, 2001; Guttmacher Institute, 2006). For instance, Latinos have disproportionately high incidence rates of HIV and STIs (Center for Disease Control and Prevention [CDC], 2012; Driscoll et al., 2001). Female adolescents of Mexican origin are also more likely to have ever been pregnant compared to female adolescents of other ethnic/national groups (Driscoll et al., 2001; Martin et al., 2010). Although adolescents of Mexican origin are at higher sexual risk than other adolescents, researchers have identified certain Latino cultural variables which are protective against risky sexual behavior (Afable-Munzus & Brindis, 2006). For instance, Latino adolescents who use Spanish at home more often are less likely to engage in sexual intercourse (Guilamo-Ramos, Jaccard, Pena, & Goldberg, 2005; Jimenez, Potts, & Jimenez, 2002) than adolescents who speak English. However, most studies of sexual behavior in Latino adolescents...
have used factors like language use or nativity as proxies for cultural values, and less research has focused on the influence of specific Latino cultural values in adolescent sexual behavior. Moreover, the transition to becoming sexual active is also part of normative adolescent development (Tolman & McClelland, 2011), and few researchers have examined the role of cultural values in normative sexual behaviors among Latinos. Examining rates and predictors of timing of multiple sexual behaviors can help in the understanding of normative sexual development, as well as expanding our comprehension of how to reduce risky sexual behaviors among Latino adolescents. In this study, we only focused on Mexican-origin female adolescents, as opposed to all Latinas, because Latinos are a very heterogeneous population (Driscoll et al., 2001). Latino adolescents of different national origins may not share the same values and behaviors. For instance, Mexican-origin female adolescents between the ages of 15-19 have the highest risk of teen pregnancy compared to other Latinas (Frost & Driscoll, 2006). Thus in this study, we explored the role of nativity, language use, familism and the importance of female virginity to better understand the role of specific cultural variables (e.g., nativity, language and Latino sexual values) in the timing of different sexual behaviors among female adolescents of Mexican origin.

**Sexual Development among Latino Adolescents**

Adolescence is a period where many individuals transition to first sexual behaviors, as part of normative development (Tolman & McClelland, 2011), and acquire more sexual experience with age (London, 2008). Ethnic differences, however, exist in the prevalence and timing of these sexual behaviors among adolescents living in the U.S. Latino adolescents, especially women, are less likely to engage in oral sex than European American (Lindberg, Jones, & Santelli, 2008; London, 2008), and less likely to engage in vaginal sex than African American adolescents (CDC, 2011). Differences in sexual behaviors within Latino national origin groups (e.g., Mexicans vs. Puerto Ricans) also exist. A nationally representative sample found that adolescents of Mexican origin are less likely to transition to first sexual intercourse before the age of 18 compared to other Latinos (McDonald, Manlove, & Ikrumullah, 2009). Female adolescents of Mexican origin may also engage in other sexual behaviors such as oral sex at a later age than other groups. Because prior research has suggested that Latino adolescents, Mexicans in particular, may have a later timing for sexual behaviors than other adolescents, but still report the highest rates of teenage pregnancy, we explored timing of making out, oral sex and vaginal sex among Mexican-origin female adolescents of different age groups. We also examined how cultural factors may protect these adolescents by predicting later timing.

**Sexual Socialization and Cultural Variables**

Latino youth who live in the U.S. are exposed to both the majority and native culture (Knight, Jacobson, Gonzales, Roosa, & Saenz, 2009; Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005). Both enculturation and acculturation processes therefore may influence timing of sexual behaviors among female adolescents of Mexican origin. Acculturation is the process by which ethnic minority adolescents gradually adopt values and behaviors of the host country (Abe-Kim, Okazaki, & Goto, 2001; Hunt, Schneider & Comer, 2004). In contrast, enculturation is the process by which ethnic minority individuals adopt the values and behaviors of their own culture (Gonzales, Knight, Birman, & Sirolli, 2004). In this study, we assessed both distal (i.e., nativity, English and Spanish language use) and proximal measures of cultural values (i.e., values of familism and female virginity) to better understand the role of culture in sexual behavior.

**Distal Measures of Cultural Variables and Timing of Sexual Behaviors.** We define distal measures of cultural variables as constructs
which are used as a proxy for, but do not directly assess cultural beliefs and values. Examples in prior research are language use, nativity, and years living in the U.S. (Afable-Munzus & Brindis, 2006). Findings assessing distal cultural variables separately suggest that Latino adolescents who use the Spanish language more often or are born outside of the U.S. are less likely to engage in sexual intercourse (Guilamo-Ramos et al., 2005; Jimenez et al., 2002; McDonald et al., 2009) or delay their initiation of first sexual intercourse (Reynoso, Felice, & Shragg, 1993; Upchurch, Aneshensel, Mudgal, & McNeely, 2001) than adolescents who speak English at home and are born in the U.S. It has been argued, however, that language use has the opposite effect when adolescents are recent immigrants or have lived in U.S. for less than 12 years (Guilamo-Ramos et al., 2005). That is, among recent immigrants, adolescents who speak English at home are less likely to transition to first sexual intercourse than adolescents who speak Spanish at home (Guilamo-Ramos et al., 2005). Because in this study most of our sample was born in the U.S., we did not assess years living in the U.S. Moreover, we posited that adolescents who use more Spanish and less English would report later timing of sexual behaviors than adolescents who use less Spanish and more English. We wanted to assess both Spanish and English use separately because researchers have argued that acculturation and enculturation are processes that develop and change separately from each other (Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli, 2002). That is, an individual can learn both English and Spanish since birth, or can be fluent only in Spanish and later learn English becoming fluent in both languages. Thus, nativity and language use may be associated with timing of sexual behaviors among female adolescents of Mexican origin.

**Proximal Cultural Values.** When interpreting associations between distal cultural variables such as language use and sexual behavior, researchers often assume that people who use Spanish more or are born in Mexico are more likely to hold traditional Latino values regarding family, gender roles, and sexuality than youth who use Spanish less or are born in the U.S. (Afable-Munzus & Brindis, 2006). Previous research rarely tests this assumption (Afable-Munzus & Brindis, 2006; Knight et al., 2009). Thus, in order to understand the process by which Latino sexual values may be protective against sexual behaviors, it is important to directly examine more proximal measures of cultural values.

**Familism and Timing of Sexual Behaviors.** Among the Mexican cultural values that may be associated with sexual behaviors of female adolescents of Mexican-origin are the general value of familism and the more sexuality-specific value of virginity or marianismo (Afable-Munzus & Brindis, 2006; Tschann et al., 2002). Although similar values have been identified in other cultural groups (Zhai & Gao, 2009), familism and marianismo are Mexican values that are influenced by this cultural group’s history and religion, and may differ from how other groups define them. Familism is the strong attachment to immediate and extended family (Villarreal, Blozis, & Widaman, 2005). It is different from relationship quality with parents because familism also entails strong feelings of loyalty, reciprocity, and solidarity among members of the same family (Villarreal et al., 2005). Because Latino parents might be likely to consider it important to delay engaging in sexual behaviors such as making out, oral sex, and vaginal sex during adolescence (Guilamo-Ramos et al., 2006), female adolescents who are more family oriented might engage in sexual behaviors later than less family-oriented ones. That is, more family-oriented female adolescents might be more likely to consider their parents’/family’s views in their sexual decision-making than less family-oriented female adolescents. In fact, Latino female adolescents who are less family oriented report stronger intentions to have sex than more family oriented female adolescents (Guilamo-Ramos et al., 2009). Familism may be a better
predictor of timing of sexual behaviors than nativity and language use, because it directly examines whether or not these adolescents adhere to cultural values important to their own national group.

Importance of Female Virginity and Timing of Sexual Behaviors. For this study, we examined the cultural sexual value of female virginity (Deardorff, Tschann, & Flores, 2008) because it parallels the value of marianism or the idea that Latino women are seen as pure and asexual and, therefore, should remain virgins until marriage (Mirande & Enriquez, 1979). Researchers suggest that female virginity is still valued among Mexican women, however, reasons might extend beyond “sexual purity” and may include a way of avoiding abusive relationships (González-López, 2003). Placing importance on female virginity is associated with less sexual experience among Latino adolescents (Deardorff et al., 2008). Because it is more directly related to sexual behavior than the general cultural value of familism or the more distal measures of cultural values like language use, the importance of female virginity may be more strongly associated with sexual behaviors. The female virginity value directly examines whether or not these adolescents adhere to cultural sexual values important to their own national group.

Although little research has specifically examined the impact of cultural values like familism and the importance of female virginity on timing of sexual behaviors, some evidence suggests that both language use and Latino values are associated, and thus cultural values may be associated with sexual behavior in similar ways. Specifically, Latino adolescents who use more Spanish and less English are more likely to believe that women should remain virgins until marriage and that talking about sex with a partner is disrespectful than adolescents who use less Spanish and more English (Deardorff et al., 2008). It is not clear, however, whether both distal (e.g., language use) and proximal (e.g., values) cultural variables independently affect timing of sexual behaviors among female adolescents of Mexican origin, or whether cultural values are the mechanism by which language use and nativity may be associated with sexual behavior. We posit that the cultural sexual values of female virginity may be more likely to be associated with timing of sexual behaviors than the general cultural value of familism and the distal cultural variables of nativity and language use.

Socioeconomic Status and Family Structure as Covariates of Timing of Sexual Behavior

Although our study highlights the importance of culture in sexual development among female adolescents of Mexican origin, we recognize other contextual factors such as family structure and socioeconomic status that are also salient predictors of sexual development. Similar to other adolescents, Latinos living with both biological parents have lower risk of engaging in sexual intercourse than other adolescents (Upchurch et al., 2001). Further, adolescents who report higher socioeconomic status have higher risk of engaging in oral sex and less risk of engaging in vaginal sex than adolescents reporting lower socioeconomic status (Brewster & Tillman, 2008; Lindberg et al., 2008). Because Latino immigrants, especially Mexicans, tend to report lower socioeconomic status than Latinos born in the U.S. (Reimers, 2006), the role of acculturation may be confounded with the role of socioeconomic status. We controlled for both socioeconomic status and family structure because the purpose of this study was to examine whether or not culture would predict sexual behaviors above and beyond socioeconomic status and family structure.

In sum, to examine the role of different cultural variables on timing of sexual behavior we assessed the distal variables of nativity and language use, the general value of familism, and the sexual value of female virginity. Further, we expected values to be more likely to predict timing of sexual behaviors than distal cultural variables. In summary, we had the following aims and hypotheses:

1) We examined the prevalence of 4 sexual behaviors (making out, oral sex, and
vaginal sex) in female adolescents of Mexican-origin.

2) We examined whether female adolescents’ nativity and English and Spanish language use were associated with timing of sexual behavior. We predicted that female adolescents who were born in Mexico and use more Spanish and less English would report later timing for engaging in sexual behaviors than female adolescents who were born in the U.S. and use less Spanish and more English.

3) We examined whether familism was associated with timing of sexual behavior above and beyond Spanish and English use. We predicted that female adolescents who were more family oriented would report later timing than less family-oriented female adolescents.

4) We examined whether the value of female virginity would be associated with sexual behavior timing above and beyond other cultural variables. We predicted that female adolescents who believe female virginity is important would report later timing than female adolescents who believe female virginity to be less important.

Methods

Participants

Data is from W2 of a longitudinal study (Bámaca-Colbert & Gayles, 2010). Female adolescents were originally recruited in 7th or 10th grade from schools in a large Southwestern, metropolitan area in the U.S. The Latino student body at the participating schools ranged from 67% to 88%. In order to be originally included in this study, we needed participants to be female adolescents of Mexican-origin and their mothers needed to be willing to participate.

The original sample consisted of a total of 338 female adolescents in 7th or 10th grade (170 7th graders; 168 10th graders), of which 321 (95%) indicated their interest in a follow-up study. Two years and a half later from the original study, a total of 201 adolescents were reached during the recruitment phase of Wave 2; 194 agreed to participate and 7 declined. Of these, 153 (48%) completed surveys at Wave 2. Of the students who completed surveys at Wave 1, but did not participate at Wave 2 (n = 185), 78% were unreachable because their phone numbers were disconnected or wrong, or never answered the phone (n = 144), 18% did not return the survey (n = 34), and 4% refused to participate (n = 7).

We examined any potential biases due to attrition. We compared participants who completed surveys at Wave 2 (n = 153) to those who only participated at Wave 1 (n = 185) on demographics and variables of interest that were available at both times (Spanish and English language use and familism). We performed five chi-square tests and four t-tests. Female adolescents who participated at Wave 2 and those who participated only at Wave 1 were found to be similar in terms of country of birth, family structure, socioeconomic status, age, grade attended, English and Spanish language use and familism values assessed at Wave 1.

For this study we focused on Wave 2 data when sexual variables were added. The sample was 153 female adolescents of Mexican-origin. Their ages ranged from 14 to 19 years (M = 16.3, SD = 1.57) at Wave 2. Most of the participants were enrolled in school (88%) with 43% attending 9th grade, 15% attending 10th grade, 41% attending 12th grade and 2% attending college. The majority of the population was born in the United States (70%) and 69% of the female adolescents self-reported reported middle class socioeconomic status. More than half of the female adolescents lived in households with both their biological mother and father (56%). Thirty-six percent of participants’ mothers had at least a high school degree at Wave 1.

Procedure

At Wave 2, undergraduate and graduate research assistants contacted participants and/or their mothers by phone, mail, or e-mail to invite
them to participate in a follow-up study. Research assistants followed informed consent procedures and obtained oral consent from mothers (if participants were minors) and assent from participants. Participants who agreed to participate received a survey in their language of choice by mail. They completed the survey at home and mailed it back inside a pre-paid envelope. Adolescents received monetary compensation ($20) for completing the survey and entered a draw to receive 1 of five $75 gift certificates for Best Buy if they sent their survey back within three weeks. Most participants completed the survey in English (88%).

Measures

Nativity. We assessed nativity or participants’ country of birth with one item at Wave 1. We recoded this variable to compare participants who were born in the U.S. (0) against participants who were born in Mexico (1).

Spanish and English Language Use. We assessed language use and how frequently a participant thinks and speaks in Spanish and English (e.g., “How often do you speak in Spanish/English with your friends?”) with two 3-item subscales from the Bidimensional Acculturation Scale for Hispanics (Marín & Gamba, 1996). Higher scores indicate more Spanish or English use. Participants rated each item on a 4-point scale from 1 (Almost Never) to 4 (Almost Always). Reliability in the current study was good ($\alpha = .85$ for Spanish and .80 for English). Individual scores were calculated as a mean score. Participants reported a mean of 3.61 ($SD = 0.55$) for English and of 2.52 ($SD = 0.82$) for Spanish use.

Familism. We assessed participants’ respect for, attachment and loyalty to, their parents (e.g., “I try to avoid dangerous things because I don’t want my parents to worry.”) with 13-item from the Cultural Values Scale (Unger et al., 2002). Higher scores indicate stronger familism. Participants rated each item on a 4-point scale from 1 (Strongly Disagree) to 4 (Strongly Agree). Individual scores were calculated as a mean score. Reliability in the current study was good ($\alpha = .86$). Participants reported a mean of 3.14 ($SD = 6.0$) on this scale.

Importance of Female Virginity. We assessed the importance of female virginity (e.g., “Do you think it’s okay for female adolescents to have sex before marriage?”) with 2 items from the Female Virginity as Important Scale (Deardorff et al., 2008). We did not include one item (“Do you think it is okay for girls to make the first move with a guy?”), because we believed this item was distinct from the construct of the importance of female virginity. Moreover, reliability was lower ($\alpha = .52$) when we included this item. Higher scores indicated higher endorsement on virginity. Participants rated each item on a 4-point scale from 1 (Definitely Yes) to 4 (Definitely No). The two items were added for a sum score ranging from 2-8. Reliability in the current study was adequate ($\alpha = .60$). Participants reported a mean of 6.03 ($SD = 1.27$) on this scale.

Timing of Sexual Behaviors. We assessed timing of sexual behaviors retrospectively with 4 items from the Romantic and Sexual History survey (Buhrmester, 2001; Smetana & Gettman, 2006). We focused on four sexual behaviors: making out, receiving and performing oral sex, and vaginal sex. We defined making out as kissing and rubbing outside of clothes. For oral sex, we assessed performed and received oral sex separately. To assess timing of these sexual behaviors, we asked adolescents to mark on a grid whether or not they had engaged in each of these sexual behaviors from 4th to 12th grade. For this study, we only consider the first time they reported engaging in these behaviors, because we were interested in the timing of experiencing these sexual behaviors for the first time. As is customary in event history analyses, we created two variables to assess timing of each behavior for a total of 8 variables. The first set of four variables was created to classify participants into two groups (1= participants who reported ever engaging in each behavior, regardless of timing, and 0= participants who reported never engaging
in each behavior). The second set of four variables was created to classify participants who had already engaged in the behavior according to the grade they reported engaging in each behavior for the first time (ranging from 4th to 12th grade). For the participants who reported never engaging in a behavior, we classify them according to the grade they were currently in (ranging from 10th to 12th grade and 13 if they have graduated from high school or reported attending college).

**Covariates.** We assessed socioeconomic status with one item at Wave 1 (How wealthy is your family?). Participants rated this item on a 6 point scale (1=very poor, 2=poor, 3=lower middle-class, 4=middle-class, 5=upper middle-class, 6=upper-class, rich). We assessed family structure also with one item (“Which of the following best describes the parents you live with?”). Participants originally rated this item on a 6 point scale (1=both birth mother and birth father, 2=birth father only, 3=birth mother and stepparent, 4=birth father only, 5=birth mother only, 6=other). We recoded this variable to compare participants who lived with both birth mother and birth father (1) against participants who report other family structures (0).

**Results**

For our first aim examining the prevalence of sexual behaviors in Mexican-origin female adolescents, we examined the frequencies of experiencing each of the 4 sexual behaviors. Results are presented in Table 1. Engaging in oral or vaginal sex was relatively uncommon for 14-16 year-old adolescents, but was more common among 17-19 year-old adolescents. Table 2 shows the co-occurrence of these behaviors by age group. No sexual experience was the most common among 14-16 year-olds, whereas engaging in oral and vaginal sex was most common among 17-19 year-olds.

<table>
<thead>
<tr>
<th>Sexual Behavior</th>
<th>14-16 year olds N= 78</th>
<th>17-19 year olds N= 75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making out</td>
<td>45%</td>
<td>72%</td>
</tr>
<tr>
<td>Performed oral sex</td>
<td>10%</td>
<td>39%</td>
</tr>
<tr>
<td>Received oral sex</td>
<td>14%</td>
<td>43%</td>
</tr>
<tr>
<td>Vaginal sex</td>
<td>15%</td>
<td>56%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sexual Behavior</th>
<th>14-16 year olds N= 78</th>
<th>17-19 year olds N= 75</th>
</tr>
</thead>
<tbody>
<tr>
<td>No sexual experience</td>
<td>55%</td>
<td>24%</td>
</tr>
<tr>
<td>Only making out</td>
<td>27%</td>
<td>13%</td>
</tr>
<tr>
<td>Oral, but no vaginal sex</td>
<td>3%</td>
<td>7%</td>
</tr>
<tr>
<td>Oral and vaginal sex</td>
<td>12%</td>
<td>41%</td>
</tr>
<tr>
<td>Vaginal sex, no oral</td>
<td>3%</td>
<td>15%</td>
</tr>
</tbody>
</table>
To determine how Latino cultural values predicted timing of sexual behaviors (Hypothesis 2-4), we used a proportional hazards Cox regression (Cox, 1972; Singer & Willet, 2003). We used the exact method for handling ties, which adjusts for the timing of events which occur in continuous time, but have been measured at set intervals (Allison, 1995). Our outcome of interest was whether or not, and when (grade in school), participants had engaged in four sexual behaviors. In the first step (Hypothesis 2), we used three distal cultural variables (nativity, English and Spanish uses) as predictors, in addition to two control variables (family structure and SES). In the second step, we added familism as a predictor, and in the third, we added the importance of female virginity.

Results are presented in Table 3. In our first set of models (Aim 2), no distal cultural variables were significant predictors of sexual behavior, with the exception of nativity in two of the 4 models; female adolescents who were born in Mexico had greater odds of engaging in making out and vaginal sex at earlier ages than female adolescents who were born in the U.S. In

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Making Out</th>
<th>Perform Oral</th>
<th>Receive Oral</th>
<th>Vaginal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hazard</td>
<td>$\chi^2$</td>
<td>Hazard</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Two parent</td>
<td>0.67</td>
<td>3.10</td>
<td>0.72</td>
<td>0.90</td>
</tr>
<tr>
<td>SES</td>
<td>1.23</td>
<td>1.53</td>
<td>1.06</td>
<td>0.05</td>
</tr>
<tr>
<td>Born in Mexico</td>
<td>1.83*</td>
<td>6.05</td>
<td>1.07</td>
<td>0.04</td>
</tr>
<tr>
<td>Spanish Use</td>
<td>1.19</td>
<td>1.16</td>
<td>0.97</td>
<td>0.08</td>
</tr>
<tr>
<td>English Use</td>
<td>1.10</td>
<td>0.18</td>
<td>0.94</td>
<td>0.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 2</th>
<th>Making Out</th>
<th>Perform Oral</th>
<th>Receive Oral</th>
<th>Vaginal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hazard</td>
<td>$\chi^2$</td>
<td>Hazard</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Two parent</td>
<td>0.78</td>
<td>0.88</td>
<td>0.69</td>
<td>1.18</td>
</tr>
<tr>
<td>SES</td>
<td>1.18</td>
<td>0.46</td>
<td>0.88</td>
<td>0.25</td>
</tr>
<tr>
<td>Born in Mexico</td>
<td>1.94*</td>
<td>4.77</td>
<td>1.04</td>
<td>0.01</td>
</tr>
<tr>
<td>Spanish Use</td>
<td>1.02</td>
<td>0.89</td>
<td>1.04</td>
<td>0.03</td>
</tr>
<tr>
<td>English Use</td>
<td>.80</td>
<td>0.36</td>
<td>0.88</td>
<td>1.12</td>
</tr>
<tr>
<td>Familism</td>
<td>.93**</td>
<td>8.05</td>
<td>0.93*</td>
<td>5.39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 3</th>
<th>Making Out</th>
<th>Perform Oral</th>
<th>Receive Oral</th>
<th>Vaginal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hazard</td>
<td>$\chi^2$</td>
<td>Hazard</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Two parent</td>
<td>0.68</td>
<td>2.90</td>
<td>0.70</td>
<td>0.98</td>
</tr>
<tr>
<td>SES</td>
<td>1.10</td>
<td>0.32</td>
<td>0.83</td>
<td>0.46</td>
</tr>
<tr>
<td>Born in Mexico</td>
<td>1.82*</td>
<td>5.53</td>
<td>0.92</td>
<td>0.05</td>
</tr>
<tr>
<td>English Use</td>
<td>1.26</td>
<td>1.85</td>
<td>1.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Spanish Use</td>
<td>1.77</td>
<td>0.17</td>
<td>0.30</td>
<td>1.23</td>
</tr>
<tr>
<td>Familism</td>
<td>0.96*</td>
<td>4.53</td>
<td>0.31</td>
<td>1.03</td>
</tr>
<tr>
<td>Female Virginity</td>
<td>0.77**</td>
<td>7.02</td>
<td>0.68*</td>
<td>5.72</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01
our second set of models (Aim 3), female adolescents who scored higher on familism were less likely to have made out and performed or received oral sex than female adolescents who scored lower on familism. In addition, country of origin was no longer significant in the model for vaginal sex. Finally, in our third set of models (Aim 4) we added a covariate measuring the importance of female virginity. For all behaviors, placing a greater value on female virginity was associated with lesser odds of engaging in that behavior. In addition, familism was no longer significant in either oral sex model, and the coefficients for familism predicting making out and both types of oral sex were reduced ($\Delta B$ making out=33.33%, $\Delta B$ oral perform=51.70%, $\Delta B$ oral received=54.46%).

**Discussion**

In this study we examined normative sexual behaviors among female adolescents of Mexican origin. Moreover, we expanded our understanding of the complex role of both distal and proximal cultural variables in sexual behavior. Similar to previous findings suggesting that many individuals engage in a wide range of sexual behaviors for the first time in adolescence (London, 2008), we found that many female adolescents of Mexican origin had their first sexual experience of making out, oral sex and vaginal sex during this period. Moreover, of those adolescents who engaged in these behaviors, most did so after 7th grade or middle adolescence, indicating that, consistent with previous literature (London, 2008), transitions to first making out, oral and vaginal sex are less likely to occur during early adolescence.

In this study, the differential rates in sexual behaviors between younger (14-16 years old) and older female adolescents (17-19 years old) suggest that sexual behaviors follow a developmental pattern with older female adolescents being more likely to engage in making out, oral sex and vaginal sex than younger ones. Percentages for oral sex and vaginal sex among the older female adolescents in our sample are lower or similar to percentages reported by Latinos in nationally representative samples (McDonald et al., 2009; Mosher, Chandra, & Jones, 2005; CDC, 2011). In this study, most of the younger female adolescents (14-16 years old) had no sexual experience or had only engaged in making out, whereas less than half of the older female adolescents (17-19 years old) had engaged in oral sex and about half had engaged in vaginal sex. In nationally representative samples, however, 49% of Latinos attending 9th through 12th grade report ever engaging in sexual intercourse (CDC, 2011), and 54% of female adolescents between the ages of 15 and 19 report having engaged in oral sex (Mosher et al., 2005). These differences in percentages of sexual behavior between our study and others may be due to the fact that we reported on a specific national group, whereas nationally representative findings only describe percentages by ethnic group and do not separate Latino ethnicity by national group. When researchers examine the effects of country of origin in Latino sexual behavior, Puerto Rican and “other” country of origin adolescents have greater odds of transition to sex before age 18 than Mexican-origin youth (McDonald et al., 2009). These findings along with ours suggest that female adolescents of Mexican origin engage in sexual behaviors (making out, oral sex, and vaginal sex) at later ages, compared to Latino youth in general. In terms of co-occurrence of different sexual behaviors, similar to adolescents between the ages of 15 and 19 (Lindberg et al., 2008; London, 2008), many older female adolescents of Mexican origin have engaged in both vaginal and oral sex. In fact, very few of our younger and older participants had only engaged in oral sex, suggesting that co-occurrence of oral sex and vaginal sex is also normative among this population.

In line with previous research (Afable-Munzus & Brindis, 2006), our findings suggest that cultural variables affect timing of sexual behaviors among female adolescents of Mexican origin. Specifically, high acculturation (e.g., born in the U.S.) and enculturation (e.g., family-oriented) delayed the transition to making out,
oral sex, and vaginal sex among our sample of female adolescents of Mexican origin. In contrast to other studies which only assess the effect of cultural variables on vaginal sex (Guilamo-Ramos et al., 2005; Jimenez et al., 2002), the current findings expand our understanding of diverse sexual behaviors beyond vaginal sex. Moreover, this study assessed both distal (e.g., nativity) and proximal (e.g., values) measures of cultural variables to better understand the effects of acculturation and enculturation processes on timing of sexual behaviors among female adolescents of Mexican origin.

In contrast to previous studies assessing distal measures of cultural variables and sexual intercourse (Reynoso et al., 1993; McDonald et al., 2009; Upchurch et al., 2001), female adolescents of Mexican origin who were born in Mexico transitioned to making out and vaginal sex earlier than female adolescents of Mexican origin who were born in the U.S. Furthermore, nativity predicted timing of these behaviors above and beyond socioeconomic status and family structure. Qualitative studies suggest that Latinas have a more idealized image of romantic relationships and are less likely to separate sex from romantic relationships compared to other ethnic groups (O’Sullivan & Meyer-Bahlburg, 2003). In our study, female adolescents born in Mexico may be more likely to be in romantic relationships than adolescents born in the U.S. Immigrant adolescents therefore may transition to making out and vaginal sex earlier than adolescents born in the U.S., because these transitions are occurring in the “ideal” context of a romantic relationship. Future studies should examine the role of cultural variables in romantic relations to further examine this explanation.

Our findings might also help examine the differential role of cultural variables, socioeconomic status, and family structure on timing of different sexual behaviors. Interestingly, nativity did not explain timing of oral sex, suggesting that different cultural variables may operate in different ways for different sexual behaviors. Contrary to other studies that suggest that language use is a significant indicator of acculturation (Afable-Munzus & Brindis, 2006; McDonald et al., 2009), English and Spanish language use did not affect the timing of any sexual behavior. In this study, nativity was a better predictor of timing of vaginal sex than language use. In fact, when we included English and Spanish language use, but not nativity, in the model (analysis not presented), language use variables were significant. Because participants who are born in Mexico may be more likely to use Spanish, and less English than participants born in the U.S., nativity may explain some of the variance that language use would have explained.

The current findings also indicate that familism affected timing of making out and oral sex, but not vaginal sex. Because Latino parents might be likely to consider it important for adolescents to delay engaging in sexual behaviors (Guilamo-Ramos et al., 2006), we expected more family-oriented female adolescents to be more likely to consider what their parents/family think in their sexual decision-making than less family-oriented female adolescents. As expected, we found that female adolescents of Mexican origin who were more family-oriented transitioned to making out and performing and receiving oral sex later than less family-oriented female adolescents. Although other studies posit that Latina adolescents who are less family-oriented are more likely to report they intend to have sex than less family-oriented female adolescents (Guilamo-Ramos et al., 2009; Killoren, Updegraff, & Christopher, 2011), in the current study, familism did not predict vaginal sex. Thus, it appears that familism serves a protective function when engaging in sexual experiences such as making out and oral sex, but not for riskier sexual behaviors such as vaginal sex. Together these findings suggest that although familism has been found to be associated with intentions to have sex in previous work (Killoren et al., 2011), it is not associated with the actual behavior. Moreover, nativity was a better predictor of vaginal sex, suggesting that the influence of nativity on sexual behavior may be through values other than familism.
In line with previous studies (Deardorff et al., 2008), the importance of female virginity, a sexual value, was associated with timing of the four sexual behaviors. Specifically, female adolescents of Mexican origin who believed female virginity to be important transition to making out, performed and received oral sex, and vaginal sex later than those who endorsed this value less. Moreover, this sexual value explained timing of these behaviors above and beyond socioeconomic status, family structure, distal cultural variables (i.e., nativity, English and Spanish language use), and the Latino value of familism. These findings may indicate that Latino sexual values are important cultural constructs that clearly predict timing of several sexual behaviors. In fact, familism was no longer significant for perform and receive oral sex, when we added this sexual value into the model. This may suggest that the reason why family-oriented female adolescents delayed engaging in performing or receiving oral sex is because they believed female virginity to be important, which could be a result of socialization from their family.

In general, our findings suggest that variables assessing Latino values (familism and female virginity) seem to better explain timing of most sexual behaviors than distal variables (nativity and language use). In the case of making out, however, nativity was also a significant predictor. Specifically, female adolescents who were born in Mexico still had greater odds of engaging in making out, even when we added familism and the value of female virginity as important. We consider, therefore, that nativity may be a proxy for variables other than the individual values we assessed (i.e., participants’ familism and female virginity values), at least in the case of making out. As mentioned earlier, it is possible that our participants born in Mexico were more likely to be in romantic relationships than those born in the U.S. Immigrant adolescents therefore may transition to making out earlier than adolescents born in the U.S. because they may be more likely to have a romantic partner. Future studies should further address this issue.

Overall, our findings underscore the importance of distinguishing between distal (e.g., language use) and proximal (e.g., values) measures of cultural variables. That is, we should not assume that speaking Spanish or being born in Mexico means that an adolescent will endorse a certain Latino value more so than someone who speaks less Spanish or is born in the U.S. Instead, we assessed both distal and proximal measures of cultural variables to expand our understanding of why, in some cases, less acculturated and more enculturated female adolescents of Mexican origin delay engaging in several sexual behaviors. For instance, although we find that Mexico born adolescents transition to making out earlier than those born in the U.S., our findings also suggest that enculturated female adolescents delay engaging in making out because they are family oriented. Moreover, we can conclude that one reason why family-oriented Latinas delay engaging in making out may be because they believe women should remain virgins until marriage.

Despite the contribution to the cultural variables and sexuality literature, our study has some limitations. In this study, few female adolescents had transitioned to vaginal sex. Because of the different rates of engaging in different sexual behaviors, some of our lack of findings in models predicting vaginal sex may have been due to limited power to detect small effects. Future research could examine larger samples or older participants to include greater numbers of participants who engaged in vaginal sex. Furthermore, this study focuses on female adolescents of Mexican origin. Mexican culture, however, tends to promote more traditional and defined views on sexuality and gender roles for men and women (e.g., women are innocent and virginal; men are macho) than other Latino cultures such as Puerto Ricans (Driscoll et al., 2001). Future research should examine whether these patterns are similar across Latino adolescents of different national origin (for example McDonald et al., 2009) and other ethnic/national origin groups. For instance, female virginity and honoring family are also important values among Asian Americans (Zhai & Gao, 2009) and may also act as protective
factors in sexual development among this population. Furthermore, due to the nature of the original study, which focused on female adolescents of Mexican origin, we were not able to look at men. However, future studies should assess the role of culture in male adolescents’ timing of sexual behaviors because men and women ascribed different meaning to sexual behaviors. In this study, we also assessed timing of sexual behaviors retrospectively. Examining timing of these behaviors longitudinally would have allowed us to assess hypothesized predictors (e.g., cultural variables) before the behaviors, and changes in cultural values over time. Finally, this study’s findings emphasize the protective role of enculturation in timing of making out, oral sex and vaginal sex. The effect of cultural variables in sexual health once female adolescents are sexually active, however, may be different. Research on risky sexual behaviors suggests that low enculturation might be a risk factor once female adolescents are sexually active. For instance, Latinos who are third generation are more likely to use condoms than Latinos who are immigrants or second generation (McDonald et al., 2009). Future studies should address both risk and protective aspects of cultural variables factors in terms of sexual experiences (e.g., making out and oral sex) as well as risky sexual health behaviors (e.g., condom use, STIs) among this population.

In sum, this study’s findings emphasize the importance of understanding adolescent sexuality from a developmental perspective. This study also expands our comprehension of the protective role of enculturation in the timing of making out, oral sex and vaginal sex among the largest Latino national group in the U.S.

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