

# Sexual Values and Risky Sexual Behaviors Among Latino Youths

**CONTEXT:** Understanding Latino youths' sexual values is key to informing HIV prevention efforts. Few studies have examined associations between culturally based sexual values and behaviors among Latinos.

**METHODS:** A sample of 839 sexually active Latinos aged 16–22 residing in San Francisco were interviewed in 2003–2006. Multiple regression and multinomial logistic regression analyses were conducted to examine associations between sexual values and behaviors, while adjusting for language use (a proxy for acculturation) and other covariates.

**RESULTS:** The importance attached to female virginity was negatively associated with the number of sexual partners women had had in their lifetime (odds ratio, 0.8) and in the past year (0.9), and was positively associated with women's nonuse of condoms, rather than consistent use, during the first month of their current relationships (1.8). For men, the importance of satisfying sexual needs increased with the numbers of lifetime and recent sexual partners (1.4 and 1.1, respectively), and with inconsistent condom use in the first month of their relationships (1.9). Comfort with sexual communication was positively associated with inconsistent use or nonuse of condoms in the last month of both men's and women's current relationships (2.0–2.2). For women, considering satisfaction of sexual needs important was associated with more sexual partners only among those who attached little value to female virginity.

**CONCLUSIONS:** It is important to integrate themes of virginity and sexual desire into intervention curricula so youth can better understand how these sexual norms influence their developing sexual identities and behaviors.

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Sexual values that may influence sexual behaviors and sexual health outcomes among Latino youths have received scarce attention. Yet they merit attention, as Latina women in the United States are at higher risk for adolescent pregnancy than are their non-Latina white counterparts.<sup>1</sup> Latinas are 2.8 times as likely as non-Latina whites to give birth at ages 15–19; overall, they have the highest pregnancy rate and birthrate among all ethnic groups in the United States.<sup>2</sup> Although Latina women initiate sexual intercourse at later ages than non-Latinas, they are less likely to use contraceptives once they begin having sex.<sup>2</sup> Young Latinos of both genders are also disproportionately affected by STDs, including HIV.<sup>3</sup> These data raise significant public health concerns, given that Latinos are the fastest growing ethnic minority group in the United States and are expected to constitute approximately 25% of the population by the year 2050.<sup>4</sup> Furthermore, the U.S. Latino population is relatively young compared with other ethnic groups; therefore, studies of youths' sexual values are particularly critical.<sup>4</sup>

Behavioral interventions that seek to promote safer sex typically fail to address Latino youths' cultural values; as a result, they often are ineffective.<sup>5–8</sup> The current study aims to elucidate links between young Latinos' sexual values and risky sexual behaviors. We used sexual values measures

that were developed in a culturally grounded manner, which employed an innovative combination of qualitative and quantitative methodologies.<sup>9</sup> Our previous research and work by others indicate that youth may assimilate in certain cultural domains, but not in others, such as sexual values.<sup>9,10</sup> Therefore, we focused on sexual values identified as important by Latino youths, which we believe are more proximally related to youths' sexual behaviors than are general cultural values and norms (e.g., familism and religiosity). By presenting one of the first studies to examine Latino youths' sexual values and behaviors, we hope to offer insight into how to shape effective preventive interventions with young Latinos.

## BACKGROUND

### Acculturation and Sexual Risk

Studies that examine acculturation, or the process of change that immigrants experience in response to the dominant culture, provide clues regarding underlying values that may influence sexual behaviors.<sup>7,11</sup> Low levels of acculturation are associated with low levels of sexual activity, delayed initiation of sexual intercourse and reduced numbers of sexual partners.<sup>12–16</sup> However, associations between acculturation and sexual behaviors are complex. English and Spanish language use appear to be differentially

related to sexual activity depending on whether adolescents are U.S.- or foreign-born. Among new immigrants, Latino adolescents living in English-speaking homes are at lower risk for engaging in sexual activity than are their counterparts in Spanish-speaking homes; among U.S.-born Latino youths, the opposite is true.<sup>16</sup> Without adequately nuanced cultural and sexual measures, it is impossible to fully understand these associations and assess underlying causality. Moreover, acculturation may be either protective or risk-enhancing, depending upon the sexual outcome studied. Level of acculturation is negatively associated with both delayed onset of sexual initiation and condom use.<sup>17–19</sup> Studies utilizing global measures of acculturation, language preference or country of birth do not provide direct information about sexual values.<sup>11</sup> Thus, it is difficult to interpret associations between acculturation and sexual behaviors, and to determine which sexual values are protective and which enhance risk.<sup>20</sup>

### Sexual Values and Sexual Behaviors

Several sexual values identified in studies with Latino adults, including notions about female virginity, sexual desire and sexual communication, may be important for youths. Gender role norms, such as *marianismo* (i.e., women as chaste, virtuous and submissive) and *machismo* (i.e., men as strong, independent and in a position of authority) influence sexual values and affect sexual behavior among Latino adults.<sup>6,21,22</sup> These norms suggest that women should maintain their virginity until marriage<sup>18,23</sup> and that men have little control over sexual impulse.<sup>24</sup> They also may influence youths' behavior. For instance, if virginity is important to a young woman, she may delay sexual intercourse; however, once she initiates intercourse, she may fail to use condoms, because individuals who believe that premarital sexual activity is unacceptable are less likely than others to plan for contraceptive use.<sup>25</sup> Similarly, if a young man accepts the notion that he has low control over his need for sex and a high need for sexual satisfaction, the result may be a relatively high number of sexual partners and little condom use.<sup>24</sup>

Sexual communication may also reflect cultural values. Among adult Latina women, acculturation is positively related to sexual communication with partners, which is positively associated with condom use.<sup>26</sup> However, because Latina women are expected to be chaste or naive, sexual communication between men and women is often considered inappropriate and is therefore limited.<sup>18,21</sup>

### Sexual Values Among Youths

Among young Latinos, liberal attitudes toward premarital sex are associated with increased levels of sexual activity (ranging from kissing to intercourse).<sup>27</sup> Similarly, Latino mothers' liberal attitudes toward premarital intercourse are positively associated with their teenage children's levels of sexual activity (again, ranging from kissing to intercourse).<sup>28</sup> In a prospective study of sexual communication among ethnically diverse sexually active adolescent

women, the reported amount of discussion with partners about contraception was positively related to the frequency of contraceptive use.<sup>29</sup>

However, previous work has identified barriers to sexual communication among Latino youths. In qualitative interviews, young Mexican men reported discomfort using sexual terms around women and expressed the belief that young women were not permitted to use or hear these words.<sup>30</sup> Similar gender-specific communication patterns have also been documented among young Puerto Rican, Dominican and Cuban women.<sup>31</sup>

Notions related to sexual desire also appear to be important. The inability to control oneself sexually has been described as a predominantly male trait;<sup>32</sup> however, Latina women also describe the phenomenon of "losing control" or not being able to stop intercourse from happening.<sup>31</sup> Traditionally, men have been perceived as having an urgent need to orgasm, and as finding it difficult or impossible to stop sexual activity once they are sexually aroused.<sup>33</sup> Endorsement of this notion of uncontrollability and related constructs is negatively associated with condom use intentions among Latino adolescents.<sup>33</sup> In an earlier article, we found no support for a measure assessing lack of sexual control, but Latino youths—both men and women—described the idea of satisfaction of sexual needs as important.<sup>9</sup> Therefore, we focused on this aspect of sexual desire in our current research.

Latina women may experience conflicting emotions related to premarital virginity. Although young Latinas acknowledge the existence of cultural norms about the importance of virginity, some report engaging in sexual activity prior to marriage without feeling guilt, shame or dishonor.<sup>30</sup> However, others view past sexual activity with regret, and many report using "secondary abstinence" as a strategy to combat these feelings.<sup>34</sup> Thus, the idea of maintaining virginity until marriage exists as a cultural norm, but how this notion influences young women's behavior remains unclear.

Furthermore, other compelling beliefs and values regarding sexuality may conflict with the idea that virginity is important.<sup>31,34</sup> For example, if young Latinos consider female virginity important, they may keep their number of partners low even if their need for sexual satisfaction is high. We examined this possibility in our current study.

### CURRENT STUDY

We examined cross-sectional associations between young Latinos' sexual values and behaviors, adjusting for language use (the most commonly utilized proxy measure for acculturation in studies examining youths' sexual outcomes<sup>11</sup>) and other covariates. We focused on three sexual values that emerged as particularly salient in our formative research (importance of female virginity, importance of sexual satisfaction and comfort with sexual communication) and five sexual outcomes (age at initiation of intercourse, number of sexual partners over youths' lifetime and in the past year, and frequency

of condom use during the first and last month of the current sexual relationship).

We hypothesized that individuals who considered female virginity important would report an older age at initiation of intercourse and fewer sexual partners than those who did not share this belief. We also expected that endorsement of this value would be associated with a relatively low level of condom use during the first month of a sexual relationship, because individuals who believe premarital sexual activity is unacceptable are less likely than others to plan for contraceptive use.<sup>25</sup> We did not hypothesize an association between virginity and condom use in the last month, given that notions of virginity may be less likely to affect condom use once a sexual relationship is under way.

Individuals who viewed satisfaction of sexual needs as important were expected to prioritize fulfilling their sexual needs and, therefore, to report earlier initiation of intercourse, more partners and less condom use than others. Given traditional notions of male sexuality, we expected these associations to be particularly salient for men.

Open sexual communication between partners, particularly communication about contraceptive practices, is a key determinant of sexual health.<sup>29,30,35,36</sup> Therefore, we anticipated that individuals' comfort with sexual communication would be positively associated with consistent condom use throughout their sexual relationships.

We also hypothesized that an interaction between considering female virginity important and considering satisfaction of sexual needs important would be associated with age at first intercourse and numbers of sexual partners. We predicted that youths who endorsed the importance of virginity would report later intercourse and fewer partners than others, even if they attached great importance to satisfying sexual needs.

## METHODS

### Study Design and Sample

The analyses described in this article are part of a cross-sectional study of relative power and condom use among Latino youths; data were collected between 2003 and 2006.<sup>37</sup> Participants were recruited from a large HMO and community health clinics in San Francisco. Institutional review board approval was obtained from the university that conducted this research and the HMO. The study was conducted in an urban area in which the three largest Latino groups consisted of individuals of Mexican, Nicaraguan and Salvadoran origin. Youths were eligible if they belonged to one of these ethnic groups, were 16–22 years old and had been sexually active with someone of the opposite sex within the past six months.

Youths recruited from the HMO were randomly selected from membership lists and were sent introductory letters; for those younger than 18, the letters were addressed to their parents. Interviewers telephoned, obtained parental permission to speak with the adolescent if he or she was younger than 18 and conducted a screening interview

**TABLE 1. Selected characteristics of participants in a study of Latino youths' sexual values and behaviors, by gender, San Francisco, 2003–2006**

Characteristic	Males (N=377)	Females (N=462)
<b>Covariates</b>		
Use of English (range, 1.0–5.0)	3.8 (0.9)	3.9 (0.8)
Use of Spanish (range, 1.0–5.0)	2.8 (0.9)	2.9 (1.1)
Age (range, 16.0–22.0)	18.8 (1.5)	18.3 (1.7)
Parental marital status (%)		
Married	64.7	53.8
Not married	35.3	46.2
Parental education (yrs.; range, 0.0–20.0)	10.5 (3.3)	10.3 (3.4)
Partner age gap† (yrs.; range, –5.0 to 16.0)	–0.6 (1.4)	2.0 (2.6)
Length of sexual relationship (mos.; range, 0.03–104.5)	15.4 (15.6)	19.0 (18.5)
<b>Sexual values</b>		
Importance of satisfaction of sexual needs (range, 1.0–4.0)	2.3 (0.6)	1.7 (0.6)
Importance of female virginity (range, 1.0–4.0)	2.2 (0.6)	2.4 (0.7)
Comfort with sexual communication (range, 1.0–4.0)	3.4 (0.5)	3.4 (0.5)
<b>Sexual outcomes</b>		
Age at first intercourse (range, 8.0–21.0)	15.3 (1.8)	15.5 (1.6)
Lifetime no. of partners (%)		
1	14.1	37.5
2–4	38.7	41.8
5–10	35.8	14.9
≥11	11.4	5.8
No. of partners in past year (%)		
1	58.9	67.3
2	18.8	17.5
3	10.6	8.7
≥4	11.7	6.5
Condom use in first month of current relationship (%)		
Never	8.2	13.7
Sometimes	27.1	23.4
Always	64.7	62.8
Missing	0.0	0.1
Condom use in last month of current relationship (%)		
Never	35.5	38.1
Sometimes	22.3	24.0
Always	34.2	25.1
Missing	8.0	12.8

†Calculated by subtracting the participant's age from his or her partner's age. Note: Unless otherwise noted, data are means (and standard deviations).

with the youths to determine eligibility. Youths recruited at clinics were screened for eligibility while waiting for appointments. Informed consent was obtained from all participants, and parental consent was obtained for minors not seeking confidential health services. Seventy-one percent of contacted individuals participated in the study. Using information provided by participants, researchers also recruited youths' sexual partners; 37% participated.

One-hour computer-assisted individual interviews were conducted in person at the HMO or community clinics by trained bilingual young adults, who were matched to participants by gender. Participants were paid \$50. A portion of the interview was administered by the interviewer, and the remainder (which covered more sensitive topics) was self-administered, with interviewer assistance, to minimize respondent bias.

The original sample included 951 Latino men and women. The 2% of sexual partners who were older than 22 and the 10% who reported ethnic origins other than Mexican, Nicaraguan or Salvadoran were excluded. The sample examined in this article consisted of 839 individuals—377 men and 462 women.

**TABLE 2. Zero-order correlations between selected characteristics and sexual outcomes, by gender**

Characteristic	Age at first intercourse	Lifetime no. of sexual partners	No. of sexual partners in past year	Condom use in first month of current relationship	Condom use in last month of current relationship
<b>COVARIATES</b>					
<b>Use of English</b>					
Males	-0.06	0.08	0.13*	0.07	0.02
Females	-0.10*	0.04	0.09	0.16***	-0.01
<b>Use of Spanish</b>					
Males	-0.00	-0.03	0.04	-0.10	-0.06
Females	-0.09	-0.13**	-0.14**	-0.10*	0.03
<b>Age</b>					
Males	-0.19***	0.30***	0.08	-0.14**	-0.23***
Females	-0.06	0.25***	0.05	-0.10*	-0.10*
<b>Parental marital status</b>					
Males	-0.14***	0.02	0.00	-0.05	-0.02
Females	-0.12**	0.13**	0.08	-0.06	-0.11*
<b>Parental education</b>					
Males	0.02	0.05	0.03	0.02	0.05
Females	-0.08	0.07	0.09	0.04	-0.02**
<b>Partner age gap</b>					
Males	-0.20***	0.07	0.05	-0.09	0.03
Females	0.03	0.15**	0.09	-0.11*	-0.15**
<b>Length of sexual relationship</b>					
Males	-0.19***	0.18***	-0.02	-0.06	-0.27**
Females	-0.10*	0.01	-0.11*	-0.05	-0.10
<b>SEXUAL VALUES</b>					
<b>Importance of satisfaction of sexual needs</b>					
Males	-0.08	0.15**	0.15**	-0.10*	-0.07
Females	0.05	-0.04	0.04	-0.14**	-0.05
<b>Importance of female virginity</b>					
Males	0.09	-0.13*	-0.10	0.00	-0.10
Females	0.08	-0.26***	-0.26**	-0.13**	0.07
<b>Comfort with sexual communication</b>					
Males	-0.05	0.10*	0.01	-0.04	-0.15**
Females	0.03	0.06	0.01*	0.04	-0.14**

\*p&lt;.05. \*\*p&lt;.01. \*\*\*p&lt;.001.

### Measures

•**Sexual values.** We conducted focus groups and qualitative interviews with Latino youths to generate themes related to sexual values, and developed measures of sexual values on the basis of these themes and related literature. Scales were created using exploratory factor analyses; final measures conformed to single-factor scales. Psychometric properties were assessed, and scales were reliable and valid. Details of the procedures are described elsewhere.<sup>9</sup>

The importance of satisfaction of sexual needs was assessed using a four-item measure that asked about participants' views on "sexual situations between a guy and a girl." Two items addressed men's sexual needs (e.g., "Do you think if a guy gets sexually excited, the girl should satisfy his sexual needs?"), and two addressed women's sexual needs (e.g., "Do you think if a girl gets sexually excited, the guy should satisfy her sexual needs?"). Both genders responded to all four questions. Response options were on a scale of 1–4 ("definitely no" to "definitely yes");

scores were averaged to yield the final measure (alpha, 0.69 for females and 0.72 for males).

The importance of female virginity was assessed using three items (e.g., "Do you think it's okay for girls to have sex before they are in a serious relationship?"). Responses were on the same four-point scale as those for the previous measure, but were reverse-coded (alpha, 0.62 for females and 0.65 for males).

Comfort with sexual communication was assessed using eight items. Six asked participants "how comfortable or uncomfortable" they would feel talking to their current partner about specific topics, and two asked how they would feel "talking about what feels good to [them] during sex" and "talking about what [they] don't like during sex." (If the relationship was not ongoing, these questions were asked with reference to the most recent partner.) Response options ranged from 1 ("very uncomfortable") to 4 ("very comfortable"); the final score was the average of the eight items (alpha, 0.84 for females and 0.89 for males).

•**Sexual behaviors.** Sexual outcomes were self-reported age at initiation of intercourse, number of sexual partners and frequency of condom use, which are commonly considered important risk behaviors related to HIV and other STDs.<sup>11</sup> Age at sexual initiation was based on one item: "How old were you when you first had sexual intercourse? This includes both vaginal and anal sex." Most Latinas consider anal intercourse to be sexual intercourse.<sup>34</sup> Number of sexual partners was assessed over a participant's lifetime and within the past year. The proportion of times condoms were used during the first month and the last month of the current sexual relationship (or, for those not currently in a relationship, the most recent one) was assessed, and responses were categorized as never (0% of the time), sometimes (1–99%) or always (100%).

•**Covariates.** Our covariates consisted of variables that have been identified as important in past research: language use, age, parental marital status, parental education and partner age gap.<sup>11,38</sup> For the condom use outcomes, we also included length of the sexual relationship, because condom use may decline over the course of a relationship.<sup>34</sup> Language use was measured using subscales of the Bidimensional Acculturation Scale,<sup>39</sup> one assessing participants' use of English and the other their use of Spanish. The items making up each subscale asked participants how often they speak and think in the language, they speak the language with their friends, they spoke the language during childhood and they speak the language at home with their family. Response options ranged from 1 ("never") to 5 ("always"); responses were averaged to yield the final score (alpha, 0.88 for the English subscale and 0.89 for the Spanish). Participants reported their parents' marital status, which was categorized as married or not married. They also reported their parents' number of years of education. If this information was available for both parents, we used the average; otherwise we used whichever parent's educational level was known. Participants'

age was assessed in years. Age gap between partners was determined by subtracting the participant's age from his or her sexual partner's age. Length of the current relationship was measured in months.

### Analyses

We conducted separate analyses for each gender, given strong evidence that young Latinos' characterizations of men's and women's sexuality and their sexual roles rely heavily on gender norms.<sup>30,31,34,36</sup> Zero-order correlations were calculated between the predictors, covariates and outcomes. We conducted multiple regression analyses to assess continuous outcomes (age at first intercourse and numbers of partners) and multinomial logistic regression analyses to assess categorical outcomes (condom use). In each model, the outcome was regressed first on the covariates, then on the sexual values and finally on the interaction term. To probe interactions, we centered variables and plotted simple slopes at low and high values of the moderator.<sup>40</sup> We used natural log transformations to deal with nonnormality for age at first intercourse and number of sexual partners.

## RESULTS

### Descriptive Statistics and Intercorrelations

On average, study participants were 18.5 years old (standard deviation, 1.7). Fifty-seven percent identified themselves as Mexican American, 16% as Salvadoran American and 8% as Nicaraguan American; 19% were of mixed ethnicity but had at least one parent of Mexican, Nicaraguan or Salvadoran descent. Seventy-six percent of participants, 22% of their mothers and 18% of their fathers were U.S.-born. The majority (93%) completed the interview in English; the remainder completed it in Spanish.

Both men and women reported more use of English than of Spanish (average scores, 3.8 vs. 2.8 for men and 3.9 vs. 2.9 for women—Table 1, page 25). Some 65% of men and 54% of women had married parents; on average, parents had 10–11 years of schooling. Men tended to be about one-half year older than their partners, women about two years younger; current relationships varied widely in length and averaged about 15 months for men and 19 months for women.

The average score on the four-point scale measuring the importance of sexual satisfaction was 2.3 among men and 1.7 among women. On the scale assessing the importance of female virginity, men's scores averaged 2.2, and women's 2.4; the average on comfort with sexual communication was 3.4 for both.

Men's and women's average age at first sexual intercourse was about 15. Almost half of men and one in five women reported having had five or more sexual partners. Some 63–65% of men and women reported consistent use of condoms in the first month of their current relationship, but only 34% and 25%, respectively, reported consistent use in the last month. More than one-third of each had never used condoms in the last month.

**TABLE 3. Odds ratios (and 95% confidence intervals) from multiple regression analyses assessing associations between youths' sexual values and behavior, by gender**

Value and behavior	Males	Females
<b>Age at first intercourse</b>		
Importance of satisfaction of sexual needs	0.98* (0.96–0.99)	1.0 (1.0–1.0)
Importance of female virginity	1.0 (1.0–1.0)	1.0 (1.0–1.0)
Comfort with sexual communication	1.0 (1.0–1.0)	0.98* (0.96–0.99)
Satisfaction x virginity	1.0 (1.0–1.0)	1.0 (1.0–1.0)
Total R <sup>2</sup>	0.11	0.13
Adjusted R <sup>2</sup>	0.08	0.11
<b>Lifetime no. of sexual partners</b>		
Importance of satisfaction of sexual needs	1.4*** (1.2–1.5)	1.1 (1.0–1.3)
Importance of female virginity	0.9 (0.8–1.0)	0.8*** (0.7–0.9)
Comfort with sexual communication	1.1 (0.9–1.3)	1.1 (0.9–1.2)
Satisfaction x virginity	0.9 (0.8–1.1)	0.8** (0.6–0.9)
Total R <sup>2</sup>	0.17	0.19
Adjusted R <sup>2</sup>	0.15	0.18
<b>No. of sexual partners in past year</b>		
Importance of satisfaction of sexual needs	1.1*** (1.1–1.2)	1.1* (1.01–1.1)
Importance of female virginity	0.9 (0.9–1.0)	0.9*** (0.8–0.9)
Comfort with sexual communication	1.0 (0.9–1.1)	1.0 (0.9–1.1)
Satisfaction x virginity	0.9 (0.8–1.0)	0.8*** (0.8–0.9)
Total R <sup>2</sup>	0.09	0.14
Adjusted R <sup>2</sup>	0.06	0.12

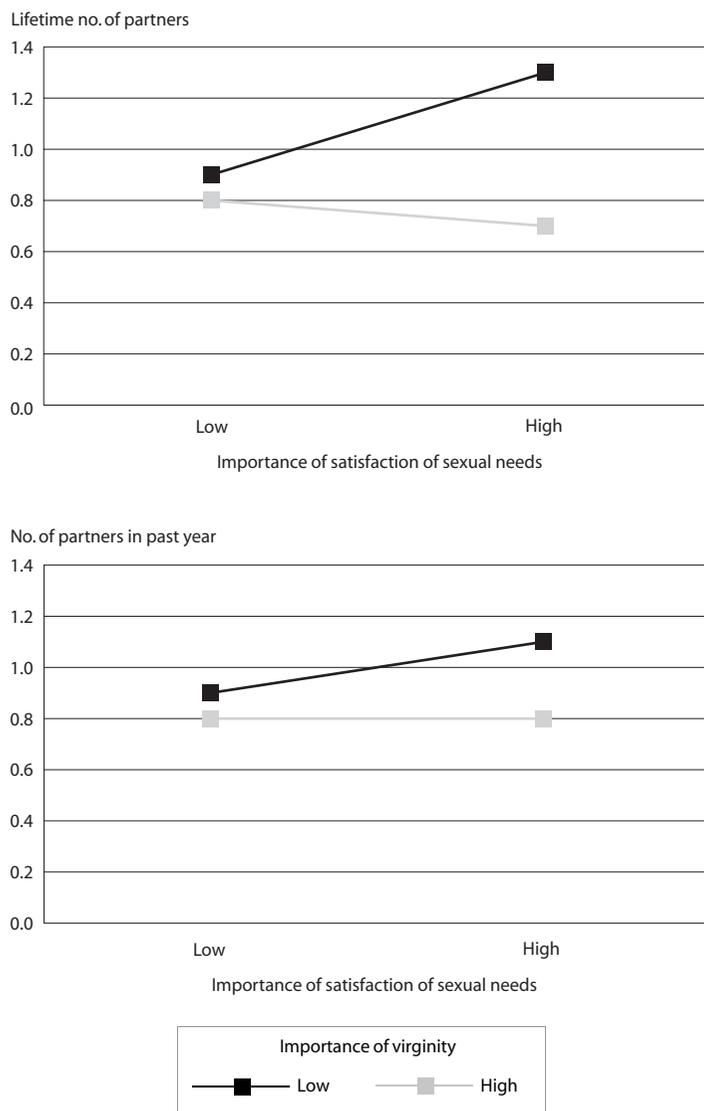
\*p<.05. \*\*p<.01. \*\*\*p<.001. Note: The following covariates were included in the analyses: language use, participant's age, parental marital status, parental education and partner age gap. Results are available upon request.

All covariates except parental education were correlated with sexual outcomes (Table 2). Endorsement of satisfaction of sexual needs as important was positively correlated with men's lifetime and recent number of partners (coefficient, 0.15 for each), and was negatively correlated with men's and women's condom use in the first month of their current relationship (–0.10 and –0.14, respectively). The view that female virginity is important was negatively related to both men's and women's lifetime number of

**TABLE 4. Odds ratios (and 95% confidence intervals) from multinomial logistic regression analyses assessing associations between youths' sexual values and condom use, by gender**

Value and condom use	Males		Females	
	Never	Sometimes	Never	Sometimes
<b>Condom use in first month</b>				
Importance of satisfaction of sexual needs	1.0 (0.5–1.8)	1.9** (1.2–2.8)	1.6 (1.0–2.8)	1.1 (0.7–1.7)
Importance of female virginity	0.8 (0.4–1.5)	1.5 (1.0–2.3)	1.8* (1.1–3.1)	1.1 (0.7–1.6)
Comfort with sexual communication	1.5 (0.7–3.4)	1.6 (1.0–2.7)	0.8 (0.4–1.5)	1.1 (0.6–1.8)
Satisfaction x virginity	0.9 (0.4–2.2)	1.1 (0.6–2.0)	0.9 (0.4–1.9)	0.9 (0.5–1.7)
<b>Condom use in last month</b>				
Importance of satisfaction of sexual needs	1.4 (0.9–2.1)	1.4 (0.9–2.4)	1.4 (0.9–2.2)	1.1 (0.6–1.8)
Importance of female virginity	1.3 (0.8–2.0)	1.4 (0.9–2.3)	1.1 (0.7–1.7)	1.1 (0.7–1.8)
Comfort with sexual communication	2.1** (1.2–3.6)	2.2* (1.2–4.0)	2.0* (1.2–3.5)	1.3 (0.7–2.5)
Satisfaction x virginity	0.9 (0.5–1.7)	1.3 (0.6–2.6)	2.0* (1.0–4.0)	1.3 (0.6–2.7)

\*p<.05. \*\*p<.01. Notes: Use of condoms "never" and "sometimes" is compared with use "always." The following covariates were included in the analyses: language use, participant's age, parental marital status, parental education and partner age gap. Results are available upon request.

**FIGURE 1. Women's sexual behaviors as predicted by the interaction between importance of female virginity and importance of satisfaction of sexual needs**

partners (−0.13 and −0.26), as well as to women's number of partners in the past year and condom use during the first month of their current relationship (−0.26 and −0.13). Comfort with sexual communication was negatively related to condom use in the last month for men (−0.15) and women (−0.14). (Zero-order correlations between predictors and covariates are available upon request.)

### Regression Analyses

•**Importance of satisfaction of sexual needs.** The more important men considered satisfaction of sexual needs, the younger their reported age at first sexual intercourse and the more partners they had had over their lifetime (odds ratios, 0.98 and 1.4, respectively—Table 3, page 27). For both men and women, the greater the importance of satisfying sexual needs, the higher the number of sexual partners in the past year (1.1). The importance attached to

satisfaction of sexual needs was also positively associated with men's having only sometimes, rather than always, used condoms in the first month of their relationship (1.9—Table 4, page 27).

•**Importance of female virginity.** The value placed on female virginity predicted risky behaviors only among women. It was negatively associated with women's lifetime and recent number of sexual partners (odds ratios, 0.8–0.9), and was positively associated with nonuse, rather than consistent use, of condoms in the first month of the current sexual relationship (1.8).

•**Comfort with sexual communication.** The greater women's comfort with sexual communication, the lower their age at first intercourse (odds ratio, 0.98). Men's and women's likelihood of saying that they had never, rather than always, used condoms in the last month increased with their level of comfort with sexual communication; for men, a similar association held for inconsistent, rather than consistent, use (2.0–2.2).

•**Interactions.** We detected no significant interactions for men, but for women, interactions between the importance of female virginity and the importance of satisfying sexual needs were associated with three risky behaviors. The importance women attached to female virginity moderated the association between the importance they attached to satisfaction of sexual needs and number of sexual partners, such that the importance of satisfying sexual needs was positively associated with the numbers of lifetime and recent sexual partners only for women who did not attach great importance to female virginity (Figure 1). In addition, the importance of satisfying sexual needs was positively associated with the likelihood of nonuse of condoms in the last month among women who attached high levels of importance to female virginity (odds ratio, 2.8—not shown) and was negatively associated with this outcome among those who attached low importance to virginity (0.7). In other words, among participants who considered it important to satisfy sexual needs, attaching relatively little importance to virginity appeared to be protective.

### DISCUSSION

Limited empirical research has focused on the cultural context within which young Latino men and women make sexual decisions.<sup>33,41</sup> This dearth of research has restricted the ability of researchers and practitioners to integrate potentially important sexual values into interventions that seek to improve sexual health among Latino adolescents. Results of our study suggest that endorsement of certain sexual values is associated with young Latinos' sexual behaviors, even when language use and other important covariates are taken into account.

We confirmed our expectation that sexual values may be associated with both protective and risk-enhancing sexual behaviors. As predicted, the belief in the importance of female virginity was negatively associated with young women's lifetime and recent numbers of sexual partners, and was positively associated with men's and women's

inconsistent use or nonuse of condoms in the first month of a sexual relationship. Contrary to our predictions, however, notions about virginity were not related to age at first sexual intercourse.

Our study included a new measure of young Latinos' sexual desire: the importance of satisfying sexual needs. We expected this sexual value to be positively associated with age at first intercourse, numbers of sexual partners, and inconsistent use or nonuse of condoms; this expectation was confirmed in our results, particularly among young men. Given that this study was cross-sectional, we cannot determine the direction of causality. Nevertheless, these findings suggest the importance of intervening with youths in ways that acknowledge the importance of sexual satisfaction while promoting strategies to protect their sexual health and that of their partners.

Results related to sexual communication were perhaps the most unexpected and informative. Contrary to our hypotheses, and to findings from previous research,<sup>42</sup> the greater participants' level of comfort with sexual communication, the less they used condoms in the last month. Thus, at first glance, this sexual value appears to be associated with heightened risk. Perhaps it indicates that an individual who is comfortable with sexual communication may be capable of persuading a sexual partner to avoid using condoms.<sup>43</sup> Alternatively, young couples who trust their sexual partners and have few fears of infidelity may be comfortable with sexual communication and use birth control methods other than condoms.<sup>44,45</sup> Qualitative research with young Latinas suggests that trust in their partners is the most often cited reason for not using condoms and that "being safe" in a relationship is linked to open sexual conversations.<sup>34</sup> Therefore, the relationship between sexual communication and condom use may be better understood if other explanatory factors, such as trust, monogamy and alternative contraceptive strategies, are included in future research.

As expected, the importance attached to female virginity and to satisfaction of sexual needs interacted to predict sexual behaviors. In general, the more important participants rated satisfaction of sexual needs, the more sexual partners they reported. However, the more important young women considered female virginity, the smaller their reported number of partners, even if they expressed high levels of need for sexual satisfaction. In previous qualitative research, Latina women acknowledged the existence of traditional norms about female virginity, but reported that those norms did not affect their sexual behavior.<sup>30</sup> Our findings indicate otherwise and are consistent with research suggesting that cultural norms, particularly those related to gender ideologies, influence youths' sexual behavior, even when youths do not perceive these norms as influential.<sup>8</sup> Therefore, it is important to integrate themes of virginity and sexual desire into intervention curricula, so that young people can understand the cultural contradictions related to their sexual self-acceptance and how these cultural sexual norms affect their behavior.

Viewing female virginity as important also moderated the association between considering satisfaction of sexual needs important and condom use, such that women who valued sexual satisfaction but not virginity were more likely to have used condoms in the last month of their current relationship than were those who attached great importance to virginity. Perhaps when need for sexual satisfaction is high, less traditional views related to virginity increase condom use, whereas traditional views inhibit condom use efficacy among youths. This interpretation should be viewed with caution, however, given that this interaction was not originally hypothesized.

Our findings support the idea that beliefs about virginity evoke ambivalent reactions or contradictory behaviors among young Latinas. Qualitative research suggests that beliefs about religion and gender roles contribute to cultural views of virginity, and that women struggle to develop sexual identities that fit within cultural and public norms.<sup>31,34</sup> These contradictory beliefs may be especially challenging for Latina women in the United States, given their dual exposure to traditional Latino messages and mainstream American values.<sup>31,34</sup> While young Latinas often outwardly reject traditional notions of premarital virginity, conflicting cultural beliefs may influence their sexual scripts, emotions and behaviors, and can be complicated to characterize. Our research represents a step toward beginning to empirically characterize this ambivalence and lays the groundwork for future research.

Women in our study were sexually active yet generally considered virginity important. This raises questions about the meaning of Latina women's sexual desires in the context of valuing virginity. Adolescent women have difficulty acknowledging their sexual desires, and this difficulty may distance them emotionally from their sexual decisions, limit their sexual empowerment and contribute to low contraceptive use.<sup>34,36</sup> When holding contradictory values, some young Latinas may rely on traditional norms about virginity and abstinence to make sexual decisions;<sup>34</sup> this behavior may be protective in relation to certain outcomes but risk-enhancing in terms of others. While no one simple message describes how to address notions about virginity when designing interventions for young Latinas, at a minimum, it appears important to integrate prevention activities that acknowledge the complexity of valuing premarital virginity while simultaneously satisfying one's own sexual desire.

### Limitations

The majority of participants completed the interview in English. Therefore, the generalizability of our findings to less acculturated Latino youths may be limited. In a more variable sample, sexual values may exhibit weaker or stronger relationships with sexual outcomes, depending on acculturation level. Future research is needed to investigate this possibility. We included young Latinos from three ethnic subgroups: Mexican, Salvadoran and Nicaraguan. By grouping participants together, we may

not have captured cultural nuances that influence behavior. In addition, participants covered a relatively wide age range, and potential patterns related to sexual maturation and development were not illuminated.

Data were cross-sectional, and causality cannot be established. We relied on retrospective report, which may introduce recall bias. For instance, participants' reports of first-month condom use may be overestimated; however, because individuals may report using condoms more often early in their sexual relationships and less consistently later,<sup>34</sup> we felt that it was important to include both first- and last-month use. We attempted to diminish respondent bias (e.g., by employing self-administered computer-assisted methods); however, future studies should incorporate leading-edge data collection methods, such as daily diaries.<sup>46</sup>

All participants were sexually active, and findings are not generalizable to youths who are not. Sexually active youths may have unique sexual values, particularly regarding the importance of virginity. Reliabilities for our virginity scale were relatively low, which may indicate that notions of virginity are challenging to assess accurately among sexually active youths. In addition, although we detected statistically significant associations, their magnitudes varied. Statistical significance does not imply practical significance, particularly when the association is small. Finally, participants were reporting on heterosexual relationships; cultural, sexual and social norms may play out quite differently for Latino youths in same-sex relationships.<sup>8</sup>

### Implications and Future Directions

The need for cultural relevance and cultural appropriateness when developing sexual health interventions has been recognized by national organizations in the United States.<sup>47,48</sup> One-size-fits-all interventions to reduce sexual risk-taking and promote positive sexual health strategies are not equally effective for youths from all cultural backgrounds, and members of a cultural group do not subscribe to that culture's norms uniformly.<sup>10</sup> By directly assessing young Latinos' sexual values, rather than focusing on general acculturation, we captured a greater degree of specificity than past studies and thereby contributed to the understanding of how sexual values are associated with youths' sexual behaviors.

A review of sexual risk reduction programs found that interventions must move beyond knowledge transfer and attitude change to emphasize acquisition of skills, including sexual communication.<sup>42</sup> Our findings indicate that skills acquisition may be necessary but not sufficient when intervening with young Latinos. We concur with other researchers who promote the importance of grounding intervention strategies within the context of Latino youths' cultural and gender ideologies.<sup>8,33,34,49–51</sup> While several prevention programs have shown promise with young Latinos,<sup>48</sup> only one known culturally grounded, evidence-based intervention to date, *Cuidate!/Take Care of Yourself*, has proven effective in a randomized controlled

trial with young Latinos, in terms of delaying intercourse, reducing the number of sexual partners and increasing condom use.<sup>51,52</sup> However, *Cuidate!*'s effects on condom use were evidenced only among Spanish speakers, not English-speaking participants.<sup>52</sup> The results for our sample of predominantly English-speaking youths suggest that inclusion of satisfaction of sexual needs into behavioral interventions to reduce HIV risk may represent an important next step in lowering risk among more acculturated Latinos.

We suggest that interventions with young Latinos should involve discussions of sexual values and integrate related activities to help youths reflect on how they internalize traditional Latino and mainstream American values, and to identify the internal conflicts that contradictory values may create. These discussions should occur within the context of youths' intimate relationships, which influence their sexual decision-making. Self-reported sexual values may vary depending on individuals' relationship with their current sexual partner. For instance, comfort with sexual communication may depend on the quality of the current relationship. Studies that focus on couple-level associations and interactions between partners would lend a more nuanced characterization of sexual values and experiences.

Several contextual factors were beyond the scope of this article but represent important areas for future research. Youths' perspectives on their sexual values, and associations with related behavioral outcomes, may differ depending on whether they are engaged in their first sexual relationship or in a subsequent one. Research on peer pressure among Latino adolescents, given youths' endorsement of sexual values, is also needed. Finally, sexual values may change as adolescents mature. Prospective research that captures the dynamic interplay of Latinos' sexual value formation and developing sexual identities throughout adolescence would better elucidate the evolving nature of these processes and may help identify early targets for intervention prior to the initiation of sexual intercourse.

### REFERENCES

1. Guttmacher Institute, *U.S. Teenage Pregnancy Statistics: National and State Trends and Trends by Race and Ethnicity*, 2006, <<http://www.guttmacher.org/pubs/2006/09/12/USTPstats.pdf>>, accessed Dec. 6, 2009.
2. Stone V, Crude birthrates and contraceptive use by racial/ethnic group in the U.S., 1990–2000, Center for Latin American, Caribbean, & Latino Studies, City University of New York, <<http://web.gc.cuny.edu/lastudies/pages/latinodataprojectreports.html>>, accessed Dec. 6, 2009.
3. Centers for Disease Control and Prevention, *HIV/AIDS Surveillance Report*, 2005, 2007, <<http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2005report/default.htm>>, accessed Dec. 5, 2007.
4. U.S. Census Bureau, *Population Projections: U.S. Interim Projections by Age, Race, and Hispanic Origin: 2000–2050*, 2004, <<http://www.census.gov/population/www/projections/usinterimproj/>>, accessed Dec. 6, 2009.
5. Betancourt H and Lopez SR, The study of culture, ethnicity, and race in American psychology, *American Psychologist*, 1993, 48(6):629–637.

**Interventions  
with young  
Latinos  
should involve  
discussions of  
sexual values.**

6. Phinney JS and Flores J, "Unpackaging" acculturation: aspects of acculturation as predictors of traditional sex role attitudes, *Journal of Cross-Cultural Psychology*, 2002, 33(3):320–331.
7. Cauce AM, Examining culture within a quantitative empirical research framework, *Human Development*, 2002, 45(4):294–298.
8. Laub C et al., Targeting "risky" gender ideologies: constructing a community-driven, theory-based HIV prevention intervention for youth, *Health Education & Behavior*, 1999, 26(2):185–199.
9. Dearthoff J, Tschann JM and Flores E, Sexual values among Latino youth: measurement development using a culturally based approach, *Cultural Diversity and Ethnic Minority Psychology*, 2008, 14(2):138–146.
10. Raffaelli M and Suarez-Al-Adam M, Reconsidering the HIV/AIDS prevention needs of Latino women in the United States, in: Roth NL and Fuller LK, eds., *Women and AIDS: Negotiating Safer Practices, Care, and Representation*, Binghamton, NY: Harrington Park Press/The Hayworth Press, 1998, pp. 7–41.
11. Afable-Munsuz A and Brindis CD, Acculturation and the sexual and reproductive health of Latino youth in the United States: a literature review, *Perspectives on Sexual and Reproductive Health*, 2006, 38(4):208–219.
12. Sabogal F et al., Gender, ethnic, and acculturation differences in sexual behaviors: Hispanic and non-Hispanic white adults, *Hispanic Journal of Behavioral Sciences*, 1995, 17(2):139–159.
13. Reynoso TC, Felice ME and Shragg GP, Does American acculturation affect outcome of Mexican-American teenage pregnancy? *Journal of Adolescent Health*, 1993, 14(4):257–261.
14. Upchurch DM et al., Sociocultural contexts of time to first sex among Hispanic adolescents, *Journal of Marriage & the Family*, 2001, 63(4):1158–1169.
15. Nyamathi A et al., AIDS-related knowledge, perceptions, and behaviors among impoverished minority women, *American Journal of Public Health*, 1993, 83(1):65–71.
16. Guilamo-Ramos V et al., Acculturation-related variables, sexual initiation, and subsequent sexual behavior among Puerto Rican, Mexican, and Cuban youth, *Health Psychology*, 2005, 24(1):88–95.
17. Ford K and Norris AE, Urban Hispanic adolescents and young adults: relationship of acculturation to sexual behavior, *Journal of Sex Research*, 1993, 30(4):316–323.
18. Marín BV et al., Condom use in unmarried Latino men: a test of cultural constructs, *Health Psychology*, 1997, 16(5):458–467.
19. Marín BV et al., Acculturation and gender differences in sexual attitudes and behaviors: Hispanic vs non-Hispanic white unmarried adults, *American Journal of Public Health*, 1993, 83(12):1759–1761.
20. Flores E, Eyre SL and Millstein SG, Sociocultural beliefs related to sex among Mexican American adolescents, *Hispanic Journal of Behavioral Sciences*, 1998, 20(1):60–82.
21. Marín BV, HIV prevention in the Hispanic community: sex, culture, and empowerment, *Journal of Transcultural Nursing*, 2003, 14(3):186–192.
22. Pavich EG, A Chicana perspective on Mexican culture and sexuality, *Journal of Social Work & Human Sexuality*, 1986, 4(3):47–65.
23. Padilla AM and Baird TL, Mexican-American adolescent sexuality and sexual knowledge: an exploratory study, *Hispanic Journal of Behavioral Sciences*, 1991, 13(1):95–104.
24. Villarruel AM, Cultural influences on the sexual attitudes, beliefs, and norms of young Latina adolescents, *Journal of the Society of Pediatric Nurses*, 1998, 3(2):69–79.
25. Bearman PS and Brückner H, Promising the future: virginity pledges and first intercourse, *American Journal of Sociology*, 2001, 106(4):859–912.
26. Rojas-Guyler L, Ellis N and Sanders S, Acculturation, health protective sexual communication, and HIV/AIDS risk behavior among Hispanic women in a large midwestern city, *Health Education & Behavior*, 2005, 32(6):767–779.
27. Christopher FS, Johnson DC and Roosa MW, Family, individual, and social correlates of early Hispanic adolescent sexual expression, *Journal of Sex Research*, 1993, 30(1):54–61.
28. Hovell M et al., Family influences on Latino and Anglo adolescents' sexual behavior, *Journal of Marriage & the Family*, 1994, 56(4):973–986.
29. Tschann JM and Adler NE, Sexual self-acceptance, communication with partner, and contraceptive use among adolescent females: a longitudinal study, *Journal of Research on Adolescence*, 1997, 7(4):413–430.
30. Marston C, Gendered communication among young people in Mexico: implications for sexual health interventions, *Social Science & Medicine*, 2005, 59(3):445–456.
31. Faulkner SL and Mansfield PK, Reconciling messages: the process of sexual talk for Latinas, *Qualitative Health Research*, 2002, 12(3):310–328.
32. Moore SM and Rosenthal DA, The social context of adolescent sexuality: safe sex implications, *Journal of Adolescent Health*, 1992, 15(4):415–435.
33. Villarruel AM et al., Predictors of sexual intercourse and condom use intentions among Spanish-dominant Latino youth: a test of the planned behavior theory, *Nursing Research*, 2004, 53(3):172–181.
34. Faulkner SL, Good girl or flirt: Latinas' definitions of sex and sexual relationships, *Hispanic Journal of Behavioral Sciences*, 2003, 25(2):174–200.
35. Halpern-Felsher BL et al., Adolescents' self-efficacy to communicate about sex: its role in condom attitudes, commitment, and use, *Adolescence*, 2004, 39(155):443–456.
36. Tolman DL, *Dilemmas of Desire: Teenage Girls Talk About Sexuality*, Cambridge, MA: Harvard University Press, 2002.
37. Tschann JM, Flores E and DeGroat C, Cultural factors and condom negotiation strategies among Latino adolescents, paper presented at the biennial meeting of the Society for Research in Child Development, Boston, Mar. 29–Apr. 1, 2007.
38. Frost JJ and Darroch JE, Factors associated with contraceptive choice and inconsistent method use, United States, 2004, *Perspectives on Sexual and Reproductive Health*, 2008, 77(1):10–21.
39. Marín G and Gamba RJ, A new measurement of acculturation for Hispanics: the Bidimensional Acculturation Scale for Hispanics (BAS), *Hispanic Journal of Behavioral Sciences*, 1996, 18(3):297–316.
40. Aiken LS and West SG, *Multiple Regression: Testing and Interpreting Interactions*, Thousand Oaks, CA: Sage Publications, 1991.
41. Villarruel AM et al., Predicting condom use among sexually experienced Latino adolescents, *Western Journal of Nursing Research*, 2007, 29(6):724–738.
42. Noar SM, Carlyle K and Cole C, Why communication is crucial: meta-analysis of the relationship between safer sexual communication and condom use, *Journal of Health Communication*, 2006, 11(4):365–390.
43. Oncale RM and King BM, Comparison of men's and women's attempts to dissuade sexual partners from the couple using condoms, *Archives of Sexual Behavior*, 2001, 30(4):379–391.
44. Civic D, College students' reasons for nonuse of condoms within dating relationships, *Journal of Sex and Marital Therapy*, 2000, 26(1):95–105.
45. Overby KJ and Kegeles SM, The impact of AIDS on an urban population of high-risk female minority adolescents: implications for intervention, *Journal of Adolescent Health*, 1994, 15(3):216–227.

46. Hensel DJ, Fortenberry JD and Orr DP, Variations in coital and noncoital sexual repertoire among adolescent women, *Journal of Adolescent Health*, 2008, 42(2):170–176.
47. National Guidelines Task Force and Hispanic/Latino Adaptation Task Force, *Guidelines for Comprehensive Sexuality Education for Hispanic/Latino Youth*, 1995, <[http://www.siecus.org/\\_data/global/images/Hispanic-Latino\\_Guidelines.pdf](http://www.siecus.org/_data/global/images/Hispanic-Latino_Guidelines.pdf)>, accessed June 24, 2009.
48. The National Campaign to Prevent Teen and Unplanned Pregnancy, Effective and promising teen pregnancy prevention programs for Latino youth, 2007, <[http://www.thenationalcampaign.org/resources/pdf/SS/SS32\\_LatinoPrograms.pdf](http://www.thenationalcampaign.org/resources/pdf/SS/SS32_LatinoPrograms.pdf)>, accessed June 23, 2009.
49. Zimmerman RS et al., Longitudinal test of a multiple domain model of adolescent condom use, *Journal of Sex Research*, 2007, 44(4):380–394.
50. Marin G, Defining culturally appropriate community interventions: Hispanics as a case study, *Journal of Community Psychology*, 1993, 21(2):149–161.
51. Villarruel AM, Jemmott LS and Jemmott JB, III, Designing a culturally based intervention to reduce HIV sexual risk for Latino adolescents, *Journal of the Association of Nurses in AIDS Care*, 2005, 16(2):23–31.
52. Villarruel AM, Jemmott JB, III, and Jemmott LS, A randomized controlled trial testing an HIV prevention intervention for Latino youth, *Archives of Pediatrics and Adolescent Medicine*, 2006, 160(8):772–777.

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