



Published in final edited form as:

*J Res Adolesc.* 2016 June ; 26(2): 300–315. doi:10.1111/jora.12192.

## Gender, Generational Status, and Parent-Adolescent Sexual Communication: Implications for Latino/a Adolescent Sexual Behavior

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### Abstract

There is little research on how specific parent-adolescent sexual communication topics influence Latino/a youth's sexual behaviors, and how gender and generational status may moderate effects. This study examined effects of three different messages on intercourse and condom use among 1944 Latino/as from the National Longitudinal Study of Adolescent Health (T1 mean age=15.46;  $sd=1.50$ ). Results indicated discussing health consequences predicted higher odds of intercourse one year later across gender and generation groups. Birth control recommendation effects on subsequent intercourse and condom use differed by generational status and gender. Results indicated that message content is important for understanding effects of parent-adolescent sex communication on adolescents' behavior, and underscored the need to consider gender and generational status in Latino/a parent-adolescent sexual communication studies.

### Keywords

Sexual health and behavior; acculturation; gender socialization

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Risky adolescent sexual behavior continues to result in high rates of sexually transmitted infections (STIs) and unplanned pregnancy in the U.S. (Weinstock, Bearman, & Cates, 2004; CDC, 2010; Hamilton, Martin, & Ventura, 2012). Latinos, currently the fastest growing minority group, show a unique profile of sexual risk. Latino/a youth are less likely to engage in sexual intercourse than white and black youth but exhibit lower levels of contraceptive and condom use (CDC, 2010; 2011) and have higher rates of pregnancy (Hamilton & Ventura, 2012) and STIs than other ethnic groups (see Villaruel, Guilamo-Ramos, & Bauermeister 2012; Raffaelli & Iturbide, 2009 for review). Furthermore, patterns of sexual risk differ by gender and acculturation level. Latino boys are more likely than girls to have sex in earlier/middle adolescence (CDC, 2010; 2011). However, with age, Latinas show greater increases in sex risk behavior compared to Latino males (Guarini, Marks, Patton, & Coll, 2012). Among Latino/a youth, greater acculturation is related to more risky sexual behaviors (Guarini et al., 2012) and higher pregnancy rates (e.g., Kaplan, Erikson, & Juarez-

Reyes, 2002). The goal of this study was to examine the associations between specific kinds of parental messages about sex and Latino/a adolescents' sexual behavior and condom use.

## Gender, Acculturation, and Sexual Risk

Acculturation is the process of change due to exposure to cultures different from one's own (Berry, 1980; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). Although it is a complex and multidimensional process, specific indicators (e.g., generational status) are common proxy measures. Afaible-Munsuz and Brindi (2006) revealed a consistent positive link between acculturation and sexual initiation based on acculturation indicators such as nativity (e.g., Jimenez et al., 2002), language spoken at home (e.g., Ebin, Sneed, Morisky, Rotheram-Borus, Magnusson, & Malotte, 2001) and length of U.S. residence (Guilamo-Ramos, Jaccard, Pena, & Goldberg, 2005). Among Latino/a youth, greater acculturation is also related to higher numbers of sex partners, higher pregnancy rates (e.g., Kaplan, Erikson, & Juarez-Reyes, 2002) and sexual risk (Guarini et al., 2012), and lower contraceptive use (Romo, Berenson, & Segars, 2004).

Acculturation may be positively related to sexual risk because acculturated youth adopt the sexual mores of mainstream youth. Recent immigrants are more likely to subscribe to the sexual mores of their heritage culture, such as the value of *marianismo*, which emphasizes chastity, modesty, and self-sacrifice for girls, and *machismo*, which is sometimes linked to male power in sexual decision making (Villarruel, 1998). In contrast, later generation youth may adopt more gender-egalitarian sexual attitudes and be more inclined to engage in premarital sex.

Furthermore, acculturation interacts with gender: among less acculturated Latino/a youth, boys are more likely to have sex compared to girls, whereas this difference is smaller among more acculturated youth (Upchurch, Aneshensel, Mudgal, & McNeely, 2001). Higher endorsement of traditional gender values such as *marianismo* has also been linked to lower condom use for Latinas, as the emphasis on self-sacrifice and submission to men may reduce girls' ability to negotiate for condom use (e.g., Ragsdale, Gore-Felton, Koopman, & Seal, 2009).

## Parent-Adolescent Sexual Communication and Latino Adolescent Sexual Behavior

In diverse studies, more frequent sexual communication between parents and adolescents has been linked to a delayed onset of sexual initiation (Hutchinson, 2002; Somers & Paulson, 2000) and to safer sex practices (DiClemente, Wingood, Crosby, Cobb, Harrington, & Davies, 2001; Somers & Vollmar, 2006), although contrasting findings have been reported (Fingerson, 2005; Jaccard et al., 1996; Manning, Longmore, Giordano, 2005; Whitaker & Miller, 2001), particularly if parents have casual attitudes and behaviors about sex (Dittus, Jaccard, & Gordon, 1999). Similar trends have been found for Latino/a youth: in most studies more frequent communication is protective for sexual behaviors such as sexual intercourse (Guilamo-Ramos, Goldberg, Lee, McCarthy, & Leavitt, 2012; Romo, Lefkowitz, Sigman, & Au, 2002), and contraception use (e.g., East, Reyes, Contreras, Wu, & Contreras,

2005), but positive relations between sexual communication and broad risky sexual behaviors have also been reported (Trejos-Castillo & Vazsonyi, 2009). In Latino families, traditional values can limit the amount and quality of parent-child sexual communication (e.g., Murphy-Erby, Stauss, Boyas, & Bivens, 2011; Guilamo-Ramos et al., 2006; McKee & Karaz, 2006). This may explain why Latino parents are less likely to discuss sexual issues with their teens compared to some other ethnic groups (e.g., Hutchinson, 2002; Meneses, Orrell-Valente, Guendelman, Oman, & Irwin, 2006). Other studies indicate that Latino parents may often provide only vague, implicit information about sex (Nadeem et al. 2006; Zavella & Casteneda, 2005).

An important but understudied aspect of parent-child communication in Latino (and other) families is the content of parental messages about sex and effects of distinct messages on sexual risk. Studies of multi-ethnic samples indicate that conversation content is influential (e.g., Hadley et al., 2009; Hutchinson 2002). The sparse literature indicates that, similar to other ethnic groups, Latino/a parent-child conversations about sex focus on consequences such as unplanned pregnancy (Guilamo-Ramos et al., 2006; McKee & Karasz, 2006; Zaella & Castaneda, 2005) and on sexual morals and values (Caal, Guzman, Berger, Ramos, & Golub, 2013; Murphy-Erby et al., 2011; Raffaelli & Ontai, 2001; Romo et al., 2002). Yet, many studies assess the overall frequency of conversations without considering their content, which may contribute to the mixed findings noted previously. Because few studies differentiate among distinct topics of sexual communication, the impact of specific messages on Latino/a sexual behavior is largely unknown. Furthermore, some messages may affect particular sexual behaviors more than others. For example, discussions about sex as a moral issue may delay sexual intercourse (e.g., Usher-Seriki, Bynum & Callands, 2008) and reduce condom use, whereas recommendations for birth control may primarily affect condom use.

The content of parent-adolescent sexual communication likely depends on the adolescent's gender. Gender differences would be expected based on traditional gender values such as *marianismo* and *machismo* (Guilamo-Ramos et al., 2006). Because traditional cultural values proscribe premarital sexual activity for girls, and because unplanned pregnancy is often considered a threat to success for Latina women (e.g., McKee & Karasz, 2006; Villarruel, 1998), Latina girls receive messages about avoiding sex and pregnancy that their male peers do not. Some studies indicate that parent-adolescent sexual communication is more encouraging of sexual activity for males, with messages that dually stress abstinence and the importance of "protection" during sex (Murphy-Erby et al., 2011; Raffaelli & Green, 2003); however, other studies have not found gender differences in communication topics (Romo et al., 2002).

Parent-child communication about sex would also be expected to change with increased acculturation, as parents and youth adopt more mainstream sexual attitudes, potentially resulting in greater openness about and tolerance of adolescent sexual activity. For example, mothers of more acculturated Latino/a youth are more likely to encourage sexual communication and to discuss safety issues (Murphy-Erby et al., 2011), and Filipino youth report that greater acculturation allows for more open communication between parents and teens (Chung et al., 2007). Additionally, the way in which sexual communication messages are received by youth may change with acculturation due to the broader changing context of

the parent-child relationship via the acculturation gap (i.e., differences in acculturation in which youth tend to become acculturated more quickly compared to their parents). The acculturation gap has been indicated as a barrier for parent-child communication among Latino/as, and can lead to risky adolescent sexual behavior (Prado et al., 2010; Shwartz et al., 2012). It is possible that for parent-adolescent dyads in which there are larger acculturation gaps (e.g., second-generation adolescents), sexual communication is particularly hampered.

Although there have been studies that examine moderating influences of acculturation or gender on sexual communication effects of sexual behavior in Latino/a samples few studies examine these potential moderators jointly. For example, using the National Longitudinal Study of Adolescent Health, Trejos-Castillo and Vazsonyi (2009) found no significant differences between first and second generation youth or between language-acculturation groups (i.e., language spoken at home) in the association between the amount of parent-adolescent sexual communication and a composite measure of sexual risk behavior. However, message content was not examined in this study, and distinct sexual behaviors were combined into a single variable so that associations between particular messages and specific behaviors could not be determined. Additionally, potential moderating effects of gender were not examined. In another study, Guilamo-Ramos et al. (2009) found that Latino/a parents and youth both reported that boys and girls receive different messages about sex; however, this study did not examine differences in sexual communication based on acculturation status. Thus, it is unknown whether the content of parental messages changes with acculturation and whether sexual communication differentially predicts sexual outcomes for Latino/a boys and girls and for more versus less acculturated youth.

### **Family context of sexual communication**

Parent-adolescent sexual communication occurs in a family context that involves parent-child relationships, parenting practices, and attitudes about sex. The levels of parental support and control influence adolescent sexual behavior. Typically, parental support (closeness and warmth) is associated with later initiation of sexual intercourse, less frequent sex, fewer sexual partners (Miller, 2002; Miller, Benson, & Galbraith, 2001) for both boys and girls (Jaccard, Dittus, & Gordon, 2000). Furthermore, closer parent-child relationships may enhance the effect of parental messages in Latino/a populations (e.g., Guilamo-Ramos et al., 2011). Parental control strategies such as monitoring and supervision reduce opportunities for sex and have been linked to lower rates of adolescent sexual intercourse in diverse samples (e.g., Hogan & Kitigawa, 1986; Jacobson & Crockett, 2000), including Latinos (Trejos-Castillo & Vazsonyi, 2009). Among Latino/as, levels of parental support and control appear to differ depending on the adolescent's gender (Updegraff et al., 2009) and acculturation level (Driscoll, Russell, & Crockett, 2008; Mogro-Wilson et al., 2008).

Parental attitudes about sex also influence the messages they communicate about sex, as well as the openness and frequency of communication. Although parents' self-reported attitudes regarding adolescent sexual activity may be important, research indicates that adolescents' perceptions of their parents' behaviors and attitudes are especially influential. For example, perceived parental attitudes regarding birth control and premarital childbearing

can affect adolescents' sexual risk taking (Jaccard et al., 1996). Perceptions of perceived parental sexual permissiveness also moderate effects of frequency of parental sexual communication on sexual behavior (Khurana & Cooksey, 2012). In the present study, adolescents' perceptions of their parents' supportiveness, control (autonomy granting), and attitudes about sex were examined as predictors of sexual activity and as possible moderators of the effects of sexual communication.

## The Present Study

To provide a more nuanced view of the effects of parent-adolescent sexual communication on Latino/a adolescent sexual risk, we examined the associations between parental discussion of three specific sexual topics (health consequences, sexual norms, and birth control) and adolescents' subsequent sexual behaviors (sexual intercourse and condom use). We also examined whether levels of these three types of sexual messages and their effects on adolescent sexual behavior varied by the adolescent's generational status and gender. Specifically, our research questions were: (1) Does parent-adolescent communication about specific sexual topics differ by adolescents' generational status and gender? (2) Do distinct sex communication topics differentially predict sexual behaviors? (3) Do the effects of specific sex communication topics on sexual behavior depend on generational status, gender, or both? To place the findings in context, we examined the role of perceived maternal support, parental autonomy granting, and maternal sexual permissiveness to see how including these variables affected the results. To our knowledge ours is the first study to focus on the effects of specific communication content among Latino youth and to consider how these effects differ for boys and girls and for youth from different immigrant generations.

We expected that message content would vary with generational status, as parents of more acculturated youth may be more open to discussing sexual issues, particularly factual information. Based on Latino/a values and traditional gender roles, we anticipated that message content would differ by gender, with girls receiving stronger messages about why they should postpone sex. We also expected the impact of particular parental messages to vary by generational status. More acculturated youth adopt more mainstream values (e.g., tolerance of sexual activity), and may need more factual information about sex and potential consequences (opposed to moral prohibitions) to make better decisions regarding safe sexual activity. We predicted parental messages about sex would be more influential for girls than boys, as girls seem to be more sensitive to parental messages in general (e.g., Henrich, Brookmeyer, Shrier, & Schahar, 2006). Finally, we explored impacts of perceived support, autonomy granting, and parents' sexual permissiveness as additional predictors of adolescents' sexual behaviors and moderators of sexual communication effects. We expected that parental support would reduce sexual risk and enhance effects of parental sex messages, while behavioral control would only reduce sexual risk. We also expected that perceived parents' sexual permissiveness might improve the salience of sexual communication topics and enhance their effects but might also facilitate earlier sexual behavior.

## Method

### Sample

Data came from Waves I and II of the in-home sample of the National Longitudinal Study of Adolescent Health (Add Health). The Add Health dataset is based on a sample of 80 high schools and their feeder middle schools, selected with unequal probability, and stratified by enrollment, region, urbanicity, type of school, and racial/ethnic mix to be representative of U.S. schools (Blum, Buehring, Shew, Bearinger, Sieving, & Resnick, 2000). A representative sample of youth in these schools was selected and supplemented with several subsamples to increase the number of adolescents from particular ethnic groups. Students in grades 7–11 at the Wave I In-Home survey (T1) were followed up one year later (T2). The students' primary caregivers, typically mothers, also participated at T1.

We restricted the sample to students who participated in both waves and had Wave II sample weights, who were in grades 7 – 11 at Wave I ( $N = 12,765$ ). To avoid non-independence of cases, we randomly selected one sibling in each family for inclusion, excluding 1,803 youth. The sample was further restricted to youth who self-identified as Latino/as. The final analytic sample included 1944 youth (51% female). Of these youth, 55.82% identified as Mexican/Mexican American, 15.29% as Cuban American, 19.07% as Puerto Rican, and 9.82% as other nationalities or mixed heritage Latino/as. Most adolescents (87%) completed the interview in English; 12% completed the interview in Spanish, and 1% completed the interview in a different language. At T1, the average youth age was 15.46 years ( $sd = 1.50$ ), and 56% lived with both parents. The majority of those who completed the interview in Spanish were of Mexican origin (43%) or Cuban (33%). A comparison of youth who participated with youth eligible for the study who did not participate at T2 (9.37%) showed only two differences on T1 study variables: youth who dropped out were less likely to report living in a two-parent home and had mothers who reported a higher frequency of discussing health consequences.

### Measures

At the Wave I in-home survey (T1), adolescents reported their ethnicity, gender, generational status, age (in years), family structure, levels of maternal support and parental control, and parental sexual attitudes. Parents reported the frequency of parent-child sexual communication about moral issues and health consequences and whether they recommended specific forms of birth control. Sexual intercourse was measured at both Wave I and II (T1 and T2), and most recent condom use was measured at Wave II (T2).

**Sociodemographic variables**—To determine ethnicity, adolescents at T1 were asked: "Are you of Hispanic or Latino origin?" Adolescents who responded "yes" were included in the analysis. Adolescents were also asked: "What is your race?" and those who reported multiple racial backgrounds were further asked "Which one category best describes your racial background?" Youths who identified a single primary race or a "best" race were retained. Generational status was measured with the following items: "Were you born in the United States?" "Was (your mother) born in the United States?" and "Was (your father) born in the United States?" Foreign-born youth were classified as first generation. Second

generation youth were defined as those who were born in the US, but whose primary caregiver (i.e., the participating parent) was born outside the U.S. Third generation youth were defined as those who had a U.S.-born primary caregiver, and were themselves born in the U.S.. Gender was coded as boys=1; girls=2).

Several other variables were included as statistical controls. Adolescent's age was measured in years. Language acculturation was included as an additional measure of acculturation as it has proven influential in other analyses (Afable-Munsuz & Brindis, 2006). Youths were asked "What language is usually spoken in your home?" and answers were coded as English=0; Spanish=1. Family financial hardship was measured by parents' response to the question: "Last month, did you or any member of your household receive: Aid to Families with Dependent Children? Food stamps? A housing subsidy or public housing?" Each item was coded as 0 (*no*) or 1 (*yes*), and the three items were summed to yield a total score ranging from 0 to 3. Family structure was coded as 1 (two biological/adoptive parents) or 0 (other family types).

**Sexual intercourse**—At T1 and T2, sexual intercourse was measured with the question "Have you ever had sexual intercourse? When we say sexual intercourse, we mean when a male inserts his penis into a female's vagina." Responses were coded as yes (1) or no (0).

**Most recent condom use**—Condom use at last sexual intercourse was measured at T2 with the item, "Did you or your partner use any method of birth control when you had sexual intercourse most recently?" Adolescents could report up to three different types of birth control from a list of 13 types (e.g., condom, birth control pills). Condom use was coded as either 1 (used a condom) or 0 (no condom use).

**Hormonal birth control use**—Hormonal birth control use at most recent sexual intercourse was added as a control due to the negative relation between condom use and hormonal birth control use (East, Jackson, O'Brien & Peters, 2007). Use was measured at T2 with the same item used for most recent condom use. Adolescents who reported using birth control pills, Depo-Provera, a ring, or Norplant were dummy-coded as 1 (used hormonal birth control), and youth who did not report use were coded as 0 (did not use hormonal birth control).

**Discussion of health consequences and sexual norm violations**—At T1, caregivers were asked four questions regarding how much they discussed specific sexual topics with their children. Responses ranged from one (*not at all*) to four (*a great deal*). Two questions ( $r = .72, p < .05$ ) focused on discussion of health consequences (i.e., "the negative or bad things that would happen if [he got someone/she got] pregnant" and "the dangers of getting a sexually transmitted disease"). Two other questions ( $r = .64, p < .05$ ) focused on discussion of premarital sexual intercourse as a violation of sexual norms and mores (i.e., discussing "the moral issues of not having sexual intercourse" and "the negative or bad impact on [the youth's] social life because he/she would lose the respect of others"). For each pair of questions, scores were averaged, yielding two discussion variables: messages about health consequences and sexual norms. Although the two measures were highly correlated, a confirmatory factor analysis indicated that the two items on each scale were

more closely related to each other than to the other items (CFA statistics available upon request). Therefore the two measures were analyzed separately.

**Birth control recommendation (BCR)**—Maternal BCR was measured by one item asking “how much” caregivers (mothers) agreed or disagreed with the statement, “You have recommended a specific method of birth control to [target youth].” Responses ranged from 1 (*strongly agree*) to 5 (*strongly disagree*). The item was reverse coded, so that a higher score indicated stronger endorsement of having made a birth control recommendation.

**Maternal support**—At T1, adolescents answered five items about their relationship with their mother. Responses ranged from 1 (*not at all*) to 5 (*very much*) for two items (e.g., “How much do you think she cares for you?”) and from 1 (*strongly agree*) to 5 (*strongly disagree*) for three items (e.g., “Most of the time, [your mother] is warm and loving towards you”). Item scores were averaged to form a perceived maternal support scale (for boys,  $\alpha = .80$ ; for girls,  $\alpha = .85$ ), with higher scores indicating more support. This scale was used in previous Add Health studies (e.g., Deutsch, Crockett, Wolff, & Russell, 2012; Trejos-Castillo & Vazsonyi, 2009).

**Parental autonomy granting**—At T1, adolescents were asked whether or not their parents let them make their own decisions about six every day decisions (e.g., “the people you hang around with”; “what you wear”; “what television programs you watch”). Answers were scored as either no (0) or yes (1). Scores were averaged such that higher scores indicated greater autonomy granting (boys,  $\alpha = .63$ ; girls,  $\alpha = .64$ ). Versions of this scale have been used in previous studies with Add Health data (e.g., Bynum & Kotchick, 2006; Wolff & Crockett, 2011).

**Youth perception of maternal sexual permissiveness**—At T1, adolescents were asked how much their primary caregiver would approve of: 1) “having sex at this time in your life,” 2) “having sexual intercourse with someone who was special to you and whom you knew well, like a steady girlfriend/boyfriend,” and 3) “using birth control at this time in your life.” Items were scored on a five point scale from 1 (*strongly disapprove*) to 5 (*strongly approve*). The items were averaged to create a “perceived sexual permissiveness” scale (boys,  $\alpha = .77$ ; girls,  $\alpha = .81$ ).

## Analysis Plan

To determine whether parental sexual communication differed by generational status and gender, a 3 (Generation)  $\times$  2 (Gender) ANOVA was estimated for each discussion topic. Post-hoc Tukey tests were used to examine pairwise comparisons. To predict sexual intercourse and condom use at T2, logistic regression models were estimated for each outcome. Separate models were estimated for health consequences and sexual norms owing to high collinearity between the two ( $r = .67$ ,  $p < .05$ ). In Step 1, sexual communication variables, acculturation variables, gender, and demographic control variables were entered into the model. In Step 2, two-way interactions were added for generational status (dummy coded) and the communication variables, and for gender and the sexual communication variables. Finally, three-way generation group, gender, and the communication variable



interactions were included (Step 3). To examine the role of other family context variables that may influence adolescent sexual intercourse and condom use, we included youth's perception of maternal support, parent autonomy-granting, and maternal sexual permissiveness. All regression models were conducted using the type COMPLEX function in Mplus to account for data clustering and weighting (Chantala & Tabor, 1999).

## Results

### Gender and Generational Differences in Sexual Communication

Correlations of all study variables for the full sample and means and standard deviations by generational status are shown in Table 1. Additionally, we examined base rates of sexual intercourse and condom use at each wave. A sizable minority of adolescents within each generation reported ever having sex at T1 (G1 = 30%, G2 = 33%, G3 = 39%), and at T2, a larger percentage of teens reported having had sex in the past year (G1=41%, G2= 43%, G3=50%). Condom use was fairly consistent between T1 (G1=53%, G2=54%, G3=54%), and T2(G1=55%, G2= 56%, G3=56%).

Our first research question focused on potential differences in maternal sexual communication across youth generational status and gender. A 2 (gender)  $\times$  3 (generation) ANOVA was conducted for each sexual communication variable. There was a significant difference between generations in discussing health consequences,  $F(2, 1472) = 12.75, p < .05$ . Post-hoc Tukey tests indicated that mothers of third generation youth reported more frequent discussions of health consequences compared to mothers of first and second generation youth (G1:  $M=2.89, SD = 0.98$ ; G2:  $M=2.86, SD=0.96$ ; G3:  $M=3.12, SD=0.91$ ). There was also a significant difference between generations for mothers' birth control recommendations (BCR),  $F(2, 1470) = 15.75, p < .05$ , indicating that mothers of third generation youth reported higher levels of BCR compared to other mothers (G1:  $M=2.50, SD=1.32$ ; G2:  $M=2.51, SD=1.36$ ; G3:  $M=2.93, SD=1.46$ ). There were no significant generation differences in mother's reported frequency of discussing sexual norms.

Mothers of boys recommended birth control more than mothers of girls (boys:  $M=3.06, SD=1.42$ ; girls:  $M=2.31, SD=1.30$ ),  $F(1, 1288) = 109.91, p < .05$ . However, mothers of girls reported more frequent discussions of health consequences (boys:  $M=2.91, SD=0.96$ ; girls:  $M=3.02, SD=0.93$ ),  $F(1, 1472)=8.67, p < .05$  and sexual norms (boys:  $M=2.58, SD=1.01$ , girls:  $M=2.98, SD=0.97$ ),  $F(1, 1455)=66.74, p < .05$ ). There were no significant interactions between gender and generation group, indicating that the gender differences the maternal messages did not vary by generational status.

### Parent-Adolescent Sexual Communication and Sexual Intercourse and Condom Use

**Sexual intercourse**—The first set of regression models examined the effects on sexual intercourse of parent-adolescent communication about health consequences and birth control. As noted earlier, communication about health consequences and sexual norms were examined in separate models owing to collinearity. To examine interactions with generational status, dummy variables were created for first and third generation youth,

respectively, with second generation youth as the reference group. In the models, effects of the two dummy variables reflect comparisons to second generation youth.

As seen in Table 2, there was a positive relationship between discussing negative health consequences and adolescents' odds of engaging in sexual intercourse at T2, controlling on virginity status at T1. More parental discussion of health consequences was associated with increased odds of intercourse. There were no interactions with gender, generation, or three-way interactions between health consequences, gender, and generation status.

The main effect of BCR on sexual intercourse was not significant. However, there was a significant interaction between BCR and the first generation dummy variable, indicating a stronger effect of BCR for second generation youth than first generation youth. When this interaction was decomposed (not shown), the effect of BCR was positively and significantly related to sexual intercourse for second generation youth ( $b=0.48$ ,  $p<.05$ ) but not first generation youth ( $b=-0.09$ ,  $p>.05$ ). The three-way interaction between BCR, gender, and first generation status was also significant. Figure 2 shows the effects of BCR on the probability of sexual intercourse (i.e., odds ratios were converted to a 0 – 1 probability) for first and second generation girls and boys. As seen in Figure 1, BCR appeared to have little influence on either first or second generation boys. However, for first and second generation girls, the effects of BCR were in opposite directions. Among first generation girls higher BCR decreased the probability of sexual intercourse one year later, whereas among second generation girls higher BCR *increased* the probability of subsequent sexual intercourse.

The same sequence of models was used to test the effect of discussing sexual norms on sexual intercourse except that discussion of sexual norms variable was used instead of discussion of health consequences. The main effect of discussing sexual norms was not significant,  $OR = 1.24$  (95%  $CI = 0.99 - 1.55$ ),  $p < .05$ , as were the two-way and three-way interactions with gender and generation group (sexual norms effects not shown in Table 2).

Finally, the three parenting context variables (maternal support, autonomy granting, perceived sexual permissiveness) and their interactions with sexual communication variables were added to the model predicting sexual intercourse. None of these variables had a significant main effect, but perceived maternal sexual permissiveness interacted with discussion of health consequences,  $OR = 1.46$ , (95%  $CI = 1.12-1.91$ ),  $p<.05$ , and sexual norms,  $OR = 1.30$ , (95%  $CI = 1.02-1.65$ )  $p<.05$ . In both cases maternal sexual communication increased the odds of adolescent intercourse when youth perceived their parents to be more sexually permissive.

**Condom use at last sexual intercourse**—The same sequence of models was used to predict condom use. As seen in Table 3, there were no main effects of discussing sexual consequences or BCR. However, the two-way interactions between BCR and the first and third generation dummy variables were both significant. BCR had a stronger positive effect on condom use for second generation youth ( $b=0.70$ ,  $p<.05$ ) compared to first generation ( $b=-0.33$ ,  $p>.05$ ) and third generation youth ( $b=-0.03$ ,  $p>.05$ ), respectively. Thus, for second generation youth only, maternal recommendation of birth control was significantly associated with increased condom use. There was also a significant three-way interaction

between the third generation dummy variable, gender, and BCR. As seen in Figure 2, BCR appeared to influence second and third generation boys similarly. However, BCR had opposite effects for second generation girls than third generation girls. Higher levels of BCR were related to a higher probability of using condoms for second generation girls, and higher levels of BCR were related to lower probabilities of using condoms for third generation girls. The same procedure was used to examine the effects of discussing sexual norms on condom use. The main effect of sexual norms was not significant (OR=1.05, 95%CI = 0.83 – 1.34,  $p>.05$ ). Neither the two-way interactions with gender and generation group, nor the three-way interactions with the generation dummy variables, were significant (not shown).

Finally, when parenting context variables were added to the model, there was a main effect of autonomy granting, OR = 1.24 (95% CI = 1.01–1.53),  $p<.05$ , such that higher autonomy granting was related to higher odds of using a condom at last sexual intercourse. The interactions between parenting context variables and sexual communication were not significant.

## Discussion

The purpose of this study was to examine the role of parent-adolescent sexual communication in Latino/a youth's sexual behavior, with a novel focus on specific parental messages about sex and how generational status and gender moderate the effects of parent sexual communication. Results indicated that third generation youth received greater discussion about health consequences and birth control from mothers compared to first and second generation youth. Mothers of girls reported discussing sexual norms and health consequences of sex more than mothers of boys, but were less emphatic about recommending specific forms of birth control. Specific maternal messages had an impact on sexual intercourse and condom use that often varied by generational status and gender. Discussing negative health consequences was associated with increased odds of intercourse but not condom use. In contrast, discussing the consequences of violating sexual norms had no impact on either outcome. Effects of BCR were much more complex: although there were no main effects of BCR for either sexual intercourse or condom use, there were significant interactions between BCR and generational status, and significant three-way interactions among BCR, generational status, and gender, for both outcomes. As discussed below, the impact of BCR was greater for second generation youth, for whom BCR predicted higher odds of engaging in sexual intercourse but also higher odds of using condoms. Furthermore, these generational differences were primarily found for girls, with distinct patterns of effects emerging for girls from different generations.

### Generational and Gender Differences in Maternal Communication About Sex

Descriptive findings revealed that mothers of third generation youth reported more communication about health consequences and birth control than mothers of first and second generation youth. Prior research indicates that third generation youth are more likely to have sex (Guarini et al., 2012); mothers may recognize this and provide more information about negative health consequences of sex, as well as options to control those consequences (BCR). In contrast, generational status did not influence discussion of sexual norms and

values, indicating that these issues are important across immigrant generations (Raffaelli & Ontai, 2001; Romo et al., 2002).

Maternal sexual communication also differed for boys and girls. Boys were given stronger BCR, whereas girls received more frequent messages regarding health consequences and the importance of adhering to sexual morals and norms. These results are consistent with findings reported in previous research, in which boys received more permissive messages while girls received more cautionary and prohibitive messages (Murphy-Erby et al., 2011; Raffaelli & Green, 2003). Such patterns may reflect traditional gender norms within Latino/a culture, (i.e., *marianismo* and *machismo*), which proscribe premarital sex for girls and encourage a dominant sexual role for boys. It is interesting that these gendered patterns held regardless of the adolescent's generational status, suggesting that traditional gender norms about sex persist even in acculturated in Latino families, and are expressed within mother-adolescent sexual communication. Emphasis on health consequences for girls may also indicate realistic concerns about pregnancy which typically has more serious implications for girls.

### Effects of Maternal Sexual Communication on Adolescent Sexual Behavior

Of central importance to the present study, parent-adolescent sexual communication was related to youth sexual behavior in complex ways. Examination of specific sexual topics revealed that there were differences in the effects of the three messages and differences in the ways that the sexual messages operated across gender and generational groups.

**Discussion of health consequences and sexual norms**—Discussing health consequences of sex such as pregnancy and STDs was associated with higher odds of having sex one year later. While this result is counter to the notion that parent-adolescent sexual communication is protective, some previous research has found a positive relationship between sexual communication and adolescent sexual activity for general populations (Fingerson, 2005; Jaccard et al., 1996; Manning et al., 2005; Whitaker & Miller, 2001) and Latinos (e.g., Trejos-Castillo & Vazsonyi, 2009). It is possible that parents increase their discussion of health consequences when they suspect their children are becoming sexually active, but the communication occurs too late to delay intercourse. Another possibility is that such discussions inadvertently communicate a greater parental tolerance of sexual activity. Messages that caution adolescents about sex without prohibiting it are not uncommon, particularly for Latino boys (e.g., Murphy-Erby et al., 2011), and could potentially encourage sexual intercourse.

In contrast, discussion of negative health consequences was not related to condom use. A lack of association between parent-adolescent sexual communication and contraceptive use has been documented in other populations as well (e.g., Aspy, Vesely, Oman, Rodine, Marshall, & McLeroy, 2007). Take together the findings suggest that simply warning youth about the risk of STIs and pregnancy may not be sufficient to promote use of condoms or other contraceptives.

Parent-adolescent discussion of sexual norms (i.e., violation of sexual norms) was not associated either with intercourse or condom use, suggesting that direct appeals to norms

and values may have little effect on Latino/a sexual behavior. Perhaps adolescents ignore this communication as an attempt by parents (or society) to control behavior that they consider to be a private decision (i.e., in the personal domain, see Smetana, Campione-Barr, & Daddis, 2004). The differential effects of discussing health consequences and sexual norms highlight the potential importance of message content and underscore the need to consider it in future studies.

Finally, contrary to what was expected, typical parenting context variables (e.g., support) did not relate to the odds of sexual intercourse or interact with sexual communication variables. However, as expected, the parent's sexual permissiveness as perceived by the youth was influential, moderating the effects of discussing health consequences and sexual norms. Discussing these topics appeared to have a stronger effect on sexual intercourse when youths perceived their parents to be more sexually permissive. It appears that adolescents who believe their parents are tolerant about sex may interpret discussions of health consequences, and even discussions of sexual norms, as tacit permission to have sex as long as they are careful and discreet. It may also be that parents who are more permissive frame their messages as cautionary rather than prohibitive, and that this framing affects youths' interpretation of the message. Taken together, the current and prior findings suggest that general discussions of risks associated with intercourse may influence sexual intercourse, but do not associate with condom use. Instead, more specific communication about contraceptives may be required to increase condom use.

**Birth control recommendations**—The effects of birth control recommendations (BCR) on sexual outcomes were complex and moderated by gender and generational status. For sexual intercourse, the three-way interaction indicated that BCR was differentially related to condom use for first and second generation girls. For first generation girls, more BCR was associated with reduced odds of intercourse, suggesting a protective effect. In contrast, for second generation girls, BCR was associated with greater odds of intercourse. It is possible that the differences in first and second generation girls is due to differences in interpretation of the messages due to differences in parent-child acculturation (e.g., the acculturation gap). Possibly, for second generation girls in particular, maternal BCR is interpreted as permissive because such messages signal that mothers acknowledge girls might have sex.

Maternal BCR effects on condom use also varied by generational status and gender. The three-way interaction comparing second and third generation youth was significant, and distinct patterns emerged for girls in particular. Higher BCR was related to lower condom use odds at last sexual intercourse (e.g., higher risk) for third generation girls, whereas for second generation girls, BCR was protective—stronger BCR was related to higher odds of condom use. It is possible that this pattern reflects a tendency for more acculturated girls to use hormonal methods of birth control (e.g., the pill) in lieu of condoms. Indeed, in this sample, 25% of third generation girls, compared to only 12% of second generation girls, reported using hormonal birth control the last time they had sex. Such methods involve more female control and investment in sexual health and behavior, both of which are reflective of a more acculturated status.

Taken together, findings indicate that maternal BCR has unique effects for second generation girls, increasing their odds of intercourse but also their odds of condom use if they are sexually active. This may reflect a two stage process: many second generation girls may engage in intercourse following maternal birth control discussions, but those discussions also lead them to use condoms, decreasing risk of STIs and pregnancy. The effects of BCR may be specific to second generation girls because first generation girls subscribe to traditional Latino values proscribing premarital sex and third generation girls are highly acculturated and subscribe to more permissive mainstream values. The findings for second generation Latina girls merit increased attention and replication in future studies.

### Limitations and Implications

Although this paper has the advantage of a nationally representative sample and longitudinal analyses, there are also limitations. Generational status (and language, as a control variable) was used as a proxy for acculturation rather than directly assessing cultural values. Furthermore, the sexual communication variables were based on a limited number of items which could have reduced reliability and comprehensiveness of these measures. Furthermore, sexual communication was assessed only at one time point, so effects of adolescent sexual behavior on parental messages could not be determined, making it difficult to disentangle the direction between youth's sexual behavior and sexual communication when. Future studies would benefit from greater specificity regarding parental messages about sex, particularly birth control recommendations, e.g., by assessing potential motivations for discussing specific sexual communication topics or including longitudinal cross-lagged analyses between sexual communication and youth behavior to better assess directionality. Additionally, Add Health data include only the caregiver's reports of parent-adolescent discussions of sexuality, but parents and youth often disagree on the frequency and content of sexual discussions (Crockett, Raffaelli, & Moilanen, 2003); ideally both perspectives would be assessed. Finally, we were not able to account for paternal sexual communication in our analyses. While the primary sexual educator is typically the mother, fathers play an important role in sexual education, particularly for boys (Raffaelli & Green, 2003), and future studies should assess the impact of both parents.

Despite limitations, the present study extends the literature on parent-adolescent sexual communication by focusing on the effects of discussing specific topics and by attending to both gender and generational status differences in parent-adolescent sexual communication and its effects. Previous studies have typically focused on sexual communication frequency rather than message content, and studies that have examined message content among Latino/as have relied on relatively small samples, limiting representativeness. This study affords a more nuanced look at sexual communication messages in a nationally-representative dataset, bridging a gap between larger studies examining acculturation, gender and sexual risk (e.g., Trejos-Castillo & Vazsonyi) and more in-depth, qualitative studies (e.g., Guilamo-Ramos et al., 2006; Romo et al., 2010). The findings indicate that distinct sexual communication topics have differential effects on adolescent sexual behavior and that effects often depend on gender and/or generational status. In particular, they revealed distinct effects for second generation girls, which merit further examination. Taken together, the findings highlight the need to consider the type of sexual communication parents discuss,

not just the amount of discussion, to understand effects on youth sexual risk. Further, they underscore the need to take adolescent gender and generational status into account when designing intervention programs to reduce sexual risk. Although further research is needed before specific recommendations for interventions can be made, this study highlights the need for culturally-tailored interventions to account for multiple contexts, within specific cultures, that may jointly influence sexual behavior and the factors that influence it.

## Acknowledgments

This research was funded by grant # HD R01 039438 from NICHD to L. Crockett and S. Russell. This research uses data from Add Health, a program project designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris, and funded by a grant P01-HD31921 from the National Institute of Child Health and Human Development, with cooperative funding from 17 other agencies. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information on how to obtain the Add Health data files is available on the Add Health website (<http://www.cpc.unc.edu/addhealth>).

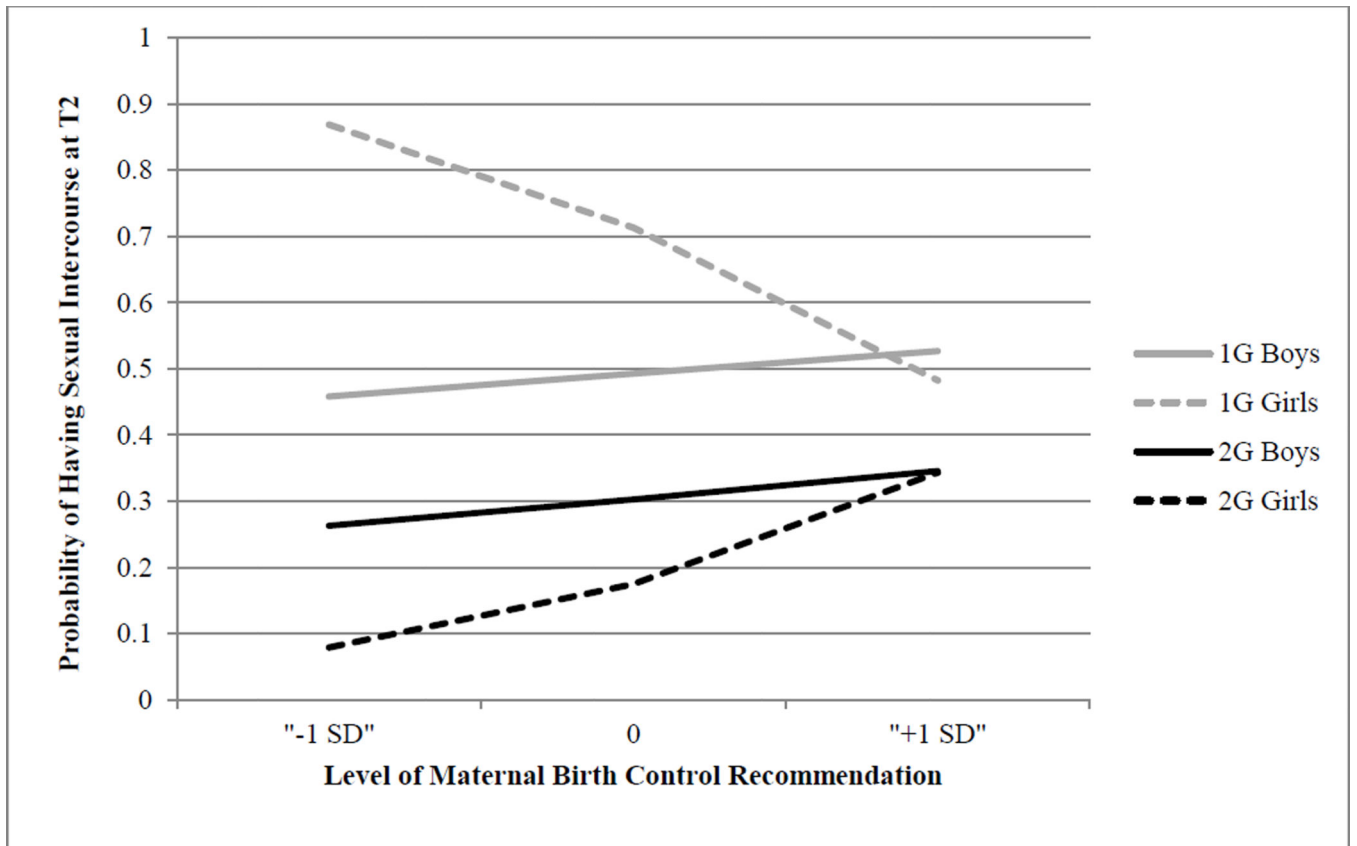
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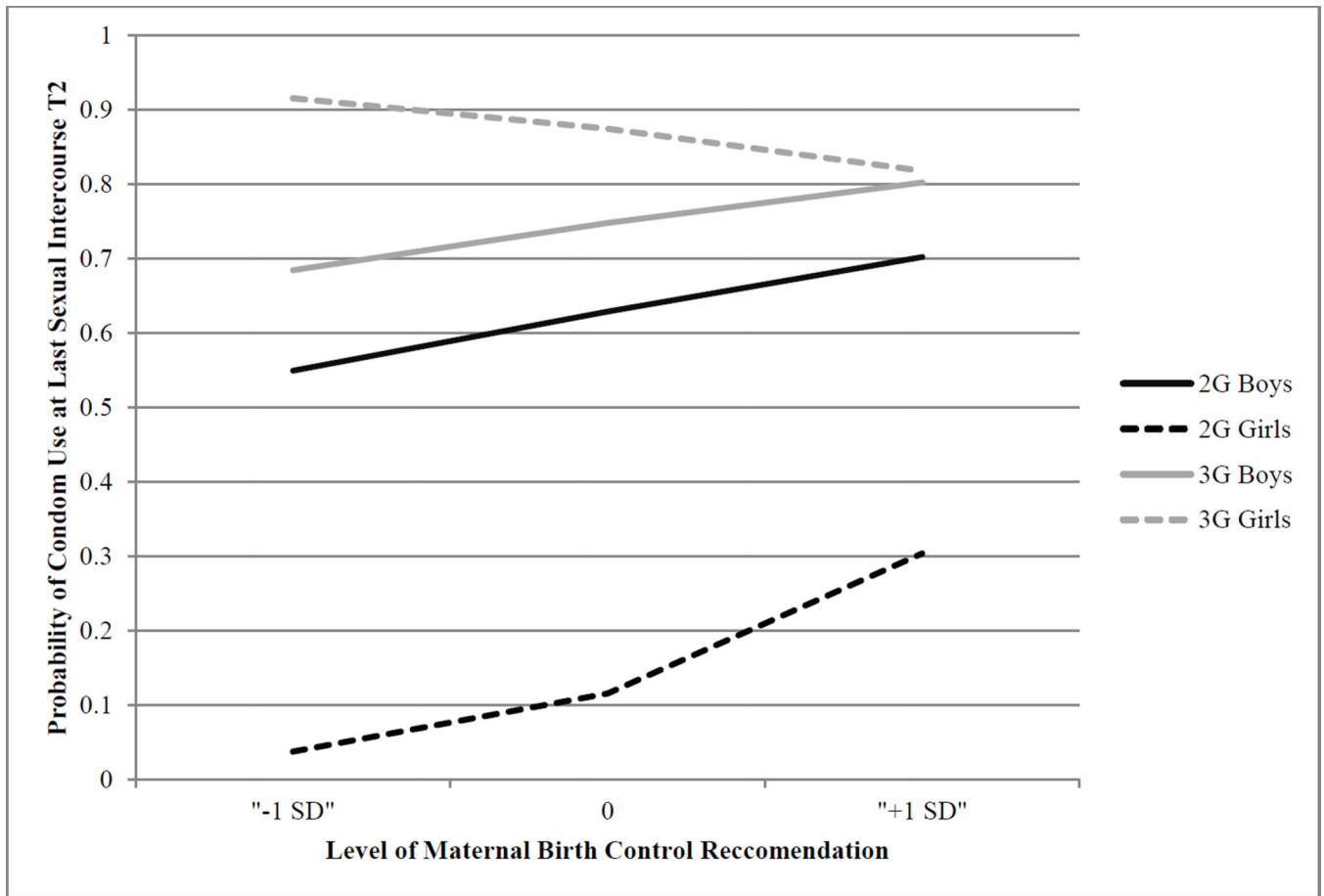
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**Figure 1.** Decomposition of three-way interaction between maternal birth control recommendation, generation group, and gender predicting probability of sexual intercourse: Effects for first and second generation Latino/a boys and girls.



**Figure 2.** Decomposition of three-way interaction between maternal birth control recommendation, generation group, and gender predicting probability of condom use at last sexual intercourse: Effects for second and third generation Latino/a boys and girls.

Table 1

Correlations for all Variables, and Means and Standard Deviations for First (G1), Second (G2), and Third (G3) Generation Latino/a Youth

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Ever had sex WII	-																
2. Condom use last sex at WII	0.02	-															
3. Health consequences	0.15**	0.03	-														
4. Sexual norms	0.07**	0.03	0.67**	-													
5. Rec. of birth control	0.18**	0.02	0.26**	0.10**	-												
6. Generation	0.08**	0.01	0.11**	0.05*	0.13**	-											
7. Gender	-0.09**	-0.12**	0.06*	0.20**	-0.26**	-0.01	-										
8. Age	-0.09**	0.26**	0.01	-0.04	0.12**	-0.18**	-0.06*	-									
9. Family structure	-0.16**	0.04	-0.11**	-0.03	-0.14**	-0.05*	0.02	0.01	-								
10. Language spoken at home	-0.06**	0.02	-0.14**	-0.04	-0.13**	-0.64**	0.02	0.02	0.14**	-							
11. Financial hardship	0.07**	0.07	0.08**	0.04	0.06*	-0.01	-0.03	-0.03	-0.28**	0.04	-						
12. Religiosity	-0.16**	-0.01	-0.01	0.07*	-0.09**	-0.05*	0.08**	0.08**	0.10**	0.04	0.01	-					
13. Hormonal birth control use WII	-0.01	0.13	0.01	-0.01	0.08*	0.02	0.07	0.07	-0.05	-0.05	0.01	-0.02	-				
14. Ever had sex WI	0.61**	-0.05	0.10**	0.02	0.18**	0.07**	-0.14**	-0.14**	-0.16**	-0.04	0.06*	-0.14**	0.01	-			
15. Parent autonomy granting	0.09**	-0.03	0.02	-0.03	-0.02	0.09**	0.06*	0.06*	-0.06*	-0.09**	0.03	-0.11**	0.07*	0.07**	-		
16. Parental support	-0.11**	0.08*	0.08**	0.06*	0.06*	-0.02	-0.14**	-0.14**	-0.09**	0.01	-0.01	0.11	-0.01	-0.13**	-0.03	-	
17. Perceived parental sex. permissiveness	0.32**	0.03	0.11**	-0.06*	0.34**	0.03	-0.36**	-0.36**	-0.16**	-0.04	0.04	-0.14**	0.09*	0.37**	0.10**	-0.03	-
Generation 1 Means (SD)	0.40 (0.49)	0.55 (0.50)	2.88 (0.98)	2.73 (1.01)	2.50 (1.32)	1.00 (0.00)	0.51 (0.50)	15.83 (1.42)	0.54 (0.50)	0.85 (0.36)	0.40 (0.72)	3.34 (0.77)	0.19 (0.39)	0.31 (0.46)	4.35 (1.62)	4.43 (0.59)	2.18 (0.99)
Generation 2 Means (SD)	0.43 (0.49)	0.56 (0.50)	2.86 (0.96)	2.75 (1.01)	2.51 (1.36)	2.00 (0.00)	0.52 (0.50)	15.46 (1.36)	0.67 (0.47)	0.65 (0.48)	0.31 (0.71)	3.38 (0.70)	0.14 (0.34)	0.33 (0.47)	4.52 (1.51)	4.39 (0.67)	2.05 (0.96)
Generation 3 Means (SD)	0.50 (0.50)	0.56 (0.50)	3.11 (0.91)	2.85 (1.03)	2.93 (1.45)	3.00 (0.00)	0.49 (0.50)	15.19 (1.54)	0.49 (0.50)	0.09 (0.29)	0.36 (0.78)	3.26 (0.75)	0.21 (0.40)	0.39 (0.49)	4.69 (1.41)	4.41 (0.68)	2.23 (1.01)

\*  $p < .05$  ;

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**Table 2**

Odds Ratio Estimates and 95% Confidence Intervals for Sexual Intercourse Latino/a Youth at T2.

Variable	Step 1	Step 2	Step 3
Generation 1	1.16 (0.62 – 2.18)	2.54 (0.43 – 15.11)	4.72 (0.24 – 93.14)
Generation 3	1.09 (0.47 – 2.53)	1.20 (0.22 – 6.48)	6.29 (0.46 – 86.61)
Language at home	0.77 (0.47 – 1.25)	0.77 (0.47 – 1.26)	0.76 (0.44 – 1.32)
Female	0.79 (0.47 – 1.31)	1.10 (0.31 – 3.90)	5.60 (0.30 – 106.06)
Health Consequences (HC)	<b>1.36**</b> (1.08– 1.70)	1.32 (0.87 – 1.99)	<b>1.97*</b> (1.96 – 3.66)
Birth Control Recommendation(BCR)	1.11 (0.94 – 1.31)	1.38 (0.96 – 1.99)	1.08 (0.66– 1.75)
Age	<b>1.20**</b> (1.14 – 1.40)	<b>1.21**</b> (1.16–1.38)	<b>1.22**</b> (1.07 – 1.39)
Hardship	1.02 (0.74 – 1.40)	1.04 (0.78 – 1.38)	1.00 (0.75 – 1.30)
Family Structure	0.61 (0.37 – 1.01)	0.61 (0.37– 1.01)	0.59 (0.35 – 1.00)
Religiosity	<b>0.72*</b> (0.54–0.94)	<b>0.70*</b> (0.53–0.92)	<b>0.70*</b> (0.54–0.92)
Had sex by WI	<b>14.58**</b> (7.70 – 27.63)	<b>15.78**</b> (8.58 – 29.04)	<b>16.31**</b> (8.80 – 30.25)
HC × Generation (1)	-	1.14 (0.68 – 1.89)	0.70 (0.31 – 1.55)
HC × Generation (3)	-	1.30 (0.79 – 2.14)	0.72 (0.34 – 1.54)
BCR × Generation (1)	-	<b>0.63**</b> (0.42 – .95)	1.02 (0.61 – 1.70)
BCR × Generation (3)	-	0.71 (0.48 – 1.06)	0.90 (0.51 – 1.58)
hC × Gender	-	0.80 (0.55– 1.18)	0.37 (0.12 – 1.16)
BCR × Gender	-	1.13 (0.80– 1.61)	1.99 (0.83 – 4.74)
Gen (1) × Gender	-	-	0.36 (0.01– 17.89)
Gen (3) × Gender	-	-	0.03 (0.01 – 1.33)
HC × Gen (1) × Gender	-	-	2.95 (0.70 – 12.53)
HC × Gen (3) × Gender	-	-	3.52 (0.86 – 14.56)
BCR × Gen (1) × Gender	-	-	<b>0.22**</b> (0.08 – 0.62)
BCR × Gen (3) × Gender	-	-	0.58 (0.20 – 1.65)

\*  $p > .05$ ,\*\*  $p < .01$ .

Note: Generation 2 is the reference group for all interactions with generation.

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**Table 3**

Odds Ratio Estimates for Using a Condom at Last Sexual Intercourse for Latino/a Youth.

Variable	Step 1	Step 2	Step 3
Generation 1	1.06 (0.40–1.15)	3.81 (0.29–49.67)	0.88 (0.04 – 18.24)
Generation 3	1.58 (0.80– 3.12)	2.48 (1.91 – 3.21)	0.62 (0.02 – 15.75)
Language at home	1.35 (0.69–2.65)	1.55 (0.81–2.98)	1.63 (0.88–3.04)
Female	0.68 (0.40–2.58)	0.40 (0.07 – 2.39)	<b>0.06*</b> (0.01–0.94)
Health Consequences (HC)	1.08 (0.83–1.42)	0.68 (0.32–1.43)	0.70 (0.31 – 1.59)
Birth Control Recommendation(BCR)	1.04 (0.81– 1.33)	<b>2.03*</b> (1.11–3.73)	1.34 (0.78– 2.33)
Age	0.82 (0.63–1.06)	0.82 (0.64–1.06)	0.82 (0.64 – 1.05)
Hardship	1.59 (0.87–2.92)	<b>1.38*</b> (0.99–1.93)	<b>1.54*</b> (1.10 – 2.17)
Family Structure	1.36 (0.98–1.89)	1.59 (0.84–3.01)	1.70 (0.89–3.26)
Religiosity	0.88 (0.61–1.24)	0.87 (0.62–1.23)	0.89 (0.63–1.27)
Hormonal Birth Control Use	<b>3.40**</b> (1.43–8.08)	<b>4.26**</b> (1.77–10.31)	<b>4.67*</b> (1.77–12.34)
HC × Generation (1)	-	1.46 (0.60–3.58)	1.57 (0.42 – 5.87)
HC × Generation (3)	-	1.61 (0.68–3.82)	1.34 (0.42 – 4.24)
BCR × Generation (1)	-	<b>0.38**</b> (0.19–0.75)	0.56 (0.21 – 1.47)
BCR × Generation (3)	-	<b>0.50*</b> (0.28–0.92)	1.06 (0.55 – 2.02)
HC × Gender	-	1.30 (0.73–2.33)	1.07 (0.40 – 4.38)
BCR × Gender	-	0.86 (0.60–1.24)	1.95 (0.86 – 4.38)
Gen (1) × Gender	-	-	19.45 (0.17– 2198)
Gen (3) × Gender	-	-	15.32 (15.32 – 1939)
HC × Gen (1) × Gender	-	-	0.76 (0.13–4.54)
HC × Gen (3) × Gender	-	-	1.49 (0.36 – 6.25)
BCR × Gen (1) × Gender	-	-	0.64 (0.10–3.93)
BCR × Gen (3) × Gender	-	-	<b>0.29*</b> (0.11 – 0.75)

\*  $p > .05$



\*\*  
 $p < .01$ .

Note: Generation 2 is the reference group for all interactions with generation.

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