Routledge
Taylor & Francis Group

Southern Communication Journal

ISSN: 1041-794X (Print) 1930-3203 (Online) Journal homepage: http://www.tandfonline.com/loi/rsjc20

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To cite this article: Amanda Holman & Jody Koenig Kellas (2015) High School Adolescents' Perceptions of the Parent–Child Sex Talk: How Communication, Relational, and Family Factors Relate to Sexual Health, Southern Communication Journal, 80:5, 388-403, DOI: 10.1080/1041794X.2015.1081976

To link to this article: http://dx.doi.org/10.1080/1041794X.2015.1081976

Southern Communication Journal
Vol. 80, No. 5, November–December 2015, pp. 388–403

High School Adolescents' Perceptions of the Parent–Child Sex Talk: How Communication, Relational, and Family Factors Relate to Sexual Health

Amanda Holman & Jody Koenig Kellas

This research focuses on how high school adolescents' (n = 159) perceptions of parent–adolescent communication about sex, including communication frequency, parent–child closeness, parents' communication competence and effectiveness, as well as the larger family environment relates to sexual risk-taking and permissive sexual attitudes. Findings show that perceived parental communication competence and effectiveness were the strongest negative predictors of adolescents' permissive sexual attitudes and sexual risk-taking, whereas peer communication frequency was a significant positive predictor. In contrast with previous research, adolescents' perception of parent communication frequency and family communication climate (e.g., conversation orientation and conformity orientation) was unrelated to adolescents' sexual risk.

One of the most challenging conversations both parents and children report during adolescence is the "sex talk" (Guerrero & Afifi, 1995). Extant research has shown that the earlier and more often parents discuss sex-related topics with their adolescents, the more likely their adolescents are to delay their sexual debut and less likely adolescents will be to engage in risky sexual behavior (e.g., Guilamo-Ramos et al., 2012; Miller, Benson, & Galbraith, 2001; Silk & Romero, 2014). Despite the evidence

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ISSN 1041-794X (print)/1930-3203 (online)
 DOI: 10.1080/1041794X.2015.1081976

that parent–child communication helps adolescents make sense of sex, many parents shy away from these discussions citing discomfort, lack of knowledge, and general communication issues as deterrents (Jerman & Constantine, 2010). Moreover the majority of research focuses on parent–child communication from the parent perspective. Because recent parent–adolescent dyadic studies have found parents and adolescents have different perceptions (Jerman & Constantine, 2010; Thompson, Yannessa, McGough, Dunn, & Duffy, 2015), an adult-centric focus may be inadequate for identifying the full range of elements associated with effective parent–child sex talks. In order to help parents feel more comfortable engaging in parent–adolescent communication about sex, researchers ought to spend less time on what communication and/or relational factors *parents* believe are effective and focus more efforts on how *adolescents* perceive these communication and/or relational factors (Miller-Day, Pezalla, & Chesnut, 2013).

Adolescents' perceptions of parent–child communication about sex are affected by the frequency and effectiveness of specific conversations and, at the same time, are embedded in the lived experiences of the larger family dynamics, such as relational closeness and family communication patterns. Family Communication Patterns (FCP) theory is a useful theoretical lens for understanding how the overall family communication environment links to adolescents' perceptions of parent–adolescent communication and relational factors associated with sexual risk. The degree to which a family climate is governed by levels of conversation and conformity-orientation can explain how families talk about sex. Indeed, initial studies on risk behavior confirm the expected link between FCP dimensions and socialization of adolescents in attitudes and behaviors concerning risk behavior (Koesten & Anderson, 2004; Miller-Day, 2008). Understanding links between various family communication climates and risk is important as there is no one ideal way for parents and adolescents to engage in dialogue about sex. By examining the larger discursive patterns within a family, scholars may further explain the common communication and relational factors associated with adolescents' sexual health. Thus, in the present study, we examine how adolescents' perceptions of parent–adolescent communication about sex, including communication frequency, parent–child closeness, parents' communication competence and effectiveness, as well as the larger family environment relates to sexual risk.

Adolescence and Sexual Health

The need to address adolescent sexual health is emphasized by research that shows that 7 out of 10 adolescents have engaged in sexual intercourse by age 19 and nearly 50% of adolescents between 15–19 years old have had sex at least once (Guttmacher Institute, 2012). There are approximately 750,000 United States females between the ages of 15–19 who become pregnant annually (Centers for Disease Control and Prevention [CDC], 2009) and the United States' adolescent pregnancy rate remains one of the highest in the developed world (Guttmacher Institute, 2012).

The risk does not end with pregnancy. Among adolescents who are sexually active, almost 35% report not using a condom and only 20% describe themselves or their partner as using birth control during their last sexual activity (CDC, 2009). Forty-seven percent of students in Grades 9 to 12 have engaged in sexual intercourse and 40% of currently sexually active high school students did not use a condom at their last sexual intercourse (Eaton et al., 2012). In addition, adolescents, compared to other age groups who are sexually active, have the highest rate of sexually transmitted infections (STIs; Guttmacher Institute, 2012). In short, adolescents are at high risk for teen pregnancy and STIs, and, therefore, sexual health remains an important concern in the United States.

It is during early/middle (ages 10–17) adolescence (Smetana, 2010) when most individuals become aware of sexuality, have sexual thoughts and engage in sexual activity (Beckett et al., 2010). Although sexuality is a normal and healthy part of adolescent development, permissive sexual attitudes and sexual risk-taking are a major concern with parents, schools, and health care professionals. S*exual risk-taking* is commonly defined as early sexual debut, unprotected sexual or oral intercourse, having multiple sexual partners, or engaging in sexual behavior under the influence of alcohol or drugs (Holman & Sillars, 2011). Related to sexual risk-taking, a *permissive sexual attitude* is often described as less conventional beliefs and values towards premarital sex, as well as more tolerance of casual sex, unprotected sexual activity, and multiple partners (Hendricks & Hendricks, 1987). Previous research has argued that sexual attitudes often guide individuals' behaviors and evaluations of sexual expressions, activities, and relationships (Guerra, Gouveia, Sousa, Lima, & Freires, 2012). Thus, both sexual attitudes and behaviors are relevant to understanding adolescent sexual risk-taking. In the current study, we examine adolescents' behaviors and attitudes as they affect and are affected by family communication.

Socialization and Sexual Risk-Taking

Although adolescents discern information, values, and norms about sexual attitudes and behaviors from multiple sources, peers and parents are the most common. Parent–adolescent communication is widely viewed as foundational to adolescent's sexual socialization. Parent-based research has well established that parents can greatly increase adolescents' knowledge of sex-related topics and reduce the likelihood that adolescents will engage in risky sexual behavior (Guilamo-Ramos et al., 2012; Miller, 2002; Silk & Romero, 2014). In particular, parent–child closeness and conversational frequency about sex have emerged consistently as negative predictors of risk (Guilamo-Ramos et al., 2012; Miller et al., 2001). For example, the more parents discuss topics, such as, sex, pregnancy, STIs/AIDS, and birth control with their adolescents the less likely adolescents will be to engage in risky sexual behavior and the more likely they will be to delay their first sexual interaction (Guilamo-Ramos et al., 2011; Guzmán et al., 2003). Although frequency seems to play a positive role in reducing adolescent risky behavior, there is some evidence that the opposite is true

particularly if adolescents model their parents' casual attitudes and behaviors about sex and sexuality (Dittus, Jaccard, & Gordon, 1999).

The majority of these findings, however, have been based on parents' perceptions of conversational frequency. Parents may over- or underestimate the frequency of sexual communication, and adolescents' own perceptions may be more important markers of the links between frequency and risk. To investigate possible correspondence with previous findings, the first hypothesis suggests the following:

> H_1: Adolescents' reports of the frequency of parent–adolescent communication about sex will be negatively related to adolescents' self-reports of (a) sexual risk-taking and (b) permissive sexual attitudes.

Unlike communication with parents, adolescents' communication with peers often contributes to permissive sexual attitudes and risky sexual behavior (Balalola, 2004; Holman & Sillars, 2011). Adolescents commonly seek more detailed information or stories about sex from their peers (Heisler, 2005). For example, when adolescents use peers as their main source of sexual information they have been more likely to believe that the majority of their peers were having sex, thus adolescents using peers as a primary source were more likely to engage in sexual behavior (Holman & Sillars, 2011). In short, communication with peers may normalize sexual risk-taking. In order to verify these findings, the second hypothesis tests the following assumption:

> H_2: Frequency of peer-adolescent communication about sex will be positively related to adolescents' self-reports of (a) sexual risk-taking and (b) permissive sexual attitudes.

Parent–adolescent communication has been shown to moderate and mediate the relationships between peers influence and adolescents' sexual risk-taking. For example, research has found that adolescents who talk with their parents were less likely to be influenced by peers (Bleakley, Hennessy, Fishbein, Coles, & Jordan, 2009; Whitaker & Miller, 2000). In addition, peer influence on the decision to engage in unprotected sexual intercourse was more influential for adolescents who had not discussed sex or condom use with parents (Whitaker & Miller, 2000). To test these findings in the current sample, we hypothesized the following:

> H_3: Frequency of parent–adolescent communication about sex will decrease the association between the frequency of peer communication and adolescents' self-reports of (a) sexual risk-taking and (b) permissive sexual attitudes.

Research also demonstrates the importance of parent and adolescent relational closeness on adolescents' sexual health. Indeed, relational closeness with parents is one of the most stable predictors of adolescents' future sexual attitudes and behaviors (Miller et al., 2001). For example, studies that focused on parents' perceptions of factors related to the sex talk found parent–adolescent relational connectedness (parental support, closeness, and warmth) is associated positively with adolescents delaying their sexual debut, engaging in less frequent sex, and having fewer sexual partners (Miller, 2002; Miller et al., 2001).

Again, however, much of the research on closeness has been from the adult's perspective. Parents and emerging adults may assess closeness differently as compared to adolescents, particularly given the independence and distancing that characterizes the parent–child relationship in adolescence (Steinberg, 2001). Thus, the current study further examines how adolescents' perceptions of closeness with parents predicts adolescent risky behavior and attitudes towards sex by posing the following hypothesis:

> H_4: Parent–adolescent relational *closeness* will be negatively related to adolescents' self-reports of (a) sexual risk-taking and (b) permissive sexual attitudes.

Although understanding communication frequency and closeness provides important information about parent–adolescent conversations about sex, these variables do not provide information about the nuances of family communication that may help to explain sexual risk, nor do they explain how adolescents perceive their parents conversational attempts. Examining these nuances should provide additional and important pieces to the puzzle of this often difficult topic of family communication.

Family Communication Culture and Adolescent Sexual Risk

Family interactions are often characterized by fairly stable patterns (Koerner & Fitzpatrick, 2002a, 2002b). The research on Family Communication Patterns theory suggests dimensions of the family communication climate, namely *conversation* orientation (i.e., parental encouragement of unrestrained interaction) and *conformity* orientations (i.e., emphasis on uniformity of beliefs and child obedience) impact how adolescents perceive parents' communication about risk behavior (Koesten, Miller, & Hummert, 2002; Miller-Day, 2008). For example, research suggests that the FCP dimensions may be connected to individuals sexual risk behavior during adolescence along with parent–child communication about risk surrounding substance use (Miller-Day, 2008) and sexual behavior (Koesten & Anderson, 2004; Lehr, DiIorio, Dudley, & Lipana, 2000). For example, higher conversation orientation has been linked to more information and value sharing about sex-related topics, thus reducing risk behaviors (Koesten & Anderson, 2004; Lehr et al., 2000).

In addition to overarching family schemas, adolescents also respond to how parents communicate during specific conversations, such as the "sex talk." In the context of parent-child communication about sex, an adolescent's perception of the parent's effectiveness (i.e., how helpful the conversation was; Canary & Spitzberg, 1987) and/or communication competence (i.e., ability to communicate ideas appropriately; Spitzberg, 1983; Spitzberg & Cupach, 1989) likely plays a role in sexual behaviors and attitudes. The more effective, or helpful, adolescents perceive what their parents have to say, the more likely they may be to heed the advice of their parent(s). In one of the few studies on adolescents' and parents' evaluation of parents as "sex educators," Feldman and Rosenthal (2000) found parents and adolescents tend to evaluate a successful sex talk very differently. Parents tended to evaluate the conversation based on their own motivation to engage and show concern for their

child. In contrast, adolescents based their evaluation on the parents' communication behaviors during the conversation, rather than the parents' intentions. Afifi, Joseph, and Aldeis (2008) found adolescents' perceptions of how their parents communicated about sex, rather than parents' own perceptions, were a better predictor of adolescents' attitude/behavior regarding sex. In other words, no matter how well intended parents are in their messages about sex, the adolescents' own perception of how their parents communicate and conduct themselves on the topic of sex seems to matter more in adolescents' future attitude and future behavior about sex.

Collectively, these findings suggest that perceptions of competence and effectiveness may facilitate and/or limit current or future communication about sex. In addition because it is within the family context that adolescents learn not only how to communicate but also how to perceive communication (Koerner & Schrodt, 2014), family communication patterns may interact with the relational and communication factors to help explain adolescents' sexual risks and attitudes because together the variables capture a more comprehensive view of the adolescent experience. In order to gain a holistic insight into adolescents' perceptions of parent–adolescent sex talk experiences and how relational, communicative, and family factors may work together to shape adolescents' sexual attitudes and behaviors, the following hypothesis was posed:

> H_5: Factors associated with communication in the family, including parent and peer frequency, parental closeness, perception of effectiveness, and perception of competence, conformity orientation, and conversation orientation will predict adolescents' self-reports of (a) sexual risk-taking and (b) permissive sexual attitudes.

Methods

Participants

Participants were 159 high school adolescents who were recruited from Grades 10 ($n = 15$, 9.4%), 11 ($n = 66$, 41.5%), and 12 ($n = 78$, 49.1%) from six high schools in the Midwest. The participants were 16 to 18 years old ($M = 16.66$, $SD = 0.65$) and consisted of 101 females (63.5%) and 58 males (36.5%) with over 96% ($n = 151$) reporting heterosexual orientation. Participants identified their ethnicities as Caucasian/White ($n = 93$, 58.5%), African American ($n = 22$, 13.8%), Hispanic/Latino/a ($n = 18$, 11.3%), Asian ($n = 9$, 5.7%), Middle Eastern ($n = 8$, 5%), Native American ($n = 3$, 1.9%), and 6 (3.8%) people identified as multiethnic.

Eighty-one percent ($n = 128$) of adolescents in this study reported talking to their parents about sex. The remainder of participants indicated they have never talked to their parents ($n = 27$) or did not answer the question ($n = 13$). When asked if they had talked to friends, 89.3% ($n = 142$) of adolescents reported talking to their friends about sex.

Of the 159 adolescents in the study, 57.2% ($n = 91$) indicated they had engaged in sexual intercourse. The average age for sexual debut was 14.91 ($SD = 1.52$) and there

was no significant difference between males' and females' age of debut, $t(87) = 0.57$, $p = .54$.

Procedure

Data were collected through an anonymous online questionnaire. Once parental consent was received, adolescent participants were e-mailed a link to the online questionnaire containing the assent form and all measures. The questionnaire included fixed-response items, Likert-type scales, and open-ended questions. The questionnaire began by asking participants to complete measures on how often they had talked to their parents and peers about specific sex-related topics (e.g., sex, condom use). Participants were then asked to complete measures to assess the general communication within their family (FCPs) and parent–child closeness. Participants also reported on a "sex talk" they recalled having with their parents and subsequently rated their parents on competence and effectiveness in that particular conversation. Finally, participants completed measures on adolescents' sexual risk-taking and permissive sexual attitudes. Participants were compensated with a gift card for one song download on Amazon.com.

Measures

Communication frequency

To assess the frequency with which adolescents talk with parents and friends about sex, participants completed Sales, Milhausen, and DiClemente's (2011) Parent-Adolescent Communication Scale (PACS). The original scale is a five-item scale with the root question: "*How often have you and your parent(s) talked about the following...*" The topics included sex, how to use condoms, protecting oneself from STIs, protecting oneself from AIDs, and protecting oneself from becoming pregnant. For the current study, one item on "the pros and cons of engaging in sex" was added to capture more general conversation topics about sex. Each item was measured on a Likert-type scale of 1 (*never*) to 4 (*often*). Descriptive and reliability statistics for all variables are presented in Table 1.

Communication effectiveness

In order to assess adolescents' perceptions of how effective their parents were in the conversation about sex, participants completed the Conversational Effectiveness Scale (Canary & Spitzberg, 1987). To curb against participant exhaustion, the scale was revised from a 20-item scale to a 5-item measure that focused on the parents' effectiveness during a particular conversation. The Likert-type scale ranges from 1 (*strongly disagree*) to 7 (*strongly agree*), and three of the five items were reverse coded so that higher scores represented higher perceived parent conversational effectiveness. Items were averaged to create an overall score of participants' perceptions of their parents' effectiveness during the communication.

Table 1 Descriptive Statistics and Zero-Order Correlations for All Study Variables

	Mean	*SD*	α	1	2	3	4	5	6	7	8	9
1. Parent Frequency	13.44	6.25	.91	—	.02	.22*	.50**	.49**	−.23*	.28**	−.16*	−.17*
2. Peer Frequency	15.83	5.47	.89		—	.01	−.01	−.03	.11	.16*	.36**	.38**
3. Closeness	4.25	1.86	—			—	.40**	.38**	−.14	.60**	−.01	−.08
4. Competence	3.18	1.12	.90				—	.79**	−.29**	.42**	−.26*	−.37**
5. Effectiveness	4.55	1.73	.90					—	−.33**	.40**	−.18*	−.37**
6. Conformity Orientation	4.22	1.14	.86						—	−.17*	.17*	.17*
7. Conversation Orientation	4.48	1.34	.94							—	.02	−.04
8. Sexual Behavior	27.75	8.58	—								—	.62**
9. Sexual Attitude	2.88	.83	.83									—

*Correlation is significant at the $p < .05$ level. **Correlation is significant at the $p < .001$ level.

Communication competence

Adolescents assessed their parents' communication competence in the parent–child conversation about sex using an adapted version of Guerrero's (1994) Communication Competence Scale. The six-item Likert scale ranges from 1 (*strongly disagree*) to 5 (*strongly agree*). A composite for communication competence was calculated by averaging the five items together with higher scores reflecting higher perceptions of competence.

Closeness

The Inclusion of Other in the Self (IOS) scale was used to measure parent–child closeness. The IOS is a single-item (7-point scale) pictorial measure of closeness or interpersonal interconnectedness appropriate for younger participants (Aron, Aron, & Smollan, 1992). Participants select the picture that best represents their relationship with another person from a set of seven Venn-diagrams, each illustrating varying levels of overlapping closeness between "self" and "other." The seven pairs of circles are arranged progressively from zero overlap (1, low closeness) to almost complete overlap (7, high closeness).

Family communication patterns

Adolescents' perceptions of their family communication climate were assessed using the Revised Family Communication Patterns (FCP) scale (Ritchie & Fitzpatrick, 1990). The FCP scale consists of 26 Likert-type items that measure the extent to which family communication patterns reflect conversation orientation (i.e., openness, free expression of ideas, individuality) and conformity orientation (i.e., conformity to parental authority). Each is measured on a 7-point scale ranging from

1 (*strongly disagree*) to 7 (*strongly agree*). Subscales were averaged and higher scores indicated greater perception of conversation and/or conformity orientation.

Sexual risk-taking

To assess adolescents' history of sexual risk-taking, the Adolescent Sexual Activity Index (Hansen, Wolkenstein, & Hahn, 1992) was adapted for use in the current study. Participants were asked to respond "*yes*" or "*no*" to the following question: "In your life, have you participated in the following behavior with a romantic partner?" Thirteen behaviors with advancing levels of risk (e.g., hugging to sex) were assessed. Two items specific to sexual risk-taking (e.g., unprotected oral sex, unprotected sex) were also added. Based on Hansen's suggestion (personal communication, January 9, 2014), the original coding scheme was adapted such that lower risk behaviors (e.g., cuddling) were scored lower (*no* = 1, *yes* = 2) than higher risk behaviors (e.g., oral sex, *no* = 1, *yes* = 4; sexual intercourse, *no* = 1, *yes* = 6). The scale also included two multiple-choice items on number of times they had sex in their lifetime and the number of different sexual partners in their lifetime; these two items were scored from 1 to 5. All behaviors were summed to create a composite score of sexual behavior with higher scores indicating higher levels of sexual risk behavior.

Permissive sexual attitudes

To assess adolescents' permissive attitudes about sexual risk-taking, participants completed the premarital sex subscale of the Sexual Knowledge and Attitude Test for Adolescents scale (SKAT-A; Fullard & Scheier, 2011). The five-item scale measures attitudes towards premarital sex (e.g., "Sex before marriage is wrong."). Four additional items were added to emphasize risky sexual behaviors during adolescence (e.g., "Unprotected sex between adolescents is NOT okay"). The Likert scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Five items were reverse coded and scores were averaged such that higher scores reflected more liberal attitudes towards premarital sex and sexual behaviors.

Results

Parent and Peer Communication Frequency

The first hypothesis predicted that adolescents' reports of frequency of parent–child communication about sex would relate negatively to adolescents' sexual risk-taking (H_1a) and permissive sexual attitudes (H_1b). Bivariate correlations revealed modest support for the hypothesis. In particular, there was a small significant negative association between adolescent reports of frequency and adolescents' sexual risk-taking, $r = -.16$ ($p < .05$, $r^2 = .03$). There was also a small significant negative correlation between frequency of communication about sex-related topics with parents and adolescents' permissive sexual attitudes, $r = -.17$ ($p < .05$, $r^2 = .03$). Thus H_1b was also supported.

The second hypothesis tested the prediction that the frequency of peer communication about sex would be positively related to adolescents' sexual risk-taking (H_2a) and permissive sexual attitudes (H_2b). As predicted, bivariate correlations revealed support for H_2a and H_2b. There were significant positive correlations between peer frequency of communication about sex-related topics and adolescents' sexual risk-taking, $r = .36$ ($p < .001$, $r^2 = .13$) and permissive sexual attitudes, $r = .38$ ($p < .001$, $r^2 = .14$). Thus, the more adolescents reported talking to their peers about sex, the more risky behavior and permissive attitudes they also reported.

To test if parent–child communication moderates the association between peer communication and adolescents' risk, linear regression models were completed using Hayes' (2013) PROCESS macro. Two separate models were run in which the frequency of peer communication about sex was entered as the focal independent variable, adolescents' sexual risk-taking (H_3a) and permissive sexual attitudes (H_3b) were entered as the dependent variables, and adolescents' reports of the frequency with which they communicated with their parents about sex was entered as the moderator. Consistent with bivariate correlations, the regression analyses indicated significant main effects for both sexual risk-taking, $R^2 = .18$, $F(3, 155) = 11.11$, $p < .001$, and permissive attitudes, $R^2 = .18$, $F(3, 155) = 11.03$, $p < .001$. Examination of the interactions revealed that parental communication frequency about sex approached significance as a moderator between peer communication frequency about sex and adolescents' sexual risk-taking, $\Delta R^2 = .02$, $F(1, 155) = 3.69$, $p = .06$. Unexpectedly, the decomposition indicated that, as communication with parents increased, the positive association between peer communication frequency and sexual behaviors was stronger ($1\ SD = 0.16$, $p < .05$, $M = 0.22$, $p < .001$, $+1SD = 0.34$, $p < .001$). In other words, when communication was more frequent with peers *and* parents, participants reported engaging in more sexual risk-taking. More frequent communication with parents about sex was not a significant moderator between peer communication about sex and adolescents' permissive sexual attitudes, $\Delta R^2 = .01$, $F(1, 155) = .01$, $p = .97$ (see Table 2).

Parent–Adolescent Closeness

Hypothesis 4 predicted that parent-adolescent relational closeness would be negatively related to adolescents' sexual risk-taking (H_4a) and permissive sexual attitudes (H_4b). Bivariate correlation analyses indicated nonsignificant, small correlations between relational closeness and adolescents' sexual risk-taking, $r = -.01$ ($p = .44$, $r^2 = .001$) and permissive sexual attitudes, $r = -.08$ ($p = .17$, $r^2 = .006$). Thus, Hypothesis 4 was not supported.

Communication and Relational Factors Within Family Culture

Two multiple regressions were conducted to test the prediction that factors associated with communication in the family, including parent and peer frequency, closeness,

Table 2 Regression Model Coefficients for the Effects of Peer Communication Frequency on Adolescents' Sexual Behavior and Attitudes as Moderated by Parental Communication Frequency

	Model 1: Sexual Behavior		Model 2: Sexual Attitudes	
Predictors	Coefficients	*p* values	Coefficients	*p* values
Intercept	2.13 (.05)	<.001	2.24 (.06)	<.001
Parent Communication Freq.	–0.09 (.04)	<.05	–0.14(.06)	<.05
Peer Communication Freq.	0.23 (.05)	<.001	0.35 (.07)	<.001
Peer Freq. × Parent Freq.	0.09 (.04)	<.05	–0.02 (.06)	.973
Interaction ΔR^2	.02	.06	.01	.971

Note. Standard errors are in parentheses.

perceptions of effectiveness and competence, and FCP would be associated with adolescents' self-reports of sexual risk-taking (H_5a) and permissive sexual attitudes (H_5b). The main effects were significant for both dependent variables. For sexual risk-taking, $F(7, 141) = 5.43$, $p < .001$, $R^2 = .21$, perceived parent communication competence ($\beta = -.28$, $p < .05$) and peer communication frequency ($\beta = .27$, $p < .05$) emerged as the strongest predictors in the model. For permissive sexual attitudes, $F(7, 141) = 7.80$, $p < .001$, $R^2 = .28$, perceived parental communication competence ($\beta = -.26$, $p < .05$), perceived parental communication effectiveness ($\beta = -.21$, $p < .05$), and peer communication frequency ($\beta = .23$, $p < .05$) were the strongest predictors in the model (see Table 3). When taken together, these findings suggest that perceptions of parents' communication and frequency of peer communication were the most important negative and positive predictors, respectively, of sexual risk-taking among adolescents in the current study.

Table 3 Multiple Regression Beta Weights and *p* Values

	Sexual Behavior		Sexual Attitudes	
Predictor	β	*p*	β	*p*
Parent Communication Frequency	−.03	.78	.10	.91
Peer Communication Frequency	.27*	.05	.23*	.05
Closeness	.04	.93	.05	.58
Communication Competence	−.28*	.02	−.26*	.03
Effectiveness	.05	.69	−.21*	.05
Conversation Orientation	.06	.20	.10	.50
Conformity Orientation	.10	.57	.03	.75

*Beta significant at the $p < .05$ level.

Discussion

The primary goal of the present study was to investigate the *adolescent perspective* surrounding parent–child communication about sex-related topics. More specifically, this study was designed to examine adolescents' views on conversation frequency, relational closeness, competence, and effectiveness surrounding parent–child sex communication, as well as how family climate impacts those views in order to provide a more comprehensive and nuanced view of the ways in which family communication relates to adolescent sexual health and risk-taking.

Numerous studies have suggested that parental communication frequency about sex is important in reducing sexual risk behaviors (Guilamo-Ramos et al., 2011; Guzmán et al., 2003; Silk & Romero, 2014). The bivariate analysis in the current study replicated these findings by supporting the negative association between parental communication frequency and adolescents' risk. However, the correlations were small and once frequency was considered with all the other factors considered in the current study, parental frequency was no longer a significant predictor in reducing risky sexual attitudes and behaviors. The results do, however, confirm that frequency of peer communication relates to adolescent sexual decision making (Heisler, 2005) and may create a "culture of encouragement" surrounding risky sexual behaviors (Holman & Sillars, 2011).

Although previous research has found parental communication frequency reduces peer influence of sexual attitudes and behaviors (Whitaker & Miller, 2000), in the current study, parental communication frequency about sex-related topics increased the strength of the correlation between peer influence and adolescents' sexual risk-taking. One explanation for this finding is that frequently talking about sex-related topics may desensitize adolescents to risk and create a sense of normalcy about sexual behaviors (DiIorio, Pluhar, & Belcher, 2002). More finite distinctions in the nature of the content in peer and parent conversations are needed to further unpack this finding.

Contrary to previous research (e.g., Miller et al., 2001), closeness was not related to sexual risk in the current study. Much of the previous research has examined parent–child closeness utilizing college-age adolescents (Jaccard, Dittus, & Gordon, 2000; Martino, Elloitt, Corona, Kanouse, & Schuster, 2008). During adolescence, although perceptions of the relationship usually remain supportive and pleasant, both adolescents and parents report a decrease in communicating positive emotions and an increase in communicating negative emotions when compared to emerging adulthood (Steinberg & Silk, 2002). These decreases in general positive emotions may play a role in adolescents' perceptions of parents' closeness in reducing an adolescents' sexual risk.

As other researchers have argued, it is likely adolescents' perceptions of their parents' communication about sex-related topics, rather than the parents' perceptions of how they themselves communicated, is more important in predicting adolescents' attitudes and behaviors about sex (Afifi et al., 2008). In the current study, adolescents' perceptions of communication competence were the strongest

predictors in reducing adolescents' attitudes and behaviors surrounding sexual risk. Adolescents' perceptions of communication effectiveness were also significant in predicting decreases in adolescents' permissive attitudes. Indeed, when adolescents believed their parents demonstrated fundamental communication skills, comfort, and sincerity and that their messages about sex were helpful, they were less likely to condone those behaviors in their self-reported attitudes about sex. This is one of the most important findings in our study as it highlights the importance of adolescents' perceptions of parents' communication skills when discussing difficult topics like sex. This finding becomes even more important in light of the findings that frequency and closeness — despite previous research and the general assumption that these variables are the key factors in parent–child communication about sex — were *not* significant predictors of sexual health in the current study. The significant link between perceptions of competence and effectiveness emphasizes the importance of parents' preparedness and the need for parent interventions on the content of communication about sex, particularly in light of the finding that peer communication frequency continues to emerge as a threat to sexual health.

Although we assumed that FCPs would play a prominent role in adolescents' sexual attitudes and behaviors, the FCP dimensions had little association with adolescents' perceptions of sexual attitudes and behaviors. These findings could suggest that perhaps sex in and of itself is a topic that acts independent from the overall family communication environment. In a study on how various topics relate to FCP, Baxter and Akkoor (2008) have argued that conversation topics actually have conversation and conformity orientation features. In particular, they found parents and adolescents commonly reported low conversation orientation in relation to sex topics compared to other topics and that sex topics may be a difficult conversation in all family environments.

Collectively, the findings in the study reveal underlying factors, which point to the importance of parent–adolescent conversations about sex and offer a basis for the importance of research from the adolescent perspective. However, as with any study, limitations do exist. Recruitment and sampling could be improved. Due to the sensitive nature of these conversations, it was difficult to obtain parental consent for their children to participate (Lefkowitz, 2002). Although the current sample size was adequate to run the proposed tests, a larger sample size should be collected in future research, as this would increase the power to lend more meaning to the results that approached significance and would allow for more complex data analysis.

In addition, the current study had a significantly greater number of female participants in the sample than males. Based on previous research that suggests adolescents engage in more open communication with their mothers than fathers (Laursen & Collins, 2009; Thompson et al., 2015), we examined gender differences in the sample. The only significant difference found was that females were more likely to talk to their mothers about sex-related topics than fathers. Thus, future studies need to further address gender differences from an adolescents' perspective, as well as collect more male perspectives to better understand how gender factors shape parent–child conversations about sex. The current findings are also based on

cross-sectional data. Longitudinal data are necessary to understand how adolescents' perceptions of parent–adolescent communication, as well as their attitudes and behaviors, change over time.

The present study extends the literature on family communication about sex by examining adolescents' perceptions of communication frequency, relational closeness, parents as effective and competent communicators about sex, and how those factors relate to sexual risk-taking and permissive attitudes within the larger family climate. As the current study demonstrates, an adolescent perspective may be foundational in providing researchers and parents insight into more effective ways to engage in parent–child conversations about sex, thus promoting healthy sexual attitudes and behaviors. Because adolescents' perceptions of their parents' competence and effectiveness emerged as the most important predictors of sexual health, future research should examine the content of parent–child communication in order to inform interventions for parents seeking guidance on how to approach this important, but sometimes challenging, topic of family communication.

Acknowledgments

The authors wish to thank all the high school principals, teachers, counselors, and students who were gracious with their time and resources.

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