



## Gender Differences in Parents' Communication With Their Adolescent Children about Sexual Risk and Sex-Positive Topics

Reina Evans, Laura Widman, Kristyn Kamke & J. L. Stewart

To cite this article: Reina Evans, Laura Widman, Kristyn Kamke & J. L. Stewart (2019): Gender Differences in Parents' Communication With Their Adolescent Children about Sexual Risk and Sex-Positive Topics, The Journal of Sex Research, DOI: [10.1080/00224499.2019.1661345](https://doi.org/10.1080/00224499.2019.1661345)

To link to this article: <https://doi.org/10.1080/00224499.2019.1661345>



Published online: 13 Sep 2019.



Submit your article to this journal [↗](#)



Article views: 225



View related articles [↗](#)



View Crossmark data [↗](#)



## Gender Differences in Parents' Communication With Their Adolescent Children about Sexual Risk and Sex-Positive Topics

Reina Evans<sup>ORCID</sup>, Laura Widman<sup>ORCID</sup>, Kristyn Kamke<sup>ORCID</sup>, and J. L. Stewart<sup>ORCID</sup>

*Department of Psychology, North Carolina State University*

*A healthy sexual self-concept that captures an understanding of the risky and the positive aspects of sexuality is imperative to life-long well-being. Parents have a unique opportunity to instill knowledge of sexual risk as well as confidence and comfort around sexuality in their adolescents. Although parent–child communication about sexual risk is fairly common, less is known regarding the frequency of parent–child communication about sex-positive topics, such as sexual desire and satisfaction. This study examined the frequency of parents' communication with their children about sexual risk and sex-positive topics among a sample of 901 parents of 13–17-year-old adolescents (parent  $M_{age} = 40.61$ ; 71% mothers) from across the U.S. Parents reported on sexual communication with their adolescent children (child  $M_{age} = 14.68$ ; 50% daughters). We examined gender differences in communication patterns. Few parents communicated with their adolescents about sex-positive topics. Only 38% discussed sexual satisfaction, 38% discussed different types of sexual practices (e.g., oral sex), and 55% discussed sexual desire. Parents communicate more about sexual risk than sex-positive topics with their adolescents and this discrepancy was largest for mothers of daughters. Fathers of daughters communicate the least about sex-positive topics. Implications for intervention development and future research on sexual communication are discussed.*

### Introduction

A healthy sexual self-concept that captures an understanding of both sexual risks and positive aspects of sexuality is imperative to life-long physical, mental, and relational well-being (Fortenberry, 2013; Heidari, Ghodusi, & Rafiei, 2017; Hensel & Fortenberry, 2013; Horne & Zimmer-Gembeck, 2006). Sexual self-concept is one's view of their sexual selfhood and encompasses people's attitudes toward themselves as sexual beings (Buzzwell & Rosenthal, 1996; Tolman & McClelland, 2011). Sexual self-concepts change and develop throughout adolescence and into adulthood as people gain sexual experience and form expectations around their own sexuality (Hensel, Fortenberry, O'Sullivan, & Orr, 2011). Although the development of sexual self-concept is multidimensional, many efforts to educate adolescents have focused on one dimension of sexual health—eliminating sexual risk-taking and encouraging abstinence (Haberland & Rogow, 2015; Marseille et al., 2018)—but not on another key dimension of sexual health: the promotion of constructs related to the positive aspects of sexuality.

Parents have a unique opportunity to encourage the development of a positive sexual self-concept through the promotion of knowledge about sexual risk as well as confidence and comfort around sex-positive topics for their adolescents (Kågesten et al., 2016; Lazarides, Harackiewicz, Pesu, & Viljaranta, 2015). Parents have a critical role as sex educators for several reasons. First, parents play an important role in their adolescents' sexual socialization by impacting adolescent sexual cognitions (Hutchinson & Cederbaum, 2011; Ritchwood et al., 2017). Second, parents can use communication and monitoring to shape adolescent sexual norms, attitudes, and self-efficacy, and, through these mechanisms, sexual initiation and condom use (Albanese, De Blasio, & Sestito, 2016; Dittus et al., 2015; Holman & Koenig Kellas, 2018; Kågesten et al., 2016; Rogers, 2017). Third, and more specifically, sex education from parents can be individualized (Grossman, Jenkins, & Richer, 2018). As adolescents mature throughout middle and high school, parents can tailor conversations with their adolescents about sexual health according to the developmental stage they are navigating (Grossman et al., 2018). Fourth, parent–child sexual communication can serve as a model for adolescents' communication with relationship partners, which is associated with reduced sexual risk-taking and increased sexual satisfaction (Frederick, Lever, Gillespie, & Garcia, 2017; Widman, Choukas-Bradley, Helms, Golin, &

---

Correspondence should be addressed to Reina Evans, Department of Psychology, 640 Poe Hall, Campus Box 7650, Raleigh, NC 27695-7650. E-mail: [revans4@ncsu.edu](mailto:revans4@ncsu.edu)

Prinstein, 2014). Finally, adolescents want their parents to communicate with them about sex (Pariera & Brody, 2018), and especially prefer comprehensive communication in which parents share “their own or others’ sexual history, experiences, and/or lessons” (Holman & Koenig Kellas, 2018).

There is a broad body of literature on the health-promoting aspects of parent–child sexual communication. Close relationships between parents and their adolescents are related to delayed sexual activity (McElwain & Bub, 2018), and frequent, high-quality sexual communication, an important component of these relationships, is a uniquely strong predictor of safer sex behavior throughout adolescence and young adulthood (Holman & Kellas, 2015; Rogers, Ha, Stormshak, & Dishion, 2015). Adolescents whose parents more frequently communicate with them about risk and disease prevention topics, such as condom use, HIV/sexually transmitted infections (STIs), and pregnancy, are more likely to engage in consistent contraception and condom use and less likely to engage in unprotected sex (Coakley et al., 2017; Widman, Choukas-Bradley, Noar, Nesi, & Garrett, 2016). Many parents seem to understand the benefits of talking about sexual risk with their adolescents and initiate some form of discussion about these topics: for example, as many as 75% of parents report having talked to their adolescents about topics like HIV/AIDS, STIs, and/or risks of sex before marriage (Ritchwood et al., 2018; Sneed, Somoza, Jones, & Alfaro, 2013; Widman et al., 2014). The extensiveness of this research has led to the development of many effective interventions aimed at increasing parent–child communication about sexual risk (Santa Maria, Markham, Mullen, & Bluethmann, 2015; Sutton, Lasswell, Lanier, & Miller, 2014; Tolou-Shams et al., 2017; Widman, Evans, Javidi, & Choukas-Bradley, 2019).

The purpose of this study is to better understand the frequency of parents’ communication with their children about sexual risk *and* sex-positive topics and to assess how parent and adolescent gender are associated with communication about both topics. Guided by the sexual communication framework outlined by Jaccard, Dodge, and Dittus (2002), we examined several fundamental elements of parent–child sexual communication: the communication message (i.e., the content or topics discussed), the communication source (i.e., the person who is providing information – mother vs. father), and the recipient (i.e., the audience that the source is communicating with – daughter vs. son). Each of these key components of communication varies and can impact the degree to which parent–child communication is effective at changing adolescent behavior (Jaccard et al., 2002). With respect to the message of parent–child communication, we examined how often parents communicate about both sexual risk and sex-positive topics with their adolescents. With respect to communication source and recipient, we attended to both the gender of the parent and gender of the adolescent.

Although the importance of parent–child communication about sexual risk messages is well established, the literature on parent–child sexual communication about topics related

to more sex-positive messages, such as sexual desire, satisfaction, or different types of pleasurable sexual practices (e.g., masturbation) is relatively sparse. A recent paradigm shift in the field of sexuality has emphasized the importance of promoting sex-positive topics among youth by defining sexual health as physical, emotional, and mental sexual *wellbeing* along with the freedom from sexual dysfunction and disease (Fortenberry, 2013; Harden, 2014). This paradigm contends that to fully promote sexual health among adolescents, it is necessary to incorporate both sexual risk topics and sex-positive topics into adolescents’ sexual education (Fortenberry, 2016; O’Sullivan, Brotto, Byers, Majerovich, & Wuest, 2014). However, considerably fewer parents seem to talk with their adolescents about sex-positive topics (Ritchwood et al., 2018; Rosenthal & Feldman, 1999), and little is known about the factors that contribute to parents’ likelihood of engaging in communication about sex-positive content. Characteristics of the communication source and recipient, including parent gender and adolescent gender, may factor into the likelihood that parents will communicate with their children about both sexual risk and sex-positive topics.

In regard to parent gender, evidence shows mothers more frequently talk to their adolescents about sexual risk than fathers (Harris, 2016; Sneed et al., 2013; Wilson, Dalberth, Koo, & Gard, 2010). In a qualitative study, late-adolescent girls reported very limited communication about sex with their fathers and most participants wanted their fathers to have communicated with them more (Hutchinson & Cederbaum, 2011). Adolescent girls point toward their father’s perception of them as “little girls,” who should not be sexually active, as a significant barrier to father–daughter sexual communication. Interestingly, mothers and sons do not seem to face similar barriers—many mothers report feeling comfortable talking with their sons about sex (Santa Maria, Markham, Engebretson, Baumler, & McCurdy, 2014). Mothers may be more likely to communicate because of the sociocultural expectation that mothers do more to parent and care for their children than fathers (Lindsey, 2015).

Regarding the gender of the communication recipient, the adolescent, it is clear that parents communicate more frequently about the risks and consequences of having sex with their daughters than with their sons (Aronowitz & Agbeshie, 2012; Flores & Barroso, 2017; Wilson & Koo, 2010). Young women recall more frequent conversations with their parents about sex than young men, and women remember these conversations to be centered around protection and abstinence, whereas men remember their conversations to have been more “neutral or encouraging” toward sexual activity (Goldfarb, Lieberman, Kwiatkowski, & Santos, 2018). However, as previously indicated, what we know about the influence of parent and adolescent gender on the frequency of sexual communication relies primarily on studies that assessed communication about sexual risk topics. To our

knowledge, only three quantitative studies have examined gender differences in parent–child communication about sex-positive topics (Ritchwood et al., 2018; Rosenthal & Feldman, 1999; Sevilla, Sanabria, Orcasita, & Palma, 2016), none of which included a national U.S. sample.

To attain a more holistic understanding of parent–child communication, we evaluated the ways in which parent gender and child gender interact and are associated with the frequency of parental communication with children about sexual risk *and* sex-positive topics. Guided by Jaccard et al.’s (2002) multifactorial framework of parent–child sexual communication, we addressed the following research questions and hypotheses:

Research question 1: How often do parents discuss sexual risk and sex-positive topics with their children? We hypothesized that parents will talk more about sexual risk than sex-positive topics with their adolescents, given that parents are often preoccupied with the long-term negative effects sexual activity can have on their children’s lives (Guilamo-Ramos et al., 2006) and express overall disapproval of their adolescents becoming sexually active (Flores & Barroso, 2017).

Research question 2: How do mothers and fathers differ in their frequency of communication about sexual risk and sex-positive topics depending on the gender of their child? In line with previous literature on sexual risk communication, we expected the greatest frequency of communication would be among mothers of daughters regarding sexual risk topics (Flores & Barroso, 2017; Wilson & Koo, 2010). In addition, we predicted fathers of daughters would communicate the least about sexual risk and sex-positive topics given previous qualitative studies that show fathers are reluctant to view their daughters as sexual beings and communicate with them about sexual issues (Hutchinson & Cederbaum, 2011).

We assessed these questions using an adapted version of Rosenthal and Feldman’s (1999) Frequency and Importance of Sex Communication Questionnaire. When this scale was published in 1999, the authors found few parents had communicated about sex-positive topics: for example, less than 15% of parents had discussed sexual satisfaction, masturbation, or different types of sexual practices with their children (Rosenthal & Feldman, 1999). Since the development of this scale, many studies have cited these findings and/or adapted the scale to evaluate parent–child sexual communication (e.g., Bouris & Hill, 2017; Powwattana, Thammaraksa, & Manora, 2018); however, most of these studies have collapsed all items to look at general frequency of communication, without attention to differing patterns that may exist for sexual risk versus sex-positive topics. The current study will fill this important gap.

## Method

### Sampling Recruitment and Data Collection

All study procedures were approved by the university IRB. Participants were recruited using Amazon’s Mechanical Turk (MTurk), a platform for crowdsourcing work that can be done remotely via the internet. MTurk users tend to

be more diverse in age, geography, and race, than other available subject pools, especially university samples (Buhrmester, Kwang, & Gosling, 2011). MTurk also provides a unique opportunity to recruit larger samples of fathers into research studies (Schleider & Weisz, 2015). However, MTurk samples are likely not representative of the general population as they tend to be younger, more educated, more liberal, more White, and of lower socioeconomic status than the average American (for reviews, see Levay, Freese, & Druckman, 2016; Sheehan, 2018; Walters, Christakis, & Wright, 2018).

In the present study, participants took a four-question qualification test to determine whether they met the study criteria. In order to qualify, users had to be over 18 years old, have an IP address from within the United States, and have at least one child aged 13–17. All users that met our qualifications were invited to take our survey. The survey included 95 questions and took 10–12 minutes for most participants to complete (*median* = 10.02 min). Participants were compensated up to \$0.75 for their survey responses. While 8,811 people completed the qualification test, 1,081 qualified to take the survey. Of the people who qualified, 1,032 initiated the survey. The sample size was determined by practical considerations: we included as large and representative a sample as possible in the 6 weeks we had to recruit and with the budget we had available for this project.

Participants with more than 50% missing data ( $n = 46$ ) were excluded from the study. Two attention checks were included throughout the survey to ensure participants were consistently attentive while answering survey items. These items (e.g., “Which one of these is a color?”) required participants to select an obvious answer in a multiple-choice format. As is common practice, participants who failed to correctly answer either of the attention checks ( $n = 44$ ) were excluded from the study (Beymer, Holloway, & Grov, 2018; Muise, Boudreau, & Rosen, 2017). Finally, three parents reported having a child that identified as a gender outside of the binary—including two parents who said their child was “non-binary” and one parent who said their child was “Male to Female transgender.” We excluded these participants from the analyses because we included child gender in most of our models and did not have enough power to examine this gender group separately.

### Participants

Our final sample included 901 parents of an adolescent child age 13–17 years old, including 644 mothers and 257 fathers ( $M_{\text{age}}$  of parent = 40.61 years,  $SD = 7.42$ ; 100% cisgender; 92% heterosexual). If parents had more than one adolescent child between the ages of 13–17, they were randomly assigned to answer survey questions on either their oldest or youngest child; 451 parents provided information about a daughter and 450 about a son ( $M_{\text{age}}$  of child = 14.68,  $SD = 1.38$ ; 90.2% heterosexual). The

sample was 80.1% non-Hispanic White, 7.4% Black, 3.0% Hispanic, 5.2% multiracial, and 3.6% other race/ethnicities. Parents from all 50 states participated in the study, with a breakdown by geographic region as follows: South (42.5%), Midwest (23.6%), West (18.3%), and Northeast (15.5%). This distribution was relatively well matched to national statistics (U.S. Census Bureau, 2018), with slightly more families from the South (42.5% in our study compared to 38.1% national average) and fewer from the West (18.3% in our study compared to 23.8% national average). Additional information about the sample can be found in Table 1.

**Measures**

**Demographics.** Participants reported their age, race, gender, sexual orientation, education, income, and location of residence. Gender was assessed with one item, asking participants whether they identified as “male,” female,” or “another gender identity.” We also asked parents to report information about their adolescent child, including: child gender, sexual orientation, age, and whether the child was the biological child of the parent.

**Parent-child Discussion of Sexual Risk and Sex-positive Topics.** Parent-child discussion of sexual risk and sex-positive topics was assessed using a scale adapted from the Frequency and Importance of Sex Communication Questionnaire (Rosenthal & Feldman, 1999). We adapted 13 items from this scale and sorted them into two groups: 1) topics relevant to avoiding sexual risk (i.e., STDs/HIV/AIDS, pregnancy, abortion, condoms/contraception, safe sex, abstinence/delaying sex), and 2) topics about normative or positive sexual development (i.e., dating/romantic relationships, sexual desire, sexual satisfaction, different types of sexual practices, talking with a partner about wants/needs, choice of sexual partners, masturbation). These topics were selected because they represent issues that are important to sexual self-concept (Holmberg, Blair, & Phillips, 2010; Horne & Zimmer-Gembeck, 2006; Klapilová, Brody, Krejčová, Husárová, & Binter, 2015; Maas & Lefkowitz, 2015). Parents were asked to report how often they have communicated with their adolescent about each of the 13 topics on a 4-point Likert scale (“1” = Never to “4” = Often). Scores were averaged for the 6 items on sexual risk communication (Cronbach’s alpha = .88) and the 7 items on sex-positive communication (Cronbach’s alpha = .90).

**Table 1.** *Sample Characteristics*

	<i>n</i> (%)			
	<b>Mothers</b>		<b>Fathers</b>	
	<b>Daughters (<i>n</i> = 332)</b>	<b>Sons (<i>n</i> = 312)</b>	<b>Daughters (<i>n</i> = 119)</b>	<b>Sons (<i>n</i> = 138)</b>
Parent age, mean(SD)	39.84 (6.79)	40.89 (6.99)	41.69 (7.39)	40.86 (9.47)
Child age, mean(SD)	14.73 (1.39)	14.71 (1.40)	14.57 (1.34)	14.54 (1.34)
Parent education				
High school or less	33 (9.9)	26 (8.3)	11 (9.2)	12 (8.7)
Some college	166 (50)	150 (48.1)	41 (34.5)	47 (34.1)
Bachelor’s degree or more	133 (40)	136 (43.6)	67 (56.3)	79 (57.2)
Race/ethnicity <sup>a</sup>				
White	266 (80.1)	261 (83.7)	92 (77.3)	103 (74.6)
Black	30 (9.0)	27 (8.7)	4 (3.4)	6 (4.3)
Hispanic	7 (2.1)	4 (1.3)	7 (5.9)	9 (6.5)
Native American/Alaskan Native	4 (1.2)	2 (0.6)	1 (0.8)	-
Asian/Pacific Islander	4 (1.2)	3 (1.0)	9 (7.6)	9 (6.5)
Multiracial	17 (5.1)	15 (4.8)	6 (5.0)	9 (6.5)
Household income				
Less than \$20,000	22 (6.6)	22 (7.1)	10 (8.4)	6 (4.3)
\$20,000-\$60,000	164 (49.4)	146 (46.8)	43 (36.1)	61 (44.2)
\$61,000-\$100,000	94 (28.3)	88 (28.2)	37 (31.1)	46 (33.3)
Greater than \$100,000	52 (15.7)	56 (17.9)	29 (24.4)	25 (18.1)
Region of residence in the U.S.				
Northeast	49 (14.8)	45 (14.4)	23 (19.3)	23 (16.7)
Midwest	75 (22.6)	86 (27.6)	28 (23.5)	24 (17.4)
South	155 (46.7)	128 (41.0)	45 (37.8)	55 (40.0)
West	53 (16.0)	53 (17.0)	23 (19.3)	36 (26.1)

*Note.* There were between-group differences in parent education such that fathers of daughters and fathers of sons had higher levels of formal education than mothers of daughters.

<sup>a</sup>Participants were given the option to select all race/ethnicity options that apply. Also, there were four mothers of daughters and two fathers of sons with missing data on race; therefore, percentages for these groups do not equal 100.

## Analysis Plan

To address our first research question (i.e., understanding the frequency of parents' communication with their child about sexual risk and sex-positive topics), participant responses to each of the 13 communication items were dichotomized so that parents who communicated at all about the topic were coded as "1" and parents who had not communicated about the topic were coded as "0." Then, the percent of parents who communicated about each item was calculated. For all other analyses evaluating communication, the mean frequency score on each subscale (frequency of communication about sexual risk topics and frequency of communication about sex-positive topics) was used. Next, we conducted within-group comparisons to compare the frequency of communication about sexual risk and sex-positive topics using four paired samples *t*-tests with a Bonferroni correction to reduce the chance of a type 1 error (Keppel & Wickens, 2004). These *t*-tests compared the frequency of communication about sexual risk versus sex-positive topics among (1) mothers of daughters, (2) mothers of sons, (3) fathers of daughters, and (4) fathers of sons.

To address our second research question (i.e., exploring how parent and adolescent gender are related to the frequency of communication), we conducted between-group comparisons. A one-way ANCOVA and post-hoc tests with a Bonferroni correction were used to determine whether the difference scores between communication about sexual risk and sex-positive topics differed across groups (i.e., mothers of daughters, mothers of sons, fathers of daughters, fathers of sons). A difference score was calculated by subtracting the mean frequency of sex-positive communication from the mean frequency of sexual risk communication for each participant, such that higher scores indicated more communication about risky than sex-positive topics. This model controlled for variables known to impact parent-child communication about sex, including the age of the adolescent, parent race (coded as White or non-White), and parent reports of whether or not the adolescent was sexually active (Flores & Barroso, 2017; Malacane & Beckmeyer, 2016). In addition, a  $2 \times 2$  (parent gender  $\times$  child gender) multivariate analysis of covariance (MANCOVA) was used with frequency of communication about sexual risk and frequency of communication about sex-positive topics as outcome variables, controlling for adolescent age, parent race, and adolescent sexual activity. Post-hoc tests were conducted to compare the main effects and a Bonferroni correction was used. Effect sizes for all analyses were calculated according to the guidelines set forth by Lakens (2013).

## Results

### Descriptive Statistics

Only 3% of parents reported no prior communication about any of the topics related to sexuality. Mean scores on

the frequency of communication about sexual risk ( $M = 2.62$ ,  $SD = 0.86$ ) and sex-positive topics ( $M = 1.98$ ,  $SD = 0.72$ ) ranged from 1 to 4. The percent of parents in each group (i.e., mothers of daughters, mothers of sons, fathers of daughters, fathers of sons) that talked about each of the 13 topics related to sexuality is shown in Table 2, as well as the means and standard deviations for frequency of communication about sexual risk and sex-positive topics for each group. In Table 2, we also report the results of chi-square tests conducted to determine if the differences observed in communication about each topic across each of the groups are significant. The most frequently discussed topics by all parents were dating/romantic relationships (94.2%), pregnancy (83.5%), and abstinence/delaying sex (81.2%). The following topics were discussed the least by all parents: talking about sexual wants/needs with a partner (33.7%), sexual satisfaction (38.1%), and different types of sexual practices/experiences (e.g., oral sex; 38.1%).

### Within-group Comparisons

Parents in all groups communicated more frequently about sexual risk than sex-positive topics (see Table 3) with their children. Mothers of daughters communicated more frequently about sexual risk than sex-positive topics,  $t(331) = 21.55$ ,  $p < .001$ , 95% CI [0.79, 0.95],  $d = 1.19$ . Mothers of sons also communicated more frequently about sexual risk than sex-positive topics,  $t(311) = 15.84$ ,  $p < .001$ , 95% CI [.52, .66],  $d = 0.90$ . Fathers of daughters were more likely to communicate about sexual risk than sex-positive topics,  $t(118) = 8.91$ ,  $p < .001$ , 95% CI [.45, .71],  $d = 0.82$ . Fathers of sons were also more likely to communicate about sexual risk than sex-positive topics,  $t(137) = 5.43$ ,  $p < .001$ , 95% CI [.18, .38],  $d = 0.46$ .

### Between-group Comparisons

A one-way ANCOVA comparing difference scores revealed that the discrepancy between the frequency of communication about sexual risk and sex-positive topics was not the same for all groups [ $F(3,894) = 24.89$ ,  $p < .001$ ,  $\eta^2_p = .08$ ; see Table 3]. The discrepancy was larger for mothers of daughters than all other groups, such that the degree to which mothers of daughters communicated more about sexual risk topics compared to sex-positive topics was greater compared to all other groups (i.e., mothers of sons,  $p < .001$ ; fathers of daughters,  $p = .001$ ; and fathers of sons,  $p < .001$ ). Additionally, the discrepancy was larger for fathers of daughters than fathers of sons ( $p = .002$ ) and for mothers of sons compared to fathers of sons ( $p < .001$ ).

A MANCOVA was conducted to assess differences in communication about sexual risk and sex-positive topics by both parent and adolescent gender, controlling for adolescent age, race, and sexual activity status. Figure 1 displays the frequency of communication about both sexual risk and

**Table 2.** Parents that Report Ever Talking about Each Sexual Risk and Sex-Positive Topic with their Daughters and Sons

	Mothers		Fathers		$\chi^2$ <sup>c</sup> n = 901
	Daughters n = 332	Sons n = 312	Daughters n = 119	Sons n = 138	
	n (%)	n (%)	n (%)	n (%)	
<b>Sexual risk topics</b>					
Abstinence/delaying sex	298 (89.8)	252 (80.8)	89 (74.8)	93 (67.4)	36.47*
Safe sex	280 (84.3)	244 (78.2)	78 (65.5)	102 (73.9)	19.96*
Sexually transmitted diseases (STDs)/HIV/AIDS	291 (87.7)	247 (79.2)	85 (71.4)	100 (72.5)	22.82*
Condoms/contraception	267 (80.4)	240 (76.9)	70 (58.8)	97 (70.3)	23.92*
Pregnancy	303 (91.3)	250 (80.1)	88 (73.9)	111 (80.4)	25.88*
Abortion	251 (75.6)	177 (56.7)	64 (53.8)	69 (50.0)	41.68*
Total Score <sup>a</sup>	2.91 (0.81)	2.58 (0.83)	2.26 (0.84)	2.35 (0.83)	
<b>Sex-positive topics</b>					
Dating/romantic relationships	322 (97.0)	298 (95.5)	106 (89.1)	123 (89.1)	18.00*
Sexual desire (e.g., feeling “turned on”)	178 (53.6)	175 (56.1)	42 (35.3)	97 (70.3)	32.01*
Sexual satisfaction (e.g., orgasm)	127 (38.3)	119 (38.1)	26 (21.8)	71 (51.4)	23.76*
Different types of sexual practices (e.g., oral sex)	149 (44.9)	110 (35.3)	26 (21.8)	58 (42.0)	21.78*
Talking about sexual wants/needs with partner	104 (31.3)	111 (35.6)	30 (25.2)	59 (42.8)	10.23
Choice of sexual partner (e.g., are they suitable?)	200 (60.2)	165 (52.9)	54 (45.4)	74 (53.6)	8.77
Masturbation	118 (35.5)	163 (52.2)	25 (21.0)	82 (59.4)	57.05*
Total Score <sup>b</sup>	2.03 (0.73)	1.99 (0.71)	1.68 (0.61)	2.07 (0.75)	

<sup>a</sup>These scores represent the mean and standard deviation for the frequency of parent-teen communication across all sexual risk topics evaluated. Means and standard errors adjusted for the presence of covariates for mothers of daughters, mothers of sons, fathers of daughters, and fathers of sons, respectively, are 2.89 (.04), 2.57 (.05), 2.30 (.07), 2.38 (.07).

<sup>b</sup>These scores represent the mean and standard deviation for the frequency of parent-teen communication across all sex-positive topics evaluated. Means and standard errors adjusted for the presence of covariates for mothers of daughters, mothers of sons, fathers of daughters, and fathers of sons, respectively, are 2.02 (.04), 1.98 (.04), 1.70 (.06), 2.08 (.06).

<sup>c</sup>Chi-square tests were conducted to determine if there were significant differences in whether or not parent-child dyad groups communicated about each of the 13 topics. A Bonferroni correction was used to conservatively estimate the significance of each test. In order to be considered significant, *p* must have been less than 0.0038. For all tests, *df* = 3.

\**p* < .0038

**Table 3.** Frequency of Sexual Risk and Sex-Positive Communication Using *t*-tests for Equality of Means

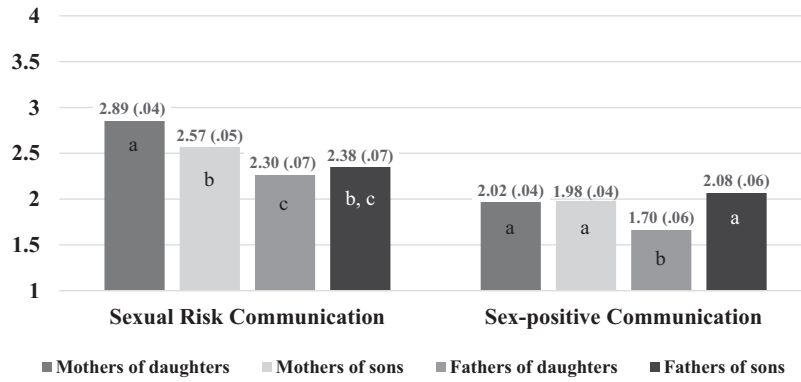
	Sexual risk topics		Sex-positive topics		<i>t</i> -test ( <i>df</i> )	Difference scores <sup>a</sup>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>
Mothers of daughters	2.91	0.81	2.03	0.73	21.55* (331)	0.87	0.74
Mothers of sons	2.58	0.83	1.99	0.71	15.84* (311)	0.59	0.66
Fathers of daughters	2.26	0.84	1.68	0.61	8.91* (118)	0.58	0.71
Fathers of sons	2.35	0.83	2.07	0.75	5.43* (137)	0.28	0.60

<sup>a</sup> A one-way ANOVA was calculated on the difference scores for each group, controlling for adolescent age, race, and parent reports of whether or not the adolescent was sexually active. The analysis was significant,  $F(3, 894) = 24.89$ . Difference scores represent discrepancy in communication about sex-positive and sexual risk topics. Difference score means and standard errors adjusted for the presence of covariates for mothers of daughters, mothers of sons, fathers of daughters, and fathers of sons, respectively, are 0.87 (.04), 0.58 (.04), 0.60 (.06), 0.30 (.06).

\* *p* < .001

sex-positive topics for mothers of daughters, mothers of sons, fathers of daughters, and fathers of sons. Significant differences were observed among the four groups on their frequency of communication about both sexual risk,  $F(3,894) = 24.71$ ,  $p < .001$ ,  $\eta^2_p = .08$ , and sex-positive topics,  $F(3,894) = 7.88$ ,  $p < .001$ ,  $\eta^2_p = .03$ ; see Table 4. Mothers of daughters communicated more about sexual risk than mothers of sons ( $p < .001$ ), fathers of daughters ( $p < .001$ ) and fathers of sons ( $p < .001$ ). Mothers of sons communicated more about sexual risk than fathers of daughters ( $p = .008$ ). There was no difference in the frequency of communication about sexual risk among fathers of daughters versus sons. There was also no difference in the frequency of communication about sexual risk among mothers of sons versus fathers of sons. Fathers of daughters communicated less about sex-positive topics than fathers of sons ( $p < .001$ ), mothers of daughters ( $p < .001$ ), and mothers of sons ( $p = .001$ ). Other comparisons on communication about sex-positive topics were not significant.

GENDER AND PARENTAL SEXUAL COMMUNICATION



**Figure 1.** Differences in mean frequency of parent–child communication about sexual risk and sex-positive topics by parent gender and child gender. Different letters indicate significant differences between groups on either sexual risk or sex-positive communication. Note: We use means adjusted for the presence of covariates and standard errors. In this analysis, groups were not compared on their communication about sexual risk vs. sex-positive topics.

**Table 4.** MANCOVA Summary for Sex-positive and Sexual Risk Communication by Parent Gender and Teen Gender

	SS	(df)	MS	F	p
<b>Sexual Risk Communication</b>					
Contrast	45.68	(3)	15.23	24.71 <sup>a</sup>	<.001
Error	550.79	(894)	0.62		
<b>Sex-Positive Communication</b>					
Contrast	11.55	(3)	3.85	7.88 <sup>b</sup>	<.001
Error	436.68	(894)	0.49		

Note. In this analysis, the following were included as covariates: adolescent age, race, and parent reports of whether or not the adolescent was sexually active.

<sup>a</sup>Tukey post-hoc tests for communication about sexual risk topics: mothers of daughters > mothers of sons > fathers of daughters; mothers of daughters > fathers of sons

<sup>b</sup>Tukey post-hoc tests for communication about sex-positive topics: fathers of daughters < mothers of daughters, mothers of sons, and fathers of sons

**Discussion**

The current study adds to the dearth of literature on sex-positive parental communication by examining the frequency of parents’ communication with their children about both sexual risk and sex-positive content. Previous studies have mostly focused on communication about one important aspect of adolescent sexuality, the prevention of sexual risk (Flores & Barroso, 2017; Harris, 2016; Jerman & Constantine, 2010; Sneed et al., 2013; Wilson & Koo, 2010), without adequately attending to another facet of healthy sexual development, the promotion of positive aspects of sexuality (Fortenberry, 2016; O’Sullivan et al., 2014). This study adds to the body of literature on parent–child sexual communication by evaluating the frequency of parents’ communication about both sexual risk and sex-positive content in a national sample of parents from the United States guided by Jaccard and colleagues (2002) multifactorial communication framework.

In line with previous research, parents in all groups (i.e., mothers of daughters, mothers of sons, fathers of daughters, and

fathers of sons) were more likely to discuss sexual risk than sex-positive content (Ritchwood et al., 2018; Rosenthal & Feldman, 1999). Previous studies suggest parents are often preoccupied with the long-term negative effects sexual activity can have on their children’s lives (Guilamo-Ramos et al., 2006) and thus, express overall disapproval of their adolescents becoming sexually active (Flores & Barroso, 2017). This may keep them from discussing topics such as sexual desire and satisfaction that imply sexual activity is a typical and healthy aspect of adolescent sexual development rather than an entirely unsafe or developmentally inappropriate act that should be avoided (Fortenberry, 2013; Harden, 2014). Given what is known of the importance of adolescents’ understanding of and comfort with the positive aspects of sexuality (Franz, DiLillo, & Gervais, 2016; Heidari et al., 2017; Holmberg et al., 2010; Mastro & Zimmer-Gembeck, 2015), future research should more thoroughly evaluate the barriers and facilitators of parent–child communication about sex-positive topics such as sexual desire and satisfaction. With a better understanding of barriers and facilitators to parent–child communication about sex-positive content, the field can look toward developing interventions that increase this important communication. Many parent-based sexual health interventions are effective at increasing parent–child communication about sexual risk and impacting adolescent sexual behavior (Akers, Holland, & Bost, 2011; Lefkowitz, Sigman, & Au, 2000; Santa Maria et al., 2015; Sutton et al., 2014) and it is possible that similar intervention methods could be utilized to promote sex-positive communication, as well. Although fewer parents talk about sex-positive topics compared to sexual risk topics, more parents now are communicating about sex-positive topics compared to parents evaluated in 1999 (Rosenthal & Feldman, 1999), when the scale used in this paper was originally developed. It is encouraging to note that while parent–child sex-positive communication is still infrequent, it may be increasing with time.

In this study, adolescent gender was associated with frequency of parents’ sexual communication with their children; however, different patterns emerged for sexual risk and sex-positive communication. The degree to which



mothers of daughters communicated more about sexual risk topics compared to sex-positive topics was greater compared to all other groups (i.e., mothers of sons, fathers of daughters, and fathers of sons). Additionally, the discrepancy was larger for fathers of daughters than fathers of sons. These findings were complemented by further analyses that show fathers of daughters communicated the least about sex-positive topics and, as would be expected considering previous research (Flores & Barroso, 2017), mothers of daughters communicated the most about sexual risk topics compared to other groups. Together, these findings show parents are more likely to provide their daughters with information about sexual risk and if they discuss sex-positive topics at all, they are more likely to do so with their sons. Although previous research on this topic is limited, another study conducted with students in Colombia identified a similar pattern: when parents communicated with daughters they were more likely to emphasize sexual protection and when they communicated with sons they were more likely to emphasize sexual promotion (Sevilla et al., 2016). When parents communicate in this gendered way, they could be reinforcing traditional sexual scripts that suggest it is appropriate for men to desire and pursue sex but that women should prevent sex from occurring (Simon & Gagnon, 1986; Rossetto & Tollison, 2017). While scholars have posited young people learn sexual scripts, in part, from their parents (Wiederman, 2005), this study helps to demonstrate the communication processes by which this may occur. Acceptance of traditional sexual scripts can lead women to comply with unwanted sexual activities and experience lower sexual satisfaction than men (Quinn-Nilas & Kennett, 2018; Sanchez, Fetterolf, & Rudman, 2012). Parents, health educators, and health-care providers could work to increase parent-daughter, and in particular, father-daughter, communication about the positive aspects of sexuality and parent-son communication about sexual risk to reduce the spread of the traditional sexual scripts that may harm healthy adolescent sexual development.

Parent gender was also important in predicting the frequency of sexual communication—particularly sexual risk communication. In line with previous research, mothers discussed sexual risk with their daughters more frequently than fathers did (for similar results, see Harris, 2016; Hutchinson & Cederbaum, 2011; Sneed et al., 2013; Wilson et al., 2010). Mothers and fathers did not differ in their frequency of communication about sexual risk with their sons. This could be because fathers are more comfortable talking to their sons about sex than their daughters (Hutchinson & Cederbaum, 2011). In addition, mothers, more so than fathers, are socialized to take on parenting responsibilities for both their sons and daughters (Lindsey, 2015)—and sexual risk communication could be understood to be one of these responsibilities. However, a growing literature suggests fathers may experience unique barriers, such as maternal gate-keeping, to developing comfortable, high-quality

relationships with their children that would allow for this intimate communication (Altenburger, Schoppe-Sullivan, & Dush, 2018).

### Limitations and Future Directions

This study evaluated parents' sexual communication with their children by assessing the frequency with which parents discussed certain topics—an element of communication related to important adolescent sexual health outcomes (De Looze, Constantine, Jerman, Vermeulen-Smit, & Ter Bogt, 2015; Widman et al., 2014). However, there were a few limitations that highlight important directions for future research. First, future research should examine other aspects of parent-child communication, such as tone and style, that may contribute to the effectiveness of conversations about sex as well as the degree to which they are sex-positive (Flores & Barroso, 2017; Rogers, 2017; Rogers et al., 2015). In line with this limitation, future studies must evaluate the extent to which parents *accurately* discuss sexual risk and sex-positive topics with their adolescents. Although studies show parent-child conversations about sex are largely beneficial for adolescents, on average (Coakley et al., 2017; Widman et al., 2016), these benefits may not extend to all youth. In particular, the benefits of sexual communication may be compromised if parents are not knowledgeable about the topics they discuss and if they convey messages of shame around sexuality (Abell & Gecas, 1997; Bangpan & Operario, 2012).

Second, the list of communication topics we included is not exhaustive and could have included other topics related to adolescents' sexual development, such as sexual identity development and sexual coercion (Diamond, Bonner, & Dickenson, 2015), as well as technology-based topics that are relevant to adolescents today, such as sexting and pornography (Madigan, Ly, Rash, Van Ouytsel, & Temple, 2018). These remain important for further evaluation.

Third, parent-child communication about sex would be best examined using dyadic data with both parent and adolescent reports. Reports of communication between parents and adolescents do not always align: in a recent study with parent-child dyads, 77% of parents reported having talked about premarital sex with their adolescents, while only 52% of adolescents reported having talked about the topic with their parents (Ritchwood et al., 2018). Future studies should evaluate the frequency of parent-child communication using a dyadic design, to see if the same gendered communication patterns emerge.

Finally, most of the parents in our sample identified as heterosexual and all parents identified as cisgender. In addition, 90.2% of parents identified their child as heterosexual and 100% of parents in our analytic sample identified their child as cisgender. Future studies should examine the frequency of parent-child communication about sex-positive topics among sexual and gender minority parents and adolescents, as patterns of sexual communication among samples like these may differ from those identified

in this study. In addition, future studies should incorporate both parent and child reported demographics as there are limitations to parent reports of adolescent gender identity and sexual orientation—some parents may not be aware and/or accepting of their child’s identity.

A strength of this study was the recruitment of a large, national sample of parents from the United States that included over 600 mothers and 257 fathers. However, previous research has suggested MTurk samples are not representative of the U.S. population. MTurk users are generally younger, better educated, and more liberal than the general U.S. population (for reviews: Levay et al., 2016; Sheehan, 2018; Walters et al., 2018). Further, MTurk samples generally exhibit underrepresentation of African Americans and overrepresentation of White and Asian Americans (Berinsky, Huber, & Lenz, 2012; Ipeirotis, 2010). Indeed, the racial/ethnic identity of our participants tended to be more non-Hispanic White (80%) than national estimates of all U.S. adults (61% White). The methods we employed in this study could be extended to other samples to confirm the generalizability or identify sub-group differences in parent–child sexual communication. Despite these limitations when using MTurk to sample participants, data collected on MTurk is extremely reliable and more representative than traditional convenience samples (Buhrmester et al., 2011).

Finally, there remains an important gap in the literature: how exactly does parent–child communication about sex-positive topics affect adolescent sexual decision-making and behavior? While decades of previous research demonstrate the protective influence sexual risk communication can have on adolescent behavior (Coakley et al., 2017; Widman et al., 2016), less is known regarding the direct influence of parent communication about sex-positive topics on adolescent behavior. It seems likely these conversations could impact important, positive aspects of adolescent sexuality such as sexual self-efficacy and sexual esteem (Hensel et al., 2011; Rostosky, Dekhtyar, Cupp, & Anderman, 2008). If this is the case, how might these effects differ by gender of the parent and gender of the child? Previous research suggests that positive aspects of adolescent sexuality may have a differential impact on the sexual behavior of women and men. For example, while sexually active male college students who report high levels of sexual esteem are less likely to use contraception during penetrative sex, sexually active female college students who report high esteem are more likely to use contraception (Maas & Lefkowitz, 2015). It will be fruitful for future research on parent-teen communication about sex-positive topics to attend to gender differences in the impact of this communication on sexual behavior over time.

## Conclusion

In this study, we examined gender differences in parents’ sexual communication with their children. Previous research has confirmed the importance of a healthy sexual self-concept

during adolescence (Fortenberry, 2013; Hensel & Fortenberry, 2013) and the unique role parents play in adolescent sexual socialization through communication with their adolescents about sex (Hutchinson & Cederbaum, 2011; Ritchwood et al., 2017). However, few studies have examined the ways in which parent gender and adolescent gender may interact and relate to the frequency of parents’ communication about both sexual risk and sex-positive content (Jaccard et al., 2002). This study found few parents communicated with their adolescents about sex-positive topics (e.g., sexual satisfaction, different types of sexual practices, sexual desire). Parents communicated more about sexual risk than sex-positive topics with their adolescents and this discrepancy was largest for mothers of daughters. Mothers of daughters communicated the most about sexual risk topics and fathers of daughters communicate the least about sex-positive topics. Future interventions should aim to increase father–daughter communication about sex-positive topics and parent–son communication about sexual risk. With this, adolescent girls may become more empowered to claim their sexual satisfaction and desire and adolescent boys may grow more inclined to prioritize sexual safety.

## Funding

This work was supported by the Department of Psychology at North Carolina State University under the McGehee, Moffie & Barkley Award.

## ORCID

Reina Evans  <http://orcid.org/0000-0001-7397-6969>  
 Laura Widman  <http://orcid.org/0000-0001-8117-5467>  
 Kristyn Kamke  <http://orcid.org/0000-0002-3075-6381>  
 J. L. Stewart  <http://orcid.org/0000-0002-7435-3146>

## References

- Abell, E., & Gecas, V. (1997). Guilt, shame, and family socialization: A retrospective study. *Journal of Family Issues*, 18, 99–123. doi:10.1177/019251397018002001
- Akers, A., Holland, C., & Bost, J. (2011). Interventions to improve parental communication about sex: A systematic review. *Pediatrics*, 127, 494–510. doi:10.1542/peds.2010-2194
- Albanese, G., De Blasio, G., & Sestito, P. (2016). My parents taught me. Evidence on the family transmission of values. *Journal of Population Economics*, 29, 571–592. doi:10.1007/s00148-015-0574-8
- Altenburger, L. E., Schoppe-Sullivan, S. J., & Dush, C. M. K. (2018). Associations between maternal gatekeeping and fathers’ parenting quality. *Journal of Child and Family Studies*, 27, 1–12. doi:10.1007/s10826-018-1107-3
- Aronowitz, T., & Agbeshie, E. (2012). Nature of communication: Voices of 11–14 year old African-American girls and their mothers in regard to talking about sex. *Issues in Comprehensive Pediatric Nursing*, 35, 75–89. doi:10.3109/01460862.2012.678260
- Bangpan, M., & Operario, D. (2012). Understanding the role of family on sexual-risk decisions of young women: A systematic review. *AIDS Care*, 24, 1163–1172. doi:10.1080/09540121.2012.699667

- Berinsky, A. J., Huber, G. A., & Lenz, G. S. (2012). Evaluating online labor markets for experimental research: Amazon.com's Mechanical Turk. *Political Analysis*, 20, 351–368. doi:10.1093/pan/mpr057
- Beymer, M. R., Holloway, I. W., & Grov, C. (2018). Comparing self-reported demographic and sexual behavioral factors among men who have sex with men recruited through Mechanical Turk, Qualtrics, and a HIV/STI clinic-based sample: Implications for researchers and providers. *Archives of Sexual Behavior*, 47, 133–142. doi:10.1007/s10508-016-0932-y
- Bouris, A., & Hill, B. J. (2017). Exploring the mother–adolescent relationship as a promotive resource for sexual and gender minority youth. *Journal of Social Issues*, 73, 618–636. doi:10.1111/josi.12234
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6, 3–5.
- Buzzwell, S., & Rosenthal, D. (1996). Constructing a sexual self: Adolescents' sexual self-perceptions and sexual risk-taking. *Journal of Research on Adolescence*, 6(4), 489–513.
- Coakley, T. M., Randolph, S., Shears, J., Beamon, E. R., Collins, P., & Sides, T. (2017). Parent-youth communication to reduce at-risk sexual behavior: A systematic literature review. *Journal of Human Behavior In The Social Environment*, 27, 609–624. doi:10.1080/10911359.2017.1313149
- De Looze, M., Constantine, N. A., Jerman, P., Vermeulen-Smit, E., & Ter Bogt, T. (2015). Parent–adolescent sexual communication and its association with adolescent sexual behaviors: A nationally representative analysis in the Netherlands. *Journal of Sex Research*, 52, 257–268. doi:10.1080/00224499.2013.858307
- Diamond, L. M., Bonner, S. B., & Dickenson, J. (2015). The development of sexuality. In R. M. Learner & M. E. Lamb (Eds.), *Handbook of child psychology and developmental science: Vol. 3. Socioemotional processes* (7th ed., Ch. 21, pp. 888). New York, NY: Wiley. doi:10.1002/9781118963418.childpsy321
- Dittus, P., Michael, S., Becasen, J., Gloppen, K., McCarthy, K., & Guilamo-Ramos, V. (2015). Parental monitoring and its association with adolescent sexual risk behavior: A meta-analysis. *Pediatrics*, 136, 1587–1599. doi:10.1542/peds.2015-0305
- Flores, D., & Barroso, J. (2017). 21st century parent–child sex communication in the United States: A process review. *Journal of Sex Research*, 54, 532–548. doi:10.1080/00224499.2016.1267693
- Fortenberry, D. (2013). The evolving sexual health paradigm: Transforming definitions into sexual health practices. *AIDS*, 27, S127–S133. doi:10.1097/QAD.0000000000000048
- Fortenberry, D. (2016). Adolescent sexual well-being in the 21st Century. *Journal of Adolescent Health*, 58, 1–2. doi:10.1016/j.jadohealth.2015.10.250
- Franz, M. R., DiLillo, D., & Gervais, S. J. (2016). Sexual objectification and sexual assault: Do self-objectification and sexual assertiveness account for the link? *Psychology of Violence*, 6, 262. doi:10.1037/vio0000015
- Frederick, D. A., Lever, J., Gillespie, B. J., & Garcia, J. R. (2017). What keeps passion alive? Sexual satisfaction is associated with sexual communication, mood setting, sexual variety, oral sex, orgasm, and sex frequency in a national US study. *Journal of Sex Research*, 54(2), 186–201. doi:10.1080/00224499.2015.1137854
- Goldfarb, E., Lieberman, L., Kwiatkowski, S., & Santos, P. (2018). Silence and censure: A qualitative analysis of young adults' reflections on communication with parents prior to first sex. *Journal of Family Issues*, 39(1), 28–54. doi: 10.1177/0192513X15593576
- Grossman, J. M., Jenkins, L. J., & Richer, A. M. (2018). Parents' perspectives on family sexuality communication from middle school to high school. *International Journal of Environmental Research and Public Health*, 15, 107. doi:10.3390/ijerph15010107
- Guilamo-Ramos, V., Dittus, P., Jaccard, J., Goldberg, V., Casillas, E., & Bouris, A. (2006). The content and process of mother-adolescent communication about sex in Latino families. *Social Work Research*, 30, 169–181. doi:10.1093/swr/30.3.169
- Haberland, N., & Rogow, D. (2015). Sexuality education: Emerging trends in evidence and practice. *Journal of Adolescent Health*, 56, S15–S21. doi:10.1016/j.jadohealth.2014.08.013
- Hall, J. A., Xing, C., & Brooks, S. (2015). Accurately detecting flirting: Error management theory, the traditional sexual script, and flirting base rate. *Communication Research*, 42, 939–958.
- Harden, K. P. (2014). A sex-positive framework for research on adolescent sexuality. *Perspectives on Psychological Science*, 9, 455–469. doi:10.1177/1745691614535934
- Harris, A. (2016). African American parent-son sexual communication among a college sample. *Journal of Pediatric Nursing*, 31, e199–e206. doi:10.1016/j.pedn.2015.12.006
- Heidari, M., Ghodusi, M., & Rafiei, H. (2017). Sexual self-concept and its relationship to depression, stress and anxiety in postmenopausal women. *Journal of Menopausal Medicine*, 23, 42–48. doi:10.6118/jmm.2017.23.1.42
- Hensel, D., & Fortenberry, D. (2013). A multidimensional model of sexual health and sexual and prevention behavior among adolescent women. *Journal of Adolescent Health*, 52, 219–227. doi:10.1016/j.jadohealth.2012.05.017
- Hensel, D. J., Fortenberry, J. D., O'Sullivan, L. F., & Orr, D. P. (2011). The developmental association of sexual self-concept with sexual behavior among adolescent women. *Journal of Adolescence*, 34, 675–684. doi:10.1016/j.adolescence.2010.09.005
- Holman, A., & Kellas, J. K. (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, 388–403. doi:10.1080/1041794X.2015.1081976
- Holman, A., & Koenig Kellas, J. (2018). “Say something instead of nothing”: Adolescents' perceptions of memorable conversations about sex-related topics with their parents. *Communication Monographs*, 85, 357–379. doi:10.1080/03637751.2018.1426870
- Holmberg, D., Blair, K. L., & Phillips, M. (2010). Women's sexual satisfaction as a predictor of well-being in same-sex versus mixed-sex relationships. *Journal of Sex Research*, 47, 1–11. doi:10.1080/00224490902898710
- Horne, S., & Zimmer-Gembeck, M. (2006). The Female Sexual Subjectivity Inventory: Development and validation of a multidimensional inventory for late adolescents and emerging adults. *Psychology of Women Quarterly*, 30, 125–138. doi: 10.1111/2Fj.1471-6402.2006.00276.x
- Hutchinson, M. K., & Cederbaum, J. A. (2011). Talking to daddy's little girl about sex: Daughters' reports of sexual communication and support from fathers. *Journal of Family Issues*, 32, 550–572. doi:10.1177/0192513X10384222
- Ipeirotis, P. (2010). *Demographics of Mechanical Turk* (CeDERWorking Paper-10-01). New York University. Retrieved from <http://hdl.handle.net/2451/29585>
- Jaccard, J., Dodge, T., & Dittus, P. (2002). Parent-adolescent communication about sex and birth control: A conceptual framework. *New Directions for Child and Adolescent Development*, 2002, 9–42. doi:10.1002/cd.48
- Jerman, P., & Constantine, N. A. (2010). Demographic and psychological predictors of parent–adolescent communication about sex: A representative statewide analysis. *Journal of Youth and Adolescence*, 39, 1164–1174. doi:10.1007/s10964-010-9546-1
- Kågesten, A., Gibbs, S., Blum, R. W., Moreau, C., Chandra-Mouli, V., Herbert, A., & Amin, A. (2016). Understanding factors that shape gender attitudes in early adolescence globally: A mixed-methods systematic review. *PloS One*, 11, 1–36. doi:10.1371/journal.pone.0157805
- Keppel, G., & Wickens, T. (2004). Simultaneous comparisons and the control of type I errors. In G. Keppel & T. Wickens (Eds.), *Design and analysis: A researcher's handbook* (4th ed., pp. 111–130). Upper Saddle River, NJ: Pearson Prentice Hall.
- Klapilová, K., Brody, S., Krejčová, L., Husárová, B., & Binter, J. (2015). Sexual satisfaction, sexual compatibility, and relationship adjustment

- in couples: The role of sexual behaviors, orgasm, and men's discernment of women's intercourse orgasm. *The Journal of Sexual Medicine*, 12, 667–675. doi:10.1111/jsm.12766
- Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: A practical primer for t-tests and ANOVAs. *Frontiers in Psychology*, 4, 863. doi:10.3389/fpsyg.2013.00863
- Lazarides, R., Harackiewicz, J., Pesu, L., & Viljaranta, J. (2015). The role of parents in students' motivational beliefs and values. In C. M. Rubie-Davies, J. M. Stephens, & P. Watson (Eds.), *The social psychology of the classroom international handbook* (pp. 53–66). Abingdon, Oxon: Routledge.
- Lefkowitz, E. S., Sigman, M., & Au, T. K. F. (2000). Helping mothers discuss sexuality and AIDS with adolescents. *Child Development*, 71, 1383–1394. doi:10.1111/1467-8624.00234
- Levy, K., Freese, J., & Druckman, J. (2016). The demographic and political composition of Mechanical Turk samples. *SAGE Open*, 6, 1–17. doi:10.1177/2158244016636433
- Lindsey, L. L. (2015). *Gender roles: A sociological perspective*. New York, NY: Routledge.
- Maas, M. K., & Lefkowitz, E. S. (2015). Sexual esteem in emerging adulthood: Associations with sexual behavior, contraception use, and romantic relationships. *Journal of Sex Research*, 52, 795–806. doi:10.1080/00224499.2014.945112
- Madigan, S., Ly, A., Rash, C. L., Van Ouytsel, J., & Temple, J. R. (2018). Prevalence of multiple forms of sexting behavior among youth: A systematic review and meta-analysis. *JAMA Pediatrics*, 172, 327–335. doi:10.1001/jamapediatrics.2017.5314
- Malacane, M., & Beckmeyer, J. J. (2016). A review of parent-based barriers to parent-adolescent communication about sex and sexuality: Implications for sex and family educators. *American Journal of Sexuality Education*, 11, 27–40. doi:10.1080/15546128.2016.1146187
- Marseille, E., Mirzazadeh, A., Biggs, M. A., Miller, A. P., Horvath, H., Lightfoot, M., ... Kahn, J. G. (2018). Effectiveness of school-based teen pregnancy prevention programs in the USA: A systematic review and meta-analysis. *Prevention Science*, 19, 468–489. doi:10.1007/s1121-017-0861-6
- Mastro, S., & Zimmer-Gembeck, M. J. (2015). Let's talk openly about sex: Sexual communication, self-esteem and efficacy as correlates of sexual well-being. *European Journal of Developmental Psychology*, 12, 579–598. doi:10.1080/17405629.2015.1054373
- McElwain, A. D., & Bub, K. L. (2018). Changes in parent-child relationship quality across early adolescence: Implications for engagement in sexual behavior. *Youth & Society*, 50, 204–228. doi:10.1177/0044118X15626843
- Muise, A., Boudreau, G. K., & Rosen, N. O. (2017). Seeking connection versus avoiding disappointment: An experimental manipulation of approach and avoidance sexual goals and the implications for desire and satisfaction. *Journal of Sex Research*, 54, 296–307. doi:10.1080/00224499.2016.1152455
- O'Sullivan, L. F., Brotto, L. A., Byers, E. S., Majerovich, J. A., & Wuest, J. A. (2014). Prevalence and characteristics of sexual functioning among sexually experienced middle to late adolescents. *The Journal of Sexual Medicine*, 11, 630–641. doi:10.1111/jsm.12419
- Pariera, K. L., & Brody, E. (2018). "Talk more about it": Emerging adults' attitudes about how and when parents should talk about sex. *Sexuality Research and Social Policy*, 15, 219–229. doi:10.1007/s13178-017-0314-9
- Powwattana, A., Thammaraksa, P., & Manora, S. (2018). Culturally-grounded mother-daughter communication-focused intervention for Thai female adolescents. *Nursing & Health Sciences*, 20, 214–223. doi:10.1111/nhs.12404
- Quinn-Nilas, C., & Kennett, D. J. (2018). Reasons why undergraduate women comply with unwanted, non-coercive sexual advances: A serial indirect effect model integrating sexual script theory and sexual self-control perspectives. *The Journal of Social Psychology*, 158, 1–13. doi:10.1080/00224545.2018.1427039
- Ritchwood, T., Peasant, C., Powell, T., Taggart, T., Corbie-Smith, G., & Akers, A. (2018). Predictors of caregiver communication about reproductive and sexual health and sensitive topics. *Journal of Family Issues*, 39, 2207–2231. doi:10.1177/0192513X17741920
- Ritchwood, T. D., Powell, T. W., Metzger, I. W., Dave, G., Corbie-Smith, G., Atujuna, M., ... Akers, A. Y. (2017). Understanding the relationship between religiosity and caregiver-adolescent communication about sex within African-American families. *Journal of Child and Family Studies*, 26, 2979–2989. doi:10.1007/s10826-017-0810-9
- Rogers, A. (2017). Parent-adolescent sexual communication and adolescents' sexual behaviors: A conceptual model and systematic review. *Adolescent Research Review*, 2, 293–313. doi:10.1007/s40894-016-0049-5
- Rogers, A. A., Ha, T., Stormshak, E. A., & Dishion, T. J. (2015). Quality of parent-adolescent conversations about sex and adolescent sexual behavior: An observational study. *Journal of Adolescent Health*, 57, 174–178. doi:10.1016/j.jadohealth.2015.04.010
- Rosenthal, D., & Feldman, S. (1999). The importance of importance: Adolescents' perceptions of parental communication about sexuality. *Journal of Adolescence*, 22, 835–851. doi:10.1006/jado.1999.0279
- Rossetto, K. R., & Tollison, A. C. (2017). Feminist agency, sexual scripts, and sexual violence: Developing a model for postgendered family communication. *Family Relations*, 66, 61–74. doi:10.1111/fare.12232
- Rostosky, S. S., Dekhtyar, O., Cupp, P. K., & Anderman, E. M. (2008). Sexual self-concept and sexual self-efficacy in adolescents: A possible clue to promoting sexual health? *Journal of Sex Research*, 45, 277–286. doi:10.1080/00224490802204480
- Sanchez, D. T., Fetterolf, J. C., & Rudman, L. A. (2012). Eroticizing inequality in the United States: The consequences and determinants of traditional gender role adherence in intimate relationships. *Journal of Sex Research*, 49, 168–183. doi:10.1080/00224499.2011.653699
- Santa Maria, D., Markham, C., Engebretson, J., Baumler, E., & McCurdy, S. (2014). Parent-child communication about sex in African American mother-son dyads. *Family Medicine & Medical Science Research*, 3, 1–6. doi:10.4172/2327-4972.1000134
- Santa Maria, D., Markham, C., Mullen, P., & Bluethmann, S. (2015). Parent-based adolescent sexual health interventions and effect on communication outcomes: A systematic review and meta-analysis. *Perspectives on Sexual and Reproductive Health*, 47, 37–50. doi:10.1363/47e2415
- Schleider, J. L., & Weisz, J. R. (2015). Using Mechanical Turk to study family processes and youth mental health: A test of feasibility. *Journal of Child and Family Studies*, 24, 3235–3246. doi:10.1007/s10826-015-0126-6
- Sevilla, T. M., Sanabria, J. P., Orcasita, L. T., & Palma, D. M. (2016). Consistencies and discrepancies in communication between parents and teenage children about sexuality. *Paidéia (Ribeirão Preto)*, 26, 139–147. doi:10.1590/1982-43272664201601
- Sheehan, K. (2018). Crowdsourcing research: Data collection with Amazon's Mechanical Turk. *Communication Monographs*, 85, 140–156. doi:10.1080/03637751.2017.1342043
- Simon, W., & Gagnon, J. H. (1986). Sexual scripts: Permanence and change. *Archives of Sexual Behavior*, 15, 97–120. doi:10.1007/BF01542219
- Sneed, C. D., Somoza, C. G., Jones, T., & Alfaro, S. (2013). Topics discussed with mothers and fathers for parent-child sex communication among African-American adolescents. *Sex Education*, 13, 450–458. doi:10.1080/14681811.2012.757548
- Sutton, M. Y., Lasswell, S. M., Lanier, Y., & Miller, K. S. (2014). Impact of parent-child communication interventions on sex behaviors and cognitive outcomes for Black/African-American and Hispanic/Latino youth: A systematic review, 1988–2012. *Journal of Adolescent Health*, 54, 369–384. doi:10.1016/j.jadohealth.2013.11.004
- Tolman, D., & McClelland, S. (2011). Normative sexuality development in adolescence: A decade in review, 2000–2009. *Journal of Research on Adolescence*, 21, 242–255. doi:10.1111/j.1532-7795.2010.00726.x
- Tolou-Shams, M., Dauria, E., Conrad, S. M., Kemp, K., Johnson, S., & Brown, L. K. (2017). Outcomes of a family-based HIV prevention intervention for substance using juvenile offenders. *Journal of Substance Abuse Treatment*, 77, 115–125. doi:10.1016/j.jsat.2017.03.013

- U.S. Census Bureau. (2018). *United States population growth by region*. Retrieved from [https://www.census.gov/popclock/data\\_tables.php?component=growth](https://www.census.gov/popclock/data_tables.php?component=growth)
- Walters, K., Christakis, D. A., & Wright, D. R. (2018). Are Mechanical Turk worker samples representative of health status and health behaviors in the US? *PloS One*, *13*, e0198835. doi:10.1371/journal.pone.0198835
- Widman, L., Choukas-Bradley, S., Helms, S. W., Golin, C. E., & Prinstein, M. J. (2014). Sexual communication between early adolescents and their dating partners, parents, and best friends. *Journal of Sex Research*, *51*, 731–741. doi:10.1080/00224499.2013.843148
- Widman, L., Choukas-Bradley, S., Noar, S. M., Nesi, J., & Garrett, K. (2016). Parent-adolescent sexual communication and adolescent safer sex behavior: A meta-analysis. *JAMA Pediatrics*, *170*, 52–61. doi:10.1001/jamapediatrics.2015.2731
- Widman, L., Evans, R., Javidi, H., & Choukas-Bradley, S. (2019). Assessment of parent-based interventions for adolescent sexual health: A systematic review and meta-analysis. *JAMA Pediatrics*. doi:10.1001/jamapediatrics.2019.2324
- Wiederman, M. W. (2005). The gendered nature of sexual scripts. *The Family Journal*, *13*, 496–502. doi: 10.1177%2F1066480705278729
- Wilson, E. K., Dalberth, B. T., Koo, H. P., & Gard, J. C. (2010). Parent's perspectives on talking to preteenage children about sex. *Perspectives on Sexual Health and Reproductive Health*, *42*, 56–63. doi:10.1363/4205610
- Wilson, E. K., & Koo, H. P. (2010). Mothers, fathers, sons, and daughters: Gender differences in factors associated with parent-child communication about sexual topics. *Reproductive Health*, *7*, 31. doi:10.1186/1742-4755-7-31