



Predictors of parental knowledge of adolescent sexual experience: United States, 2012

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ABSTRACT

Parent-child sexual health communication has been shown to protect against adolescent sexual risk-taking behavior. Parent knowledge of adolescent sexual experience can inform timing and content of conversations; however, little is known about factors associated with such knowledge. To investigate this question, parent-child dyads (N = 942) from a U.S. nationally-representative internet panel were surveyed in June 2012. Agreement between adolescent report of vaginal sex and parent's knowledge of such behavior was assessed. Multivariate regression was used to assess predictors of accurate parental knowledge of adolescent sex. Most parents (87%) reported knowledge of their adolescents' sexual experience. Parents with accurate knowledge of adolescent sexual experience were more likely to report at least one prior conversation with their child about sexual health (OR 2.35), have a daughter (OR 1.88), and have a child who expressed comfort discussing sexual health (OR 1.71). Results indicate that parental knowledge of adolescent sexual experience reflects more comfortable parent-child sexual health communication. Developing tools to improve adolescent comfort discussing sexuality may improve parent-child conversations about sexuality, contributing to efforts to increase safer sex practices among adolescents.

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1. Introduction

The teen pregnancy rate in the U.S. is among the highest in the developed world and almost one quarter of U.S. adolescents report using no contraception at first sex (Martinez and Abma, 2015). Parent-child communication about sex has been associated with improved sexual health outcomes, such as delayed sexual debut and improved condom use (Widman et al., 2016; Markham et al., 2010). One factor that impacts parent-child sexual health communication is accurate parental knowledge of adolescent sexual experience (Jaccard et al., 1998). Parents frequently underestimate their adolescents' sexual activity (Yang et al., 2006; Mollborn and Everett, 2010; Stanton et al., 2000). However, studies suggest that parent knowledge of adolescent sexual experience can lead to greater discussion of protective strategies to counter risk. For example, parents who know or suspect that their adolescents have had sex are more likely to discuss contraception (Raffaelli et al., 1998).

Few studies have explored parent knowledge of adolescent sexual experience. The objective of this study was therefore to assess the prevalence and predictors of accurate parental knowledge of adolescent sexual experience.

2. Material and methods

2.1. Participants and procedures

Data for this cross-sectional study were collected in June 2012 on behalf of Planned Parenthood Federation of America, *Family Circle Magazine*, and the Center for Latino Adolescent and Family Health at NYU. Study participants were members of a nationally-representative online research panel, recruited by a market research agency (GfK®) via address-based sampling. Address-based sampling involves probability-based sampling of addresses from the U.S. Postal Service's Delivery Sequence File. Randomly sampled addresses are invited to take part in an online research panel through a series of mailings. Invited households can join the panel by completing and returning a paper form in a postage-paid envelope, calling a toll-free hotline, or going to a website and completing an online recruitment form. After accepting the invitation to join the panel, respondents then answer demographic questions. Through address-based sampling, the Knowledge Networks online research panel represents households with unlisted telephone numbers, non-telephone households, and cell phone only households (which account for about 32% of households). Households without a computer or internet are provided with a netbook and internet access in order to participate. Only those sampled through these probability-based techniques are eligible to take part, ensuring that Knowledge Networks maintains a nationally representative research panel.

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Members (N = 3390) received an email invitation to participate in the study if they were known to be the parent of a 15 to 18 year-old. Of those, 51% opted to complete the survey and 61% of those were both confirmed eligible and had an adolescent at home who completed the survey (N = 1046). Parents and adolescents separately completed a 10 minute online survey about parent-child sexual health communication and adolescents' sexual experiences. Adolescent survey questions mirrored parent questions, except adolescents were asked about their own sexual experiences. Dyads (N = 104) were excluded from analyses if adolescents reported a lack of confidentiality/honesty completing the survey.

2.2. Study outcome

Accurate parental knowledge of adolescent sexual experience was defined as agreement between parent and adolescent report of adolescent ever having had vaginal sex (yes/no). Parents who either reported their adolescent's sexual activity inaccurately or reported not knowing whether or not their adolescent had sex were classified as not having accurate knowledge.

2.3. Independent variables

Demographics, including age, gender, and educational achievement, were taken from baseline information collected by Knowledge Networks and by parent report. A history of sexual health communication was measured by asking participants if they had ever discussed any topics related to sexuality; examples of sexual health topics were provided and include bodies and how they work, human development, reproduction, differences and similarities between boys and girls and men and women, types of relationships and what makes a relationship healthy or unhealthy, sexual behavior and preventing pregnancy and STDs. A history of sexual health communication was considered "positive" if endorsed by both dyad members. Age at first sexual health conversation was measured by asking participants the adolescent's age at first sexual health conversation with a parent (0–5, 6–10, 11–14, 15–18) and deferring to the lowest age category reported by the dyad. This variable was then recoded as a dichotomous variable (0–14, 15–18). Parent and adolescent comfort discussing sexual health topics was measured by asking "How comfortable do you feel talking to your [CHILD or PARENT] about sexuality and sexual health?" Participants were given a 4-point Likert scale to report comfort; this variable was then recoded as a dichotomous variable (somewhat or very uncomfortable = 0 and somewhat or very comfortable = 1).

2.4. Data analysis

Univariate, bivariate, and multivariate analyses were performed considering parent accurate knowledge of adolescent sex as the outcome variable. A logistic regression model used variables that achieved significance (p < 0.05) in bivariate analyses. STATA version 12.0 was used for analyses.

This study was reviewed by Columbia University Medical Center's Institutional Review Board and was found to be exempt from review.

3. Results

A total of 942 parent-child dyads were included in the analyses. Parents had a mean age of 46 years old (range 20 to 75) and 68.9% were mothers; adolescents were 15–18 years of age and 48.5% were female. Nineteen percent of the adolescent population reported ever having had vaginal sex (Table 1).

Table 1
Study population descriptive statistics, United States, 2012 (n = 942 dyads).

Variable	n	%
Parent gender (female)	649	68.9
Adolescent gender (female)	457	48.5
Parent race/ethnicity		
White	671	71.2
Black	91	9.7
Hispanic	122	13
Other	58	6.2
Adolescent race/ethnicity		
White	637	67.6
Black	81	8.6
Hispanic	122	14.7
Other	86	9.1
Parent marital status (married)	709	75.3
Parent education		
<High school	37	3.9
High school graduate only	177	18.8
Some college/college graduate	728	77.3
Adolescent comfort discussing sexual health	519	55.3
Parent comfort discussing sexual health	790	84.1
Adolescent reports ever having had vaginal sex	179	19.1

3.1. Analysis of primary outcomes

Overall, 87% of parents had accurate knowledge about adolescent experience with vaginal sex. Parents of sexually experienced adolescents had a significantly lower odds of reporting accurate knowledge than did parents of adolescents who had never had sex (77% vs. 90%, respectively, OR 0.38, 95% CI [0.24–0.61]).

In the adjusted multivariate analysis, being the parent of a female adolescent (OR 1.88, 95% CI 1.22–2.90), having had a conversation about sexuality (OR 2.35, 95% CI 1.37–4.05) and adolescent comfort discussing sexual health topics (OR 1.71, 95% CI 1.09–2.69) were associated with greater odds of parental accurate knowledge of adolescent sexual behavior (Table 2).

4. Discussion

In this national sample of parent-adolescent dyads, we found that most parents accurately knew whether their adolescents had engaged in vaginal sex, although fewer parents of sexually experienced adolescents reported such knowledge. Key predictors of accurate knowledge included adolescent female gender, parent-child past discussions about sexuality, and adolescent report of comfort discussing sexual health. It is possible that adolescents are sharing sensitive information

Table 2
Factors associated with parental knowledge of adolescent sexual experience, United States, 2012 (n = 822 dyads).

	Unadjusted OR [95% CI]	Adjusted OR [95% CI]
Demographic variables		
Parent age	1.00 [0.97–1.03]	^a
Adolescent age (15–18)	0.82 [0.68–0.99]	0.83 [0.60–1.01]
Parent gender (female)	1.59 [1.02–2.48]	1.41 [0.91–2.19]
Adolescent gender (female)	1.87 [1.21–2.93]	1.88 [1.22–2.90]
Parent educational achievement	1.04 [0.81–1.33]	^a
Communication variables		
Prior parent-adolescent discussion about sexual health	2.95 [1.80–4.82]	2.35 [1.37–4.05]
Adolescent age at first sexual health conversation	1.04 [0.58–1.80]	^a
Parent comfort discussing sexual health	1.84 [1.09–3.08]	0.95 [0.52–1.73]
Adolescent comfort discussing sexual health	2.09 [1.38–3.15]	1.71 [1.09–2.69]

^a In the adjusted model, variables were excluded if no significant associations were found in the bivariate analysis.

about their sexual experience only after their parents have initiated the conversation, perhaps because parents suspect via parental monitoring that their adolescents have become involved in sexual relationships. However, it is interesting to note that adolescent comfort discussing sexual health, but not parent comfort, is correlated with parent knowledge of adolescent sexual experience.

Our findings are supported by previous studies. Mollborn and Everett cite an 82% prevalence of parental knowledge of adolescent sexual behavior, using data drawn from the National Longitudinal Study of Adolescent Health, although they found parents less likely to report “I don’t know” (1% vs. 11% in our study) (Yang et al., 2006). This may reflect a greater willingness to admit lack of knowledge in an online survey. We chose to combine parents who reported “I don’t know” about their adolescent’s sexual experience with those parents who reported inaccurate knowledge due to our hypothesis that knowledge of teen sexual experience can inform important conversations aimed at risk reduction, such as conversations about contraception.

Our results suggest that adolescents share more with their parents when they feel a greater level of comfort discussing sexual health. However, interventions to enhance parent-adolescent communication have proved effective at improving mainly parent comfort discussing sensitive topics (Santa Maria et al., 2015). Fewer interventions have focused on enhancing adolescents’ comfort discussing sexual health with their parents (Santa Maria et al., 2015; Akers et al., 2011). Akers et al. reviewed the literature on parent-adolescent sexual health communication interventions and found that parents report greater positive intervention effects than adolescents (Akers et al., 2011).

We acknowledge several study limitations. Our ability to maintain a nationally-representative sample was limited by the challenge of recruiting parent-teen dyads, as both dyad members were asked to complete the survey. Compared to the U.S. population, our study population had a greater percentage of parent participants who were white, college educated, and married. In addition, adolescent participants were less likely to report having had sexual intercourse than adolescent participations in the 2015 Youth Risk Behavior Survey (19% vs. 41%) (Kahn et al., 2016). This may, in part, be due to a younger mean age of adolescents in our study compared to the Youth Risk Behavior Survey, as under 30% of 16 year-old report sexual experience in the 2011–2013 National Survey of Family Growth (Martinez and Abma, 2015). While there is always the potential for inaccurate reporting of sexual activity, collection of sexual behavior data with computers increases the accuracy of reporting. Finally, this study assessed only heterosexual, vaginal sexual experience and therefore fails to include parental knowledge of non-heterosexual behavior. As such, findings may not be generalizable to the national population. Despite these limitations, predictors of parental knowledge of adolescent sexual experience are still relevant when considering obstacles to parent-child sexual health communication. Interventions to increase and improve parent-child sexual health communication have proved promising (Gavin et al., 2015), but have mainly served in increase the amount of communication between parents and adolescents. This study further informs intervention efforts that aim to improve quality of parent-child sexual health communication.

4.1. Conclusion

Results from this study suggest that adolescent comfort discussing sexual health is more strongly associated with parental knowledge of

adolescent vaginal sex than is parental comfort. Interventions that aim to improve parent-child sexual health communication would therefore do well to target adolescent comfort discussing sexual health, in addition to encouraging parents to increase the amount of communication around sexual health topics. Further work is needed to determine whether parent knowledge of adolescent sex is associated with improved sexual health outcomes, such as contraceptive use.

Transparency document

The [Transparency document](#) associated with this article can be found, in online version.

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