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Sexual health education for adolescent males who are interested in sex with males: An investigation of experiences, preferences, and needs

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Abstract

Purpose: There is a dearth of research to inform sexual education programs to address sexual health disparities experienced by adolescent males who are interested in sex with males (AMSM). The current study sought to determine where AMSM receive sexual health information, clarify their preferences, and explore relations with sexual behavior.

Methods: AMSM ($N = 207$; ages 14–17) in the United States completed an online sexual health survey. Bivariate associations between sexual education exposure/preferences by sexual behavior were assessed using Fisher's exact tests and one-way analyses of variance.

Results: Eighty-nine (43%) participants reported no sexual contact with male partners, 77 (37%) reported sexual contact without condomless anal sex, and 41 (20%) reported condomless anal sex. Participants received sexual health information from their parents/guardians ($n = 122$, 59%), formal sources ($n = 160$, 78%), and the Internet ($n = 135$, 65%). The most commonly covered topics by parents/guardians and formal sources were how to say no to sex, how to prevent HIV and other sexually transmitted infections, and methods of birth control. The most common online-researched topics were how to safely have anal sex, the types of sex you can have with a male partner, how to use a condom, and how to use lubrication. Participants noted preferring a sexually-explicit online sexual health program that addresses male–male sex.

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Implications and Contribution: Despite the sexual health disparities experienced by adolescent males who are interested in sex with males, available sexual education resources do not meet their needs. Sexual education programs that take youth preferences into account and address male–male sexual behaviors can help these youth develop healthy sexual behaviors.

Conclusions: Online sexual education programs that explicitly address male–male sex are needed. Tailored programs can help AMSM develop healthy sexual behaviors and decrease their HIV/STI risk.

Keywords

sexual education; adolescents; sexual minority youth; AMSM; HIV; STI

INTRODUCTION

Adolescent males interested in sex with males (AMSM) < 18 years old are at elevated risk for HIV and other sexually transmitted infections (STIs) in the United States (U.S.) [1,2]. AMSM account for 93% of new HIV infections among males in their age cohort [1]. Adolescent and young adults (15–24 years old) account for approximately half of all new STIs, with AMSM experiencing disproportionately high rates of chlamydia, gonorrhea, and syphilis [2,3]. Despite increased risk, AMSM are less likely than their heterosexual peers to receive relevant sexual education in school [4,5] or from their parents [6]. AMSM who lack necessary sexual education may be more likely to engage in sexual risk behaviors [5]. In lieu of relevant sexual education from traditional sources (e.g., schools, parents), AMSM likely turn to the Internet, including online pornography, to learn about male–male sexual relationships [7–9].

Sexual education programs—especially those that address male–male sexual behaviors and prepare young men for healthy sexual activity—are essential to decrease HIV/STIs among AMSM. However, relatively few published studies have sampled AMSM < 18 years old to ask about their sources of sexual health information, the information they are being provided by these sources, and their preferred methods of receiving sexual health information [8]. The current study adds to this emerging and important literature.

Specifically, we asked 207 AMSM (ages 14–17) about what sexual health information they are receiving, where they are accessing it, and their preferences for sexual education programs. Further, we examined how sexual activity with male partners, including sexual risk-taking, was associated with sexual education receipt and preferences. As evidence indicates that sexual risk behavior patterns are established during adolescence for AMSM [10–13], it is important to intervene with AMSM prior to and around the time of their sexual debut. Understanding how both sexually active and not yet sexually active AMSM obtain sexual health information and how they would prefer to receive it will help researchers, health professionals, and educators develop programs better suited to the needs of these youth and, ultimately, help these young men learn and establish healthy sexual behaviors [10]. Youth–informed, sexual health programs targeting AMSM early in their psychosexual development will likely decrease both immediate and long-term HIV/STI risk [10,11].

METHOD

Study Design

We recruited AMSM in 2017 via online advertisements and posts on social media (e.g., Instagram). Detailed recruitment and study procedures have been describe previously [14]. To be eligible participants needed to: (1) be age 14 to 17; (2) be cisgender male (i.e., male sex at birth and male gender identity); (3) self-identify as gay/bisexual, or report being sexually attracted to males, or report voluntary past year sexual contact with a male partner; (4) reside in the U.S.; and (5) have a personal email address. Interested potential participants were directed to the study website for screening, hosted using REDCap [15].

Eligible respondents progressed to consent text imbedded within the website. Capacity to consent was confirmed using four questions that evaluated respondents' understanding of study procedures, risks, and benefits [16–18]. Respondents who could not answer all four questions accurately after three attempts were deemed ineligible. Those who consented received an email containing a unique survey link. The survey took 30 minutes ($SD = 12$) on average, and completers were emailed a \$15 Amazon.com gift code. To protect against fraudulent or duplicative enrollments, screening and survey responses were cross-referenced using age (age vs. date of birth), location (zip code vs. state of residence), sexual activity (multiple questions across the screener and survey assessing sexual behavior), and email address [19,20]. All procedures, including a waiver of guardian consent, were reviewed and approved by the hospital IRB.

Measures

Socio-demographics.—Characteristics included recruitment source (Instagram, Facebook/other), U.S. census region (northeast, midwest, south, west) [21], age (continuous), race/ethnicity (White, Black/African American, Latino, Mixed Race/Other), enrollment in school (yes, no), highest education level (10th grade, 11th grade or more), living situation (in guardians' home, other), urbanicity (metropolitan residence, other) [22], employment (unemployed, employed part-time), sexual orientation (gay-identified, other), "outness" about sexual attraction to males ("out," not "out" all of the time), and age at which the participant realized his sexual attraction to men (continuous).

Sexual Education Exposure.—Adapted from previous sexual education research with predominantly heterosexual adolescents [23,24], participants were provided a list of sexual education topics (e.g., how to prevent HIV, how to say no to sex) and asked to indicate which ones they had spoken to a parent or guardian about (check all that apply). Participants were then asked if they had ever received formal sexual education in school, at church, in a community center, or some other in-person location (yes, no). Participants who answered yes were asked to indicate the topics in which they had received in formal education (check all that apply). Lastly, participants were asked if they had ever searched for information about how to have sex using a website or a phone application (yes, no). Participants who answered yes were asked to indicate which sexual education topics they searched for using a website or phone application (check all that apply). A count variable of topics covered by

each source (parents/guardians, formal instruction, website or phone application) was created to quantify the dose of education from each source (range 0–12).

Sexual Education Preferences.—Participants were asked to indicate (check all that apply) sexual health topics that they judged as important to cover in a sexual education program for AMSM (e.g., how to prevent STIs). They were asked to indicate (check all that apply) how they would most prefer to receive their sexual health information (e.g., through school, parents/guardians, online). Lastly, they were asked to indicate (check all that apply) specific ways of presenting information that they thought would be useful to include in a sexual education program that addresses male–male sexual health (e.g., images or visuals showing how to correctly use a condom).

Sexual Behavior.—Participants were asked to report solely on voluntary sexual behaviors. They were asked ever having sexual contact with another person (yes, no). Sexual contact was defined as kissing, mutual masturbation, oral sex, vaginal sex, or anal sex. Participants who answered yes were asked about sexual contact with male, female, and transgender partners (check all that apply). Participants who reported sexual contact with male partners were asked about engagement in specific sexual behaviors (e.g., kissing, oral sex, anal sex; check all that apply). Those reporting anal sex were asked to report the number of total and condom-protected times they had anal sex with a male partner. Using this information, a calculated field established the number of condomless anal sex (CAS) acts, which was automatically presented to participants, who were asked to confirm it. A variable incorporating voluntary sexual behavior and sexual risk with male partners was created (coded: none, sexual contact with no CAS, CAS).

Analyses

Socio-demographics, sexual education exposure, and sexual education preferences were described using frequency distributions and measures of central tendency and variation. We assessed differences by sexual behavior using Fisher’s exact tests and one-way analyses of variance. Due to small cell sizes, we were unable to run multivariable analyses. Analyses were conducted using Stata 15 [25].

RESULTS

Participants

The majority (84%) of participants were recruited via Instagram. The average age of participants was 16 years ($SD = 1.0$). Participants reported living in 40 states (17% Northeast, 20% Midwest, 29% South, and 34% West). Eighty-nine (43%) participants reported no sexual contact with male partners, 77 (37%) reported sexual contact with no CAS, and 41 (20%) reported CAS (Table 1). Approximately half (48%) identified as racial/ethnic minorities, most (93%) lived in their guardian’s home, and the majority (87%) lived in a metropolitan area. Two-thirds (65%) self-identified as gay. The remaining one-third identified as bisexual (24%), heterosexual (5%), queer (4%), or other (1%). Approximately one-third (31%) were “out” about their sexual attraction to male partners. Compared to participants who reported no sexual contact with male partners, participants reporting sexual

contact with male partners but no CAS and those who reported CAS were more likely to be older ($F(2, 204) = 4.4, p = 0.01$). Younger age of realizing male sexual attraction ($F(2, 197) = 6.6, p < 0.01$) was associated with having sexual contact with male partners but no CAS and reporting CAS.

Sexual Education Exposure

Approximately three-fifths ($n = 122, 59\%$) reported discussing at least one of the listed sexual health topics with a parent/guardian (Table 2). Among participants who discussed sexual health information with their parents/guardians, the most common topics discussed were how to say no to sex ($n = 86, 71\%$), how to prevent STIs ($n = 73, 60\%$), methods of birth control ($n = 64, 53\%$), and how to prevent HIV ($n = 64, 53\%$). Participants who reported no sexual contact with male partners were more likely to have spoken with their parents/guardians about how to talk with sexual partners about what they wanted (37% vs. 23% vs. 8% for no contact, sexual contact with no CAS, and CAS, respectively; $\chi^2 = 7.5, p = 0.03$) and did not want to do sexually (37% vs. 25% vs. 8% for no contact, sexual contact with no CAS, and engagement in CAS, respectively; $\chi^2 = 7.1, p = 0.02$). The average number of sexual health topics covered by parents/guardians was four ($SD = 3$).

Three-quarters ($n = 160, 78\%$) of participants reported receiving formal sexual education in school, at church, in a community center, or another in-person location (Table 2). Among participants who received formal sexual education, the most commonly addressed topics were how to prevent STIs ($n = 132, 83\%$), how to prevent HIV ($n = 127, 79\%$), how to say no to sex ($n = 125, 78\%$), and methods of birth control ($n = 118, 73\%$). Participants who reported no sexual contact with male partners were more likely to have received formal sexual education about how to talk with sexual partners about what they did not want to do sexually (57% vs. 38% vs. 28% for no contact, sexual contact with no CAS, and engagement in CAS, respectively; $\chi^2 = 8.2, p = 0.02$) and how to talk with sexual partners about STIs and HIV (55% vs. 36% vs. 28% for no contact, sexual contact with no CAS, and engagement in CAS, respectively; $\chi^2 = 7.6, p = 0.02$). The average number of sexual health topics formally provided to participants was six ($SD = 3$). We found no differences by sexual behavior in the number of topics formally covered.

Approximately two-thirds ($n = 135, 65\%$) of participants reported using a website or phone application to look up information about sex (Table 2). Among that group, the most common topics they researched were how to safely and comfortably have anal sex ($n = 102, 76\%$), the types of sex you can have with a male partner ($n = 95, 70\%$), how to use a condom ($n = 84, 62\%$), and how to use lubrication ($n = 82, 61\%$). The average number of sexual health topics participants looked up online was five ($SD = 3$). We found no differences by sexual behavior in the number or content of the topics they researched.

Preferred Methods of Receiving Sexual Health Information

Among the entire sample ($N = 207$), ten of the twelve proposed topics were endorsed by 85% or more of the participants (Table 3). The two topics that were not as strongly endorsed were methods of birth control ($n = 84, 41\%$) and how to safely and comfortably have vaginal sex ($n = 70, 34\%$). Topic endorsement did not differ by sexual behavior.

The majority of AMSM surveyed indicated that they would prefer to receive sexual health information online ($n = 175$, 85%) or in school ($n = 118$, 57%). Participants who reported not having sexual contact with male partners were more likely to indicate that community organizations (36% vs. 21% vs. 17% for no contact, sexual contact with no CAS, and engagement CAS, respectively; $\chi^2 = 7.2$, $p = 0.03$) and parents/guardians (13% vs. 8% vs. 0% for no contact, sexual contact with no CAS, and engagement in CAS, respectively; $\chi^2 = 6.6$, $p = 0.02$) would be acceptable sources of sexual health information. We observed no other significant differences by sexual behavior.

The majority of participants (70%) indicated that in sexual education programs for AMSM should include: (1) visual representations of sexual behaviors and barrier protection techniques (e.g., how to correctly use a condom), (2) illustrations of communication techniques with sexual partners, (3) an overview of the types of male–male sexual behaviors, and (4) content addressing the influence of pornography on sexual behavior. We observed no differences by sexual behavior in the endorsement of what would be useful to include.

DISCUSSION

AMSM are disproportionately impacted by HIV/STIs [1,2], and this health disparity may be partially attributable to inadequate access to sexual education content that is accurate and relevant to the men's experiences [4,5]. Despite the importance of tailored sexual education [26], there is a dearth of research to inform program development for AMSM. To address this deficiency, we examined the venues where AMSM received their sexual health information, their preferences for sexual education topics, and relations between their sexual behavior and sexual education exposure and preferences.

Most AMSM reported receiving some sexual health information from their parents/guardians, formal sources, and the Internet. There were notable differences in the information received by source. Specifically, parents/guardians and formal sources provided youth with information about how to prevent HIV/STIs, birth control, and how to say no to sex—topics that are relevant for all youth. To find more male–male specific or explicit information (e.g., types of male–male sex, how to safely and comfortably have anal sex), AMSM used the Internet. These findings mirror the results of a 2010 study of young adult men who have sex with men (MSM) that found that, because minimal information specific to male–male sex was provided by family or formal sources, most young adult MSM turned to the Internet, including online pornography [27]. Unfortunately, almost 10 years later, our findings appear highly similar. Continued reliance on the Internet for sexual health information reveals the need for more reliable and evidence-based sexual health programs that can address online misinformation as well as the impact of pornography on sexual behaviors [7].

Relatively few differences by sexual behavior emerged. AMSM who were not yet sexually active with male partners, and those who were sexually active without engaging in CAS, were more likely to report speaking with their parents/guardians about how to communicate about what they did and did not want to do sexually. These youth were also more likely to report receiving formal instruction on communicating with partners about what they did not

want to do sexually and STIs/HIV. These finding suggests that youth who are provided with informal or formal instruction in sexual communication skills may feel more empowered to decline sex and negotiate condom use [28]. Further research is needed to assess the best ways to teach sexual communication skills to AMSM and its subsequent impact on sexual behaviors.

Two published studies assessing relations between formal HIV education in school and sexual risk behaviors among AMSM report equivocal findings [4,5]. Using data from the Youth Risk Behavior Surveillance System, one study found that exposure to HIV education in school was associated with an increased odds of condom use at last sex among AMSM [5]. Alternatively, a study in eleven Florida high schools found that exposure to HIV education in school was not associated with condom use at last sex among AMSM [4]. Given that school-based sexual health education programs generally reduce sexual risk behaviors and increase condom use [29], one would hope that AMSM who received such programs would benefit from them similarly. However, results from this and two previous studies suggest that, unfortunately, this may not be the case [4,5].

There are multiple reasons why AMSM would be unlikely to benefit from the formal sexual education provided in schools, including unfavorable state level policies [30] and unwelcoming school environments [31]. As AMSM will likely continue to receive sexual health information through compulsory education, sexual education policies that are explicitly affirming of same-gender sexuality and require inclusion of information specific to same-gender sex are needed. Additionally, once policy barriers are removed, school-based sexual health programs must develop and refine content that addresses the unique needs of AMSM.

In our study, AMSM expressed preferences for sexual health programming that (a) is online, (b) addresses topics pertinent to male–male sex (e.g., how to safely and comfortably have anal sex), and (c) is explicit (i.e., includes images of sexual behaviors and protection techniques, overviews of the types of male–male sex, addresses the influence of pornography on sexual behavior). These preferences did not differ by self-reported sexual behavior—that is, they reflected the preferences of youth who were and who were not yet sexually active. As youth-informed sexual education may be more effective for AMSM than existing approaches, it will be important for researchers, health professionals, and educators to honor these preferences when designing sexual education programs.

We wish to acknowledge the limitations of this research. Although we present data from a relatively large and diverse sample from across the U.S., the findings may not generalize to other youth (e.g., transgender or youth interested exclusively in opposite-sex partners) or all AMSM. A minority (15%) of our sample identified as exclusively Black/African American. Because Black/African American AMSM are at elevated risk for HIV [1], future research building upon the work of Arrington-Sanders and colleagues [8,32] is necessary to explore the sexual health needs of these youth in particular. We asked participants to report only on voluntary sexual behavior; because AMSM are more likely than their non-MSM peers to experience sexual coercion and violence [33], sexual education programs must address these experiences as well. Formal sexual education included information provided at school,

church, community centers, and other in-person locations. As the sexual health information provided at each of those locations may differ, additional research is needed to assess those potential differences and how they are associated with AMSM behavior. We did not assess whether the information the AMSM received addressed male–male sex or if it focused solely on male–female sex (e.g., only how to use a condom in the context of vaginal sex). Additional research is needed to assess how these topics are being presented. Sexual health information provided by a medical professional was also not assessed. Additional research regarding the role of medical providers in the sexual education of AMSM is needed. Finally, we were unable to conduct multivariable analyses that controlled for important socio-demographic factors (e.g., age). Future research assessing relations between sexual education exposure and sexual behaviors should include larger samples to adjust for potential confounders.

Historically, the focus of health education has been on heterosexual sexuality [34]. As a result, AMSM are denied the opportunity to receive the information they need to make healthy sexual choices. Our findings indicate that, although AMSM do receive some sexual health information from parents/guardians and formal programs, most rely on the Internet to obtain information specific to male–male sexual relationships. The disadvantages of this source include the plethora of misinformation online [7] and the ubiquity of pornography, which typically depicts risky behaviors [35]. Nonetheless, AMSM have reported that they prefer to access sexual health information online, presumably because it is more responsive to their needs and obviates the potential for judgment that is present during in-person programs. AMSM also prefer sexual education that is explicit. Evidence suggests that eroticizing safer sex can promote risk-preventive attitudes and reduce risk behavior [36]. Inclusion of images and visuals that depict sexual acts and the use of barrier protection, as well as demonstrations of partner communication techniques, may facilitate the learning and adoption of healthy sexual behaviors for AMSM.

In sum, despite the sexual health disparities experienced by AMSM, the sexual education resources available to these adolescents do not meet their expressed needs. Sexual education programs should take into account AMSM preferences and address male–male sexual behaviors specifically. Researchers, health professionals, and educators should collaborate to develop online programs that are explicit, address male–male sexual relationships, and help AMSM critically evaluate online information, including misinformation portrayed in pornography. An iterative curriculum development process that includes input from all stakeholders (e.g., AMSM, parents/guardians, educators, health professionals, community-based organizations) is necessary to ensure that comprehensive feedback is incorporated and maximize the likelihood that programs will be adopted. Curricula need to be scientifically accurate, developmentally appropriate, and responsive to the health needs of AMSM. Websites need to be user-friendly and exportable. Further, pre-exposure prophylaxis (PrEP) was recently approved for use with adolescents [37]. Future sexual health programs for AMSM will additionally need to include information about PrEP. Ultimately, creating more acceptable and effective sexual education programs for AMSM can help them to cultivate healthy sexual behaviors early in their sexual development and decrease their subsequent HIV and STI risk.

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Abbreviations:

AMSM	adolescent males who are interested in sex with males
MSM	men who have sex with men
HIV	human immunodeficiency virus
STI	sexually transmitted infections
CAS	condomless anal sex

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Table 1.

Socio-demographics by sexual activity with male partners among 14 to 17 year old males who are interested in male sexual partners in the United States ($N = 207$).

Socio-demographics	Total $N = 207$ n (%)	None $n = 89$ n (%)	No CAS $n = 77$ n (%)	CAS $n = 41$ n (%)	χ^2
Recruitment source					1.2
Instagram	174 (84)	77 (87)	62 (81)	35 (85)	
Facebook/Other	33 (16)	12 (13)	15 (20)	6 (15)	
Census region					3.5
Northeast	34 (17)	15 (17)	14 (19)	5 (13)	
Midwest	41 (20)	18 (20)	16 (22)	7 (18)	
South	58 (29)	24 (27)	18 (24)	16 (40)	
West	70 (34)	32 (36)	26 (35)	12 (30)	
Race/Ethnicity					7.3
White	107 (52)	53 (61)	38 (49)	16 (39)	
Black/African American	30 (15)	11 (13)	10 (13)	9 (22)	
Latino	42 (20)	13 (15)	18 (23)	11 (27)	
Mixed Race/Other	26 (13)	10 (12)	11 (15)	5 (12)	
Currently enrolled in school	196 (95)	85 (96)	74 (96)	37 (93)	0.8
Highest level of education achieved					8.3 *
10th grade	127 (63)	63 (74)	44 (58)	20 (50)	
11th grade or more	74 (37)	22 (26)	32 (42)	20 (50)	
Live in guardians' home	192 (93)	77 (87)	76 (99)	39 (95)	9.5 **
Metropolitan residence	170 (87)	75 (92)	63 (85)	32 (80)	3.3
Ever been homeless	12 (6)	5 (6)	3 (4)	4 (10)	1.7
Employed at least part-time	72 (35)	20 (23)	37 (48)	15 (37)	12.0 **
Gay identified	136 (66)	60 (67)	48 (62)	28 (68)	0.6
"Out" about sexual attraction to males	64 (31)	21 (24)	28 (37)	15 (37)	4.1
	m (SD)	m (SD)	m (SD)	m (SD)	F
Age	15.7 (1.0)	15.5 (1.1)	15.9 (0.9)	15.9 (1.0)	4.4 **
Age realized sexually attracted to males	12.1 (2.1)	12.8 (1.8)	11.9 (2.2)	11.5 (2.3)	6.6 **

* $p < 0.05$;

** $p < 0.01$, CAS = condomless anal sex

Table 2.

Sexual education exposure by sexual behavior with male partners among 14 to 17 year old males who are interested in sex with males in the United States ($N = 207$).

Sexual Education Topics	Parent/Guardian			Formal Instruction			Website/Phone App			χ^2	F		
	Total n (%)	None n (%)	CAS n (%)	Total n (%)	None n (%)	CAS n (%)	Total n (%)	None n (%)	CAS n (%)				
How to say no to sex	86 (71)	36 (74)	33 (69)	17 (68)	47 (76)	53 (77)	25 (86)	1.4	28 (21)	8 (18)	17 (29)	3 (10)	4.9
Methods of birth control	64 (53)	25 (51)	28 (58)	11 (44)	50 (81)	50 (73)	18 (62)	3.6	31 (23)	11 (24)	14 (24)	6 (19)	0.3
How to prevent: sexually transmitted infections (STIs)	73 (60)	29 (59)	28 (58)	16 (64)	52 (84)	58 (84)	22 (76)	1.1	47 (35)	15 (33)	22 (37)	10 (32)	0.3
HIV/AIDS	64 (53)	29 (59)	21 (44)	14 (56)	49 (79)	54 (78)	24 (83)	0.3	47 (35)	16 (36)	21 (36)	10 (32)	0.1
How to use: a condom	46 (38)	19 (39)	18 (38)	9 (36)	41 (66)	33 (48)	14 (48)	5.1	84 (62)	29 (64)	38 (64)	17 (55)	0.9
lubrication or lube (e.g., K-Y, bodyglide)	9 (7)	2 (4)	5 (10)	2 (8)	14 (23)	10 (15)	7 (24)	1.9	82 (61)	25 (56)	40 (68)	17 (55)	2.2
How to talk with sexual partners about: what you would like to do sexually	31 (25)	18 (37)	11 (23)	2 (8)	29 (47)	20 (29)	8 (28)	5.5	46 (34)	17 (38)	21 (36)	8 (26)	1.3
what you would NOT like to do sexually	32 (26)	18 (37)	12 (25)	2 (8)	35 (57)	26 (38)	8 (28)	8.2*	36 (27)	11 (24)	18 (31)	7 (23)	0.8
STIs/HIV	22 (18)	11 (22)	9 (19)	2 (8)	34 (55)	25 (36)	8 (28)	7.6*	31 (23)	12 (27)	14 (24)	5 (16)	1.2
How to safely and comfortably have: anal sex	7 (6)	2 (4)	3 (6)	2 (8)	11 (18)	5 (7)	4 (14)	3.3	102 (76)	35 (78)	42 (71)	25 (81)	1.2
vaginal sex	16 (13)	9 (18)	5 (10)	2 (8)	21 (34)	19 (28)	10 (35)	0.8	41 (30)	20 (44)	14 (24)	7 (23)	6.3
Types of male-male sex	5 (4)	0 (0)	4 (8)	1 (4)	7 (11)	3 (4)	2 (7)	2.3	95 (70)	32 (71)	40 (68)	23 (74)	0.4
Average number topics covered	m (SD) 3.7 (2.5)	m (SD) 4.0 (2.4)	m (SD) 3.7 (2.8)	m (SD) 3.2 (2.4)	m (SD) 6.3 (3.2)	m (SD) 5.2 (2.9)	m (SD) 5.2 (3.1)	2.6	m (SD) 5.0 (3.4)	m (SD) 5.1 (3.5)	m (SD) 5.1 (3.5)	m (SD) 4.5 (3.1)	0.5

* $p < 0.05$; CAS = condomless anal sex

Table 3.

Preferred methods of receiving sexual health information by sexual behavior with male partners among 14 to 17 year old males who are interested in male sexual partners in the United States ($N = 207$).

	Total $N = 207$ n (%)	None $n = 89$ n (%)	No CAS $n = 77$ n (%)	CAS $n = 41$ n (%)	X²
Topics to Cover					
How to say no to sex	175 (85)	74 (83)	68 (88)	33 (81)	1.5
Methods of birth control	84 (41)	34 (38)	36 (47)	14 (34)	2.1
How to prevent:					
HIV/AIDS	197 (95)	88 (99)	71 (92)	38 (93)	4.7
sexually transmitted infections (STIs)	196 (95)	87 (98)	70 (91)	39 (95)	3.8
How to use:					
a condom	196 (95)	87 (98)	71 (92)	38 (93)	2.9
lubrication or lube (e.g., K-Y, bodyglide)	178 (86)	79 (89)	68 (88)	31 (76)	4.6
How to talk with sexual partners about:					
what you would like to do sexually	187 (90)	83 (93)	69 (89)	35 (85)	2.1
what you would NOT like to do sexually	191 (92)	85 (96)	71 (92)	35 (85)	4.0
STIs/HIV	193 (93)	83 (93)	71 (92)	39 (95)	0.4
How to safely and comfortably have:					
anal sex	191 (92)	84 (94)	71 (92)	36 (88)	1.7
vaginal sex	70 (34)	28 (32)	28 (36)	14 (34)	0.4
Types of male-male sex	186 (90)	82 (92)	67 (87)	37 (90)	1.2
Preferred way to receive sexual health information					
Online	175 (85)	74 (83)	66 (86)	35 (85)	0.2
Through school	118 (57)	57 (64)	41 (53)	20 (49)	3.4
Through community organizations	55 (27)	32 (36)	16 (21)	7 (17)	7.2*
Through parents/guardians	18 (9)	12 (13)	6 (8)	0 (0)	6.6*
Through church	11 (5)	6 (7)	3 (4)	2 (5)	0.7
Useful to include					
Images or visuals:					
showing how to correctly use a condom	189 (91)	81 (91)	71 (92)	37 (90)	0.1
showing how to correctly use lubrication or lube	155 (75)	67 (75)	56 (72)	32 (78)	0.4
of the sexual acts that are being discussed	165 (80)	72 (81)	58 (75)	35 (85)	1.8
An illustration of ways to communicate with sexual partners:					
about HIV/STIs	174 (84)	80 (90)	62 (81)	32 (78)	4.1
about wants and desires	165 (80)	70 (79)	62 (81)	33 (81)	0.1
Overview of the types of male-male sex	174 (84)	75 (84)	65 (84)	34 (83)	0.1
Addresses the influence of pornography on sexual behaviors	149 (72)	61 (69)	57 (74)	31 (76)	1.0

* $p < 0.05$; CAS = condomless anal sex