

Original Paper

Developing Online Recruitment and Retention Methods for HIV Prevention Research Among Adolescent Males Who Are Interested in Sex with Males: Interviews with Adolescent Males

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Abstract

Background: Adolescent males interested in sex with males (AMSM) are an important audience for HIV prevention interventions, but they are difficult to reach due to their age and social stigma.

Objective: We aim to identify efficient methods to recruit and retain AMSM in online research.

Methods: Interviews with 14-to-18-year-old AMSM (N=16) were conducted at 2017 Pride events in Boston, MA and Providence, RI.

Results: Participants reported that (1) social media platforms are viable recruitment venues; (2) recruitment advertisements should describe the study using colorful/bright pictures, familiar words, and information about compensation; (3) surveys should be <20 minutes in length; (4) modest compensation (eg, email gift card, US \$10 to \$20) was preferred; and (5) communications that remind participants about the length and content of surveys, and compensation, should be sent between study activities to increase retention.

Conclusions: Soliciting input from AMSM provides critical guidance regarding recruitment and retention procedures to increase the efficiency of HIV prevention research for this at-risk group.

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KEYWORDS

HIV; adolescent males; sexual minority; recruitment; retention; online research; MSM

Introduction

Adolescent males who are interested in sex with males (AMSM) are at increased risk for HIV in the United States [1]. Elevated HIV rates among AMSM are attributed to early sexual experiences and behavior patterns formed during adolescence [2,3]. Despite evidence of considerable sexual risk-taking [2] and HIV risk among AMSM [1], there is a paucity of HIV research and interventions targeting AMSM [4]. HIV prevention interventions targeting AMSM during adolescence (before or

shortly after their sexual debut) can help them establish healthy sexual behaviors, which will have both short- and long-term benefits [3,5,6].

Social networking websites/phone apps are increasingly used to recruit and retain difficult-to-reach populations in health research [7]. AMSM use the Internet and mobile technology to explore their sexuality and seek resources, so social networking websites/phone apps are particularly important for reaching and providing interventions to AMSM [4]. Community engagement is an important part of the development of social network-based

recruitment/retention strategies for online sexual health and HIV prevention interventions [8], and has been successfully used with adult men who have sex with men (MSM) and youth [9,10]. Although two online HIV intervention studies have successfully recruited and retained samples that include MSM <18 years old [11,12], only one study focused exclusively on AMSM (aged 14-18 years) [13]. We were unable to find any studies that inquired with AMSM themselves about optimal online recruitment and retention methods. The current study sought to fill this gap; specifically, interviews were conducted with 14-to-18-year-old AMSM to understand acceptable ways to recruit and retain them in online HIV prevention research. By having AMSM inform these techniques, researchers will be better prepared to successfully conduct online HIV prevention research and develop online interventions to address HIV disparities among AMSM.

Methods

A convenience sample of AMSM (N=16) were interviewed during 2017 Boston and Rhode Island Pride events. Potential participants were approached by study staff who briefly described the study and established eligibility. Eligibility criteria included: (1) being 14-to-18 years old; (2) being cis-male; and (3) identifying as gay/bisexual, reporting sexual attraction to male partners, or reporting voluntary sexual contact with a male partner in the past year. Youth provided verbal assent or consent, depending on their age, and completed a capacity to consent assessment. A waiver of guardian permission was obtained.

Forty-four individuals agreed to be screened; of those, 16 (16/44, 36%) were eligible, and of those all (16/16, 100%) agreed to participate. Of the 28 individuals who were ineligible, the most common reasons for ineligibility were not identifying as cis-male (15/28, 54%) and being over 18 years of age (12/28, 43%). Interviews took approximately 20 minutes to complete. Answers were recorded on smartphones using REDCap [14] and data were coded in real-time by the interviewers. The interview was programed with a list of potential answers for each question, as well as an open-ended response option to capture responses that fell outside the listed options. For open-ended responses, a framework matrix analysis was conducted after data collection was complete [15,16].

Participants were informed as a part of the assent/consent process that the questions they were being asked were part of a larger online sexual health study. Specifically, they were told, "the larger study is designed to determine if an online-delivered sexual health education program might help young men like you stay healthy and avoid sexually transmitted diseases." For

recruitment, participants were asked which social media websites/phone apps they used, the one they used most frequently, and which ones would be good to advertise on. Respondents were asked about the features that would be important to include in online advertisements and, of those features, which would be the most important to include. For retention, participants were asked about the longest online survey they would be willing to complete, ways to increase retention in a longitudinal online study, preferred forms of compensation, and their preferred compensation amount for a 30-minute online survey. All procedures were approved by The Miriam Hospital Institutional Review Board. Participants received US \$5 for the interview.

Results

The average age of the sample was 16 years (standard deviation=2). Eight participants (8/16, 50%) identified as a racial/ethnic minority, 11 participants (11/16, 69%) were gay-identified, and 12 participants (12/16, 75%) reported being sexually active with a male partner in the last year.

For recruitment (Table 1), the majority of respondents used Facebook (15/16, 94%), YouTube (14/16, 88%), Instagram (13/16, 81%), and Snapchat (13/16, 81%). The most frequently used websites/phone apps were Facebook (5/16, 31%) and Snapchat (5/16, 31%). The majority of participants said Instagram (12/16, 75%), Snapchat (11/16, 69%), and Facebook (10/16, 63%) would be the best websites/phone apps to advertise on. Participants reported that it was important for online advertisements to include a brief description of the study with short phrases and bullet points (10/16, 63%), colorful and bright pictures (9/16, 56%), information about compensation (9/16, 56%), and familiar/comfortable words (8/16, 50%). Among these options, colorful and bright pictures (4/16, 25%) and a short description (3/16, 19%) were identified as most important.

For retention (Table 2), the majority of respondents (9/16, 56%) would complete a 10-to-20-minute survey. Information about compensation (11/16, 69%), the length of surveys (10/16, 63%), and what kinds of questions would be asked (10/16, 63%) were identified as important information to provide. The majority of respondents said that sending reminders between study activities (15/16, 94%) and providing compensation (12/16, 75%) would increase retention. Participants preferred an email gift card (11/16, 69%) as compensation. More than half of the participants (9/16, 56%) said that US \$10-\$20 is fair compensation for a 30-minute online survey.

Table 1. Website use and online recruitment strategies identified by AMSM (N=16).

Website use and recruitment strategies	Total, n (%)
Websites used by AMSM	
Facebook	15 (94)
YouTube	14 (88)
Instagram	13 (81)
Snapchat	13 (81)
Twitter	4 (25)
Tumblr	7 (44)
Pinterest	3 (19)
Google+	1 (6)
Best websites for advertising/recruiting AMSM	
Instagram	12 (75)
Snapchat	11 (69)
Facebook	10 (63)
Twitter	6 (38)
YouTube	5 (31)
Tumblr	5 (31)
Pinterest	1 (6)
Vine	1 (6)
Style and content features for online advertisements	
A brief description with short phrases and bullet points	10 (63)
Colorful and bright pictures	9 (56)
How they will be compensated	9 (56)
Familiar and comfortable words	8 (50)
If parent/guardian permission is required or not	6 (38)
A detailed description of the study	4 (25)
How long the study will take	3 (19)

Table 2. Retention strategies identified by AMSM (N=16).

Retention strategies	Total, n (%)
Longest online survey willing to fill out	
5-10 minutes	6 (38)
10-20 minutes	9 (56)
>20 minutes	1 (6)
Information to include in study materials to increase retention	
How participants will be compensated	11 (69)
Length of the survey	10 (63)
Content (ie, what will be asked)	10 (63)
Importance of the questions	5 (31)
Confidentiality assurances	1 (6)
Ways to increase retention in longitudinal online studies	
Send reminders between study activities (eg, phone calls, text messages, or emails)	15 (94)
Provide compensation	12 (75)
Increase compensation value in increments for each activity completed	1 (6)
Preferred forms of compensation	
Email gift card	11 (69)
Check in mail	5 (31)
Cash in mail	2 (13)
Preferred compensation amount for a 30-minute online survey (US \$)	
\$10-\$20	9 (56)
\$20-\$30	7 (44)
\$30+	0 (0)

Discussion

Facebook advertisements have been the predominant way that online HIV intervention studies have recruited AMSM [11-13]. In addition to Facebook, our results indicate that other social media platforms may also be useful. Specifically, most AMSM in our sample report using multiple social networking websites/phone apps. An assessment of the Facebook advertisements used in the intervention study targeting 14-to-18-year-old AMSM found that having images that are salient to AMSM improved recruitment rates [17]. Similarly, our participants indicated that advertisements including bright and colorful images and words that are familiar to AMSM would be important. Our participants also felt that advertisements should include a brief description of the study with short phrases, bullet points, and information about compensation.

Previous online studies have used varying levels of monetary compensation (US \$10-\$35 per activity) and emailed gift cards to compensate their participants and increase retention [11-13]. Our results corroborate the value of compensation to increase retention, this range of dollar amounts (depending on the length

of the study activity), and the use of emailed gift cards. Although previous studies did not indicate other retention-specific procedures, our participants suggested that sending study reminders between study activities may be an additional way to increase retention. Furthermore, AMSM in our study indicated that informing them about how they will be compensated, the length of the surveys, and what they will be asked could also increase retention. Lastly, participants felt that online assessments should be brief.

A limitation of our study is the small sample size. Nonetheless, these results can inform recruitment and retention procedures in online HIV prevention research targeting AMSM. Additional research testing the suggested recruitment and retention procedures is warranted. Furthermore, as the technological landscape quickly shifts, and because adolescents are early adopters of new technology, it is important to continuously assess the current technologies that youth are using. Ultimately, designing recruitment and retention procedures with the input of the target audience (ie, AMSM) will increase the efficiency, reach, validity, and scientific yield of HIV prevention research. This yield, in turn, can facilitate the development of online HIV prevention interventions for this at-risk group.

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Conflicts of Interest

None declared.

References

1. Centers for Disease Control and Prevention. HIV Surveillance Report, 2016; vol 28. Atlanta, GA: Centers for Disease Control and Prevention; 2017 Nov. URL: <https://www.cdc.gov/hiv/library/reports/hiv-surveillance.html> [accessed 2017-12-12] [[WebCite Cache ID 6vesxBeAB](#)]
2. Everett BG, Schnarrs PW, Rosario M, Garofalo R, Mustanski B. Sexual orientation disparities in sexually transmitted infection risk behaviors and risk determinants among sexually active adolescent males: results from a school-based sample. *Am J Public Health* 2014 Jun;104(6):1107-1112 [[FREE Full text](#)] [doi: [10.2105/AJPH.2013.301759](https://doi.org/10.2105/AJPH.2013.301759)] [Medline: [24825214](#)]
3. Mustanski BS, Newcomb ME, Du Bois SN, Garcia SC, Grov C. HIV in young men who have sex with men: a review of epidemiology, risk and protective factors, and interventions. *J Sex Res* 2011 Mar;48(2-3):218-253 [[FREE Full text](#)] [doi: [10.1080/00224499.2011.558645](https://doi.org/10.1080/00224499.2011.558645)] [Medline: [21409715](#)]
4. Mustanski B. Future directions in research on sexual minority adolescent mental, behavioral, and sexual health. *J Clin Child Adolesc Psychol* 2015;44(1):204-219 [[FREE Full text](#)] [doi: [10.1080/15374416.2014.982756](https://doi.org/10.1080/15374416.2014.982756)] [Medline: [25575125](#)]
5. Glick SN, Golden MR. Early male partnership patterns, social support, and sexual risk behavior among young men who have sex with men. *AIDS Behav* 2014 Aug;18(8):1466-1475 [[FREE Full text](#)] [doi: [10.1007/s10461-013-0678-7](https://doi.org/10.1007/s10461-013-0678-7)] [Medline: [24356869](#)]
6. Friedman MS, Marshal MP, Stall R, Cheong J, Wright ER. Gay-related development, early abuse and adult health outcomes among gay males. *AIDS Behav* 2008 Nov;12(6):891-902 [[FREE Full text](#)] [doi: [10.1007/s10461-007-9319-3](https://doi.org/10.1007/s10461-007-9319-3)] [Medline: [17990094](#)]
7. Lane TS, Armin J, Gordon JS. Online recruitment methods for web-based and mobile health studies: a review of the literature. *J Med Internet Res* 2015;17(7):e183 [[FREE Full text](#)] [doi: [10.2196/jmir.4359](https://doi.org/10.2196/jmir.4359)] [Medline: [26202991](#)]
8. Allison S, Bauermeister JA, Bull S, Lightfoot M, Mustanski B, Shegog R, et al. The intersection of youth, technology, and new media with sexual health: moving the research agenda forward. *J Adolesc Health* 2012 Sep;51(3):207-212 [[FREE Full text](#)] [doi: [10.1016/j.jadohealth.2012.06.012](https://doi.org/10.1016/j.jadohealth.2012.06.012)] [Medline: [22921129](#)]
9. Martinez O, Wu E, Shultz A, Capote J, López RJ, Sandfort T, et al. Still a hard-to-reach population? Using social media to recruit Latino gay couples for an HIV intervention adaptation study. *J Med Internet Res* 2014 Apr 24;16(4):e113 [[FREE Full text](#)] [doi: [10.2196/jmir.3311](https://doi.org/10.2196/jmir.3311)] [Medline: [24763130](#)]
10. Bull SS, Phibbs S, Watson S, McFarlane M. What do young adults expect when they go online? Lessons for development of an STD/HIV and pregnancy prevention website. *J Med Syst* 2007 Apr;31(2):149-158. [Medline: [17489508](#)]
11. Bauermeister JA, Pingel ES, Jadwin-Cakmak L, Harper GW, Horvath K, Weiss G, et al. Acceptability and preliminary efficacy of a tailored online HIV/STI testing intervention for young men who have sex with men: the Get Connected! program. *AIDS Behav* 2015 Oct;19(10):1860-1874 [[FREE Full text](#)] [doi: [10.1007/s10461-015-1009-y](https://doi.org/10.1007/s10461-015-1009-y)] [Medline: [25638038](#)]
12. Mustanski B, Greene GJ, Ryan D, Whitton SW. Feasibility, acceptability, and initial efficacy of an online sexual health promotion program for LGBT youth: the Queer Sex Ed intervention. *J Sex Res* 2015;52(2):220-230. [doi: [10.1080/00224499.2013.867924](https://doi.org/10.1080/00224499.2013.867924)] [Medline: [24588408](#)]
13. Ybarra ML, Prescott TL, Phillips GL, Bull SS, Parsons JT, Mustanski B. Pilot RCT results of an mHealth HIV prevention program for sexual minority male adolescents. *Pediatrics* 2017 Jul;140(1):1-1. [doi: [10.1542/peds.2016-2999](https://doi.org/10.1542/peds.2016-2999)] [Medline: [28659456](#)]
14. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)--a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform* 2009 Apr;42(2):377-381 [[FREE Full text](#)] [doi: [10.1016/j.jbi.2008.08.010](https://doi.org/10.1016/j.jbi.2008.08.010)] [Medline: [18929686](#)]
15. Green J, Thorogood N. *Qualitative Methods for Health Research*, Third Edition. London: SAGE Publications Ltd; 2013.
16. Smith J, Firth J. Qualitative data analysis: the framework approach. *Nurse Res* 2011;18(2):52-62. [doi: [10.7748/nr2011.01.18.2.52.c8284](https://doi.org/10.7748/nr2011.01.18.2.52.c8284)] [Medline: [21319484](#)]
17. Prescott TL, Phillips IG, DuBois LZ, Bull SS, Mustanski B, Ybarra ML. Reaching adolescent gay, bisexual, and queer men online: development and refinement of a national recruitment strategy. *J Med Internet Res* 2016;18(8):e200 [[FREE Full text](#)] [doi: [10.2196/jmir.5602](https://doi.org/10.2196/jmir.5602)] [Medline: [27492781](#)]

Abbreviations

AMSM: adolescent males who are interested in sex with males

MSM: men who have sex with men

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