Understanding Engagement in HIV Risk and Prevention Research Among Black Young Men Who Have Sex with Men and Transgender Women in the District of Columbia

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Abstract

Purpose: To develop optimal methods to study sexual health among black young men who have sex with men and transgender women (BYMSM/TW).

Methods: We conducted a mixed-methods prospective study to identify recruitment and retention strategies for BYMSM/TW (age 16–21) in Washington D.C., and describe HIV risk behaviors and context.

Results: Incentivized peer referral was highly productive, and 60% of BYMSM/TW were retained for 3 months. Participants reported high levels of sexual risk, homophobia, racism, and maternal support.

Conclusion: BYMSM/TW studies should utilize a combination of peer-based, in-person, and technology-based recruiting strategies. Additional research is needed to leverage mobile technology and social media to enhance retention.

Key words: HIV, methodology, racial disparities, sexual behavior, young men who have sex with men and transgender women (YMSM/TW).

Introduction

THE HIV EPIDEMIC in the United States (U.S.) is becoming increasingly concentrated among black young men who have sex with men and black young transgender women (BYMSM/TW).^{1,2} The factors sustaining the observed racial disparities in HIV among U.S. MSM are largely related to sexual network- and structural-level differences between black and other MSM.^{3–10} Although a growing number of studies have successfully recruited racially diverse samples of YMSM,^{9,11–14} most were not restricted to HIV-uninfected BYMSM/TW age ≤21 years, the U.S. population most in need of primary prevention efforts. To effectively conduct relevant research, investigators must understand how best to recruit, engage, and retain BYMSM/TW in prospective research, including how to leverage the ubiquity of mobile technology among youth.¹⁵

We conducted a mixed methods pilot study in the District of Columbia (D.C.) to inform the development of optimal methods to study sexual health among U.S. BYMSM/TW in a high-density, concentrated epidemic.¹⁶ We had three aims: identify culturally- and age-appropriate strategies for

engaging local BYMSM/TW in HIV prevention research; determine the feasibility of recruiting and retaining this population in prospective studies; and describe the demographics, HIV risk behaviors, and other contextual experiences of BYMSM/TW in D.C.

Methods

This was a two-phase study that was approved by the Institutional Review Board at George Washington University and included a waiver of parental permission.

For Phase 1, we partnered with two community-based organizations serving lesbian, gay, bisexual, and transgender (LGBT) youth and convened three focus groups to elicit methods for recruitment and retention of BYMSM/TW. Participants were eligible if their sex assigned at birth was male regardless of current gender identity, were age 16–21 years, lived in the D.C. metropolitan area, spoke English, and reported ever having a male sex partner. Sex was defined as anal or oral sex, or mutual masturbation. Although black race was not an inclusion criterion, one participant self-identified as white and was excluded from these analyses.

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If eligible, study staff discussed study procedures with participants and obtained verbal informed consent. An experienced male researcher facilitated the focus groups using a semi-structured interview format with questions about appropriate locations, means, language, compensation amounts, and local nuances related to the recruitment and retention of BYMSM/TW. Focus groups lasted 60–90 minutes and were audio-recorded. Participants received a \$35 incentive. An experienced transcriber produced a verbatim transcription that was reviewed for quality assurance by a research team member, loaded into ATLAS.ti (ATLAS.ti Scientific Software Development GmbH, Berlin, Germany), and coded using an open coding process. The study team synthesized the data, identified key concepts and emergent themes that addressed the relevant research questions, and used content analysis to delineate data patterns.

Phase 2 was a quantitative, three-month cohort study. Based on the themes and lessons learned during Phase 1, we aimed to recruit 25 BYMSM/TW using venue-, mobile-, and web-based strategies. For in-person recruitment, study staff attended scheduled events at local organizations to discuss the study and distribute referral cards. Web-based recruitment included 4 months (September–December 2013) of paid banner advertisements on Facebook and garnered 387 “likes.” We also employed incentivized peer referral: Participants were offered an unlimited number of referral cards and received \$25 if a referred friend enrolled. Eligibility criteria were identical to Phase 1, and focus group participants were invited to complete Phase 2. All eligible participants underwent a verbal informed consent process and provided contact information. The quantitative surveys were administered using Qualtrics software (Qualtrics, Provo, Utah) and were laptop- and smartphone-accessible. Study participants completed the baseline survey at our campus research clinic, a community-based organization, or a nearby café. Three months later, participants received a text/voice invitation to complete the web-based follow-up survey, which could be completed remotely or at the study research clinic. We did not use social media to communicate with enrolled participants due to confidentiality concerns. Participants received a \$35 incentive for completing each survey.

The baseline and follow-up questionnaires included questions related to demographics, characteristics of early and recent sexual partners, HIV and other sexually transmitted infection (STI) testing history, substance use, social isolation,¹⁷ school-based sex education, and experienced homophobia and racism.¹⁸ Given the small sample size and hypothesis-generating nature of this study, we only presented descriptive statistics for the baseline measures. We used Stata 13.0 (StataCorp, College Station, Texas) to conduct all analyses.

Results

Phase 1: Qualitative study to identify strategies for engaging BYMSM/TW in prospective research

The three focus groups enrolled 20 BYMSM/TW aged 16–21 years and occurred in May–October 2013. The discussions elicited three distinct themes related to conducting research among local BYMSM/TW: use of contemporary technology; transparency about study methods; and legiti-

macy of research goals and staff. Table 1 includes direct quotes illustrating these themes.

Participants strongly endorsed using mobile technology to identify and communicate with BYMSM/TW. There was broad consensus for using texting as a primary means of communication and ensuring that quantitative surveys were smartphone-compatible. While there was general agreement that traditional computer use and emailing were outdated activities for many youth, some indicated that these methods symbolized maturity (e.g., using email for a job search). For recruitment, BYMSM/TW provided names of popular social networking apps including those used by the general youth population as well as men who have sex with men (MSM)-specific apps. In addition to paid advertisements, participants recommended that research studies set up user profiles and recruit participants directly.

BYMSM/TW consistently commented on the need for transparency and legitimacy when being approached to participate in HIV prevention research. Consequently, peer recruitment was nominated as the most effective recruitment strategy. While there was agreement about recruitment efforts directly communicating study goals and methods, some BYMSM/TW stressed the importance of being upfront about monetary incentives since this would be the primary motivating factor for some participants. Others commented on strong altruism within their community. BYMSM/TW also noted that traditional recruitment efforts (e.g., flyers, street corner recruitment) remained valuable.

Phase 2: Quantitative prospective study of BYMSM/TW

Between October 2013–February 2014, we screened 37 individuals. Twenty-seven (73%) were eligible and 26 (96%) enrolled. Fifteen (58%) enrolled participants were recruited through peer referral, six (23%) at community-based organizations, and five (19%) through Facebook advertisements. The majority of peer referrals were from a single social network. Participants' median age was 19 years, and five were 16–17 years old. Those recruited at community-based organizations were slightly younger (median = 17.5 years) than among those recruited through peer referral (19 years) or Facebook (20 years). We developed the George Washington University Institutional Review Board (IRB)-approved protocol to directly recruit participants using a GPS-based, MSM-specific app but reached our recruitment goal before it could be used. Of the 25 BYMSM/TW, 15 (60%) completed the three-month survey. Only two of the five (40%) 16–17 year olds completed the three-month survey, compared with 65% of older participants (Fisher's exact P -value = .358). All participants completed the baseline survey on the study laptop, and 13 also chose this for their follow-up survey despite a remote option.

Participants' demographic and sexual risk behavior characteristics are described in Table 2. Nearly all self-identified as gay/bisexual, 4 identified as transgender or female, and the median age at same-sex sexual debut was 14 years. While a minority of participants reported any receptive oral sex (36%), insertive oral sex (48%), insertive anal sex (32%), or sex with a female partner (24%), a majority reported receptive anal sex with a male partner (68%). Half reported condomless anal sex in the past 3 months, and 11 of these 13 BYMSM/TW reported condomless receptive anal sex.

TABLE 1. SELECTED ILLUSTRATIVE FINDINGS FROM FOCUS GROUPS OF BLACK YOUNG MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN, DISTRICT OF COLUMBIA, 2013–2014

Using Technology in BYMSM/TW Research

Interviewer: Do all of you have smartphones?

Respondent: Everyone pretty much has an iPhone.

Interviewer: Would you take the survey on the cell phone?

Respondent: Oh, for sure. Yeah. I think it would be easier on a smart phone. No, it would be.

Respondent: Even on an iPhone it's a struggle. Taking a survey on a computer is the best.

Interviewer: On the computer?

Respondent: Even with an iPhone, I don't like doing applications. I don't like when certain things should not be on a phone, especially a survey or application, like, you know.

Interviewer: Email. So do people use email?

Respondent: I do.

Respondent: I do.

Interviewer: You do. Okay.

Respondent: Especially anyone who is looking for a job or has, like, goals in life. Email.

Interviewer: Do folks kind of go to a PC and sit down and...?

Respondent: Mm-mm (negative).

Interviewer: It's all about the phone.

Respondent: You make a profile, you put pictures up, and they take like a little bio or whatever. (Another Respondent: And by pictures, I mean pictures.) Pictures that are appealing to others.

Transparency

Interviewer: So what would be some things that would attract you all into participating in research?

Respondent: Oh I would say it just like this, money.

Respondent: But to me, it not just about the money. It's about learning and things, and things you didn't know about and hearing different stories. That's why I came.

Respondent: I think so people can better understand how we live or the struggles that we go through on a daily basis. Like the struggles we deal with are a lot of things are just within one day. I mean, honestly, a lot of people won't do it, because a lot of people will think, "I don't need this. Why y'all want to research? Mind your own business." Then you have those who are like, "Finally, *someone* wants to hear us. *Someone* wants to understand where we are coming from." So I think that is why you have those people who will want to do it just because finally we can tell our story.

Respondent: I just think that sometimes people have a lot of pride that gets in the way and being offered help. So with that being said because somebody wants to show you that they're not struggling when they really are so that you don't see them at their weakest point they're going to deny what it is that you give them access to. Also, I think that, going back to the whole approaching someone of that work field, I feel like instead of assuming that that's what they're doing I would probably just ask, "Do you know of someone in some type of association with that type of background or who is participating in those type of things and then offer with the help?" Because if you just assume, then it's just going to be like a rebellious situation in my opinion.

Legitimacy

Respondent: Or just have, if you have your own little shirt like, like the survey name on the shirts and when you pass out flyers make sure you have your shirt on that says what you're about on the back. And on the front just have like a picture and logo or whatever you want and then pass the flyers out to them and (they'll see that you're ready.)

Interviewer: And so you're saying wear, that would legitimize me?

Respondent: Yeah knowing more, like, who you are.

Respondent: Some gays don't like to be approached by know heterosexuals, especially when it's a topic of a session. Hey, we are going to do research on it. They automatically going to go into defense mode: "Don't do too much and make sure he stays away from me." So either have a woman with you or have an older homosexual who can explain what is what. And if you go up to them personally, you should just like have a flyer.

Respondent: But I feel like somebody my age will have a lot more success, not necessarily convincing somebody to do something, but at least participate in a conversation with me as opposed to somebody who is aspiring to learn more about the community and isn't really experienced with that type of lifestyle. So, essentially, you guys are going along the right, but I think that it really takes a peer-to-peer conversation because it might be more so of an understanding where they know where they're coming from and they can relate and they can keep a conversation going as opposed to it really feeling like an interview.

BYMSM/TW, black young men who have sex with men and transgender women.

The majority indicated that they had received HIV/STI testing, and two self-reported HIV infection.

Substance use, social support, and other contextual factors are described in Table 3. Binge drinking and marijuana use were common, while other reported substance use was

rare. Maternal support was high, yet one-third of participants were classified as being socially isolated from family or friends. For most measures of internalized homophobia, approximately half of the respondents indicated strong agreement with lower levels. The majority of BYMSM/

TABLE 2. DEMOGRAPHICS AND SEXUAL RISK BEHAVIOR CHARACTERISTICS OF 25 BLACK YOUNG MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN, DISTRICT OF COLUMBIA, 2013–2014

Characteristic	#/n ^a (%)	Median [IQR]
<i>Demographics</i>		
Age		19 [18–20]
Transgender woman	4/24 (16.7)	
High school degree	15/23 (65.2)	
Current student	15/24 (62.5)	
Gay or bisexual identity	23/25 (92.0)	
<i>Sexual Development</i>		
Age you first wondered about being gay/bisexual		10 [8–12]
Age you were first sexually attracted to males		11 [7–15]
Age first decided that you were gay		12 [9–14]
Age that you first came out		15 [12–18]
Age at which you first had sex with male partner		14 [10–16]
Age at first receptive oral sex with male partner (<i>n</i> = 9)		14 [13–17]
Age at first giving oral sex to a male partner (<i>n</i> = 12)		13 [11–16]
Age at first receptive anal sex with a male partner (<i>n</i> = 17)		14 [12–16]
Age at first insertive anal sex with a male partner (<i>n</i> = 8)		16 [14–17]
Age at first sex with a female partner (<i>n</i> = 6)		13 [5–15]
Ever had a boyfriend	20/25 (80.0)	
Ever “came out” to someone	23/24 (95.8)	
Ever attracted to females	11/23 (47.8)	
<i>Lifetime and Recent Sexual Behaviors</i>		
Number of male anal sex partners, lifetime		3 [1–13]
Number of male anal sex partners, past 3 mo.		2 [0–3]
Any condomless anal sex, past 3 mo.	13/25 (52.0)	
Any condomless receptive anal sex, past 3 mo.	11/25 (44.0)	
Any HIV status disclosure by anal sex partner, past 3 mo. ^b	8/15 (53.3)	
Any HIV status disclosure to anal sex partner, past 3 mo. ^b	7/14 (50.0)	
<i>HIV/STI Testing and Diagnosis History</i>		
History of any HIV testing	18/22 (81.2)	
History of any STI testing	12/22 (68.2)	
History of any STI diagnosis	1/25 (4.0)	
Ever received HPV vaccine		
No	9/25 (36.0)	
Yes	5/25 (20.0)	
Don’t know/no answer	11/25 (44.0)	
HIV-infected (self-reported) ^c	2/18 (11.1)	

IQR, interquartile range; STI, sexually transmitted infection; HPV, human papillomavirus.

^aTotal sample size was 25. Due to missing data and skip patterns, the denominator for each measure is indicated.

^bRestricted to BYMSM/TW who reported anal sex in the past 3 months.

^cRestricted to BYMSM/TW who reported ever receiving an HIV test.

TW indicated at least one lifetime experience of homophobia (84%) or racism (72%).

Discussion

This mixed methods study provided an in-depth investigation into appropriate strategies for engaging BYMSM/TW in sexual health research. Three-month retention was lower than expected, thus future studies should consider innovative strategies for ensuring more complete follow-up, especially among BYMSM/TW <18 years old. Additional findings demonstrated early age at sexual debut, high levels of reported sexual risk, and high levels of experienced racism and homophobia. However, we were encouraged to see relatively high levels of social support and HIV testing among our sample, with a lifetime HIV testing prevalence (81%) similar to other studies of urban YMSM of color.^{14,19} Although the absolute number was small, 16% of our sample

identified as transgender women of color, highlighting the feasibility of recruiting this population that is among the most at-risk for HIV.

These quantitative findings are among the few published estimates of early sexual behaviors and other contextual HIV/STI risk factors among BYMSM/TW.²⁰ In a study of Chicago YMSM age 16–20 years, differences in sexual network characteristics between black and white YMSM were greater than differences in individual-level behaviors.⁹ When compared with similarly aged YMSM from a similar study of almost entirely non-black YMSM in Seattle,²¹ BYMSM/TW in the present study reported similar or lower levels of individual-level sexual behaviors (unpublished data, 2009–2010, SN Glick). Moreover, many contextual factors were similar between studies including parental support, isolation from family, and high school sex education attendance; isolation from friends was more common among D.C. BYMSM/TW than Seattle YMSM. Additional research

TABLE 3. HEALTH AND CONTEXTUAL CHARACTERISTICS OF 25 BLACK YOUNG MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN, DISTRICT OF COLUMBIA, 2013–2014

Characteristic	#/n ^a (%)
<i>Substance Use</i>	
Ever smoked regularly (≥ 1 cigarette every day for 30 days)	19/24 (79.2)
Any binge drinking in past month (≥ 5 drinks/day)	15/25 (60.0)
Marijuana use, past 3 months	11/22 (50.0)
Poppers use, past 3 months	3/22 (13.6)
Viagra use, past 3 months	0/24 (0.0)
Cocaine use, past 3 months	1/23 (4.4)
Crack use, past 3 months	0/24 (0.0)
Heroin use, past 3 months	0/24 (0.0)
Methamphetamines use, past 3 months	0/24 (0.0)
<i>Social Support</i>	
Mother figure is supportive of sexuality ^b	16/20 (80.0)
Father figure is supportive of sexuality ^b	6/13 (46.2)
Isolated from family ^c	6/20 (30.0)
Isolated from friends ^c	6/22 (27.3)
<i>School-Based Sex Education and Support</i>	
Attended in middle school	18/23 (78.3)
Attended in high school	18/24 (75.0)
High school-based LGBT group	10/23 (43.5)
<i>Internalized Homophobia</i>	
Summary score, median [interquartile range] ^d	37 [32–43]
Would not change sexual orientation (strongly agree)	15/25 (60.0)
Comfortable being a homosexual male (strongly agree)	12/25 (48.0)
Homosexuality is as natural as heterosexuality (strongly agree)	13/25 (52.0)
Feel comfortable in gay venues (strongly agree)	13/25 (52.0)
Uncomfortable in social situations with gay men (strongly agree)	6/25 (24.0)
Comfortable discussing homosexuality in public (strongly agree)	11/25 (44.0)
Comfortable being seen with gay person (strongly agree)	14/25 (56.0)
<i>Experienced Homophobia</i>	
Reported at least one experience, ever ^e	21/25 (84.0)
Reported at least one type of experience “very frequently,” ever ^e	13/25 (52.0)
<i>Experienced Racism</i>	
Reported at least one experience, ever ^f	18/25 (72.0)
Reported at least one type of experience “very frequently,” ever ^f	3/25 (12.0)

LGBT, lesbian, gay, bisexual, and transgender.

^aTotal sample size was 25. Due to missing data and skip patterns, the denominator for each measure is indicated.

^bRestricted to BYMSM/TW who reported ever coming out to their mother ($n=20$) or father ($n=13$) figure.

^cLubben Social Network Scale.

^dComposite of 7 items each scored from 1 to 7; overall range 1–49. Lower scores indicate greater internalized homonegativity.

^eIncluded being made fun of or called names, hit, hearing that gay people will be alone when old, hearing that gay people are not normal, feeling that sexuality embarrassed family, pretended to be straight to be accepted, lost a job or other opportunity, cutting off a relationship with friends or family, or being harassed by police because of sexuality.

^fIncluded being made fun of or called names, hit, treated rudely, denied entry to a gay venue, harassed by police, limited in job search, limited in finding sex, or limited when looking for a relationship because of race/ethnicity.

should examine reasons for condom nonuse and how familial and other social support affect HIV/STI risk.

Our study team was ultimately successful in recruiting its target sample, yet this was challenging. Peer referral was nominated as the most effective recruitment strategy and eventually produced one-half of the cohort sample. However, the process was slow which mirrored published reports of using respondent-driven sampling among YMSM.²² Unlike previous YMSM research²¹ and focus groups recommendations—but reflecting broader secular changes in how social media are used—few BYMSM/TW were recruited through browser-based Facebook advertisements, and those recruited through Facebook were older. A recent study of adult MSM demonstrated success using Grindr to recruit younger (age 18–30 years) MSM, although MSM recruited by this modality were also more likely to be white.²³ We did not expect most participants to choose to complete their surveys at our research clinic rather than online, which suggested the value of face-to-face communication and/or immediate receipt of the incentive. Finally, although we utilized a strict retention protocol based on formative research—including texting, flexibility with location of study visit, and monetary compensation—we only collected 60% of the three-month surveys. This could be attributed to the inherent challenges of retaining youth in prospective research, or a function of the observational study design where participants had less ongoing connection with the study as compared with intervention trials.

The study had additional limitations. Because it was designed as a feasibility study, we lacked sufficient sample size for bivariate or multivariable quantitative analyses. We also were unable to evaluate temporal trends due to the limited number of follow-up surveys. The study participants were comprised of a convenience sample, many recruited through a single social network, thus our findings may not be generalizable to all BYMSM/TW. Finally, all of our measures were based on self-report and prone to social desirability bias.

Conclusion

To curb the US HIV epidemic, new prevention strategies for BYMSM/TW are urgently needed. Based on our experience in D.C., BYMSM/TW were conducive to research study participation using locally- and culturally-appropriate recruitment methods, and reported risk behaviors highlighted the critical need for targeted HIV prevention research. Moving forward, researchers should continue to develop innovative methods for prospective studies to disentangle the individual-, network-, and structural-level factors that are contributing to the exceedingly high HIV incidence rates among BYMSM/TW. We recommend that research focused on BYMSM/TW utilize a combination of in-person, peer-based, and technology-based recruiting strategies. Additional research should identify novel ways to leverage the ubiquity of mobile technology and social media to enhance engagement and retention of BYMSM/TW in HIV prevention research and programming.

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