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Self-Efficacy among Young Men who have Sex with Men: An exploratory analysis of HIV/AIDS risk behaviors across partner types

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Abstract

HIV infection continues to rise among young men who have sex with men (YMSM). We explored whether unprotected receptive anal intercourse (URAI) occasions and partners, respectively, were associated with YMSM's (N = 194; ages 18–24) self-efficacy for safe sex with regular and casual partners. We created four self-efficacy typologies: high self-efficacy with both partner types [HRHC;*N*=73(41.7%)], high self-efficacy with regular partners but low with casual partners [HRLC;*N*=24(13.7%)], low self-efficacy with regular partners but high with casual partners [LRHC;*N*=21(12.0%)], and low with both partner types [LRLC;*N*=57(32.6%)]. YMSM in the LRHC category reported fewer URAI occasions, whereas those in the HRLC group reported more URAI partner and occasions, respectively. YMSM having serodiscordant partners were more likely to report more URAI partners, and be represented in the LRLC category. These findings underscore the importance of addressing differential self-efficacy across partner types, and highlight an urgent need to enhance YMSM's self-efficacy with casual partners.

Keywords

gay; prevention; sexual risk; partners

Introduction

Men who have sex with men (MSM) accounted for over half (61%) of all new HIV infections in the United States (US) in 2009. Young men who have sex with men (YMSM) carried the largest burden (69%) of new infections among individuals ages 13 to 29, and 44% of infections among MSM of all ages. Furthermore, while new infections remained somewhat steady for MSM in other age groups, YMSM experienced a drastic increase in new infections between 2006 and 2009, particularly YMSM of color (1). These data underscore the urgent need to develop effective HIV/AIDS prevention programs for this population.

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Safer sex practices (e.g.; condom use, discussions of HIV status, and HIV testing) can be enacted in order to avoid HIV infection through the especially high-risk activity of unprotected receptive anal intercourse (URAI). However, to successfully engage in such safer sex practices, YMSM must feel confident in their ability to negotiate these safer sex strategies with their partners (i.e., safer sex self-efficacy) (2), particularly when engaging in unprotected sex with serodiscordant or HIV-unknown partners (3). Consequently, addressing YMSM's self-efficacy to negotiate condoms with partners remains an important priority in HIV/AIDS prevention. The influence of self-efficacy on behavior is context specific (4); thus, it is vital that we consider the relationship between safer sex self-efficacy and HIV/AIDS risk behaviors as dependent on partner type. Recent findings suggest that MSM have difficulty enacting their safer sex desires with casual and romantic partners, respectively, albeit for different reasons (e.g., caught in the heat of the moment vs. foregoing condoms as a sign of trust) (5–8). Researchers have also noted that YMSM may be more likely to negotiate condom use with casual partners than with a main/regular partner. Recognizing that YMSM may seek different types of partners (e.g., regular and/or casual) at any given time (9–10), it is necessary that YMSM simultaneously feel confident in their ability to negotiate safer sex across different partner types.

Although self-efficacy is dependent on partner type, and despite the prevalence of simultaneous regular/casual partner-seeking, few researchers have examined whether YMSM's self-efficacy with casual partners aligns with their self-efficacy with regular partners (11). Further, researchers have often focused on only one type of self-efficacy (e.g., self-efficacy with casual partners) when examining HIV/AIDS risk behaviors (12–14). This approach, however, assumes that safer sex self-efficacy for casual and regular partners are mutually exclusive or independent processes. YMSM's sexual decision-making, however, may be informed by their *concurrent* perceptions of self-efficacy with regular and casual partners. It is possible, for example, that YMSM who report higher levels of self-efficacy with casual and regular partners negotiate safer sex practices differently (e.g., consistent condom use across both partner types) than counterparts who report high self-efficacy with one type of partner but not the other (e.g., condom use with casual partners only). Similarly, YMSM who report low self-efficacy with both partner types may be least likely to use condoms. This concurrency consideration of partner types is a unique contribution to the current body of literature, and would allow us to consider whether varied self-efficacy across partner types differentially influences YMSMs' risk behaviors.

Study Objectives

The goal of this study was to explore and examine the relationship between safer sex self-efficacy and sexual risk behaviors in order to inform ongoing HIV prevention efforts. We pursued three objectives for this study. First, we assessed YMSM's self-efficacy to negotiate safer sex with casual and regular partners, respectively. Second, we examined the overlap between these two partner types scales and created four self-efficacy categories (i.e., Low Regular/High Casual; High Regular/Low Casual; Low Regular/Low Casual; High Regular/High Casual). We then examined whether these self-efficacy categories varied by YMSM's sociodemographic characteristics and sexual risk behaviors. Finally, we examined whether these self-efficacy categories were associated with YMSM's occasions of URAI in the prior two months and number of URAI partners, respectively, in multivariate models.

Methods

Sample

Data for this paper come from a 2011 study examining the influences of social and sexual networks on HIV testing behaviors (the "Young Men's Study"). To be eligible, recruits had

to be male, be between the ages of 18 and 24, live in the Detroit Metro Area, and report having been sexually active with a male partner in the past 6 months. Participants were recruited from venues frequented by YMSM (e.g., social media websites, dating websites, bars/clubs, university health centers, health departments, public postings), and incentivized with a $25 gift card. Promotional materials included the logo of both the University of Michigan and the HIV/AIDS Resource Center (HARC), our community partner, and asked young men to verify their eligibility to participate in an HIV/AIDS survey, a mention of a $25 gift card incentive, and the survey's website.

Procedures

The web-survey was developed using current web-survey recommendations (15), and piloted prior to data collection. Study data were protected with a 128-bit SSL encryption and kept within a University of Michigan fire- walled server. Upon entering the study site, participants were asked to enter a valid and private email address, which served as their username. This allowed participants to save their answers and, if unable to complete the questionnaire at one sitting, continue the questionnaire at a later time. Participants were then asked to answer six questions (i.e., biological sex, age, residential zip code, sexual activity with men, race/ethnicity) to determine their eligibility. If eligible, participants were presented with a detailed consent form that explained the purpose of the study and their rights as participants.

We carried out data quality checks following recommended practices (16) to minimize duplicate or fraudulent entries following best practices. We used participants' email, IP address, browser/operating system, and time taken to complete survey to flag potential fraudulent/duplicative cases. We also examined the concordance in participants' answers to key survey questions (e.g., comparing participants' self-reported age in years in the screener to their reported month/year of birth in the survey). We cross-checked email and IP addresses through web applications (e.g., Facebook, IP lookup). If verified, we treated a case as unique; otherwise, we did not use the entered data. We had 824 unique site visitors, as counted by unique IP address. We recorded 1034 survey entries, which included 194 eligible and complete cases, 16 incomplete entries, and 264 entries that were ineligible for study participation based on eligibility criteria. In addition, we detected 559 fraudulent entries which were removed from our dataset. Our recruitment rate was 79.69% and, after excluding fraudulent cases, our completion rate was 92.38%. After verification, data were de-identified and transferred into SPSS software.

Consented participants then answered a 30–45 minute questionnaire that assessed their sociodemographic characteristics, attitudes, norms, and intention to get tested for HIV, previous HIV testing experiences, network characteristics, sexual behavior, substance use, information-seeking behavior, and Internet use. Participants could select a $25 iTunes or Amazon e-gift card upon completion of the questionnaire. We acquired a Certificate of Confidentiality to protect study data. The University of Michigan Institutional Review Board and our local community partner (HIV/AIDS Resource Center) approved all study procedures.

Measures

We include descriptive statistics for variables included in this report in Table I.

Sexual Behavior—Participants were asked to report their sexual behavior with men and women during the previous two months using the Sexual Practices Assessment Schedule (17–18). Questions were asking both in formal language and vernacular (in italics) to increase comprehension. For this report, we focus on the questions regarding participants'

number of sexual encounters where they served as the receptive partner. Specifically, we report on the number of URAI occasions and partners, respectively. We assigned a value of zero to participants who reported not having engaged in URAI in the past two months.

Self-Efficacy—We adapted Fisher and colleagues' (19) self-efficacy scale to ascertain YMSM's confidence to discuss safer sex with partners, refuse to have unprotected sexual intercourse, nonverbally communicate to a partner a desire for safer sex, tell a partner through a joke one's desire for safer sex, refuse sex if a partner refuses to use a condom, ask a partner their HIV status, and ask a partner when they were last tested for HIV (20). Participants responded these items using on a 5-point scale (1=Very confident, 5=Not confident at all). Questions were asked separately for regular and casual partners. Cronbach's alphas for the self-efficacy for safe sex scales were α=.94 for regular partners and α=.91 for casual partners. Higher scores in each scale reflect less confidence to negotiate condoms.

HIV Status—We asked YMSM how many times they had tested for HIV, and whether they had ever tested positive for HIV. We used these two questions to categorize our sample of YMSM into HIV-positive, HIV-negative, and HIV-unknown status.

Partner Serodiscordance—Participants who reported having URAI with one or more partners were asked to report if they had been expressly told by their sexual partner(s) that they were HIV-negative or HIV-positive, respectively. Partners who had not expressly told the participant their HIV status were categorized as having an unknown HIV status. We created a dummy variable to measure the risk of having one or more potentially serodiscordant partners during URAI in the prior two months (0 = seroconcordant; 1=one or more serodiscordant partners). Among HIV-negative participants, having a serodiscordant partner was operationalized as having one or more partners who were HIV-positive or of unknown status. Among HIV-positive participants, a serodiscordant partner was operationalized as having one or more partners who were HIV-negative or of unknown status. Among participants who did not know their HIV status, having a serodiscordant partner was operationalized as having one or more partners who were HIV-positive or of unknown status.

Demographic Characteristics—Participants were asked to report their age in years, highest level of education completed, sexual orientation, and transgender identity. Participants also indicated their race (Black/African American, White, American Indian/Alaskan Native, Asian, Native Hawaiian/Pacific Islander, and Other) and Spanish/Hispanic/Latino ethnicity. We combined American Indian/Alaskan Native, Asian, Native Hawaiian/Pacific Islander, and Other Race categories given the limited number of observations, and then created dummy variables for each race/ethnicity group. White respondents served as the referent group in our analyses. We also asked participants to report whether they were single or in a relationship with another man.

Data Analytic Strategy

After conducting exploratory descriptive analyses, we used generalized linear models with a Poisson distribution to accommodate the count nature of our outcome variables. We included the self-efficacy categories as predictors of URAI partners and occasions, respectively, after controlling for race/ethnicity, and partner serodiscordance. For purposes of this analysis, we chose to include the serodiscordance variable rather than HIV status due to the fact that this report focuses on sexual partnerships and how they shape YMSM's risk for HIV transmission. Low self-efficacy for both regular and casual partners (LRLC), and White race were used as initial reference categories. We performed post-hoc analyses

alternating the referent self-efficacy category in order to identify and contrast additional sub-group differences in URAI partners and occasions, respectively. No differences in sexual risk behavior were noted between educational levels (high school completion versus less than high school) or age; thus, these variables were excluded from the multivariate models. For brevity, only statistically-significant findings ($p<.05$) are presented in the text.

Results

Sample Description

Our sample consisted of 194 YMSM with a mean age of 20.66 years (SD = 1.71). Over a third (39%) self-identified as African-American/Black, followed by Whites (26%), Latino/Hispanic (17%), and Mixed or Other Race (18%). The majority of the sample self-identified as gay (84%) or bisexual (13%). Seven percent of the sample identified as transgender. Most participants (N=133, 68.6%) reported being single. A third of our sample reported never having tested for HIV (N=65, 33.5%). Among those who had tested, the mean number of HIV tests reported was 4.14 tests (*SD* = 3.58). Over half of the sample reported being HIV-negative (58.8%), 7.7% reported being HIV-positive, and 33.5% did not know their HIV status.

Participants reported an average of two partners in the past two months (*M*=1.72, *SD*=2.26), with over a quarter of the sample reporting having had one or more URAI partners in the past 2 months. When we examined the average number of URAI partners in the past two months across race/ethnicity categories ($F_{3,190}=4.69$, $p<.01$), we found that African American participants (*M*=.20, *SD*=.52) reported fewer partners than Latinos (*M*=.76, *SD*=1.08) and participants of other races (*M*=.68, *SD*=1.27), respectively. We noted no other racial/ethnic differences in URAI partners. We then examined the number of URAI partners by HIV status ($F_{2,191}=8.78$, $p<.001$), and found that HIV-negative YMSM (*M*=.49, *SD*=.97) reported fewer URAI partners than HIV-positive partners (*M*=1.13, *SD*=.83), and more partners than those of an unknown HIV-status (*M*=.17, *SD*=.52). YMSM who were unaware of their HIV status also reported fewer URAI partners than HIV-positive YMSM in our sample.

Participants reported an average of two URAI occasions (*M*=1.94, SD=6.00), with 13% (N=25) reporting having at least one serodiscordant partner. We also noted mean differences in URAI occasions by HIV status ($F_{2,191}=3.07$, $p<.05$). HIV-negative respondents (*M*=2.82, *SD*=7.56) had more occasions of URAI than those with an unknown status (*M*=.57, *SD*=1.98). YMSM reporting serodiscordant partners (*M*=1.68, *SD*=1.11) reported more URAI partners than those who did not report serodiscordant partners (*M*=.25, *SD*=.65), $t(192)=-9.21$, $p<.001$.

Self-efficacy categories

After summing the items for each scale, we noted a negatively skewed distribution in the scores for regular (skew = −1.26) and casual (skew = −1.18) partner self-efficacy, respectively. Consequently, acknowledging that the non-normal distribution could bias our categorization if we used the mean as the cut-point for each scale, we opted to do a median split to divide participants into four meaningful categories: low self-efficacy with both regular and casual partners (LRLC; N=57), low self-efficacy with regular partners and high with casual partners (LRHC; N=21), high self-efficacy with regular partners and low with casual partners (HRLC; N=24), and high self-efficacy with regular and casual partners (HRHC; N=73).

Serodiscordant partners

Participants with a serodiscordant partner reported lower self-efficacy with both casual (M=15.42, SD=7.76; $t(176)$=2.70, p<.01) and regular (M=15.16, SD=6.99; $t(178)$=3.18, p < 0.01) partners than those without serodiscordant partners (Casual: M=11.94, SD=5.52; Regular: M=11.01, SD=5.89), respectively. Moreover, we noted that most participants with serodiscordant partners were represented in the LRLC category (N=13; 54.2%) compared to LRHC (N=2; 8.3%), HRLC (N=3; 12.5%), and HRHC (N=6; 25.0%) categories. A chi-square statistic was not computed for this difference given the few observations in all other self-efficacy categories. We noted no other differences across self-efficacy scores.

URAI Partners

In our multivariate model ($\chi 2_{(df=8,\ N=175)}$=88.96, p<.001), we found no difference in the number of URAI partners across self-efficacy categories (see Table II), once we had accounted for partner serodiscordance. YMSM who reported at least one serodiscordant partner were more likely to report multiple URAI partners. We noted no association in URAI partners by race/ethnicity or relationship status.

In post-hoc analyses contrasting the other self-efficacy typologies to one another, we found that YMSM in the HRLC category (OR = 2.92 [95% CI: 1.06, 8.08], Wald χ^2=4.27, p<.05) were more likely than counterparts in the LRHC group to report multiple URAI partners in the past two months. We noted no other significant contrasts in our analyses.

URAI Occasions

In a multivariate model ($\chi 2_{(df=8,\ N=175)}$=127.07, p<.001), YMSM in the LRHC category were less likely to report URAI occasions than YMSM in the LRLC category (see Table III). Conversely, YMSM in the HRLC category reported more URAI occasions than the referent group. We also found significant differences in URAI occasions by race/ethnicity categories and HIV status. Compared to White YMSM, Black, Latino or Other Race participants reported fewer URAI occasions. Single participants were less likely to report URAI occasions than YMSM in relationships. We noted no relationship between URAI occasions and partner serodiscordance.

In post-hoc analyses contrasting the other self-efficacy typologies to one another, we found that YMSM in the LRLC (OR=.47 [95% Confidence Interval (CI): .36, .62], Wald χ^2=27.68, p<.001), HRHC (OR = .47 [95% CI: .35, .62], Wald χ^2=28.69, p < .001), and LRHC (OR = .19 [95% CI: .11, .34], Wald χ^2=31.41, p < .001) were less likely than those in the HRLC category to report URAI occasions in the past two months. Conversely, YMSM in the LRLC (OR = 2.50 [95% CI: 1.40, 4.46], Wald χ^2=9.56, p < .01), HRHC (OR = 2.50 [95% CI: 1.40, 4.46], Wald χ^2=9.74, p < .01), and HRLC (OR = 5.31 [95% CI: 2.96, 9.53], Wald χ^2=31.41, p < .001) report greater URAI occasions than those in the LRHC group. Contrasts using HRHC as the referent group were comparable to those presented in Table III.

Discussion

Self-efficacy is a vital ingredient in promoting safer sex behavior; however, the negotiation of safer sex behaviors has been noted to vary across partner types (6, 11, 21). At present, however, it remains unclear whether YMSM's *concurrent* perceptions of partner-specific self-efficacy are associated with different HIV/AIDS risk outcomes. This concurrency consideration of partner types is a unique contribution to the current body of literature, and would allow us to consider whether varied self-efficacy across partner types differentially influences YMSMs' risk behaviors. Our results suggest that YMSM express different levels of self-efficacy with casual and regular partners, being categorized into one of four groups:

low self-efficacy with both regular and casual partners (LRLC), low self-efficacy with regular partners and high with casual partners (LRHC), high self-efficacy with regular partners and low with casual partners (HRLC), and high self-efficacy with regular and casual partners (HRHC). These typologies, in turn, were associated with different HIV/AIDS risk outcomes. Below, we discuss the implications of these findings, highlighting opportunities for HIV/AIDS prevention and intervention development.

Participants in the LRLC category did not have a different number of URAI partners than their counterparts in other self-efficacy categories. The absence of such a relationship, however, may be attributable to the inclusion of serodiscordance in our regression model. Given that most serodiscordant URAI partnerships were identified among those in the LRLC category, it may be possible that the serodiscordance variable suppressed our ability to identify mean differences in URAI partners across self-efficacy categories. Statistical considerations aside, the overlap between low self-efficacy across both partner types and having one or more serodiscordant partners aligns with prior research suggesting that YMSM with low self-efficacy are less likely to negotiate safer sex and reduce their HIV/AIDS risks (2). Given that one third of our sample were represented in the LRLC category and accounted for most serodiscordant partnerships, our findings underscore the need to focus on YMSM who do not feel confident in their ability to negotiate with partners, both regular and casual, and equip them with skills and strategies that help them negotiate sexual encounters safely.

YMSM's perceptions of having self-efficacy to negotiate safer sex with only one partner type were also found to be associated with HIV/AIDS risk. YMSM who reported low self-efficacy with regular partners and high self-efficacy with casual partners (LRHC) reported fewer URAI occasions than any other self-efficacy category. These findings align with prior research suggesting that YMSM are more likely to negotiate condom use with casual partners than with regular partners (11). Although we are unable to assess YMSM's partner-seeking behaviors, one potential explanation for this finding may be that YMSM in the LRHC category are more likely to seek out casual partners than regular partners. As a result, these YMSM may have had a greater number of opportunities to enhance their self-efficacy. It may also be possible that YMSM in the LRHC category are aware that they feel less confidence with regular partners, and take active steps to protect their sexual safety by minimizing their HIV/AIDS risk through condom negotiation strategies with casual partners. While intriguing, we are unable to examine these proposed relationships in our study; consequently, future research examining the sexual decision-making of YMSM in the LRHC category is warranted.

While self-efficacy with casual sex partners was associated with fewer HIV/AIDS risks even though self-efficacy with a regular partner may be low for some YMSM (e.g., LRHC), the same cannot be stated for YMSM on the other side of the spectrum. YMSM in the HRLC category had a higher risk behavior profile, reporting a greater number of URAI occasions in the past two months than any other group and being three times more likely than YMSM in the LRHC to have had multiple URAI partners. These trends persisted even after accounting for relationship status and partner serodiscordance. Consequently, YMSM in the HRLC group may perceive themselves to be efficacious with regular partners, yet have difficulty enacting their confidence in another relational context. In a qualitative study of YMSM's safer sex negotiations, for example, Eisenberg and colleagues (11) noted that YMSM wanted to engage in safer sex practices, yet communicated trust and pursued intimacy by foregoing condoms. Similarly, Bauermeister and colleagues (22) noted that single YMSM were more likely to report multiple URAI partners if they expressed symptoms of romantic obsession and believed that foregoing condoms would help them achieve an emotional connection with a partner. Having lower self-efficacy with casual partners, YMSM in the

HRLC group may also have a difficult time adapting their sexual negotiation strategies for regular partners to casual encounters. Taken together, these findings underscore the need to understand how and when YMSM in the HRLC group engage in safer sex practices, and develop tailored HIV prevention strategies that increase their ability to translate their self-efficacy with regular partners into actual practice across partner types.

Although we noted different sexual risk behaviors between YMSM in the HRLC and LRHC categories, we noted no differences between YMSM in the HRHC and LRLC categories. This finding was unexpected as we would anticipate from a theoretical standpoint that YMSM who report high self-efficacy with both regular and casual partners should present with the lowest risk profile. We posit four possible interpretations for future research. First, it is possible that YMSM who believe themselves to be highly efficacious across partner types have an excessively optimistic outlook on their HIV susceptibility and, as a result, engage in sexual behaviors that resemble those in the LRLC category. In essence, being overly confident may nullify the protective effects expected from having self-efficacy. An alternative explanation may be that YMSM in the HRHC group are unable to discern between regular and casual partners, resulting in an inability to enact partner-specific condom negotiation skills. Third, self-efficacy to practice safe sex may not perfectly correlate with YMSM's behavioral capability to actually enact safer sex practices. YMSM may know what they have to do in order to have safe sex, and be confident in these actions, but ultimately may decide to forego such behaviors for any number of reasons, including desires for increased pleasure and intimacy (5, 11) or inability to negotiate condom use due to substance use impairment (23–26). Finally, it is plausible that our measure of self-efficacy may not perfectly discriminate between groups and, as a result, lead to a limited correlation with YMSM's safer sex practices. Future research examining the plausibility of these interpretations is warranted, as it may point to different strategies in HIV/AIDS prevention.

It is also worth noting that single YMSM were also less likely to report URAI occasions than YMSM in relationships. While foregoing condoms with a regular partner may be a suitable expression of intimacy and trust for YMSM, it is vital that YMSM and their partners be tested prior to foregoing condoms (27). MacKellar et al. (28) for example, found that YMSM forewent condoms before the HIV infection window had passed. Consequently, it is vital that we provide YMSM opportunities to sustain their condom use self-efficacy with regular partners until they have achieved this milestone. Although we were unable to assess the duration of YMSM's relationships, we found a third of YMSM in our sample had never tested for HIV. This proportion of YMSM who are unaware of their HIV status is consistent with prior research (29–30). Given that most new infections are attributable to undiagnosed HIV cases (31) and attributable to a regular partner (32), it is necessary that we continue to promote and sustain intervention strategies focused on increasing HIV status awareness for YMSM in and out of relationships.

While our study provides important insight into HIV risk among YMSM, there are several limitations that must be noted. First, a significant proportion of the sample identified as gay or bisexual, limiting the generalizability of our findings to YMSM who do not identify as gay or bisexual. Second, we did not ascertain how participants found out about our study (e.g., online vs. bars), making difficult to document the diversity of our recruitment efforts and sample. Third, our study is also geographically limited to the Detroit Metro Area and may not be generalizable to YMSM living in other communities. Fourth, the survey offered no definition of casual or regular partners, allowing YMSM to respond with their own definition in mind; however, we must recognize that there are varying definitions for these terms, including a growing body of literature recognizing that a dichotomized distinction between partner types may be artificial and not as easily delineated in young men's lives (33). Consequently, we encourage future research to examine whether condom self-efficacy

measures may be more discriminant by focusing on the timing of a relationship (e.g., "getting to know someone" vs. "dating for a while") and/or the traits of a relationship (e.g., sex with a partner in a relationship with high intimacy vs. one with a partner where there is little or no intimacy). Fifth, our analyses focus on unprotected receptive anal intercourse, limiting our ability to examine how self-efficacy may influence YMSM's decisions to engage in unprotected insertive anal intercourse with different partner types. Future research examining whether our self-efficacy findings may differ as a function of sexual role is warranted in order to portray a full picture of YMSM's HIV risks. Finally, social desirability bias may influence how participants answered survey questions referring to sexual risk behavior; however, we sought to minimize social desirability with the use of a web-based survey and previously validated sexual behavior assessments with this age group. These limitations notwithstanding, our study contributes to the literature by acknowledging that self-efficacy for safer sex with both regular and casual partners concurrently influences YMSM's HIV/AIDS risks. These findings underscore the need to formulate new and innovative strategies to promote safer sex strategies for YMSM, including activities that simultaneously take into account, and are tailored for, different partner types.

Strategies that increase YMSM's safe sex self-efficacy across partner types are warranted. Our findings provide some evidence that differing self-efficacy typologies may underscore different risk profiles among YMSM; however, it remains unclear whether these partner-based self-efficacy typologies inform different partner-seeking behaviors, behavioral skills, or communication styles. Future research, qualitative and quantitative, examining these processes is needed in order to strengthen ongoing prevention efforts.

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Table I

Descriptive Statistics of Study Variables (N = 194)

	Mean	SD	N	%
Age	20.66	1.71		
Race/Ethnicity				
Black			76	39.2
Hispanic			34	17.5
White			50	25.8
Other Race			34	17.5
Education[a]				
Not completed HS			10	5.2
Completed HS/GED			183	94.8
Sexual Identity[b]				
Gay			163	84.5
Bisexual			26	13.5
Heterosexual			7	3.6
Transgender[c]			14	7.3
Relationship Status				
Single			133	68.6
In a Relationship			61	31.4
Lifetime HIV Testing				
Tested			129	66.5
Number of tests	4.14	3.58		
Never Tested			65	33.5
HIV Status				
HIV+			15	7.7
HIV−			114	58.8
HIV Unknown			65	33.5
Serodiscordance				
Serodiscordant URAI			25	12.9%
Self-Efficacy[d]				
Regular Partner[e]	11.59	6.20		
Casual Partner[f]	12.41	5.97		
Low SE w/Reg Partner, Low SE w/Cas Partner			57	29.4
Low SE w/Reg Partner, High SE w/Cas Partner			21	10.8
High SE w/Reg Partner, Low SE w/Cas Partner			24	12.4
High SE w/Reg Partner, High SE w/Cas Partner			73	37.6
Sexual Behavior (past 2 months)[f]				
Total number of male partners	1.72	2.26		
URAI partners	0.43	0.87		
Engaged in URAI			54	27.8

Notes. HRHC = High Self-Efficacy with Regular and Casual Partners; HRLC = High Self-Efficacy with Regular Partners and Low Self-Efficacy with Casual Partners; LRHC = Low Self-Efficacy with Regular Partners and High Self-Efficacy with Casual Partners; LRLC = Low Self-Efficacy with Regular and Casual Partners

[a] One participant had missing data on education

[b] One participant had missing data on sexual identity

[c] Two participants had missing data on transgender identity

[d] Higher scores reflect less confidence in negotiating safer sex

[e] 14 participants had missing/incomplete data on self-efficacy with regular partners

[f] 16 participants had missing/incomplete data on self-efficacy with casual partners

[f] Variables presented in original metric for descriptive purposes. Given their skewed distributions, we used each variable's log10 transformation in analysis

Table II

Poisson Regression of Unprotected Receptive Anal Intercourse Partners (N=175)

	Odds Ratio	95% Confidence Interval	Wald χ2 Statistic
Self Efficacy [a]			
LRLC	*Ref*		
HRHC	.93	(.51, 1.70)	.06
LRHC	.51	(.20, 1.32)	1.92
HRLC	1.49	(.81, 2.72)	1.64
Race/Ethnicity[b]			
White	*Ref*		
Black	.53	(.26, 1.08)	3.08
Latino	1.35	(.72, 2.53)	.89
Other Race	1.78	(.94, 3.39)	3.09
Serodiscordance[c]			
Seroconcordant	*Ref*		
Serodiscordant	5.86***	(3.60, 9.53)	50.67
Relationship Status			
In a relationship	*Ref*		
Single	.74	(.45, 1.22)	1.38

* p < .05;

** p < .01;

*** p < .001

Notes. HRHC = High Self-Efficacy with Regular and Casual Partners; HRLC = High Self-Efficacy with Regular Partners and Low Self-Efficacy with Casual Partners; LRHC = Low Self-Efficacy with Regular Partners and High Self-Efficacy with Casual Partners; LRLC = Low Self-Efficacy with Regular and Casual Partners. *Ref* denotes use of category as referent.

Table III

Poisson Regression of Unprotected Receptive Anal Intercourse Occasions (N=175)

	Odds Ratio	95% Confidence Interval	Wald χ^2 Statistic
Self-Efficacy			
LRLC	*Ref*		
HRHC	1.00	(.77, 1.31)	.01
LRHC	.40**	(.22, .72)	9.56
HRLC	2.13***	(1.61, 2.82)	27.68
Race/Ethnicity			
White	*Ref*		
Black	.64***	(.50, .83)	11.82
Latino	.50***	(.35, .71)	15.14
Other Race	.41***	(.29, .59)	23.05
Partner Serodiscordance			
Seroconcordant	*Ref*		
Serodiscordant	1.13	(.83, 1.53)	.57
Relationship Status			
In a relationship	*Ref*		
Single	.57***	(.45, .71)	24.55

* p < .05;

** p < .01,

*** p< .001

Notes. HRHC = High Self-Efficacy with Regular and Casual Partners; HRLC = High Self-Efficacy with Regular Partners and Low Self-Efficacy with Casual Partners; LRHC = Low Self-Efficacy with Regular Partners and High Self-Efficacy with Casual Partners; LRLC = Low Self-Efficacy with Regular and Casual Partners. *Ref* denotes use of category as referent.