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Spectrums of Love: Examining the relationship between romantic motivations and sexual risk among young gay and bisexual men

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Abstract

We examined the association between HIV/AIDS risk behaviors and romantic feelings among single, young gay and bisexual men (YGBM). Romantic feelings may have positive (romantic ideation) and negative (romantic obsession) connotations. Consequently, we hypothesized that YGBM would report greater risks if they reported having obsessive thoughts about their relationship desires; conversely, we hypothesized that YGBM who envision a romantic relationship would report fewer unprotected partners. Using cross-sectional data from a study examining YGBM's online dating experiences (N=376; ages 18 to 24), we found a positive association between romantic obsession and number of partners for unprotected receptive (URAI) and insertive (UIAI) anal intercourse. Conversely, we found a negative association between romantic ideation and number of partners for URAI and UIAI. Is love risky or protective? Our results indicate support for both perspectives. We discuss the implications of our findings, highlighting the importance of addressing romantic pursuits into existing HIV-prevention interventions for YGBM.

Keywords

MSM; love; obsession; ideation; gay; resilience

INTRODUCTION

More than 70% of new HIV infections among males in the US occur among men who have sex with men (MSM), with nearly 40% estimated to have occurred among youth between the ages of 13 and 29 years [1]. Recent trends among MSM show that young MSM (YMSM) had the greatest percentage increase in HIV diagnoses, from 57% in 2005 to 68% in 2008. Furthermore, YMSM accounted for approximately 88% of HIV diagnoses among adolescent and young adult males in 2008 [2]. From a social developmental perspective [3], emerging adults are at risk of acquiring HIV because their transitions from adolescence into adulthood are often accompanied by a series of explorations in romantic, sexual, and peer relationships [4]. The emerging adulthood spans ages 18 to 25 [3] and is characterized by

“having left the dependency of childhood and adolescence, and having not yet entered the enduring responsibilities that are normative in adulthood, emerging adults often explore a variety of possible life directions in love, work, and worldviews” (p. 469). While adolescence may be a period in which individuals begin to explore adult behaviors and norms, usually through limited participation in adult activities, the emerging adulthood period allows youth non-restricted exploration of adult behaviors and norms prior to settling on adult responsibilities. At present, however, we know little about how gay and bisexual emerging adults’ romantic motivations may influence their HIV/AIDS risk behaviors. This knowledge will aid in developing developmentally and interpersonally appropriate HIV prevention messages. Therefore, the main goal of this manuscript is to examine how romantic motivations are associated with sexual risk behavior among young gay and bisexual men (YGBM).

Dating behaviors play a role in the social and sexual practices of gay youth [5, 6]. While heterosexual youth have opportunities to engage in serial dating and involvement in romantic relationships during adolescence, gay and bisexual men’s same-sex dating opportunities may be delayed until emerging adulthood due to the stress associated with the development of a non-heterosexual identity, fear of rejection from family and friends [7–10], and realignment and adaptation of their romantic expectations with increasing dating and sexual experience [11–13]. Moreover, dating opportunities during adolescence could be limited, thereby restricting connections to others who could play a key positive role in the development of sexual identity and health [5, 14].

In pursuit of romantic and sexual possibilities during the emerging adulthood years, YGBM are more likely to report sexual partners than during adolescence as they have more opportunity to explore their sexuality [3]. Even when YGBM may wish to use condoms, their exploration into an emerging sexual identity and introduction into same-sex dating may lead to feelings of trust and infatuation which may compromise YGBM’s ability to negotiate consistent condom use in every sexual opportunity [15]. Furthermore, condom use may also be less likely if men believe that the benefits of engaging in unprotected sex outweigh those attributed to condom use (i.e., decisional balance) when seeking to promote intimacy and form an emotional bond with a sexual partner [16–18]. Taken together, these findings suggest that examining YGBM’s romantic motivations are warranted in order to contextualize their vulnerability to HIV/AIDS risk.

In the pursuit of romantic possibilities, some YGBM may be eager to fall in love and, colloquially speaking, look for love in all the wrong places (or the wrong people). Although the concept of love is not easily defined, operationalized, and measured in the literature, research on this construct has shown that it is multidimensional comprising of several distinct components [19, 20]. One component describes extreme motivations for romantic relationships that is thought to manifest as obsessive love [20–22]. Romantic obsession refers to intrusive and intense thoughts about a partner that are often also marked by intense feelings of dependence, insecurity, and doubt about a relationship [20–22]. Past research has found evidence to suggest that these extreme romantic motivations (e.g., romantic obsession) are associated with greater HIV/AIDS risk behaviors. In a sample of LGBT men and women in New York City, Missildine, Feldstein, Punzalan, and Parsons found that MSM were more likely to report higher romantic obsession scores than female counterparts, irrespective of relationship status, and to report a greater number of sexual partners [23]. Parsons and Bimbi found that MSM who self-identified as barebackers (i.e., intentional unprotected sex in HIV risk contexts; [24]) reported higher romantic obsession scores than men who did not self-identify as barebackers, irrespective of their HIV status [18]. However, more research is needed to understand how extreme romantic motivations may increase YGBM’s vulnerability to HIV/AIDS risks.

Studies exploring whether romantic motivations may be a protective factor in YGBM's lives have received less attention in the literature. Through romantic relationships, YGBM may have access to resources that buffer negative outcomes and help them navigate their sexuality safely. YGBM's participation in same-sex relationships may be associated with higher psychological well-being [5, 25], which may reduce YGBM's vulnerability to HIV/AIDS risks. Some evidence also suggests that romantic motivations, particularly when assessed as a normative behavior, may have positive implications for YGBM's HIV/AIDS risks. In past studies, romantic ideation (e.g., characterizing components of ideal future relationships) has been associated with fewer number of partners for UAI among MSM [26–27]. In this study, we define romantic ideation as an individual's ability to conceptualize thoughts and feelings about pursuing romantic relationships. This construct is distinct from romantic obsession in that it assumes that romantic ideation is normative and based on cultural and social norms [28]. Consequently, while romantic obsession may be a risk factor, romantic ideation may not inherently expose YGBM to HIV/AIDS risk factors while pursuing love. To date, however, no study has examined whether the opposing findings between HIV/AIDS risk and romantic obsession (risk) and ideation (protective), respectively, are attributable to inadequate or one-sided measurement of romantic motivations. Acknowledging that love is a core component of the human experience, we proposed a risk and resilience framework [29] to examine the relationship between YGBM's number of UAI partners and romantic obsession and ideation, respectively. Specifically, we examined whether these relationships would persist once both romantic motivations were included in a multivariate analysis simultaneously.

Given the scarcity of research examining the risk and protective influences of love on YGBM's HIV/AIDS risk behaviors, our study had three main objectives. First, we tested the psychometric properties of a scale that adequately measured romantic motivations both as a risk factor (romantic obsession) and as a protective factor (romantic ideation). Second, we explored the bivariate associations between these romantic motivations and YGBM's number of partners for UAI in the past two months. Finally, we tested a multivariate model examining the relationship between the number of partners for UAI and the risk and protective romantic motivations concurrently, after accounting for sociodemographic characteristics and YGBM's decisional balance to forego condoms as a way of achieving intimacy with a sexual partner.

METHODS

Sample

Data for this paper were collected as part of a cross-sectional observational study examining young men's dating experiences online [30]. To be eligible for participation, men had to be between the ages of 18 and 24, and report having used a dating website in the past 3 months, having been sexually active with a male partner met on a dating website in the past 6 months, and being single. Participants were recruited through advertisements on two popular, non-sex specific social networking sites, referrals, and flyers posted at local venues commonly frequented by sexual minority youth. Recruitment materials asked men to participate in a research study examining the use of dating websites to meet other men. We did not define "dating websites" to ensure inclusivity of sites that are marketed for romance (e.g., Match.com, Chemistry.com) or for broader social purposes (e.g., Gay.com, Manhunt.com). Social network advertisements were viewable only to men who fit our age range and who lived in the United States. Promotional materials displayed a synopsis of eligibility criteria, a mention of a \$15 iTunes gift card incentive, and a link to the survey's website.

Our sample consisted of 431 young men ($M = 21.49$, $SD = 1.94$) who self-identified as gay (88%) or bisexual (12%). Close to three quarters of the sample self-identified as White or European American; the remainder of the sample identified as Hispanic or Latino (8.9%), Asian or Pacific Islander (7.5%), Black or African American (6.1%), or Other (3.5%). Participants who completed our survey lived in 44 of the 50 US states and territories, including Puerto Rico, and had comparable demographic characteristics across the four US Census regions (19.5% from the Northeast, 24.8% from the Midwest, 28.1% from the South, and 26.0% from the West; 7 participants did not provide information on their state of residence). Highest educational attainment varied across our sample: less than a high school education (2.1%), completed high school (11.2%), technical or associate degree (4.0%), currently enrolled in college (46.3%), completed college (21.2%), currently pursuing a graduate degree (11.4%), and completed a graduate education (3.9%). For purposes of this analysis, we focus on the sexually-active sample ($N = 376$).

Procedures

The web-survey was developed using current web-survey recommendations [31], and pilot tested prior to data collection [32]. Study data were protected with a 128-bit SSL encryption and kept within a University of Michigan firewalled 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 in one sitting, continue the questionnaire at a later time. Participants were then asked to answer four questions (i.e., age, relationship status, use of the Internet, sexual activity with partner met online) to determine their eligibility. If eligible, participants were presented with a detailed consent form that explained the purpose of the study (i.e., exploring how YGBM use the Internet for dating) and their rights as participants. YGBM were asked to acknowledge that they read and understood each section of the consent form, respectively (i.e., participation involvement, protection of privacy, uses of data, potential benefit, compensation, terms of the Certificate of Confidentiality, changing their mind about participation, and who to contact if they had questions).

Consented participants then answered a 30–45 minute questionnaire that covered assessments regarding their sociodemographic characteristics, HIV status, Internet use, relationship ideals, sexual and substance use behaviors, and general mood over the last few months. For those questionnaires that were incomplete, participants were sent two reminder emails that encouraged them to complete the questionnaire; one email was sent a week after they had started the questionnaire and another was sent a week before the questionnaire was scheduled to close. We acquired a Certificate of Confidentiality to protect study data. The University of Michigan Institutional Review Board approved all study procedures.

Measures

We include descriptive statistics for variables included in this report in Table 1.

Demographic characteristics—Respondents were asked to report their age (in years), highest level of education completed (1 = *Less than high school*, 2 = *High school*, 3 = *Technical/Associate degree*, 4 = *Some College*, 5 = *College*, 6 = *Some Graduate School*, 7 = *Graduate School*), and whether they were currently in school and/or employed part-time or full-time. Respondents were asked to report if they considered themselves of Latino or Hispanic ethnicity, followed by several racial categories: African American or Black, Asian or Pacific Islander, White or European American, Native American, and Other. We combined the Native American and Other Race categories given the limited number of observations, and created dummy variables for each race/ethnicity group. For multivariate analyses, we dichotomized the race/ethnicity variables into White and Non-White given the

number of racial/ethnic categories with low percentages. White participants served as the referent group.

Finally, we asked participants if they had ever fallen in love (“I have never fallen in love”; 1 = *Strongly Disagree* to 5 = *Strongly Agree*). We collapsed this variable into a dichotomous variable (0 = *No*; 1 = *Yes*). YGBM who strongly disagreed or disagreed with the statement were marked as having been in love; all other answers were marked as never having been in love.

Sexual Behavior—Respondents were asked to report their sexual behavior with men and women during the previous two months using the Sexual Practices Assessment Schedule [33]. Questions were posed both in formal language and vernacular (in italics) to increase comprehension. For this report, we include questions regarding the total number of male partners, as well as occasions of receptive anal intercourse (RAI) and insertive anal intercourse (IAI), respectively. If participants reported at least one occasion of RAI and/or IAI, respectively, they were asked to report the number of unprotected RAI (URAI) and IAI (UIAI) occasions in the past two months, as well as the number of URAI and UIAI partners with whom they had sex.

HIV Status—Participants were asked whether they had been tested for HIV, if they had received their test result, and whether they were HIV infected (no actual HIV test was performed). We created dummy variables for each HIV status category.

Partner Serodiscordance—Participants who reported having URAI and/or UIAI with one or more partners were asked, “Of those men, how many had actually told you they were HIV-negative and you had no reasons to doubt it?” and “Of those men, how many do you know to be HIV-positive?” The difference in the wording between the two questions was based on our interest to know if the participant had actually been expressly told by the partner he was HIV-negative (as opposed of assuming seronegativity given that the partner “looked healthy”), and our acknowledgement that someone may find out a partner’s HIV-positive status without actually discussing it (e.g., finding HIV prescription drugs in his medicine cabinet). Those partners who were neither included in the HIV-negative nor HIV-positive counts were considered of unknown status. We created a dummy variable to measure the risk of having one or more potentially serodiscordant partners during URAI in the previous 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 with HIV-status unknown, having a serodiscordant partner was operationalized as having one or more partners who were HIV-positive or of unknown status.

Romantic Motivations Scale (RMS)—We adapted the Romantic Obsession Scale (ROS; [18]) to also include romantic ideation in its assessment. Romantic ideation items were developed based on our review of the literature regarding romantic ideation among youth and formative qualitative research with 34 YGBM who we had interviewed prior to the scale development [15]. Participants rated each statement in the RMS using a 5-point scale ranging from 0 = *Strongly Disagree* to 4 = *Strongly Agree*. We then computed mean composite scores for the total RMS scale, and for the romantic obsession and romantic ideation subscales, respectively. We present the RMS items in Table 2 and discuss its psychometric properties in the Results section.

Decisional Balance to Use Condoms—We used the Decisional Balance subscale for Pleasure and Emotional Connection [16] to examine participants' decisional balance to use or forego condoms with partners. Participants were asked to answer 7 items twice. Each statement first referred to sex without condoms, followed by an identical statement asking about sex with condoms. Items included "Sex [with/without] condoms is very intimate to me" and "Sex [with/without] condoms makes feel close to my partner". Participants rated each statement using a 5-point scale ranging from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. Respondents' score was computed by summing the net difference between unprotected sex and condom use scores across the statements. Greater positive scores reflect greater benefits/gains associated with unprotected sex. Negative scores reflect greater benefits/gains associated with condom use. The one-factor solution scale (63.10% of variance explained) had strong reliability (Cronbach's $\alpha = .94$).

Data Analytic Strategy

We first examined the distribution of the variables under study (see Table 1), followed by a principal axis factor analysis with varimax rotation using the RMS items (see Table 2). This factor solution was selected given our interest in having two orthogonal factors (e.g., obsession and ideation) that could be included simultaneously in multivariate analyses. We then carried out bivariate correlations between the variables of interest (see Table 3). We then used generalized linear models with a Poisson distribution to accommodate the count nature of the sexual behavior outcomes, after adjusting for age, race, sexual identity, and whether YGBM had ever been in love in our multivariate analyses (see Table 4). We included these covariates in our analyses to avoid potential confounds when estimating the relationship between number of partners and romantic ideation and obsession. To avoid artificially increasing the Type-I error rate, we examined the omnibus test for each model and the Wald χ^2 statistic of each predictor. Furthermore, to minimize inadequate model estimation due to overdispersion (i.e., an excessive number of zeros [34]), we restricted the multivariate analyses to YGBM who had reported engaging in receptive ($N = 252$) or insertive ($N = 241$) anal sex. Finally, we tested for interaction effects between romantic ideation and obsession on number of UAI partners; however, we found no support for interaction effects (data not shown). For brevity, only statistically significant predictors are discussed in the text.

RESULTS

Sample Description

Approximately 74% of the sexually-active sample self-reported being HIV-negative, 3% reported being HIV-positive, and 23% did not know their HIV status. Furthermore, 9% of the sample reported having had unprotected sex with one or more partners of serodiscordant or unknown HIV status. As shown in Table 1, participants reported an average of 4 male partners in the past two months ($M = 4.12$, $SD = 5.89$, $Md = 2$). Sixty-two percent of the sample reported engaging in receptive anal sex in the past two months ($N = 252$). Among those who had receptive anal sex, over half of the sample reported engaging in at least one unprotected receptive anal intercourse occasion (URAI; $M = 2.88$, $SD = 6.57$) with one or more partners ($M = 1.43$, $SD = 3.27$). Sixty percent of the sample also reported engaging in insertive anal intercourse ($N = 241$). Among those engaged in insertive anal intercourse, over half of the sample reported at least one unprotected insertive anal intercourse occasion (UIAI; $M = 2.55$, $SD = 5.85$) with one or more partners ($M = 1.31$, $SD = 2.95$).

Factor Analysis

Using principal axis factor analysis with varimax rotation, we extracted two orthogonal factors (see Table 2) explaining 44.64% of the total variance (Cronbach's $\alpha = .86$). The first

factor, *Romantic Obsession*, referred to men's obsessive motivations regarding romantic relationships. The Romantic Obsession factor explained 24.52% of the total variance and had strong reliability (8 items; Cronbach's $\alpha = .84$). Conversely, the second factor, *Romantic Ideation*, assessed YGBM's thoughts about a potential romantic relationship. The Romantic Ideation factor (4 items; Cronbach's $\alpha = .77$) explained an additional 20.13% of the total variance.

Participants reported higher mean scores for the romantic ideation subscale ($M = 3.05$, $SD = .73$) than for the romantic obsession scale ($M = 1.84$, $SD = .85$). We found no mean differences across RMS subscales by type of UAI partner, or statistically-significant bivariate relationships between the subscales and other study variables. The two subscales were moderately correlated ($r = .51$, $p < .001$) and included simultaneously in subsequent multivariate analyses.

Multivariate Analyses

Number of URAI Partners—After examining the omnibus test for our multivariate Poisson regression model (χ^2 (N = 248, df = 8) = 216.01, $p < .001$), we found a positive association between URAI partners and romantic obsession (AOR = 1.53, $p < .05$) and decisional balance to forego condoms (AOR = 1.62, $p < .001$), respectively. Romantic ideation, on the other hand, was negatively related to URAI partners in the past two months (AOR = .51, $p < .001$).

Number of UIAI Partners—After reviewing the omnibus test for our model (χ^2 (N = 234, df = 8) = 209.21, $p < .001$), we found a positive association between the number of UIAI partners in the past two months and romantic obsession (AOR = 1.60, $p < .05$), decisional balance to forego condoms (AOR = 1.82, $p < .001$), and having ever been in love (AOR = 2.08, $p < .05$). Conversely, romantic ideation was negatively related to UIAI partners (AOR = .58, $p < .001$).

DISCUSSION

Pursuing romantic possibilities with same and opposite sex attractions is a normative developmental process for youth as they transition from adolescence into young adulthood. Romantic relationships can play a central role in shaping adolescent development, particularly in the development of interpersonal skills and a sense of self or identity [35]. For sexual minority youth, romantic relationships play a pivotal role in sexual identity development, serving not only as a way to learn about intimacy and sexual desires, but also as a source of support to help cope with possible rejection from family and friends and the social stress associated with the development of a non-heterosexual identity [36]. Moreover, they serve as the primary context in which sexual behavior is explored. Yet, research about the specific roles gay and bisexual emerging adults' romantic motivations may serve as risky or protective factors in influencing their HIV/AIDS risk behaviors is remarkably limited.

Within the HIV/AIDS literature, researchers have reported mixed findings on the association between romantic pursuits and HIV risk behaviors among YGBM. In our study, we posited that these mixed findings could be attributable to different theoretical perspectives (e.g., risk vs. resilience) and their associated measurement approaches. Consequently, we examined whether we could adequately measure YGBM's romantic motivations both as a risk factor (romantic obsession) and as a protective factor (romantic ideation). We found support for a two-factor solution of romantic motivation in our psychometric analyses. The first factor (romantic obsession) examined obsessive thoughts about romantic pursuits, whereas the second factor (romantic ideation) accounted for normative thoughts about romantic relationships. This two-factor solution highlights the importance of considering how certain

motivations and behaviors may have both positive and negative attributes [37]. Based on our two-factor solution, we then tested the association between the two romantic motivation constructs and the number of URAI and UIAI partners reported over the past two months, respectively. Given the similar findings for both URAI and UIAI analyses, we discuss them concurrently through the remainder of the Discussion.

Is thinking about love risky or protective to young gay and bisexual men's sexual health? Our findings support both perspectives. Consistent with past findings with older samples [18, 19], YGBM expressing greater romantic obsession were more likely to report HIV risks. Specifically, greater romantic obsession was associated with greater number of partners with whom YGBM engaged in unprotected sex in the past two months. One plausible interpretation for this finding is that YGBM who are eager to participate in a romantic relationship may prioritize their romantic desires over sexual health protective behaviors. In these contexts, YGBM may use unprotected sex as a marker of intimacy with sexual partners [16, 17], particularly if they are trying to create a romantic bond with these partners. In addition, it is plausible that YGBM who report greater romantic obsession may be more likely to perceive fewer risks when engaging in unprotected sex with their sexual partners. Consistent with the fundamental attribution error, for instance, YGBM may overestimate personal characteristics (e.g., attribute an intimate connection with a sexual partner) and underestimate the HIV/AIDS risks present in the situation (e.g., negotiating condoms or disclosing serostatus). While foregoing condoms within a seroconcordant, committed relationship may be a marker of a couple's intimacy and not risky in itself, inconsistent condom use with multiple partners may increase YGBM's vulnerability to HIV infection [38]. Future research examining how romantic obsession may influence YGBM's perceived vulnerability to HIV infection and their attributions about their sexual partners is warranted.

Furthermore, some researchers have argued that romantic obsession mirrors many of the elements present in compulsive sexual behavior, a known correlate of HIV/AIDS risk behavior [23]. In fact, research on obsession-based romantic relationships are characterized as insecure and harmful, and have been linked to lower levels of relationship satisfaction, dependent and anxious attachments, intrusive thoughts about a partner, and the fear of losing a partner [21, 22]. Feelings of passion and infatuation with potential partners may also impact YGBM's ability to negotiate condom use at the time of the sexual encounter [15]. Consequently, it is plausible that YGBM who experience romantic obsessive thoughts frequently may have difficulty self-regulating their sexual decision-making with a potential romantic partner and face unique challenges regarding condom negotiation and self-efficacy. While other factors may play a crucial role in YGBM's decisions to engage in unprotected sex (e.g., intimacy and forming an emotional bond), as discussed in more detail further below, more research is needed to identify the mechanism by which romantic obsession influences sexual decision making among YGBM. In this study, we were unable to test whether YGBM who report higher romantic obsession scores are also more likely to report greater difficulties in self-regulation and/or condom negotiation with their partners. Future research in this area is warranted to inform HIV prevention programs geared towards single YGBM.

On the other hand, consistent with a resilience framework, we found YGBM who reported romantic ideation were less likely to report UAI partners, after accounting for romantic obsession and whether YGBM felt that they had ever fallen in love in the past. This finding is consistent with past research on future orientation and risk-taking behaviors among youth [39–41]; i.e., youth who are able to conceptualize and envision an aspect of their lives in the future are less likely to engage in behaviors that may compromise these future plans. In a recent study, for example, Bauermeister found that YGBM who were able to envision

components (e.g., commitment, sexual exclusivity) of romantic relationships in the future were less likely to report having a greater number of UAI partners [26]. Our finding is also consistent with a strength-based approach to HIV prevention, as Herrick and colleagues have argued, in examining existing strengths and assets that help many gay men to sustain safer sex practices and in turn, to remain HIV-uninfected over time [42]. For example, the authors proposed that factors such as self-monitoring and social support help to buffer negative outcomes, such as loss of control or loneliness that potentially promote sexual risks and/or hinder decisions to engage in safer sex. This supports our notion that romantic ideation may be protective for YGBM who pursue partners with the goal of forming a future relationship, in that they are likely to exert greater self-control and self-monitoring by presenting themselves and engaging in behaviors that are socially ideal (including condom use) in order to make the best impression on potential romantic partners [30].

Therefore, we encourage the inclusion of discussions regarding future relationship aspirations among YGBM into on-going HIV/AIDS prevention programs for this population. These discussions may create opportunities for YGBM to consider their long-term relationship goals and to plan and develop strategies to achieve them. Furthermore, from a structural standpoint, these findings are encouraging as they support the notion that having the opportunity to envision a same-sex relationship may be health protective for YGBM; however, we are unable to ascertain whether the exposure to specific social policies (e.g., civil unions, gay marriage) and cultural portrayals of same-sex relationships in the media may encourage the development of romantic ideation among young men in our sample. Similarly, we are unable to test how environments where same-sex relationships are less likely to be tolerated potentially fuel loneliness among YGBM and create contexts where the desire to feel loved encourages romantic obsession. Future research examining how structural factors may promote or hinder YGBM's romantic ideation and obsession is warranted.

Romantic motivations were not the sole contributors to YGBM's partner-seeking behaviors. After accounting for romantic ideation and obsession in our multivariate models, we found that YGBM who reported having been in love were more likely to engage in UIAI than those who had never fallen in love. One plausible interpretation for this finding is that YGBM who reported having been in love may be trying to recapture feelings of being in love by engaging in behaviors that they perceive would increase feelings of intimacy and closeness to a partner. At the same time, the lack of an association between ever fallen in love and URAI may be an indication that YGBM are trying to reduce their risk of HIV infection by engaging in strategic positioning, a practice in which the insertive role is taken due to an awareness that risk of HIV infection is lower relative to URAI [43–45]. That is, while YGBM may use unprotected sex as a marker of intimacy to try to recapture feelings of being in love, by taking the insertive role they are engaging in a practice that confers less risk of HIV infection than URAI. However, we were unable to examine this hypothesis in this study. Further empirical work is warranted in order to gain an understanding of the mechanisms through which past experiences of having fallen in love influence YGBM's pursuits of romantic possibilities and in turn, how romantic motivations influence their sexual behavior serving to increase potential risk (i.e., engaging in unprotected sex) or strategies that potentially mitigate some of the risk (i.e., engaging in practices that confer less risk).

In addition, we found that the net gains of foregoing condoms over having sex with condoms (i.e., decisional balance) to achieve an intimate and emotional connection with a partner was associated with HIV risk in the past two months. Consistent with past research [16], YGBM were more likely to report having had a greater number of UAI partners if they perceived that foregoing condoms created an emotional connection with sexual partners.

Nevertheless, the fact that decisional balance to achieve intimacy with partners remained statistically significant in our multivariate analyses even after accounting for romantic desires suggests that we may need to reexamine our conceptual definition of intimacy within HIV/AIDS research. While intimacy is theorized to be a component of ideal romantic relationships [26, 46], intimacy as a domain may include additional aspects not measured in the current study, including emotional support, attachment styles, and kinship [21, 47]. A greater understanding of how intimacy manifests, within and beyond romantic desires, may facilitate the development of innovative HIV/AIDS prevention messages and programs. Future research, qualitative and quantitative, examining how intimacy is conceptualized and operationalized in young men's lives is warranted.

Our study had several limitations. First, our cross-sectional design hindered our ability to make causal assertions about our findings. It remains unclear whether the association between sexual risk behaviors and romantic ideation and obsession, respectively, varies depending on the number and quality of past romantic relationships. As youth's sexual and emotional experience increases, for example, the relationship between these constructs may also change. Furthermore, the salience of these romantic motivations may vary across the life course. Among emerging adults, romantic obsession may be a developmental component of growing up, exploring new interpersonal experiences, and learning to self-regulate romantic feelings. Consequently, future research should examine whether romantic ideation changes over time and whether these changes influence sexual behavior. Second, participants were recruited as a convenience sample as there are no population frames from which to select a randomly representative sample of young gay and bisexual men. Third, some eligible YGBM may have been unable to participate in the survey if they had limited access to a personal computer or the Internet. Furthermore, some YGBM may have been dissuaded from participating in the study given the study incentive (e.g., iTunes gift card), particularly if they did not own a MP3 player. Fourth, we were unable to assess the type of relationship (e.g., casual, romantic) that participants may have had, or may have assumed that they had, with their sexual partners when they forewent condom use. Future research should include relationship type in order to account for this potential confounder when examining the relationship between romantic motivations and HIV risk. Finally, given our sample eligibility criteria (i.e., single men who recently sought dates online), our findings may not be generalizable to all YGBM, particularly among men who have no interest in pursuing romantic relationships at this time. In addition, sample was predominantly White, limiting the generalizability of our findings to other racial/ethnic groups. It is plausible that cultural differences may exist in how romantic motivations are conceptualized and operationalized by YGBM of different racial/ethnic backgrounds. Future psychometric work on the Romantic Motivation Scale may elucidate these variations, if they exist. Additional qualitative and quantitative research that examines how different racial/ethnic groups may conceptualize and enact these constructs is warranted.

Taken together, our findings suggest that it is important to examine how YGBM think about love in their lives. Our findings suggest that discussions regarding romantic motivations, whether risky (i.e., obsession) or protective (i.e., ideation), may facilitate conversations regarding partner-seeking behaviors and decisions to engage in unprotected sex within ongoing prevention programs. These discussions may create or highlight HIV prevention opportunities. In addition, providing safe environments where YGBM can pursue romantic opportunities with others and/or learn to navigate these intimate relationships may provide innovative HIV approaches. Future intervention research examining romantic motivations may provide insights on how to diminish HIV risks by decreasing the number of partners with whom youth engage in unprotected sex.

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Table 1

Descriptive statistics of variables of interest

	Sexually-active (N = 376)	Engaged in RAI (N = 252)	Engaged in IAI (N = 241)
<i>Demographics</i>			
Sexual Identity			
Gay	334 (88.8%)	219 (86.9%)	208 (86.3%)
Bisexual	42 (11.2%)	33 (13.1%)	33 (13.7%)
Race			
White	275 (73.1%)	181 (71.8%)	184 (76.3%)
Black	22 (5.9%)	14 (5.6%)	14 (5.8%)
Hispanic	37 (9.8%)	28 (11.1%)	23 (9.5%)
Asian/Pacific Islander	29 (7.7%)	18 (7.1%)	15 (6.2%)
Other Race/Ethnicity	13 (3.5%)	11 (4.4%)	5 (2.1%)
Education			
Less than High School	8 (2.1%)	4 (1.6%)	5 (2.1%)
High School	39 (10.4%)	31 (12.3%)	25 (10.4%)
Technical/Associate	14 (3.7%)	13 (5.2%)	10 (4.1%)
Some College	174 (46.3%)	120 (47.6%)	110 (45.6%)
College	79 (21.0%)	50 (19.8%)	56 (23.2%)
Some Graduate School	44 (11.7%)	24 (9.5%)	23 (9.5%)
Graduate School	17 (4.5%)	9 (3.6%)	12 (5.0%)
Age (in years)	21.46(1.96)	21.42(1.98)	21.55(1.94)
HIV Status			
HIV Negative	277 (73.7%)	186 (73.8%)	175 (72.6%)
HIV Positive	12 (3.2%)	11 (4.4%)	9 (3.7%)
HIV Status Unknown	87 (23.1%)	55 (21.8%)	57 (23.7%)
<i>Sexual Behaviors</i>			
Total Number Male Partners	4.12 (5.89)	4.54 (6.27)	4.89 (6.38)
URAI Partners	0.95 (2.75)	1.43 (3.27)	1.21 (2.92)
UIAI Partners	0.84 (2.44)	0.98 (2.63)	1.31 (2.95)
URAI Occasions	1.93 (5.54)	2.88 (6.57)	2.30 (5.29)
UIAI Occasions	1.64 (4.84)	2.13 (5.75)	2.55 (5.85)
Participants had serodiscordant partner(s)	32 (8.5%)	21 (8.3%)	17 (7.1%)
Decisional Balance to Forego Condoms ^a	-0.12 (1.24)	0.02 (1.24)	0.04 (1.24)
Romantic Obsession ^b	1.84 (.85)	1.83 (.87)	1.87 (.88)
Romantic Ideation ^b	3.05 (.73)	2.98 (.77)	3.03 (.73)
Ever in Love (N, %)	255 (68.7%)	177 (70.8%)	156 (66.1%)

Notes. URAI = unprotected receptive anal intercourse; UIAI = unprotected insertive anal intercourse.

^aComputed by summing the net difference between unprotected sex and condom use scores. Greater positive scores reflect greater emotional benefits/gains associated with unprotected sex; negative scores reflect greater emotional benefits/gains associated with condom use.

^bScale ranges from 0 = Strongly Disagree to 4 = Strongly Agree.

Table 2

Factor Structure of the Romantic Motivations Scale

	Factor	
	Romantic Obsession	Romantic Ideation
I think about how being in a relationship would solve my problems	.68	.23
I have sex to feel loved.	.67	.05
I confuse sex with love.	.64	.15
My desire to find a boyfriend has interfered with my ability to get into a meaningful relationship.	.62	.21
I feel empty when not in a romantic relationship.	.57	.38
I pursue partners even though they have told me that they are not interested.	.54	.09
I fall in love quickly.	.48	.35
I obsess about a specific person even though it may not work out.	.45	.39
I often think about romantic relationships.	.18	.84
I often think about romantic possibilities	.17	.76
I enjoy the high associated with starting a new relationship	.09	.60
When I meet someone I like, I can't stop thinking about him.	.33	.47
	$\alpha = .84$	$\alpha = .77$

Table 3

Bivariate associations across variables of interest ($N = 376$)

	Age	Decisional Balance	Romantic Obsession	Romantic Ideation	URAI Partners
Decisional Balance	.07				
Romantic Obsession	-.08	.03			
Romantic Ideation	-.02	-.06	.51***		
URAI partners ^a	-.01	.37***	.09	-.14	
UIAI partners ^a	.04	.40***	.07	-.07	.57***

* $p < .05$,
** $p < .01$,
*** $p < .001$

^a In bivariate analyses, we used the log-10 transformation for number of unprotected receptive anal intercourse (URAI) and unprotected insertive anal intercourse (UIAI) partners in order to avoid violations to normality.

Table 4

Multivariate Poisson regression examining the relationship between number of URAI and UIAI partners among YGBM engaged in receptive and/or insertive anal intercourse in the past two months, and romantic obsession and ideation, after adjusting for age, sexual identity, race/ethnicity, partner serodiscordance, decisional balance to forego condoms, and ever been in love.

	(N = 248)			(N = 234)		
	AOR	95% CI	Wald χ^2	AOR	95% CI	Wald χ^2
Age	.97	(.82, 1.15)	.14	.95	(.81, 1.11)	.43
Bisexual ^a	1.39	(.46, 4.26)	.33	1.09	(.47, 2.52)	.04
Minority Race/Ethnicity ^b	.86	(.44, 1.69)	.19	1.44	(.77, 2.52)	1.29
Serodiscordant partner(s)	.94	(.52, 2.05)	.01	1.02	(.56, 1.86)	.01
Decisional Balance	1.62 ***	(1.32, 1.98)	21.43	1.82 ***	(1.47, 2.24)	31.48
Romantic Obsession	1.53 *	(1.02, 2.30)	4.29	1.60 *	(1.09, 2.34)	5.83
Romantic Ideation	.51 ***	(.37, .72)	14.52	.58 ***	(.44, .75)	15.93
Ever in Love ^d	1.03	(.47, 2.28)	.01	2.08 *	(1.13, 3.84)	5.48

* $p < .05$,

** $p < .01$,

*** $p < .001$

^a Gay identity serves as the comparison group.

^b Whites serve as the comparison group.

^c Having had only seroconcordant partner(s) serves as the comparison group.

^d Not having ever been in love serve as the comparison group.

^e Due to missing data in one or more variables, we excluded 4 participants from the multivariate URAI analysis and 7 participants from the multivariate UIAI analysis.