“Sometimes people let love conquer them”: How love and trust in relationships among MSM impact perceptions of sexual risk and sexual decision-making

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INTRODUCTION

Gay, bisexual, and other men who have sex with men (MSM) account for a disproportionate burden of HIV and sexually transmitted infections (STIs) in the United States (1). After decades of HIV and STI prevention efforts, HIV incidence is still increasing among MSM (1), with MSM accounting for 63% of HIV incidence in the United States in 2010 (2). To address this, research has examined the prevalence and predictors of sexual risk-taking, especially unprotected anal intercourse (UAI), the primary biological risk for HIV transmission. Previous research has aimed to understand risk-taking on multiple levels, including societal and structural influences (e.g. minority stress theory) (3-6), relationship characteristics (e.g. formal vs. casual) (7) and individual cognitive processes for decision-making (8-10). However, little research has focused on the emotional processes that occur when individuals, especially men, make sexual decisions.

When research has focused on emotional motivations for sexual risk-taking, it has mostly been within the context of intentional UAI with casual and/or anonymous partners in a risky context, commonly referred to as "barebacking" (11-14). This research has quantitatively and qualitatively examined sexual risk-taking within the specific context of casual sex; however, it does not fully examine how emotional processes impact decision-making across a variety of relationship contexts. Sexual risk-taking among MSM in more committed relationships has also been examined; however, little research has explored the impact of emotions on risk-taking. Studies by Goodreau et al. and Sullivan et al. indicate that one to two-thirds of new HIV infections among MSM are attributable to main partnerships (15, 16); which is often s explained by the increase in number of UAI acts in formal or main partnerships (16). Quantitatively, we understand why HIV transmission occurs among main partnerships; however, studies have not qualitatively examined motivations behind sexual risk-taking in these types of relationships, which are typically characterized by increased levels of love, intimacy, and trust.

Sexual decision-making has also been examined within the context of behavioral theories, which are useful when understanding motivations behind sexual risk-taking. Existing theoretical frameworks

(e.g. Health Belief Model, Protection Motivation Theory, Precaution Adoption Process) suggest that decision-making regarding risky behaviors is directly linked to perceptions of risk and vulnerability (8-10). A cost-benefit analysis, also based on perceptions of risk, may also apply to sexual decision-making; studies by Suarez et al. suggest that condom negotiation is based on the assessment of the perceived benefits of UAI (e.g. pleasure, intimacy) and how they compare to the perceptions of sexual risk (e.g. HIV, STIs) (17, 18). These theoretical frameworks are complicated by the understanding that sexual risk and HIV vulnerability are often underestimated during decision-making processes, resulting in risk perception as a poor deterrent of sexual risk-taking (19). Furthermore, decisions about risk are not always "rational" or "logical"; there are multiple contextual factors that impact sexual decision-making (17, 18, 20). Emotions may account for this non-rational and non-logical context; however, they have not been fully explored within these frameworks of cognitive decision-making.

Some research has quantitatively focused on how emotions impact sexual risk, specifically examining romantic feelings and romantic motivations in terms of "romantic obsessions" (21, 22). In these studies, "romantic obsession" was defined based on scales measuring obsessive and extreme thoughts, dependence, etc. A study conducted among lesbian, gay, and bisexual men and women found that gay and bisexual men reported a higher romantic obsession than lesbian and bisexual women; this romantic obsession was associated with a higher reporting of sexual compulsivity, which could be used as measure of sexual risk (22). In another cross-sectional study of 376 young MSM (YMSM), Bauermeister et al. found that having feelings described as a "romantic obsession" was positively associated with a greater number of UAI partners (for both receptive and penetrative UAI), while YMSM who reported having a "romantic ideation" had fewer UAI partners (21). Other studies have also quantitatively examined emotions in more formal relationships (23, 24). In one study, HIV sero-discordant same-sex male couples reported how intimacy and sexual satisfaction impacted sexual risk-taking; among HIV-negative partners intimacy and sexual satisfaction were negatively associated with sexual risk-taking, while among HIV-positive partners, sexual satisfaction was positively associated with sexual risk-taking (23). These studies show that romantic or intimate emotions are present for MSM and quantitatively, this

research suggests that emotions have an impact on sexual risk; however, previous studies do not qualitatively examine how emotions impact sexual decision-making or perceptions of sexual risk.

While much research has attempted to explain the determinants behind sexual risk-taking among MSM, previous literature does not qualitatively and holistically examine how emotions impact sexual decision-making and sexual risk-taking in a variety of types of relationships or how these experiences change as relationships develop or diminish over time. In this longitudinal qualitative study, we examine a variety of types of sexual and romantic relationships among MSM to understand how emotions (e.g. love, intimacy, trust) mediate MSM's perceptions of sexual risk and sexual decision-making. We use a longitudinal qualitative approach that utilizes visual timelines in order to capture the dynamic nature of emotions, relationships, and perceptions of sexual risk. This qualitative longitudinal approach allows us to capture micro-shifts that occur as emotions and perceptions of risk changed over the study period. In addition, this approach provides a clearer understanding of participants' overall relationship patterns in order to make better comparisons when understanding how risk-taking occurs.

METHODS

Study Population and Recruitment

This study was approved by Emory University's Institutional Review Board. From November 2012-February 2013, we contacted MSM who previously participated in other studies at Emory University and stated that they were interested in being contacted again for future research. Participants were eligible if they: 1) self-identify as a gay or bisexual man; 2) live in the Atlanta metropolitan area; and 3) had UAI in the three months prior to being screened for the study. All potential participants (n=1,440) were contacted via email to complete a screening survey, which produced 198 responses. All eligible and interested participants (n=46) were later contacted to schedule interviews. We recruited 25 participants, all of whom completed the study.

After 20 baseline in-depth interviews (IDIs) were completed and summarized, the data were reviewed to assess saturation and variation in participant demographics in order to determine how to continue recruitment. Targeted recruitment for the final five participants involved fewer young men (<25

years) because there was less variation in data from these participants (Table 1). The mean age for participants was 32.2 years, ranging from 19-50. Approximately half the participants identified as African American/Black (44%) and half were Caucausian/White (48%); only two participants identified as another race (8%). Almost all participants identified as gay/homosexual (92%), with two identifying as bisexual. Most participants were not in a committed relationship (answered no the question: "Are you currently in a relationship with a man you feel committed to above all others? Some people might call this a boyfriend, life partner, husband, or significant other.") (68%) at the time of enrollment.

Study Procedures

We conducted an innovative, three-phase, ten-week longitudinal qualitative study, involving participation in an in-depth interview at baseline (baseline IDI), three personal relationship diaries (PRDs), and an additional in-depth interview at closing (debrief IDI). In total, we conducted 25 baseline IDIs, 75 PRDs, and 25 debrief IDIs.

Baseline IDIs followed a step-by-step process using a life-history timeline to retrospectively examine dating and sexual histories**.** Participants placed stickers with predetermined labels on the timeline in response to questions about relationship characteristics (e.g. partner type, commitment, exclusivity), emotions (e.g. love, trust, safety), experiences with anal sex (e.g. frequency, condom use, sexual decision-making), and perceptions of HIV and STI risk with each partner.

During the next phase of the study, participants completed three prospective, web-based PRDs (one every three weeks), answering quantitative questions about sexual and/or dating partner during this time period. PRDs asked about commitment to each partner, how they knew each partner, how long they knew each partner, how many sexual encounters they had with each partner (stratified by type: oral, penetrative anal, receptive anal), how frequently condoms were used, and how they ranked each person on a scale from one to five based on how well they knew the partner, emotional risk, and HIV/STI risk. Rankings were on a 1-5 scale, with 1 being the least and 5 being the most. Participants were also asked to choose applicable statements from a list of 26 "hot spots," statements that demonstrated a variety of

emotions/relationship characteristics (e.g. "I don't know the first thing about him," "I get jealous when he flirts with other people," "I trust him a lot,").

PRD data were extracted and unpacked in a debrief IDI, which also employed a timeline approach to further examine emotions and sexual decision-making during the ten weeks of follow-up. Participants followed a systematic, participatory process in which they were asked to qualitatively describe previously reported PRD answers, which were represented on the timelines with stickers. Separate timelines were created for each partner, signifying changes between each PRD three-week period; participants were asked to further describe PRD answers and expand on each partner using predetermined labels that they added onto the timelines. Each debrief IDI was tailored to participant responses in PRDs, with slightly different interview guides addressing different types of responses (e.g. multiple sexual partners, one sexual partner, PRDS that included not having sex).

Data Analysis

All IDIs were audio recorded and transcribed verbatim. Analysis was conducted using MAXqda, version 10 (Verbi Software, Berlin, Germany), a qualitative data analysis software program. Multiple analysis strategies were employed in order to compare and contrast themes within and between interviews. Interviews were first examined as individual life-stories; after multiple close readings, we created thick descriptions characterizing each participant, summarizing his relationships and identifying his relationship style, patterns of condom use, and risk definitions. This in-depth analysis of individual life-stories enabled analysts to then consider a thematic analysis, examining patterns across participants within the context of each individual's experiences.

This thematic analysis entailed the consistent application of a set of codes to all verbatim transcripts in order to examine how themes were discussed across participants and between groups of participants. A preliminary codebook was created based on a close reading of several transcripts, incorporating explicit domains from interview guides (deductive themes) as well as pervasive, unanticipated themes that were emergent across various transcripts (inductive themes). Provisional definitions were given to each code and six analysts applied the codes to a single transcript. The coded

transcripts were merged for comparison and code definitions were revised based on an examination of coding disagreement. This process was repeated until consistent agreement was attained among all coders; three baseline IDIs and one debrief IDI were coded in this way.

Once the final codebook was established (Table 2), these codes were applied to all fifty baseline IDI and debrief IDI transcripts, with at least two analysts coding each transcript. A focused reading of coded text allowed analysts to develop thick descriptions for each theme. These descriptions identified common concepts, patterns, and unique statements that appeared in the transcripts. Data were also compared between demographics; for the purpose of data retrieval by theme, types of respondents were grouped together based on age, race, relationship status, relationship development, HIV status (if disclosed), and patterns of condom use. Key quotes, including common and outstanding quotes statements, were chosen to represent the data.

RESULTS

Participants described a variety of types of relationships, including: long- and short-term; monogamous and open; emotional and unemotional; frequent, occasional, and one-time encounters and; developing, diminishing, and steady relationships. There was also a range in experiences with sexual decision-making and the formation of risk perceptions; there was variation between participants, but for each individual, decision-making also varied depending on the partner and the type of relationship. The most common emotions described by participants were: love, intimacy, trust, and lust.

Love and Emotional Connections

Participants frequently described feelings of "*love*," *"being head over heels,"* "*emotional connections*," and *"emotional attachments."* At times, these terms were used interchangeably, but many participants also described strong emotional connections with partners that they specifically would not define as love. These emotional connections and experiences of love were described as a "*constellation"* or a "*bunch of things"* that fit together to create a feeling or experience of love, including: the *"emotional"* part of a relationship, *"genuinely"* caring about someone, *"emotionally investing,"* feeling excited, having common interests, feeling comfortable, *"knowing someone,"* feeling as though someone

will *"always be there for you,"* being willing to *"do anything and everything I could to support him,"* knowing that someone *"won't let you down," "sharing your emotions,"* taking *"ownership and responsibility"* for a partner's happiness, the desire to spend time with each other, feeling like *"your day wouldn't be complete without them in your life,"* unconditional feelings of love (e.g. loving despite not agreeing on everything), *"an emotional part [during] sex,"* attraction, tenderness, intimacy, trust, respect, being *"unselfish and less guarded with your heart,"* someone who will *"stick around"* even through *"rocky roads*," feeling like someone is *"family,"* and knowing that *"you* want *to spend your life"* with someone.

Love was described as one-sided in some relationships and mutual in others; participants described both the experience of loving and feeling loved. In more one-sided experiences of love, this sometimes changed who had *"control"* in the relationship: "*I was the one in control. He was more smitten with me than I was smitten with him. So I had more control at the beginning. But over time, falling in love and fear sometimes of losing him…I let go of the reigns a little bit*" (P115). This sense of giving up control and fear of the termination of a loving relationship also played a role in definitions of "*emotional risk,"* a ranking question on the PRDs. Participants provided numerous explanations for emotional risk and stronger emotional attachments commonly meant that emotional risk was either very low or very high; low risk was because a participant had more confidence in the relationship and high risk was due to fear of losing the partner.

Mutual experiences of love were described as something that makes a relationship "*more serious*" or involves a "*deeper connection*;" one participant described a loving partner as *"my happily ever after"* (P107). Another participant described an "*emotional connection*" as *"potential… to go somewhere much more serious… potential of building a life together"* (P114). This sense of building a life together is where love and commitment overlap; however, these relationship characteristics were not described as mutually exclusive because commitment existed in relationships that lacked love and vice versa.

Love and Risk Perceptions

Participants described feelings of love and "*emotional connections*" or "*emotional attachments*" as contributing to perceptions of risk and sexual decision-making. However, there was variety in how participants described this impact; some participants perceived emotional connections as decreasing sexual risk, while others perceived it as increasing risk.

Some participants considered their "*safest*" partners to be the ones with whom they did not have any emotional attachments because they felt more "*in control*" of these sexual encounters:

> *P101: I'm going to go over here [naming this partner as my least risky partner in terms of HIV and STIs]. This was my random act of kindness, that's what I call this… it's no scientific research to that but that's my honest answer…Because that's normally how it happens…That's normally how I feel. I'm in control of the situation. I don't feel a certain kind of way afterwards. There's no emotional attachment afterwards and I feel safe, emotionally and physically and health-wise afterwards.*

P101, who expressed in both his baseline and debrief IDIs that he was more accustomed to casual relationships, felt that casual relationships without "*emotional attachments*" were less risky. Similarly, other participants considered the partners with the emotional connections to be a higher risk because they were more likely to *"let their guard down"* and *"let love conquer them."*

> *P102: If I had [anal] sex with [this partner] it would have been purple [without a condom] too because I was so into him and so ready that it was just gonna be purple. I could trust him… I believed I could until I saw what I saw… I think the pattern is very common. I believe that when people like someone so much, I think Lady Gaga said it in her song 'Bad Romance,' she said, 'I want to share your disease with you.' When people love you so much… when they feel like they love someone so much they are willing to risk life itself for that person knowing what this person's status is or knowing their situation… Sometimes people let love conquer them and not their relationship.*

While participants who were less accustomed to formal relationships felt that an increase in emotions also increased HIV and STI risk, many other participants linked a lack of emotional connection with a higher risk for HIV and STIs; this was especially true for participants who were more typically involved in formal relationships rather than casual ones. This was especially evident in cases where emotional connections changed over the study time period because perceptions of risk coincided with these changes. This allowed participants to provide additional insight into the relationship between a decrease in emotional connection and an increase in HIV/STI risk. P103 described a partner who was a "*lover*" in the first PRD and was ranked as a 3 in terms of HIV/STI (1-5 scale, 5=highest risk). In the

second and third PRDs, this partner transitioned to a "*hookup*" and the HIV/STI risk increased to a 4. P103 explained the change as resulting from the level of emotional connection in his relationship:

> *P103: I chose a three for the timeframe that I saw him as a lover primarily because, to me, that's going to be the least amount of risk….you're more in touch with him, to me, I guess, whenever I saw him as a lover. Whereas whenever I transitioned into…seeing him now in a hookup frame of mind. He then gets upgraded to a four because then at that point…those feelings before of trying to feel close to him or whatnot kind of went to the back burner so to speak. So of course there's more risk at that point when you're not as concerned with it…. as far as being in touch with him, there's feelings of intimacy. I think there's an element of communication… an obvious aspect that comes into play there. [With a lover] you're still communicating more in depth as far as daily feelings and whatnot. Whereas with hookups, it's more so when are you available?...*

According to P103, feeling close to a partner lowered HIV/STI risk because the deeper connection leads to a different type of communication. In this case, the lack of communication is associated with an increased risk. P112 also described a similar situation in which his feelings for a partner decreased over the study period and this was associated with an increase in HIV/STI risk. In this case, it was the result of a specific event that occurred:

> *P112: All these numbers kind of correspond like how well I knew him dropped. The emotional risk dropped. But the HIV and STI risk increased. He had just more of a negative connotation after that… I guess probably because I was feeling a certain kind of way about him because of him and my brother fighting, I think that's probably why he got lower scores. Not because they're necessarily the most conscious things but just because I was feeling a certain way about him. Because I don't think between three weeks and six weeks he increased drastically in his HIV and STI risk or anything. Just it's more of a mental thing.*

In this example, the difference in the perception of risk is described as something "*mental*" rather than an actual change in HIV/STI risk. However, this mental change can be important when it facilitates sexual decision-making.

Love and Sexual Decision-Making

Love was described as something that was associated with "*lustful feelings.*" Different acts of sex were described as more associated with loving feelings and emotional connections than others, which translated into sexual decision-making based on emotional connections; in most cases anal sex was perceived as a more intimate activity, but a few participants described oral sex as "*more loving*." Some participants described "*saving*" certain activities for partners who were "*romantic*":

> *Interviewer: Earlier you mentioned how you wouldn't just fuck anybody…how there's differences in the values between oral sex and fucking. And so I guess could you talk about that a little more and why, with [this partner], that you wouldn't, you only decided to have oral with him?*
>
> *P112: Because I, again, I do trust him but there aren't strong emotions. There's friend emotions but there's not like strong, like a romantic emotion attached to him. There's something that's kind of reserved for romantic situations.*

When discussing condom decision-making, participants described engaging in UAI specifically because of emotional connections. According to participants, an emotional connection and an increased sense of comfort in a relationship can lead to a perception of reduced risk, which facilitates UAI:

> *P122: I think there's probably a misconception that the more comfortable you feel with someone the less of a risk that there is. But I know that's not true, but I think that's how a lot of people feel… the level of comfort that you feel with the person, I think that you mentally think that their risk goes down because you feel more comfortable with them. So I think that use of condoms probably decreases as you go along.*
>
> *P120: I would say the more comfortable and trusting in those things that I feel, it seems to be like those I see as the least amount [of HIV/STI risk] and…I didn't use condoms right away because there was a sense of feeling loved and secure and lots of, that kind of starting out.*
>
> *P117: I think I just fell really hard for [him] because I don't think we used a condom but once or twice. Looking back, stupid just because of where he came from and knowing the life he was living. But in my heart, and I know you shouldn't base it on what's in your heart or your feelings but I just knew that there was no trouble there. It's worked in my favor so far with him but I just knew there was nothing to really worry about.*

In addition to considering their own emotional connections with their partners, participants also discussed how their partners' feelings towards them mediated sexual decision-making. Participants described being more willing to engage in UAI if their partner considered them to be a *"priority in the love department"* (P117). Participants also described their partners' willingness to engage in UAI because of their emotional connections with them: *"Both of them [were] very deeply emotionally attached to me… I think in both situations, I wanted to more than they did. And they did it for me or they allowed me to"* (P119). In these cases where condom decision-making was based on mutual emotional connections, perceptions of HIV/STI risk were frequently reduced and UAI was used as a way to increase the connection between partners. In the case that perceptions of risk were increased, it was because there was the idea that a participant would be more likely to engage in UAI, which still indicates that an emotional connection with a partner facilitates UAI.

Intimacy

Intimacy was defined as multidimensional, including "*mental*," "*emotional*," and "*physical*" factors. Intimacy was commonly defined by participants in terms of sex, but was also described by many participants as something completely separate from sex because "*you can be intimate with somebody and not have sex with them*" (P106). Intimacy ranged from physical affection that is not necessarily sexual (e.g. cuddling, kissing), participating in activities together (e.g. cooking, going to the movies), sharing intimate details about oneself in conversation (e.g. sexual histories, family histories, difficult experiences), and experiences of commitment and exclusivity. Intimacy was also defined in terms of an emotional connection and, for some participants, was closely linked with feelings of love.

In some cases, participants used the term "intimacy" simply to describe sex, but most participants differentiated between sex that lacked intimacy and sex that included it. Sometimes this difference was purely physical; some participants described intimate sex as less "*aggressive*." Other participants stated that intimacy doesn't necessarily change the physical actions of sex, but rather impacts the "*mood*"; one participant stated that, "*We still do exactly the same things. It's just all in my head*" (P104).

Intimacy and Risk Perceptions

Participants commonly described partners with whom they experienced intimacy as being partners who were perceived as less risky for HIV/STIs. P103 describes how the experience of being intimate leads to a perceived "*lower risk*" and how intimacy makes one feel "*less guarded*":

> *P103: To me, when you're able to get intimate with somebody, there's a lower [HIV/STI] risk because obviously if you are able to take your feelings into that extreme, you're feeling less guarded. You're feeling like you have to worry about it less versus when you transition into hooking up with somebody and it's more so about getting laid or fulfilling sexual desires and needs that come up. Worrying less about, as far as relationship aspects. That, to me, your risk is obviously going to elevate.*

According to P103, not thinking about the "*relationship aspect*" elevates sexual risk. Other participants explained that this perception of reduced sexual risk and increased "*safety*" due to intimacy is not necessarily based on communication about HIV risk management, but rather is based on an assumption due to increased comfort that forms from intimacy:

P124: I knew him more, a little bit more intimately. Like, I can't say that I know him perfectly well but I know him well enough to know that it's a safe situation and so I felt more comfortable and enough to give oral sex…

Interviewer: What about [this partner] made you feel safe? You said that you felt safe with him, in terms of oral sex.

P124: Just the fact that I know him and the fact that I know he's, there's a 99.99999% chance he's not carrying any STIs and likewise me the same, and so in that regard just because I know him there is a greater level of intimacy there, that's why, I think I felt more safe.

"Feeling safe" often occurred based on the idea of increased intimacy and according to P124, the intimacy was enough reassurance to believe that this partner was not a risk for his sexual health.

Intimacy and Sexual Decision-Making

This link between intimacy and sexual risk-taking was also described as impacting decisions about condoms; participants specifically identified using a condom in relationships that lacked intimacy: "*We had non-intimate conversation. Didn't really know him, so I used the condom*" (P123); "*I would always use a condom with him and we're not that intimate with each other*" (P109). On the other hand, in relationships that had intimacy, participants were more likely to engage in UAI because they are "*less guarded*":

Interviewer: Do you see any connection between the stickers and the HIV risk?

P121: I guess I would probably connect that to I wanted to feel close and connected to him, comfortable as being intimate

Interviewer: How are those things related to HIV risk?

P121: I guess when you feel comfortable with someone, I guess you kind of, in a way you let your guard down physically. And so you may do things that you don't ordinarily do just with a random person that you meet or whatever. So I guess that's how that would be related to that HIV and STI risk.

Interviewer: So what kinds of things might you do with someone who you feel more comfortable with?

P121: I guess, eventually you may have unprotected sex, even though that didn't happen in this case. You may do that. You may just try things that you've never really done before.

This idea of being "*less guarded*" was described as a reason for lower perceived sexual risk; however, it is also described as a reason for UAI.

According to participants, intimacy was also directly related to trust and commitment in terms of decisions about condom use. Many participants described seeking this level of intimacy that results from not using a condom; in this context, UAI was perceived as a symbol of intimacy and commitment—a sign that this partner was a more formal relationship:

> *Interviewer: Why did you decide not to use condoms?*
>
> *P122: I think there's always the excuse out there that it feels better or whatever. I don't believe that and the reason I don't believe that is because once you're having sex, you're enjoying it no matter what. I personally think that for us, and I can only speak for us as a couple, that it forms a bond and a level of intimacy that, when you remove, when you take that condom away, it also takes away the maybe like boyfriend status and it's like OK, this is committed. So because we're committed, we're taking this step. So maybe it's also an indirect unsaid step from one level to the next and I think that it's a, it is a trust level and it is a trust action… So I think that not using one was also us saying to each other we're at this point, we're taking it to the next step. Maybe we took it to the next step in other areas, but this is how we're taking it to the next step in our sex life.*

In this case, UAI was a form of an implicit sexual agreement—it was an "*indirect unsaid step*" that symbolized a shift in the relationship, increasing the intimacy and establishing the relationship with a more official status.

Trust

Trust was a common theme among participants and was frequently described as an integral factor mediating perceptions of risk and sexual decision-making. Trust was a dynamic concept; some participants described trust as something that was built over time while other participants described it as just being there (or not being there). In some cases trust was equated with comfort, but it went beyond simply comfort when participants described trust in terms of "*trusting him with my life*." This level of trust was based on the idea that a partner would never intentionally do anything that would cause the participant harm, such as transmitting an STI or HIV. Development of trust was most commonly based on explicit or implicit sexual agreements involving the determination of monogamy or concurrency with outside partners and the likelihood that a partner would keep or break an agreement.

Trust and Risk Perceptions

According to participants, feelings of trust that were formed based on sexual agreements strongly determined perceptions of HIV/STI risk. Monogamous partners with whom explicit agreements had been made were commonly considered to be more trustworthy and the least risky for HIV/STIs:

> *P107: [He was less risky because] we are committed. I have no reason to distrust him ever. We're monogamous…I have no reason not to trust him. I mean I'm sure there are people who have been surprised before in their lives but you know at this point I have no reason to mistrust him.*

> *P125: I trust him a lot would relate [to how I ranked him for HIV/STI risk] because I trusted, first of all, on the test results and then in him when he said, you know, I haven't had any other partners…this one basically goes back to the trust and you basically, you haven't lied to me so far that I'm aware of. So the fact that you say you haven't been with anyone and I kind of, there's no risk there.*

For some participants, non-monogamy in a relationship simultaneously reduced trust and increased the perception of HIV/STI risk. This was especially the case if expectations and agreements regarding monogamy changed during the course of the relationship:

> *Interviewer: Were any other feelings attached to the fact that you knew that he was going on Grindr [an online hookup site] and that other people were telling you things?*

> *P103: Well, I mean, it caused a lot of distrust to be quite honest because when I would have sexual encounters with him… I would always have this thought in the back of my mind like am I going to contract something? What am I getting into bed with, you know? Whereas before, it purposely wasn't like that, when there was more an exclusivity.*

For other participants, trust and risk were not based purely on monogamy, but rather honesty regarding outside partners. If outside partners were part of an explicit agreement and there was open and honest conversation about that agreement, then these relationships were still categorized by trust and a perceived lower HIV/STI risk; however, the lack of this honesty and the breaking of agreements was perceived as "*a problem*" and an increased risk:

> *P114: We never had a commitment to be monogamous, even though I was while we were together. He claimed he was going to be but I knew, based on knowing him, that that wasn't going to be the case. And so I told him, you know, I don't want that hype but I do want you to be honest with me when if you do something else because I want to know… if you're out playing around then I want to know about it. I'm not saying you can't, I'm just saying you need to be honest with me about what you're doing…So that became an issue where I did find out he was doing things and I'm like, okay, there's an issue if there's not honesty and regardless of what the*

relationship, if it's boyfriend, friends, whatever, I expect honesty and if I'm being lied to then I have a big problem with that.

P114 describes a situation in which it is not the agreement itself that builds trust and reduces risk, but the honesty regarding the agreement. Many other participants also discussed risk perceptions and trust in terms of the breaking of agreements or the likelihood that a partner would or would not break an agreement. In many cases, the most trusted partners were those who were perceived as least likely cheat. Cheating was equated with dishonesty and a breach of trust and risk was commonly defined purely based on the *"likelihood of cheating"*:

> *P121: [I defined HIV/STI risk] based on the likelihood of somebody possibly cheating. I just looked through the list and said who would be the most likely out of all of them to cheat or to lie about something.*

> *P119: [I define risk] based on whether I trust you with my life because that's what you're doing. So, and do I feel like I know enough about movements or patterns in men? Because at the end of the day, men operate in patterns and so did I know enough about your patterns as a man that I could forecast that you're not cheating and/or that I would feel comfortable being unprotected?*

Participants described trust in terms of this "*likelihood to cheat*" based on the perception that a partner "*would have never done anything to put me at risk or anything like that*" (P124). Participants also stated that this trust meant that if a partner did cheat, that he would still ensure the participant's safety in terms of sexual risk: "*I trust him, the fact that I don't think he's playing around or cheating on me. And I trust that if he did, he would tell me and we would take more appropriate actions even if that meant starting back to use condoms for a while until we made sure" (P114).*

The perception of a partner's likelihood to cheat or not cheat was also based on emotional connections, especially if a participant felt that their partner had a strong emotional connection to them:

> *Interviewer: What does that mean to trust him?*

> *P124: I knew that he had really strong emotions towards me and I knew that he wasn't interested in anyone else and that he wasn't having sex with anyone else. So that's how I trusted that he wasn't going to give me any STIs.*

P124 describes this further to explain how this impacts a perception of risk: *"Part of the [risk] ranking deals with the way that I perceive their emotions towards me are and whether I know they're like wholly*

devoted to me or not" (P124). If a partner had a "*strong emotions*" or was more "*devoted*" then they were perceived as more trustworthy, less likely to cheat, and therefore less risky.

Trust and Sexual Decision-Making

Feelings of trust also navigated sexual decision-making and the decision to engage in UAI: "*We were best friends. I trusted him more than I trusted most people in my life. That level of trust, it just didn't need a condom because I trusted him that much that I knew that he would be safe with my body. That's how much I trusted him" (P112).* When participants felt as though their partner was going to ensure the safety of their sexual health, they were more likely to engage in UAI.

Trust based on sexual agreements was an especially strong facilitator for sexual decision-making, with determinations of condom use based on whether or not a relationship was exclusive. Participants were less likely to have UAI with partners with who had outside partners or a partner who was likely to cheat:

> *P108: He wanted to still have it raw but I wasn't comfortable with it because I think he'd be up to having sex with other people random and I'm not going to get burned. I'm not trying that.*
>
> *P111: Because we was no longer exclusive so I didn't know who he had been with and I'm protecting myself. So I started using, I told him you have to use a condom…Before because we was exclusive [we didn't use condoms]. But now that we're not, I don't know who you with, what you doing, so in order to protect me, that is why I said we're going to have to use a condom.*
>
> *P102: So I was like, 'Just wear condoms you know let's just do it.' I mean he was already for condoms anyway but it was the kind of relationship where I was not going to like even if we got comfortable with a condom I wasn't going to take it off anyway. I wasn't gonna be like let's take it off or let's like let's like it always need to be something between us at all times because his pattern, his behavior pattern showed me that he was always in denial you know he showed that he can be sneaky and sometimes not distrustworthy but he worked with an angle and a motive. And he was a user towards the end so it just led me to believe that this is a person who is capable of cheating, a person that can meet someone like (snaps fingers) in a minute and have sex with them on the way of coming home you know and people don't know that but it's getting to the point now where sex is so available now that you can cheat so much more easily… so that's why I was like number two! [the second riskiest of my partners].*

In some cases, being in a monogamous relationship was a reason to engage in UAI: "*For me it's always assumed that you wear a condom and for most of the guys who I date I think they're on the same page and it's when you are in a relationship…that you stop wearing a condom*" (P104). For some

participants, the point where UAI became more likely was when the partners had an explicit conversation to be monogamous: "*Once we had the, OK, we're being monogamous and we've had our test then we pretty much just stopped using condoms"* (P114). UAI was more common in monogamous or exclusive relationships because of the level of trust:

> *Interviewer: How did you make decisions about condom use?*
> *P124: There was an element of trust here. We were monogamous and so I felt like I trusted him….We did have sex, protected sex, in the beginning and then as time went on, we stopped.*
>
> *Interviewer: How did you make decisions about condoms with him?*
> *P121: Well, technically at first we started using them but then it kind of all because we're boyfriends we didn't use them anymore because we trusted each other.*
> *Interviewer: How does trust play a role?*
> *P121: It's like an assumption, but you feel strongly about the person to where you think they wouldn't do anything to hurt you or anything.*

UAI occurred due to the trust that existed in monogamous relationships, but in some cases, UAI was also used specifically to build trust and show a partner that you are being monogamous; the willingness to not use a condom was considered a sign of trust in the relationship: "*When we first started out, he wanted to use condoms and then we built up that trust and we decided to experiment without the condom and I didn't want him not to trust me so I did it"* (P109). Multiple participants stated that the trust built from UAI was also considered to be a sign of "*commitment*":

> *P122: We were in the middle of having sex and I think we both had already disclosed that we both were negative; we hadn't been with other people… and I said to him, I said do you want me to put on a condom? And he said it's up to you…and I think that was his way of saying I trust you but I want you to feel comfortable, so whatever your level of comfort is. So I didn't [use a condom] and… neither of us has since then. So I think that, again, it's little experiences that develop into trust and go from maybe boyfriend over to partnership because you're, I think that, I mean, that's a big commitment. I mean, some people take it less seriously. Other people take it more seriously and maybe it wasn't the act of not wearing a condom. It was the 'I'm comfortable' but I want you to be at the same level of comfort that I am kind of thing. So, yes, so I think that's how it actually kind of started.*

P122 stated that the trust built from UAI was not only due to the act itself, but the feelings associated with that act; in this case, UAI was an opportunity for both partners to show each other that they trusted each other enough and that they felt *"comfortable"* enough to have sex without a condom.

Participants also described some cases where partners perceived UAI as a necessary element of trust in order to build a relationship: "*So his thing was if you don't trust me not to have sex with you without a condom then we don't need to be together*" (P106, Baseline). Under these circumstances, UAI was considered proof that neither partner was going to have sex with anybody else. However, the necessity to engage in UAI as proof of not cheating was considered a very negative experience:

> *P101: With [this partner], we never used a condom because he looked it at a condom as I was cheating on him which scared the hell out of me…with him, it was a written rule. It's like what do we use the condoms for?...When I pulled out a condom, he's like, 'What do we need that for? You're not cheating on me, are you?' And that's where the physical unsafe part was, always felt like that with him.*

Lust

Lust was defined as a *"sexual attraction"* or a *"physical thing"* that sometimes was present in more emotionally intimate relationships, but could exist without any other emotional connections. Love and lust were described as two very different feelings; however participants recognized that sometimes people get confused between these two emotions as well. Participants described lust and experiences of pleasure during sex as mediating decisions about sex. Lust functioned differently than the other emotions because it only had only a small impact on perceptions of risk; however feelings of lust did facilitate a participant's willingness to engage in UAI despite a perception of risk.

Lust and Risk Perceptions

When participants described the relationship between lust and perceptions of risk, they described lust as increasing risk perceptions because it has the potential for facilitating increased sexual risk-taking:

> *Interviewer. Which stickers [on the timeline] do you feel like most impact how you ranked HIV risk?*
>
> *P101: …probably pleasure because now I'm realizing that I need to keep my guard up because I'm enjoying it as well… meaning I need to make sure that, am I still, am I the bottom, and I the top, because if I'm, if I'm pleasuring myself, maybe I'm pleasuring myself in different type of sexual activity now. Or maybe I'm finding different sexual activity that will lead to me pleasuring my, being pleasured. So I have to, that just letting me know, OK, just because I'm feeling good…let me still keep my eyes open because now I'm starting to enjoy this.*

Participants recognized that increased feelings of lust and pleasure could potentially lead to different types of sexual activities that could potentially be riskier, therefore increasing the perception of HIV/STI risk.

Lust and Sexual Decision-Making

Lust in and of itself navigated decisions around condom use. Lust was described as a reason for UAI:

> *P103: At the beginning of the relationship there was a lot of unprotected sex and kind of just having first met them there was a lot of sexual lust that was built up and a lot of mixed emotions so that's kind of what led to that.*

In some cases, the experience of being *"so into him,"* describing someone as *"hot,"* and experiencing lust facilitated decisions that participants described as risky and atypical. For example, P104 described a sexual experience with a partner who had a known HIV-positive status:

> *P104: Actually I topped him with a condom the first time also and it was a lot of fun but I just was nervous the whole time. And the problem that I had going against me is that he is very, very hot and sexy and it's like the struggle I'm having with what my brain is telling me to not do versus like what my eyes want and the hands want to do.*
>
> *Interviewer: So you talked about the impact of the fact that he's very, very hot and sexy and how that sort of changes things for you….Can you elaborate on that a little bit more? What kind of effect does that have exactly?*
>
> *P104: Well there are certain physical characteristics about him that I really, really like on a guy and that I don't find often. And when I see those things, it's kind of like a major weakness for me. It's like a drug. So I just, I can't help myself sometimes with that, yes. That's pretty much it.*

P104 attributes his sexual decision-making to his attraction to this partner. Even though P104 described this experience as risky, in the moment his feelings of attraction were competing with his cognitive process in determining risk. Other participants also described this same phenomenon of knowingly engaging in sexual risk-taking behaviors due to attraction: "*I don't trust him to not be free of STIs and there's an element of it being unsafe but…at least felt like during the time that the risk was worth the reward"* (P124). According to participants, attraction can mediate sexual decision-making, enabling one to "*let all [their] cares go to the wind*" (P104).

On the contrary, in some cases, participants described experiences that were "*fun*" or "*passionate and intense*" but they still did not engage in sexual risk-taking behaviors. In one example, P118, one of the youngest participants, describes an experience where *"he was pretty fun in bed, actually"* but he did not have condoms available so they did not engage in anal intercourse, despite wanting to do so. For a few participants, describing a partner as *"hot and sexy"* made them even more likely to use condoms because they were under the assumption that being *"hot"* meant that this partner was likely to have a lot of other partners:

> *Interviewer. So what made you use condoms?*
>
> *Participant 101. ... I wanted to make sure that I did as much as I could do to protect myself because he was, I knew that he was just that, very hot and sexy.*

Though a few participants perceived increased attraction as a reason to use a condom, participants more commonly expressed experiences where lust alone navigated the decision to engage in UAI that they would have otherwise considered to be risky behavior.

Willingness to take a risk

According to participants, love, intimacy, and trust mediate sexual decision-making through risk perceptions; however, feelings of lust mediate sexual decision-making by causing one to overlook the possibility of risk. Many participants, especially those who were not in formal relationships, described their *"willingness"* to take a risk, explaining *"a certain tolerance for risk"*; however, this was perceived as negative:

> *Interviewer. Do you feel like you learned anything about yourself in this process?*
>
> *Participant 124. Yeah, well, yes. I learned that I definitely attach a lot of negative feelings and emotions to my sexual encounters. I have a certain tolerance for risk, like, you know, I'm kind of OK with getting a blow job in a sex club. I'm kind of OK with having anal sex with somebody who I don't really know that well. Like, um, protected but, you know. I mean, I have pretty high, I have a relatively high tolerance for risk when it comes to this sort of thing and I've had an STD before, so I know that, you know, I'm human and can definitely get it (chuckling). Um, but, um, you know, I've, I've been very, very, very lucky with respect to, you know, the encounters that I've had and the things that could have happened, um, to me. So, I mean, I'm thankful for that but, um, at the same time I know that, you know, if I keep on doing this crap that it, it's going to bite*

me and then I am going to get something that you can't wash off. So, or, or take a shot and get rid of. Yeah. So. I would like to change my behavior (laughing) but that's easier said than done.

Participants who were in formal relationships were also engaging in UAI; however, these participants did not perceive their actions as higher risk because other emotions and levels of commitment were established. However, for all participants and for a variety of relationships, emotions had an impact on a *"willingness"* (or lack of willingness) to engage in UAI.

DISCUSSION

Results presented here indicate that feelings, including love, intimacy, and trust, impact sexual decision-making by shaping perceptions of risk. Most commonly, love, intimacy, and trust reduced perceptions of risk, thus increasing a willingness to participate in UAI. The willingness to engage in risk-taking behaviors when positive emotions are present means that the actual risk may be greater in relationships with greater emotional connections, e.g. those in which men feel a greater sense of love and comfort with their partner. This implies that one's perception of risk may not always align with actual risk, which challenges theories of health behavior that state that risky behaviors are linked with perceptions of risk (8-10).

Lust, however, was described as a unique feeling because it increased a willingness to engage in UAI without reducing a perception of risk. When considering a cost-benefit analysis (17, 18) for sexual decision-making, lust may increase the benefit of engaging in riskier behaviors without impacting the perception of the cost; however, the concept of lust was described as more complex than simply explaining UAI as an increased benefit. The idea of increased pleasure and increased attraction changes a cognitive process; this feeling was compared to *"a drug"* that lowers inhibitions and the ability to control decision-making.

Although little research has examined the impact of emotions on perceptions of risk and sexual risk-taking, these findings indicate that it is important to consider the relationship between emotional connections and sexual risk-taking when working with HIV and STI prevention. Participants identified engaging in risky behavior despite being knowledgeable about HIV and STI risks. In some cases, they

used this education to engage in risk reducing activities (e.g. UAI when they are a penetrative partner, but not a receptive partner); however, participants also actively ignored this education and engaged in risky behaviors despite *"knowing better."* HIV and STI prevention efforts should address these emotions and cognitive processes that occur when these emotions are present because according to these findings, education about sexual risk is not as useful when it does not consider the emotional contexts in which sexual decisions are made.

There were some limitations when conducting this research. Due to the qualitative nature of the data, results are not generalizable beyond an urban population of gay and bisexual men in Atlanta. Furthermore, even though participants described relationships with MSM who do not identify as gay or bisexual, all participants identified as gay or bisexual, limiting the ability to understand the impact of emotions on sexual risk among MSM in general. Despite these limitations, this study incorporated an innovative longitudinal approach to understand the complexities of the impact of emotions on sexual risk-taking.

These findings indicate that additional research needs to be done in order to examine how to address emotional processes when considering HIV and STI prevention interventions. Interventions should illuminate these aspects of relationships among men in order to more appropriately address sexual decision-making.

Table 1: Number of Participants by Age and Race

Age (in years)	Race			
	White	Black	Multiple Races	Total
<25	3	2	1	6
25-34	5	5	0	10
≥35	4	4	1	9
Total	12	11	2	25

Table 2: Code Definitions

Code	Definition
State of the Union	Relationship definitions, transitions, development, beginnings/endings, terms, casual vs. serious, future plans, activities shared, meeting the family, (Non-)Cohabitation; Hotspot: "I don't know the first thing about him"; Ranking 1-5 on how well they know the person
Exclusivity	Concurrency, monogamy, cheating, fidelity, sexual agreements, women on the side
Inequalities	Inequalities between partners: age, race/ethnicity, disability, body size, social class/capital/access/privilege, income, housing
Economics	Money, material issues, material inequalities, work, being the financial provider, Sugar Daddy, transactional sex, forming a joint household/partnership/economies, dependent economies, personal finances
Dominance	Dominance, submission, aggression, and passivity
IPV	Abuse/assault (named or unnamed): emotional, physical, sexual, material, verbal, stalking, controlling behaviors, manipulation, coerced non-use of condoms, name-calling ("too gay"), threats; one partner having power over the other; Do NOT code for BDSM
Gay	What it is to be or act "gay," coming out, the "lifestyle," being "environmentally gay," being closeted, internalized homophobia, gay marriage, having girlfriends on the side *only as part of being gay/bisexual.*
Sexy Sex	Descriptions of what sex is, its meanings, differences between acts, lust, physical attraction *to a specific partner*, great sex/bad sex, feeling "sexy," "unsexy," "turned on," "turned off," "excited," "He is very, very hot and sexy," "He makes me feel very, very hot and horny"
Condom	Condom use, non-use, decision-making/self-efficacy around condoms, discussions or lack of discussions about condom use
HIV/STI	HIV Testing, status, becoming positive, learning about ex- or current partner status, how status affects relationship, disclosure
Risk	Emotional risk, risk definitions, describing something as risky/not risky, risk ranking, HIV/STI risk, other HIV/STI risk reduction techniques besides condom use, Safe/Unsafe in the context of sexual risk
Drugs/alcohol	Any reference to using drugs or alcohol, being high or drunk
Online	Hooking up, finding partners online, starting a relationship online, sexual decisions based on online information. Grindr, Facebook, Twitter, Jack'd, Adam4Adam, Manhunt, Scruff
Masculinity/ Gender	Concrete discussions/definitions of masculinity, not being masculine enough, femininity, being the "protector"
Mental Health	Discussions of mental health and emotional well-being, impact on relationships and sexual decision-making, changes in mental health (Refers to interviewee and his partners. Code all mentions)
Self-Esteem	Discussions of self-esteem, self-image, body image, how self-esteem impacts relationships, how self-esteem impacts sexual decision-making and self-efficacy
Commitment	Explicit discussions of commitment: its presence, its lack, what commitment means, how commitment is defined
Trust	Explicit discussions of trust, distrust, deceit; discussions of what trust means and how it impacts the relationship, honesty/dishonesty
Love	Explicit discussions of "love" (or lack thereof)—also use with red hearts. Do not use if "making love" is only a euphemism for sex
Intimacy	Explicit discussions of "intimacy" (or lack thereof)
Security	Explicit discussions of: "secure" "insecure" "safe" "unsafe"
Respect	Explicit discussions of "respect" (or lack thereof)
Other Feelings	Explicit discussions of other blue stickers: Happy, Comfortable, Like Myself, Wanted, Appreciated, Supported, Understood, Excited (non-sexual), In Control, Connected, Vulnerable, and Used (include opposites and discussions of absence of feelings)

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