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The Impact of Age and Age Discordance on Sexual Risk Taking in Men Who Have Sex with Men (MSM)

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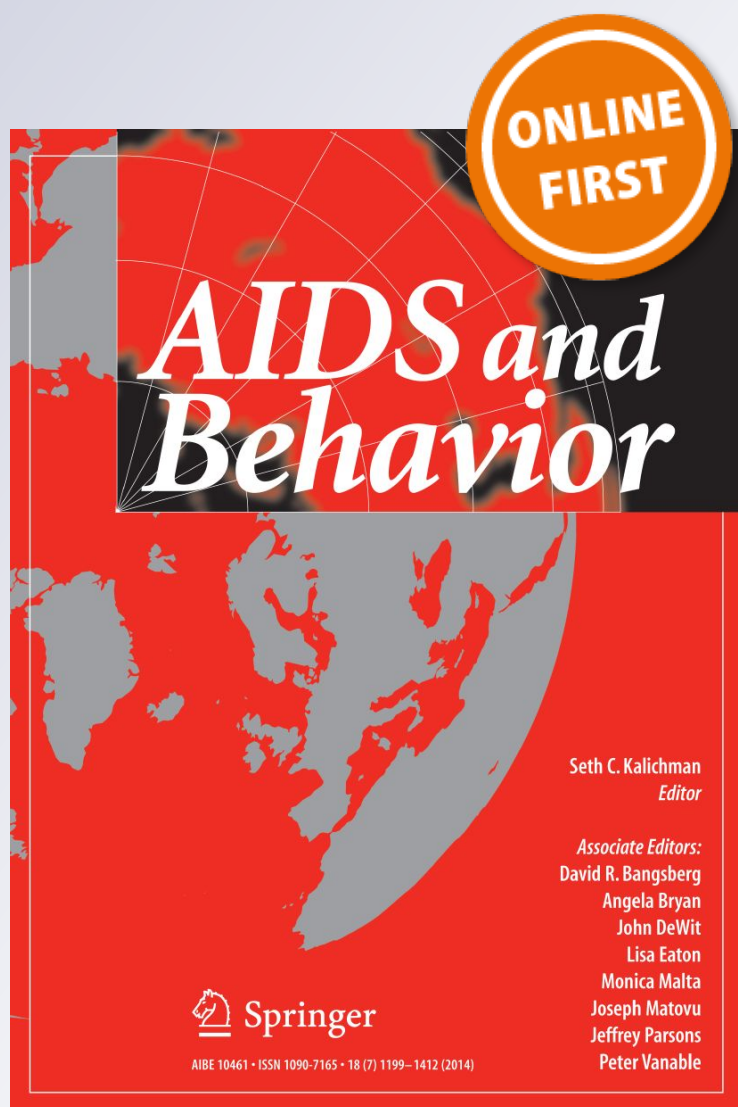
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Age and Age Discordance Associations with Condomless Sex Among Men Who Have Sex with Men

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Abstract We explored the effect of older partner's age and age difference between partners on condomless sex among men who have sex with men (MSM). We analyzed dyads ($n = 1720$) from participants ($n = 969$) in the Sexual Acquisition Transmission of HIV Cooperative Agreement Program. We used modified Poisson regression to model the probability of a sexual encounter's being condomless as a function of older partner's age and age difference between partners adjusting for HIV status, substance use, race/ethnicity, and partner type. We found an interaction between older partner's age and age difference ($p < 0.05$). Condomless sex decreased with increasing age of the older partner when the age difference was 5–9 years ($p = 0.004$) or ≥ 10 years ($p = 0.04$), but not when < 5 years. Condomless sex was less likely among older MSM when there was ≥ 5 years age difference between partners than < 5 years difference. Both age and age discordance affect the likelihood of a sexual encounter between MSM being condomless.

Resumen Exploramos que efecto tiene la edad de la persona mayor y la diferencia de edad entre parejas en el sexo sin condón entre HSH. Analizamos díadas ($n = 1720$) de participantes ($n = 969$) del Sexual Acquisition Transmission of HIV Cooperative Agreement Program. Utilizamos la regresión de Poisson modificada para modelizar la probabilidad de que en un encuentro sexual no se use condones como función de la edad de la persona mayor y la diferencia de edad entre los compañeros, ajustando con el status de VIH, uso de sustancias, raza/etnia, y tipo de pareja. Encontramos una interacción entre la edad de la persona mayor y la diferencia de edad ($p < 0.05$). Sexo sin condón disminuyó al aumentar la edad de la persona mayor cuando había una diferencia en edad de 5–9 años ($p = 0.004$) o ≥ 10 años ($p = 0.04$), pero no cuando había < 5 años de diferencia. Sexo sin condón era menos probable entre los HSH mayores cuando había una diferencia de edad de ≥ 5 años, no en < 5 años. Ambos edad y diferencia de edad afectan la probabilidad de que no se use condones en un encuentro sexual entre HSH.

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Introduction

Few studies have explored risk-taking behavior in age-discordant sexual encounters among men who have sex with men (MSM), and few have focused on the sexual risk behaviors of MSM over age 40. From the perspective of younger partners, studies have shown that sex with older MSM increases their risk for HIV infection [1–3] because older partners are more likely to be infected with HIV [4]. A study in San Francisco found that simply having older

sex partners increased young MSM's risk for HIV infection even if they had fewer sex partners and used condoms more frequently than did young MSM with only younger or same age partners [5]. A study in Los Angeles found that the odds of HIV infection were 3.5 times greater among MSM ages 23–29 who reported having sex partners who were five or more years older than they were, than among MSM who did not report older partners [6]. The same study concluded that there are “dual sources” of HIV risk for young MSM: unprotected sex with partners of *any age* and HIV exposure from older partners. And in North Carolina, young MSM (early 20 s) already living with HIV reported having had sex partners who were on average 6 years older than they were, and they were more likely to have had partners over the age of 30 than were MSM without HIV infection [2]. Similarly, studies in Australia [7] and China [8] showed that MSM who reported having older sex partners had a twofold increase in their risk for HIV infection compared with MSM who did not report older sex partners; and one review of the literature found a “growing body of evidence” that age-discordant sexual relationships may increase the risk of acquisition of HIV by younger MSM [9].

Yet other studies have found that age difference between sex partners made little difference to the probability of their engaging in risky sexual behavior with either regular or casual partners [10], or that increased sexual risk behavior was associated with age-concordant partners rather than age-discordant partners [11]. The findings of researchers who have compared the sexual behaviors of younger and older MSM have been inconsistent: Either young MSM were more likely than older MSM to engage in anal sex without using a condom [12–14], or both age groups engaged in condomless sex equally [15–17]. This inconsistency may be the result of ignoring confounding by potential influences of age discordance between partners on risk-taking behaviors. Complicating efforts to articulate risks for older MSM in age discordant dyads, different studies employ different cutoff ages for defining “young” men (<25, ≤25, <30, ≤30 years old). These differences conflate the sexual behaviors and motivations of “older” MSM in their late 20 s, with those of MSM in their 40 and 50 s.

Although an older sex partner is more likely to expose his younger partner to HIV infection because HIV prevalence increases with age, we do not know that there is more risk taking in a sexual encounter when one partner is older. This study explores the impact of the older partner's age and age discordance in a sexual dyad on the likelihood of risky behavior in a sexual encounter. We hypothesized that older MSM in sexual encounters are more likely to engage in high-risk behaviors with partners who are ≥10 years younger than they are, compared with partners that are

closer in age. To address this, we analyzed the effects of the older partner's age and the age difference between partners on reported condom use in sexual encounters. We tried to answer the following questions: (Q1) What is the association between the age of the older partner and condomless sex; (Q2) What is the association between age discordance in a dyad and condomless sex; (Q3) Is the association between age of the older partner and condomless sex affected by age discordance; and (Q4) Is there a threshold age above which condomless sex is no longer associated with age?

Methods

Overview

This study analyzed data from the three U.S. sites (Los Angeles, Chicago, Raleigh-Durham) for NIDA's Sexual Acquisition and Transmission of HIV—Cooperative Agreement Program (SATHCAP), a cross-sectional study that examined the role of drug use in the sexual transmission of HIV from traditional high-risk groups, such as MSM and drug users, to lower risk groups [18]. The study recruited participants in two waves, between 2005–2006 and 2006–2008.

Description of Data

Original Data Source

SATHCAP employed respondent-driven sampling (RDS) and a dual high-risk group sampling approach that relied on peer recruitment for a combined, overlapping sample of MSM and drug users. The study was conducted in two waves that were identical except for slight changes to the recruitment scheme in wave 2; wave 1 respondents were not eligible to participate in wave 2. Participants were (1) at least 18 years old, (2) identified as male, female, or transgender, (3) engaged in any sexual activity with a male or female partner in the last six months, and (4) used drugs in the last six months (methamphetamine, heroin, crack or powder cocaine, or injected some other drug). Eligible participants completed questionnaires and provided biological samples for HIV, STIs, and drug use. A total of 4736 individuals (MSM, heterosexual men, women) enrolled across the three sites.

Analytic Sample

First, we restricted our analysis to 969 self-identified male participants from the SATHCAP sample who reported having sex with men at least once in the prior six months;

some also reported sex with women. Second, we counted the sexual encounter dyads reported by these participants. Finally, after gathering information on the dyads, we determined whether the study participant or his sex partner was the older person in the dyad. This means that in one dyad the study participant may be the older sex partner, but in another dyad he might be the younger one. We chose sexual encounter dyads as our unit of analysis because participants provided data on the last encounter they had with their three most recent sex partners in the prior six months, including their sex partners' age, race/ethnicity, HIV status, the type of sex they engaged in (anal, oral, group), their sexual role (top or bottom), condom use (or not), and whether they or their partner used any alcohol or drugs prior to sex. We excluded dyads with women, transgender individuals, and minors, and analyzed up to three sexual encounters per participant, for a total of 1726 encounters. For multivariable analyses, we dropped 6 dyads (0.35%) of "other, other" race/ethnicity pairings, leaving 1720 dyads for the multivariable regression. Our sample was primarily African American, like the larger sample.

Measures

The dependent variable, condomless sex (yes/no), was defined as anal sex (insertive or receptive) without a condom. Condomless oral sex was not considered "condomless sex" in this analysis because of the very low risk for HIV transmission [19]. Predictor variables included characteristics of both participants in the sexual encounter: (1) race/ethnicity pairings (10 potential combinations of White, Black/African-American, Hispanic, other); (2) HIV status concordance (categorical: concordant positive, concordant negative, discordant-but-know-partner-status, discordant-partner-status-unknown); (3) any substance use before sex by either sex partner, dichotomized, from a more extensive list of drugs than the drug use inclusion criterion for the study (marijuana, methamphetamines, speedball, crack, cocaine, heroin, other opiates, ecstasy, poppers, special K, GHB, and Viagra), including an option for "other drugs" and binge drinking; (4) age difference between partners, treated both as a continuous variable (absolute age difference) and categorized into three levels, <5, 5–9, ≥ 10 years difference; (5) age of the older partner in the dyad (whether study participant or the participant's sex partner) coded both as continuous (mean = 44) and categorical, <40, 40–49, ≥ 50 years old; and (6) type of sex partner (categorical: unknown [someone they had never met before and will never see again]; one time [someone they had sex with one time but could find again if necessary]; acquaintance [someone they had sex with more than once but not regularly and with whom they *do not*

socialize]; friend [someone they have sex with more than once but not a regular basis and with whom they do socialize]; main/regular [someone considered the primary sexual partner or someone with whom they have sex on a regular basis]; and trade [someone with whom they exchanged sex for money or other goods (giving or receiving)]. We also controlled for site (Los Angeles, Chicago, Raleigh-Durham) and study wave (wave 1 or wave 2).

Analysis

We used modified Poisson regression to model the likelihood of a sexual encounter being risky (i.e., involving condomless sex) as a function of the predictors listed above, accounting for clustering within participants. We chose unstructured correlation matrices because not imposing a specific structure to potential correlations among the three most recent sex partners of a participant is the most general approach and makes the least assumptions. We chose modified Poisson regression over logistic regression because the binary outcome (condomless sex) was not rare (>5% probability); logistic regression would overestimate the relative risk from the resulting odds ratio [20–22]. We tested for interaction between age of the older partner and age difference between partners. We used SAS 9.4[®] to conduct the analyses.

Results

Sexual Encounter Characteristics

Participants reported a mean of two partners in the prior 6 months. The majority of sexual dyads analyzed were from Los Angeles (58%). See Table 1. The mean age of study participants and sex partners was 41 and 37 years old, respectively. The older partner in the plurality of sexual encounters was 40–49 years old ($n = 832$, 48%); the mean age of the older partner was 44 years. Thirty-three percent ($n = 575$) of encounters occurred between individuals with ≤ 5 -year age difference, and 39% ($n = 678$) of the encounters had a ≥ 10 year age difference between partners. Almost 1/3 ($n = 535$) of the 1720 sexual dyads analyzed involved condomless sex. More than half (53%) of the dyads involved sex with a friend or main/regular partner, of which 34% were condomless. See Table 2.

More than half (54%) of the sexual encounters included at least one partner of unknown HIV status; of these encounters, 28% were condomless. Although known seroconcordant HIV-positive sexual encounters were a small proportion of all sexual encounters (16%), they reported

Table 1 Sexual dyads by study site and wave

Site	Wave 1 (2005–2006) n (%)	Wave 2 (2006–2008) n (%)	Total n
UCLA	490 (65)	536 (53)	1000 (58%)
Chicago	134 (18)	313 (32)	447 (26%)
Raleigh-Durham	128 (17)	145 (15)	273 (16%)
Total:	752 (44)	968 (56)	1720

the highest levels of condomless sex (43%). Known serodiscordant sexual encounters (both partners know their status, and they are different) were the smallest proportion of all encounters (10%), of which 27% reported condomless sex. Seroconcordant HIV-negative sexual encounters (21%) reported the second highest level of condomless sex, 32%. Sexual encounters with one Hispanic and one White partner reported the highest proportion of condomless sex (42%) compared with all other combinations of White, Black and Hispanic dyads. At least one of the partners in the dyad used drugs or binged on alcohol before sex in 64% of the encounters, and 34% of these involved condomless sex. See Table 2.

Multivariable Analysis

In the modified Poisson regression main effects model, reported condomless sex decreased as the age of the older partner increased when age of the older partner was examined as a categorical variable (not tabulated). Relative to encounters in which the older partner was ≥ 50 years old, there was a 38% higher probability of condomless sex when the older partner in the dyad was < 40 years old ($p = 0.007$), and a 26% higher probability of condomless sex when the older partner was 40–49 years old ($p = 0.03$). When we examined age as a continuous variable in this mode, the probability of condomless sex dropped by 1% with each increasing year of age for the older partner, although this was marginally statistically significant ($p = 0.04$). Age discordance, i.e., the difference in age between sex partners, was not independently associated with condomless sex in the main effects models ($p \geq 0.5$). See Table 3.

The probability of condomless sex was lower for all partner types relative to main/regular partners, except for unknown: 24% lower relative risk for friend ($p = 0.002$); 25% for acquaintance ($p = 0.009$); and the greatest difference of 45%, with trade partners ($p = 0.003$). Relative to sexual encounters among HIV-positive concordant dyads, encounters in serodiscordant dyads (in which the status of both partners was known and different) were 35% less likely to involve condomless sex ($p = 0.003$), and encounters in which one of the partners' status was unknown were 26% less likely to involve condomless sex ($p = 0.004$). Sexual encounters between Hispanic and

White partners were 48% ($p = 0.002$) more likely to be condomless than encounters in which both partners were Black; no other statistically significant racial/ethnic differences were observed. Sexual encounters in which both partners used substances (including binge drinking) were 31% ($p = 0.002$) more likely to engage in condomless sex, relative to dyads in which there was no substance or alcohol use. Substance use by only one partner was not significantly associated with condomless sex ($p = 0.5$). See Table 3.

Interaction Between Age and Age Difference

In interaction testing, there was a statistically significant interaction between the older partner's age and the age difference between partners ($p < 0.05$). See Table 4. Age difference modified the effect of the older partner's age on condomless sex: there was a 3% *relative* reduction in condomless sex per year of aging of the older partner in encounters with a 5–9 year age difference ($p = 0.004$), and a 2% *relative* reduction in condomless sex per year of aging of the older partner if the age difference was ≥ 10 years ($p = 0.04$). Stated alternatively, the older partner's age modified the effect of age difference on condomless sex. See Fig. 1. The age of the older partner had no association with condomless sex when the between-partner age difference was < 5 years ($p = 0.4$) or when the older partner was 44 years old (median age) ($p > 0.4$).

Discussion

Our study sheds new light on the complicated relationship between age and risk-taking sexual behavior in MSM, and on the important role played by age discordance between partners. We can now answer the questions we raised earlier and say that the probability of condomless sex decreased as the age of the older partner increased (Q1) and that age discordance was not independently associated with condomless sex (Q2).

However, examining the interaction between age of the older sex partner and age discordance (Q3) led to our key result and resulted in a nuanced response to the question on whether there is a threshold above which age is no longer associated with condomless sex (Q4). We found that even

Table 2 Sexual dyads and characteristics linked to condomless

	Sexual encounters n ^a	Condomless sexual encounters n ^b
Total	1720	535 (31%)
Age of older partner		
<40 years old	468 (27%)	153 (33%)
40-49 years old	831 (48%)	268 (32%)
≥50 years old	421 (24%)	114 (27%)
Age discordance		
<5 years	575 (33%)	173 (30%)
5-9 years	467 (27%)	148 (32%)
≥10 years	678 (39%)	214 (32%)
Partner type		
Main/regular	557 (32%)	210 (38%)
Friend	358 (21%)	102 (28%)
Acquaintance	313 (18%)	93 (30%)
One time	242 (14%)	60 (25%)
Unknown	161 (9%)	329 (33%)
Trade	89 (5%)	141 (32%)
HIV status		
Both positive	267 (16%)	116 (43%)
Both negative	358 (21%)	114 (32%)
One positive, one negative	165 (10%)	44 (27%)
One known status, one unknown status	930 (54%)	261 (28%)
Race/ethnicity		
Both Hispanic	133 (8%)	40 (30%)
Hispanic, black	128 (7%)	44 (34%)
Hispanic, white	142 (8%)	60 (42%)
Hispanic, other	51 (3%)	11 (22%)
Both black	808 (47%)	229 (28%)
Black, white	151 (9%)	49 (32%)
Black, other	65 (4%)	16 (25%)
Both white	181 (11%)	67 (37%)
White, other	61 (4%)	19 (31%)
Other, other	6 (0.35%)	1 (17%)
Any substance use by either partner		
No	590 (34%)	157 (27%)
Yes (1 person)	195 (11%)	57 (29%)
Yes (both persons)	898 (52%)	313 (35%)
Missing	37 (2%)	8 (22%)
Site		
Los Angeles	1000 (58%)	329 (33%)
Chicago	447 (26%)	141 (32%)
Raleigh-Durham	273 (16%)	65 (24%)

^a Percentage of encounters with the characteristic

^b Percentage of encounters that are condomless

after controlling for HIV status concordance, partner type, and substance use, that (1) sexual encounters between men are less likely to involve condomless sex as the age of the older partner increases, but only if there is age discordance of at least 5 years between partners; and (2) condomless

sex is more likely in younger dyads when there is age discordance than when there is age similarity (less than 5 year age difference), whereas in older dyads condomless sex is *less* likely when there is age discordance between partners than when there is age similarity. The interaction

Table 3 Modified poisson regression model of factors associated with condomless sex—main effects (age of older partner as continuous variable)

Variable	Relative risk	95% Confidence limits	p value
Age (continuous, in years)			
Older partner in dyad	0.99	(0.98–1.00)	0.04
Age difference			
<5 years	Referent		
5–9 years	1.00	(0.83–1.20)	0.99
>10 years	1.05	(0.88–1.25)	0.57
Partner type			
Main/regular	Referent		
Friend	0.76	(0.64–0.90)	0.002
Acquaintance	0.75	(0.61–0.93)	0.009
One time	0.70	(0.56–0.88)	0.002
Unknown	0.84	(0.64–1.10)	0.2
Trade	0.55	(0.37–0.82)	0.003
HIV status			
Concordant-positive	Referent		
Concordant-negative	0.81	(0.64–1.02)	0.07
Discordant	0.65	(0.49–0.86)	0.003
Discordant-unknown	0.74	(0.61–0.91)	0.004
Race			
Both black	Referent		
Both Hispanic	1.03	(0.80–1.50)	0.85
Hispanic, black	1.26	(0.88–1.58)	0.12
Hispanic, white	1.48	(1.08–1.79)	0.002
Hispanic, other	0.85	(0.48–1.49)	0.57
Black, white	1.21	(0.91–1.49)	0.11
Black, other	1.06	(0.62–1.51)	0.78
Both white	1.17	(0.87–1.50)	0.26
White, other	1.11	(0.77–1.62)	0.60
Any substance use			
No	Referent		
Yes (1 person)	1.10	(0.86–1.40)	0.46
Yes (both persons)	1.31	(1.10–1.56)	0.002
Missing	0.69	(0.35–1.36)	0.28

Bold values indicate statistical significance ($p < 0.05$)

between the age of the older partner and age discordance had no association with condomless sex when the older partner was 44 years old (median age) or when the age difference between partners was <5 years. Our assessing for an interaction between age and age difference in sexual dyads explains in part why our results starkly contrast with studies that found older MSM to be an HIV risk to younger MSM [1–8, 10, 11]. It also undermines suggestions to develop public health messages for young MSM about the risks of HIV in some intergenerational relationships [9].

Only substance use by both sex partners, not just one of the partners, increased the probability of condomless sex relative to neither using substances. This is not entirely consistent with studies demonstrating the global and event-specific associations between substance use and sexual risk

among young MSM [9] or reports demonstrating that sexual risk behaviors among middle-aged and older MSM increase with substance use [23, 24]. This finding may be a function of our looking at sexual dyads, i.e., the behaviors of both sex partners, rather than just the behaviors of individual study participants. A review of studies on substance use before or during sex shows that it reduces inhibition and the ability to negotiate condom use [9].

An unexpected finding was the increased probability of condomless sex in Latino-White sexual dyads, compared with Black-Black dyads. Although there is no clear explanation for this finding, there are some factors that partly account for this result. In one study, 243 Latino MSM reported 766 sexual partnerships, of which 62% ($n = 472$) were with White partners [25]. They also

Table 4 Modified poisson regression model of factors associated with condomless sex—interaction model (age of the older partner [continuous] * age difference)

Variable	Relative risk	95% Confidence limits	p value
Age (continuous, in years, centered on 44)			
Older partner in dyad	1.01	(0.99–1.02)	0.42
Age difference			
<5 years	Referent		
5–9 years	0.91	(0.77–1.14)	0.36
>10 years	1.01	(0.87–1.22)	0.93
Partner type			
Main/regular	Referent		
Friend	0.77	(0.65–0.91)	0.003
Acquaintance	0.77	(0.62–0.95)	0.01
One time	0.70	(0.56–0.88)	0.002
Unknown	0.84	(0.65–1.09)	0.2
Trade	0.55	(0.37–0.82)	0.003
HIV status			
Concordant-positive	Referent		
Concordant-negative	0.81	(0.61–1.03)	0.08
Discordant	0.65	(0.49–0.86)	0.002
Discordant-unknown	0.75	(0.61–0.91)	0.005
Race			
Both black	Referent		
Both Hispanic	1.05	(0.76–1.45)	0.79
Hispanic, black	1.27	(0.95–1.69)	0.10
Hispanic, white	1.48	(1.15–1.91)	0.002
Hispanic, other	0.88	(0.51–1.53)	0.65
Black, white	1.21	(0.95–1.53)	0.12
Black, other	1.11	(0.73–1.68)	0.64
Both white	1.18	(0.90–1.54)	0.23
White, other	1.09	(0.74–1.62)	0.66
Any substance use			
No	Referent		
Yes (1 person)	1.11	(0.87–1.42)	0.41
Yes (both persons)	1.32	(1.11–1.58)	0.002
Missing	0.70	(0.36–1.37)	0.29
Age interaction (age of older partner * age difference)			
Age older partner x age difference (<5 years)	Referent		
Age older partner x Age difference (5–9 years)	0.97	(0.95–0.99)	0.007
Age older partner x Age difference (10 + years)	0.98	(0.96–1.00)	0.04

Bold values indicate statistical significance (p < 0.05)

reported that White sex partners were easier to meet compared with Asians, Blacks, and other Latinos, and they perceived White sex partners to pose less of a risk for HIV infection than Black or Latino partners. The perception of less HIV risk from a White partner may also be fueled by a perceived racialized hierarchy of value in the sexual marketplace, where Whites are consistently more favored by men of all racial/ethnic backgrounds [26]. In effect, Latino MSM's perception of White sex partners as easier to meet, less likely to have HIV infection, and as being more desirable than men of other racial/ethnic backgrounds may

explain in part why Latino-White sexual dyads engaged in more condomless sex than Black-Black dyads.

Relative to seroconcordant dyads, condomless sex was less common in serodiscordant dyads and in encounters in which one of the partners' HIV status was unknown, but it was not rare in either group. Inconsistent condom use between serodiscordant partners—whether of known or unknown HIV status—continue to challenge HIV-transmission prevention efforts. People between 25 and 44 years old represent 40% of people living with an undiagnosed HIV infection [27]. It is estimated that HIV

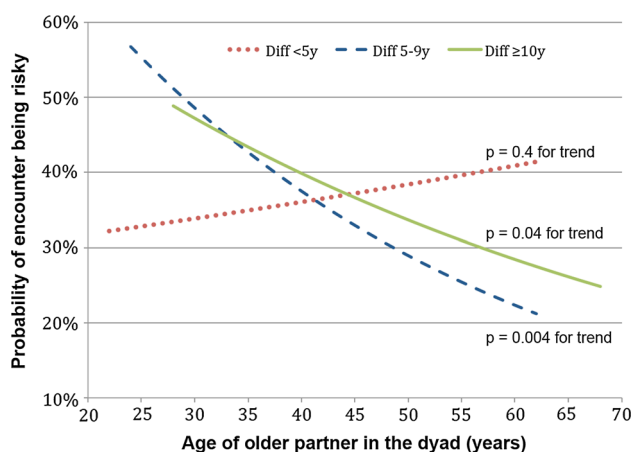


Fig. 1 Model-predicted probability that a sexual encounter in the referent group (concordant HIV-positive status, both partners Black, no substance use) will be condomless as a function of age of the older partner (continuous) and age discordance between partners (<5, 5–9, ≥10 years). Model includes controls for partner relation type (unknown, one time, acquaintance, friend, main/regular, trade), HIV status concordance, race/ethnicity pairing, substance use before sex, study site, and study wave

transmission from people with an undiagnosed HIV infection, and people with diagnosed HIV but *not in treatment*, together account for more than 90% of the 45,000 new HIV infections in 2009 [28]. Our findings imply that because the age of the older sex partner in an encounter and age discordance between partners interact to determine the probability of condomless sex, resources to test and identify new cases of HIV, as well as efforts to retain people in care, should focus especially on younger men who have sex with men 5 or more years younger than them, and older men who have sex with men of similar age. Strategically targeting behavior change interventions and HIV testing and care messages to MSM based on their age *and* the age of their partners may have a bigger impact on risky sexual behaviors and HIV transmission than indiscriminately promoting HIV testing to the entire MSM population.

Limitations

The limitations of these findings include the RDS method that resulted in participants recruiting others so much like themselves that the sample may not be fully representative of all MSM [29]. Moreover, using drugs was an inclusion criterion of the study, so the sample does not represent MSM who refrain from drug use. Because our focus was primarily on age and age discordance, we did not analyze drug use in terms of specific substances used, e.g., cocaine, methamphetamine, heroin. There are also the limits inherent to self-report about sexual behaviors and to recall, particularly recalling the age of a one-time sex partner.

However, much of our analysis focuses on categorical differences in partner age, rather than partner age in years. The former measure may be less vulnerable to error than the latter. Nevertheless, our study is a step forward in addressing sexual age mixing because it is approached from the standpoint of the older sex partner, whereas most studies of sexual age mixing have been focused primarily on younger MSM [30, 31].

Conclusion

Our study demonstrates that in age-discordant sexual encounters among MSM, the age of the older sex partner by itself does not tell us whether he will engage in sexual behaviors that increase the probability of HIV acquisition for younger MSM. Rather, it is the *interaction* between the age of the older partner and the age difference between partners that predicts whether a sexual encounter will be condomless. Our study shows that as the age of the older sex partner increases, the probability of condomless sex decreases if there is at least a 5 years age difference between partners. In other words, the high prevalence of HIV in older MSM—an epidemiological fact—by itself does not imply increased HIV transmission from older to younger men. The difference in the sexual *behaviors* of older MSM vis-à-vis younger vs. similar-age sex partners may significantly modify the risk of transmission. These findings have two implications. First, they suggest that we focus HIV pre-exposure prophylaxis (PrEP) messages and resources on those younger MSM who frequently have even younger sex partners (at least 5 years younger), as well as on older MSM who frequently have sex with men close in age. Second, they challenge us to reframe how we think about the risk for HIV infection that older MSM pose to younger ones to ensure that we eschew approaches that may inadvertently fuel ageism or the HIV stigmatization of older MSM.

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Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Compliance All procedures performed in studies involving human participants were in accordance with the ethical standards of the University of California, Los Angeles, and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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