Predictors of condom use with main and casual partners among HIV-positive men over 50

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Abstract

Objective—Sexual health amongst the growing population of older adults living with HIV has garnered increased research attention. Previous studies have identified alcohol and drug use as factors increasing rates of sexual activity and sex risk behavior in this population. However, the influence of partner type (whether main or casual) on the links between substance use and sexual behavior in older men living with HIV remains understudied and was the focus of the current study.

Methods—Data were collected from telephone interviews with 378 men, aged 50 or older, living with HIV, and residing in the New York City area. The sample included 224 (59%) men who identified as gay or bisexual, and 154 (41%) who identified as heterosexual. The majority of the sample identified as Black (66%) and the average age was 55 years. Participants reported on recent sexual behavior, substance use, and viral load/detectability status.

Results—Results of multinomial logistic regression analyses found that substance use was associated with increased rates of condomless sex with casual partners but not with main partners, while self-reported viral load (perceptions of immunological health) was a factor associated with condomless sex with main partners, but not with casual partners.

Conclusions—The findings indicate that different factors are involved in instances of condomless sex depending on whether the partner is a main or casual partner. Research and intervention efforts aimed at reducing risk factors for older men living with HIV and their partners need to take into account the relational context of sexual behavior.

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key words or phrases

Sex Risk; Substance Use; Older Adults; HIV and aging

1. Introduction

The need for increased knowledge and understanding of the sexual behavior of older adults (aged 50 or above) living with HIV is paramount, as it is estimated that older adults will make up more than half of America's HIV population by 2015 (High et al., 2012). Sexuality and intimacy are important factors for older adults in general (Gott & Hinchliff, 2003), and many older adults remain sexually active – for example, in Lindau et al.'s (2007) study, 73% of adults aged 57–64 reported being sexually active in the previous 12 months. However, awareness in older adults of their ongoing risk for HIV and sexually transmitted infections remains inadequate (Sankar, Nevedal, Neufeld, Berry, & Luborsky, 2011), and is compounded by a relative lack of age-specific public health policy (Maes & Louis, 2003; Wood, 2013), and by ineffective communication with health care providers (Gott, Hinchliff, & Galena, 2004; Ports, Barnack-Tavlaris, Syme, Perera, & Lafata, 2014).

Further, several recent studies have indicated that older adults living with HIV remain sexually active at rates roughly equivalent to or higher than that of their HIV-negative peers. Estimates of recent sexual activity in older men living with HIV range from 47% (Lovejoy et al., 2008) to 58% (Golub et al., 2010) in the previous three months, and 72% (Cooperman, Arnsten, & Klein, 2007) in the previous six months. In Lovejoy et al.'s (2008) sample, recent sexual activity was more commonly reported among the relatively small sample of heterosexual men (72% of the 57 participants) than the gay/bisexual men (36% of the 136 participants). However, rates of sexual activity did not differ by sexual orientation in Golub et al. (2010) or Cooperman et al. (2007). These studies also uncovered a substantial degree of potentially risky sexual behavior, as rates of recent condomless anal or vaginal sex ranged from 32–50%.

A number of studies have investigated correlates and predictors of sex risk behavior among older adults. In a study of 802 gay and bisexual men aged 40 to 94 years, Jacobs et al. (2010) found that among the variables associated with higher risk for condomless sex were being younger (40–59 vs. 60–94), being HIV-positive, using drugs (including Viagra and other erectile dysfunction medications), and having a greater number of partners. Coleman and Ball (2007) found that the absence of HIV-related symptoms and being single were both associated with higher levels of perceived barriers to condom use in a sample of older African American men living with HIV – however, it is not known whether this translated into actual condom non-use. In a study of 914 older men and women (heterosexual and gay/ bisexual) living with HIV, Golub et al. (2010) found higher risk for condomless sex to be associated only with loneliness and having sex under the influence of drugs – no other demographic variables or physical health factors were associated with higher risk rates. Lovejoy et al. (2008) found that marijuana and club drug use was associated with increased sexual activity for older gay and bisexual men living with HIV, while alcohol was associated with increased sexual activity for older heterosexual men living with HIV. However, these

studies did not consider whether the observed associations differed depending on whether the sexual activity was with a main partner or casual partner.

The substance use correlates of sex risk with respect to partner type was considered by Vanable et al. (2004) in a study of 1,712 HIV-negative younger men. Alcohol use (but not recreational drug use) was associated with greater sex risk with casual partners only, as rates of condomless sex with main partners were not affected by levels of alcohol use. The authors reasoned that alcohol was used with new casual partners to perhaps counter anxiety and tension not typically experienced with main partners. Prestage et al. (2009) examined immune functioning correlates of sexual risk within main partnerships among HIV-negative and HIV-positive gay men in Sydney, Australia (with an average age of 40 years). They found that, for the HIV-negative men, their main partner's HIV status and viral load detectability were factors in sexual decision-making, but these factors were not significant among the HIV-positive men.

It is not yet known whether partner type similarly influences the likelihood of sexual risk in older men living with HIV, and whether substance use and information regarding one's viral load detectability are factors in their decision-making process. The current study explored whether these factors, along with other demographic variables, are associated with the likelihood of condomless sex for older men living with HIV, and whether these associations differ with respect to sex with main partners or casual partners. Based upon previous research, we hypothesized that substance use would significantly predict greater odds of casual (but not main) partner condomless sex. In contrast, we hypothesized that viral load detectability status would be negatively associated with condomless sex with main partners. Given that drug and alcohol use have been shown to differentially influence sexual activity for men depending on sexual orientation (Lovejoy et al., 2008), analyses incorporated post hoc tests of moderation to examine whether correlates of sexual behaviour differed across sexual orientation groups.

2. Methods

2.1. Participants

In total, 651 individuals in the New York City area were either contacted by research staff after preliminary screening in person or online, or called the research center directly in response to passive recruitment materials, and 625 (96.0%) consented to complete the telephone survey. Of these, 20 (3.2%) were excluded because they were under 50 years of age, six (1.0%) reported an HIV negative or unknown serostatus, and 40 (6.2%) reported they were not currently prescribed at least one HIV medication. Of the remaining 559 participants, 382 (68.3%) identified as male and 378 (99.0%) of these provided sufficient data for inclusion in the current analysis. These men were included in the current analysis. Table 1 contains demographic data for these participants.

2.2. Procedures

Data were collected between November 2011 and March 2013, for the purpose of determining eligibility for participation in a randomized clinical trial of a behavioral intervention, the *Wisdom in Spirituality Education* (WISE) study. Structured telephone

interviews were conducted by trained research assistants who entered participant responses directly into an electronic database using a common survey interface, *Questionnaire Development Software* (QDS).

Recruitment activities included active and passive strategies, conducted both online and in person. Active recruitment activities included community and social events involving persons living with HIV and/or substance users. Study information was provided and a brief preliminary screener was administered on an iPad to interested individuals. Those who met preliminary screening eligibility (e.g., living with HIV and being on HIV medication, being 50 or older, and having substance use and/or substance use related problems) were asked to provide contact information and were subsequently called to complete the full telephone interview. Passive recruitment involved community-based distribution of printed project materials and internet distribution of study information through listservs and websites targeting the HIV-positive community and/or service providers. The passive materials included a telephone number to call directly for the telephone-administered structured interview, and also an internet-based link that included additional study information and the brief preliminary screener. Potential participants could complete the preliminary screener and provide contact information, in which case they were later contacted by a staff member to complete the full telephone interview. As a result of multiple pathways for eligibility screening, the full telephone interview was completed by individuals abstinent from substance use only in cases where those individuals called directly in response to passive recruitment materials. All recruitment procedures and materials were approved by the IRB of the research team.

2.3. Measures

Participants provided information on demographic characteristics, including gender, sexual identity, race, age, relationship status, and most recent viral load. Partnered men also reported their main partner's HIV status. With respect to viral load, participants were asked "What was your most recent viral load?" and could then either report as detectable/ undetectable or provide a report of their viral load in terms of viral copies per ml. Where the latter information was provided, participant responses were recoded such that 200 copies was detectable and < 200 copies was undetectable.

Sexual Behavior. Participants reported whether or not they had anal or vaginal sex during the previous 30 days. Participants who responded "Yes" were subsequently asked whether any of these partners was someone considered to be a main partner (i.e. "someone with whom you have a primary romantic relationship"). Condom use was assessed separately for casual and (where reported) main partners. Participants were asked to estimate the percentage of time they used condoms during anal and/or vaginal sex with a casual partner in the previous 30 days. Based upon these responses, a categorical casual sex partner variable was created. Participants were classified as either having no sex with casual partners, only intercourse with consistent condom use with casual partners (some casual partner sex reported and 100% condom use during sex with casual partners) or at least some condomless intercourse (some casual partner sex reported and < 100% condom use with casual partners).

Those individuals who reported sexual activity with a main partner in the previous 30 days were separately asked to estimate the percentage of time they used condoms during anal and/or vaginal sex with their main partner. Similar to the procedure applied to casual partner sex, a categorical main partner sex variable was created. Participants were classified as either having no sex with main partners, only consistent condom use with main partners (some main partner sex reported and 100% condom use during sex with main partners) or at least some condomless sex (some main partner sex reported and < 100% condom use with main partners). Participants who did not indicate having a main partner were coded as missing on this variable.

Substance use behavior. Participants reported whether or not they used alcohol, marijuana, cocaine/crack, methamphetamines, sedatives, opiates (e.g., heroin, codeine or synthetic opiates), PCP, psychedelics (e.g., LSD, mushrooms, Special K), solvents, or other drugs. When substance use in the past 30 days was reported, participants were asked to indicate the number of days each substance was used.

Alcohol related problems. Among participants reporting alcohol use in the past 30 days, perceptions of problematic drinking were assessed using the three-item Alcohol Use Disorders Identification Test – Consumption (AUDIT-C) scale (Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998). Scores ranged from 0 to 12 and, for males, scores of four and above are indicative of an elevated risk of problem drinking. The scale demonstrated adequate reliability (Cronbach's $a = .70$).

Drug use related problems. Among participants reporting drug use in the past 30 days, perceptions of substance use related problems were assessed using the 10-item Drug Abuse Screening Test (DAST-10) (Skinner, 1982). Scores ranged from 0 to 10. Scores of three and above indicate intermediate severity of problem use. The scale demonstrated adequate reliability (Cronbach's $a = .77$).

2.4. Analytic Plan

Multinomial logistic regression was employed to identify factors associated with sexual behavior (condomless sex, consistent condom use, or no sex). Separate models were calculated for each outcome (casual vs. main partner sexual activity). In initial models, the "no sex" group served as the referent group. In order to better understand differences between individuals who engaged in condomless sex and those who engaged in consistent condom use, a redundant model was also calculated in which consistent condom use was the referent group. Finally, we tested whether relationships between predictors and outcome were moderated by sexual identity. In order to arrive at a parsimonious model, interaction terms were tested using a forward entry process. The interaction term with the largest effect was entered into the model and its significance was evaluated. The process stops when the additional interaction effect is associated with a non-significant p value.

3. Results

Table 1 contains demographic and sexual activity information for this sample of 378 HIV-positive older males (with a mean age of 54.9). The majority of the sample was Black

(66.4%), single (59.8%), and gay/bisexual (58.9%). Of the 152 partnered men, 91 (59.9%) reported having a partner who was also HIV-positive and 61(40.1%) reported having a partner who was HIV-negative. Table 2 summarizes data related to the occurrence of sexual behavior with main partners and the concurrence of sexual behavior with casual partners among those men who reported main partners. All men who were abstinent with their main partners were also abstinent from sex with casual partners. Among men who reported consistent condom use with main partners, 39.6% engaged in concurrent sex with casual partners and all of those reported using condoms consistently with casual partners. The majority (51.0%) of men who reported condomless sex with main partners, engaged in concurrent condomless sex with casual partners; 6 (11.8%) reported consistent condom use; and 19 (37.3%) reported no casual partner sex.

Sexual behavior with casual partners

Table 3 contains results of multinomial regression models predicting sexual behavior with casual partners. Age, race, main partner HIV status, and viral load were unrelated to sexual behavior with casual partners. Examination of coefficients suggested that gay/bisexual men were more likely to be sexually active and that sexually active gay/bisexual men were more likely to engage in condomless sex compared to their heterosexual counterparts. The odds of engaging in condomless sex (vs. no sex) and consistent condom use (vs. no sex) were higher among gay/bisexual men compared with heterosexual men. The odds of condomless sex (vs. consistent condom use) were also higher among gay/bisexual men compared to their heterosexual counterparts.

The severity of substance use was associated only with sexual risk-taking. DAST scores were positively associated with the odds of condomless sex (vs. no sex). However, DAST scores were unrelated to the odds of condomless sex (vs. consistent condom use) and the odds of consistent condom use (vs. no sex). There was no evidence that sexual orientation moderated the association between DAST scores and sexual behavior with casual partners.

There was a significant interaction between sexual orientation and AUDIT scores. Among heterosexual men, AUDIT scores were not significantly associated with sexual behavior or condom use with casual partners. In contrast, among gay/bisexual men, the severity of alcohol use was associated with increased odds of being sexual active with casual partners. AUDIT scores were positively associated with the odds of condomless sex (vs. no sex) and with the odds of consistent condom use (vs. no sex). However, the severity of alcohol use was not associated with sexual risk among sexually active gay/bisexual men. It was not significantly related to the odds of condomless sex vs. consistent condom use.

Sexual behavior with main partners

Table 4 contains results of multinomial regression models predicting sexual behavior with main partners among participants who reported having a main partner. Age, race, partner serostatus, severity of alcohol use and severity of substance use were unrelated to sexual behavior with main partners. Examination of coefficients suggested that the gay/bisexual men were more likely to have condomless sex with their main partners than were the heterosexual men. The odds of condomless sex (vs. no sex) and the odds of condomless sex

(vs. consistent condom use) were lower among heterosexual men compared to gay/bisexual men. Sexual identity was not significantly related to consistent condom use (vs. no sex).

A detectable viral load was associated with decreased odds of sexual activity with a main partner. Participants who reported a detectable viral load were less likely to engage in condomless sex (vs. no sex) and consistent condom use (vs. no sex). Viral load detectability was not associated with risk-taking among men who were sexually active with their main partners. Viral load was not significantly associated with the odds of condomless sex (vs. consistent condom use). Results of forward entry examination of interaction terms suggested that the effects of all predictors were consistent across gay/bisexual and heterosexual groups.

In order to address concerns about the impact of limiting analyses to only partnered men, an alternative analytic procedure, which modeled zero-inflation as a result of relationship status was conducted. The significance of regression coefficients associated with main partner sexual risk category was unaffected. The only predictor associated with having a main partner (vs. being single) was sexual orientation. Heterosexual men were more likely to report a main partner than gay/bisexual identified men (B = .50, 95% CI: .05 – .95; expB = 1.65, $p < .05$).

4. Discussion

The current study builds upon existing research suggesting that the relational context of sexual behavior matters with regard to the potential for HIV transmission via condomless sex with main partners (Goodreau et al., 2012; Sullivan, Salazar, Buchbinder, & Sanchez, 2009; Mustanski & Parsons, 2014). Consistent with previous studies' findings (Cooperman et al., 2007; Golub et al, 2010; Lovejoy et al., 2008), these results suggest that many older men living with HIV lead sexually active lives, and also that a substantial number of these sexually active men are engaging in condomless sex. The results of the current study extend this general finding by examining correlates of casual vs. main partner condomless sex. While condomless sex with a casual partner was positively correlated with substance use, condomless sex with a main partner was associated with self-reported perceptions of viral load detectability, but was not associated with substance use.

In examining relationships between substance use severity and condomless sex, the current study utilized separate measures of drug use and alcohol use severity (DAST-10 and AUDIT). In doing so, results suggest that both alcohol and drug use are relevant to the prediction of being sexually active with casual partners for gay and bisexual older men; however, only drug use was associated with being sexually active with casual partners among heterosexual older men. Examined together, these results suggested a pattern in which the severity of alcohol use was associated with increased sexual activity only among gay and bisexual men. Meanwhile, the severity of drug use was associated more specifically with sexual risk-taking for older adult men regardless of sexual orientation. Higher AUDIT scores were positively associated with the odds of both sex with and without condoms (vs. no sex) with casual partners. These results are consistent with the findings of Lovejoy et al. (2008) who observed that alcohol was primarily associated with sexual frequency but not specifically with sexual risk. Consistent with other studies demonstrating a link between

substance use and sexual risk-taking (Golub et al., 2010; Cooperman et al., 2007; Jacobs et al., 2010), higher DAST scores were associated with the odds of condomless sex (vs. no sex) but were not associated with the odds of consistent condom use (regardless of reference group).

Similar to findings for alcohol use severity, the presence of a detectable viral load was associated with decreased odds of both main partner sex with and without condoms, but did not distinguish between the two. Several explanations for this finding are possible. One possible explanation is that concerns about infectiousness suppress sexual activity when viral load is detectable. Prestage et al. (2009) suggested that the link between viral load detectability and sexual behavior may be stronger for HIV-negative men in serodiscordant couples, the current sample was restricted to individuals over age 50 and it may be that concerns about infectiousness are more salient for older HIV-positive men when making sexual decisions with main partners. Results related to partner sero-concordance contradict this hypothesis. Partner serodiscordance was not associated with the likelihood of condomless sex with main partners. This finding might have been expected if concerns about infectiousness were a motivating factor in condom use decisions. Consistent with suggestions of Lovejoy et al. (2008), it may also be that self-reported perceptions of immunological health indicated by viral load are associated broadly with one's subjective sense of physical health in this population. Partnered individuals who feel physically healthier may be more capable of, interested in, and rewarded by being sexually active with their main partners.

Results of the current study provide important descriptive data about the sexual lives of older adult men living with HIV. Sexual abstinence was commonly reported among men who identified themselves as being in a relationship with a main partner. Approximately half of participants who reported a main partner were sexually abstinent. These men did not have sex with main or casual partners. Gay and bisexual men were found to be more sexually active, and to have greater odds of having condomless sex, than their heterosexual counterparts. One reason why condomless sex may be more likely among gay and bisexual men is the use of serosorting as a strategy to reduce HIV infection (Parsons et al., 2005). The prevalence of HIV among gay and bisexual men is higher than heterosexuals, making it easier to utilize serosorting, which could contribute to greater likelihood of condomless sex. Concurrent sex with casual partners was also frequently reported among men who were sexually active with main partners. Where concurrent sexual behavior occurred, condom use with casual partners often mirrored condom use with main partners, which runs counter to previous research on gay and bisexual men that found lower rates of condomless sex among with casual partners than with main partners (Hoff, Chakravarty, Beougher, Neilands, & Darbes, 2012). In the current study, men who reported only consistent condom use with main partners also reported consistent condom use with casual partners when concurrent sex was indicated. Similarly, the majority of men who reported condomless sex with main partners also reported condomless sex with casual partners when concurrent sex was indicated.

Future studies should focus specifically on decision-making process with regard to sex with main partners and casual partners, and explore how safety in sex is negotiated among older

adults when at least one partner is HIV-positive. It would also be beneficial to explore reasons for not having sex among those participants who reported no recent sexual activity, in order to ascertain whether sexual abstinence is motivated by concerns for safety vs. health-related conditions (e.g., fatigue, side effects of medications, or limited relationship options), and to also consider ways of maximizing the capacity of older adults living with HIV to lead healthy and satisfying sexually active lives.

A number of limitations to the current study should be considered. First, all data were gathered through self-report and relied on participants' ability to recall behavior over the previous 30 days. Recruitment methods may limit the generalizability of these findings beyond metropolitan areas. While individuals who were not using substances were included in the study when they called to screen in response to passive recruitment messages, active recruitment efforts were focused on individuals who use substances. The current sample therefore potentially under-represents individuals who abstain from substance use. It should be noted that the majority of the present sample was Black, of low socio-economic status, and mostly aged between 50 and 60 years. Also, while main partner HIV serostatus was known (and included as a predictor in models examining sexual behavior with casual partners as well as those examining sexual behavior with main partners), the HIV serostatus of casual partners was not assessed in this study. This prevented examining casual partner serostatus as a correlate of sexual behavior and condom use, and also the classification of main vs. casual partner may not capture the full range of relationships in their varying degrees of seriousness and duration. Data related to seropositioning among the gay/bisexual men and the occurrence of heterosexual anal intercourse were not collected. In addition, the use of aggregate data did not allow for analysis of whether substance use occurred on the same day(s) as sexual activity. Future studies with day-level and event-level recording of substance use and sexual activity will further illuminate the associations found in the present study.

In sum, the current study represents a meaningful contribution to the literature by demonstrating the relevance of both drug use and alcohol use to the prediction of sexual behavior with casual partners as well as the relevance of viral load suppression to the prediction of sexual behavior with main partners. These differential associations suggest that different motivational factors may contribute to sexual risk behavior depending upon partner type.

Acknowledgments

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Table 1

Demographic Characteristics

Demographics	Total	Gay/Bisexual	Heterosexual	Test Statistic
	n (%)	n (%)	n (%)	
Overall	378	224 (58.9)	154 (41.1)	
Race and Ethnicity				$\chi^2(2) = 17.9$**
Black/African American	251 (66.4)	137 (61.2)[a]	114 (74.0)[b]	
Latino	68 (18.0)	40 (17.9)	28 (18.2)	
White/European/Other	59 (15.6)	47 (21.0)[a]	12 (7.7)[b]	
Relationship Status and Concordance				$\chi^2(2) = 7.9$*
Single	226 (59.8)	147 (65.6)[a]	79 (51.3)[b]	
Partnered - Seroconcordant	61 (16.1)	30 (13.4)	31 (20.1)	
Partnered - Serodiscordant	91 (24.1)	47 (21.0)	44 (28.6)	
Viral Load				$\chi^2(1) = 4.0$*
Undetectable (VL <200)	276 (77.1)	172 (80.8)	104 (71.7)	
Detectable	82 (22.9)	41 (19.2)	41 (28.3)	
Sexual Activity with Casual Partners				$\chi^2(2) = 35.8$**
No Sex	218 (57.7)	106 (47.3)[a]	112 (72.7)[b]	
Consistent condom use	74 (19.6)	44 (19.6)	30 (19.5)	
Condomless sex	86 (22.8)	74 (33.0)[a]	12 (7.8)[b]	
Sexual Activity with Main Partners				$\chi^2(2) = 15.2$**
No Sex	273 (72.4)	165 (74.0)	108 (70.1)	
Consistent condom use	53 (14.1)	20 (9.0)[a]	33 (21.4)[b]	
Condomless sex	51 (13.5)	38 (17.0)[a]	13 (8.4)[b]	
	M (SD)	M (SD)	M (SD)	
Age (years)	54.9 (4.4)	54.7 (4.3)	55.4 (4.5)	$t(378) = -1.5$

*
$p < .05$;

**
p .01

Note: Some variables have missing data. Within rows within variables, cells with different superscripts differ significantly ($p < .05$) by Fisher's Exact Test.

Table 2

Concurrence of main and casual partner sex among men who reported a main partner ($n = 152$)

	Sex with main partners			Total
	None	**Consistent condom use**	**Condomless sex**	**Total**
Sex with casual partners	*n*(%)	*n*(%)	*n*(%)	*n*(%)
None	48 (100.0)	32 (60.4)	19 (37.3)	99 (65.1)
Consistent condom use	0 (0.0)	21 (39.6)	6 (11.8)	27 (17.8)
Condomless sex	0 (0.0)	0 (0.0)	26 (51.0)	26 (17.1)
Total	48 (100.0)	81 (100.0)	51 (100.0)	152 (100.0)

Table 3

Predictors of Consistent Condom Use and Condomless Sex with Casual Partners (*n* = 378)

Condomless sex vs. No sex		
	expB	**95%CI**
Age	0.98	0.92, 1.05
Race (ref = non-White)	0.62	0.27, 1.43
Sexual Identity (ref = gay/bisexual)	0.13**	0.06, 0.27
Relationship Status and Concordance (ref = single)		
Seroconcordant Partner	0.84	0.42, 1.68
Serodiscordant Partner	0.30*	0.11, 0.80
Viral Load (ref = undetectable)	1.27	0.63, 2.54
AUDIT	1.14*	1.03, 1.27
DAST	1.15*	1.04, 1.27
Sexual Identity X AUDIT	0.93	0.76, 1.14
Condomless sex vs. Consistent condom use		
Age	0.99	0.91, 1.07
Race (ref = non-White)	1.06	0.35, 3.16
Sexual Identity (ref = gay/bisexual)	0.22**	0.09, 0.53
Relationship Status and Concordance (ref = single)		
Seroconcordant Partner	0.94	0.40, 2.22
Serodiscordant Partner	0.36	0.11, 1.14
Viral Load (ref = undetectable)	1.00	0.44, 2.26
AUDIT	0.99	0.88, 1.12
DAST	1.10	0.98, 1.23
Sexual Identity X AUDIT	1.16	0.92, 1.48
Consistent condom use vs. No sex		
Age	1.00	0.94, 1.06
Race (ref = non-White)	0.63	0.26, 1.52
Sexual Identity (ref = gay/bisexual)	0.55*	0.30, 1.00
Relationship Status and Concordance (ref = single)		
Seroconcordant Partner	0.77	0.38, 1.56
Serodiscordant Partner	0.82	0.39, 1.72
Viral Load (ref = undetectable)	1.23	0.63, 2.39
AUDIT	1.15*	1.02, 1.29
DAST	1.05	0.96, 1.15
Sexual Identity X AUDIT	0.80*	0.67, 0.94

*
p <.05;

**
p .01

Table 4

Predictors of Consistent Condom Use and Condomless Sex with Main Partners (*n* = 152)

Condomless sex vs. No sex	expB	95%CI
Age	0.90	0.80, 1.02
Race (ref = non-White)	0.25	0.05, 1.17
Sexual Identity (ref = gay/bisexual)	0.13**	0.05, 0.38
Partner Status (ref = concordant)	0.44	0.16, 1.18
Viral Load (ref = undetectable)	0.20**	0.06, 0.64
AUDIT	0.99	0.86, 1.14
DAST	1.11	0.95, 1.31
Condomless sex vs. Consistent condom use		
Age	1.00	0.21, 1.42
Race (ref = non-White)	0.98	0.18, 5.38
Sexual Identity (ref = gay/bisexual)	0.20**	0.08, 0.49
Partner Status (ref = concordant)	0.55	0.21, 1.42
Viral Load (ref = undetectable)	0.77	0.24, 2.47
AUDIT	1.08	0.94, 1.24
DAST	0.97	0.83, 1.14
Consistent condom use vs. No sex		
Age	0.91	0.82, 1.02
Race (ref = non-White)	0.26	0.05, 1.28
Sexual Identity (ref = gay/bisexual)	0.70	0.27, 1.83
Partner Status (ref = concordant)	0.83	0.35, 1.99
Viral Load (ref = undetectable)	0.29*	0.11, 0.79
AUDIT	0.91	0.82, 1.02
DAST	1.13	0.98, 1.31

*
p <.05;

**
p .01