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Substance Use and Experienced Stigmatization Among Ethnic Minority Men Who Have Sex With Men in the United States

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INTRODUCTION

Ethnic minority MSM face multiple forms of stigmatization and discrimination, both on the basis of race and sexual orientation (Choi et al., 2013; Diaz et al., 2001; Martinez & Sullivan, 1998; Nemoto et al., 2003; Szymanski & Gupta, 2009). Research examining the relationship between perceived discrimination due to race/ethnicity, sexual orientation or gender has found positive associations between these various forms of discrimination and substance misuse (McLaughlin, Hatzenbuehler & Keyes, 2010). Stress related specifically to homophobic attitudes and discrimination (also identified as “homonegativity” and “heterosexism”) has been a frequently cited risk factor for heavy substance use or abuse for gay (predominantly white) men (Hamilton & Mahalik, 2009; McKirnan & Peterson, 1988; Meyer, 1995; Weinstein, 1992).

Minority stress theory (Brooks, 1981; Meyer, 1995) has emerged to attempt to explain consistent research findings of greater levels of substance use and substance use disorders, psychological distress, and mental health disorders among sexual minority populations (Cochran et al., 2000; Cochran et al., 2004; Fergusson, Horwood & Beautrais, 1999; Sandfort et al., 2001). Among sexual minorities, minority stress has been conceptualized as exposure to victimization and discrimination, expectations of rejection and hostility, internalization of negative attitudes/beliefs about homosexuality, and concerns about self-disclosure/concealment of identity (Meyer, 2003). Some of these aspects of sexual minority stress have parallels in race/ethnicity-related minority stress. In both cases, a devalued social identity or status heightens the risk for particular forms of stigma-related stress; this stress leads to psychological distress and elevated substance use (potentially as an avoidant coping strategy). Experiencing multiple types of discrimination (as in the case of being a gay man of color) may increase the odds of substance use disorders (McCabe et al., 2010; Mizuno et al., 2011).

Ethnic minority MSM are confronted with minority stigma in a variety of social contexts. Racism may be experienced within the mainstream gay community as well as within the general community (Teunis, 2007). Similarly, the sources of experienced homophobia may also be multiple: from the general community, from the family, and from heterosexual friends. It is not clear to what degree these multiple forms of minority stress may differentially affect substance use and misuse. The few published studies that we have identified which examined discrimination and substance use among ethnic minority MSM

have focused on no more than two ethnic minority groups, have based results upon narrower (younger) samples, and have not differentiated specific sources of discrimination/minority stress in a comparable manner (Fernandez et al., 2005; Wong, Weiss, Ayala & Kipke, 2010).

The present study addresses critical gaps in the research on ethnic minority MSM and substance use. First, the study sample of ethnic minority MSM includes African American, Asian/Pacific Islander and Latino men, providing a broader picture of the experiences of ethnic minority MSM and permitting between-group comparisons on substance use and its correlates. Second, the study explores the association of substance use both with experiences of stigmatization based upon sexual orientation and with those based upon ethnic minority status. These associations have been examined differentiated by source of stigmatization or discrimination. Finally, we have been able to discern whether associations between substance use and experiences of stigmatization differ by race/ethnicity by testing for interactions.

METHODS

Participants and Procedures

Data presented here come from the Ethnic Minority Men's Health Study, designed to examine social networks and sexual partnerships, experiences of social discrimination, and their relation to sexual risk for HIV among African American, Asian/Pacific Islander, and Latino MSM in Los Angeles, California. Study participants were recruited between May 2008 and October 2009. Utilizing a chain-referral sampling methodology, initial "seed" respondents were recruited through referrals from project staff at AIDS Project Los Angeles and through outreach activities at venues frequented by MSM (e.g., bars, dance clubs, coffee shops). Inclusion criteria were: (1) self-identification as African-American, Asian/Pacific Islander, or Latino; (2) minimum age of 18 years; (3) Los Angeles County residence; (4) having a male sex partner within the prior six months; and (5) not having participated in earlier phases of this study involving qualitative interviews or survey instrument pretesting. Study procedures were approved by the institutional review boards of the University of California, San Francisco and AIDS Project Los Angeles.

After providing written informed consent, eligible seed participants completed a one hour, standardized questionnaire administered as an audio computer-assisted self-interview (A-CASI). Each seed participant received \$50 for compensation and offered an opportunity to recruit up to three other MSM friends or acquaintances. He was given three "recruitment coupons" to pass out to such contacts to invite their participation. For every redeemed coupon, the nominating participant received \$10.

Upon phoning the study telephone number printed on their coupons, potential recruits were screened for eligibility by project staff. If eligible, they were scheduled to complete the study protocol at the project site. All potential participants were required to bring a valid recruitment coupon to their scheduled appointment. On the completion of the A-CASI-based survey, enrolled participants were given three recruitment coupons each and invited to give these coupons to their MSM friends or acquaintances. This recruitment and enrollment

process continued until our target sample size was reached of approximately 400 for each ethnic group.

Measures

Demographic characteristics—Respondents were asked about their race/ethnicity, age, level of formal education, nativity (U.S.-born versus foreign-born), self-identified sexual orientation, marital status, and self-reported HIV serostatus.

Substance use—Respondents were asked about their use of a variety of substances in the prior 6 months. This included both quantity and frequency measures of alcoholic beverages (we report on any use and heavier average use – 5 or more drinks – on drinking days). Respondents were asked about the use of categories of specific illicit drugs (e.g., marijuana/hashish; crack cocaine; powder cocaine; barbiturates, tranquilizers or sedatives; psychedelics/hallucinogens) within the prior 6 months. For analytic purposes, we created a dichotomous measure of *poly-drug use*, defined as the use of 3 or more categories of illicit drugs during the prior 6 months. We also created a dichotomous measure of *stimulant drug use*, defined by the use of any of the following substances in the prior 6 months: crack cocaine, powder cocaine, methamphetamines, other amphetamines, or Ecstasy/MDMA/other forms of MDA. The poly-drug use measure was intended to identify heavier and potentially problematic recreational drug use, and was modeled after one used in Stall et al. (2001). We chose to focus on stimulant drug use, as this category of recreational drugs has been identified as a particular health concern within the gay community, and associated with sexual risk behaviors for HIV (Colfax et al., 2004; Colfax et al., 2005).

Experiences of racism—We assessed lifetime experiences of racism from two different sources: the general community and the mainstream gay community. Racism within the general community (a four-item summative index of affirmative responses; range 0–4) assessed experiences of mistreatment within the general community due to race/ethnicity (e.g., being stopped or harassed by the police; being made fun of, harassed, or called names by others). Perceived racism within the gay community was measured with a four-item Likert scale (e.g., I've felt white gay men have acted as if they're better than me because of my race or ethnicity; I've felt ignored or invisible where white gay men hang out because of my race or ethnicity). Item responses were scored from 1 ("strongly disagree") to 4 ("strongly agree"); the scale score was calculated as the mean value of item responses (Cronbach's alpha = 0.86).

Experiences of homophobia—We assessed lifetime experiences of homophobia from three different sources: the general community, heterosexual friends, and family. Homophobia within the general community (a five-item summative index; range: 0–5) assessed experiences of mistreatment within the general community on the basis of sexual orientation (worded to parallel items in the experiences of racism in the general community scale). Perceived homophobia among heterosexual friends and perceived homophobia within the family were measured respectively with a three-item Likert scale (e.g., Heterosexual/straight friends have distanced themselves because of my sexual orientation; Cronbach's alpha = 0.87) and a four-item Likert scale (e.g., Being open with my family

about my sexual orientation has meant risking being cut out of their lives; Cronbach's alpha = 0.82). Items were scored as above (“strongly disagree” to “strongly agree”); scale scores were calculated as the mean value of item responses (range 1–4).

Our measures of experiences of racism and experiences of homophobia were developed through a process meant to yield a culturally sensitive and psychometrically valid quantitative survey instrument. We utilized qualitative data collected from six focus groups (n=50) and 35 individual in-depth interviews from the initial phase of this study. Existing measures (e.g., Diaz et al., 2001) were first modified, based on text from interview transcripts, to ensure that items used were congruent with our target population's subjective experiences and phraseology. Next, initial drafts of the measures were pre-tested on 18 participants (6 from each racial/ethnic group), using experimentally validated pretest procedures (Cannell et al., 1989). After revising the draft measures based on respondent feedback, the revised measures were administered via ACASI to 150 participants (50 per ethnic group) to assess their psychometric properties. The analysis of this data was used to make final refinements to the instrument.

Statistical Analysis

Descriptive analyses include prevalence of use of alcohol and illicit drugs in the prior 6 months, both in the overall sample and within each racial/ethnic group. We report bivariate and multivariate analyses for two measures of illicit drug use (poly-drug use and any stimulant use). Multivariate analyses initially entered all demographic variables and discrimination variables listed above, as well as the interactions between each discrimination variable and race/ethnicity. Backward elimination removed all main effects with $p > .20$ and interaction terms with $p > .05$. To account for clustering of respondents within referral chains we used the GEE modeling framework (Liang & Zeger, 1986) for the multivariate analyses and for p-values used in the descriptive analyses of substance use prevalence. In multivariate models where interactions with race/ethnicity were statistically significant for a given variable, we present the odds ratios and 95% confidence intervals within each racial/ethnic group separately for ease of interpretation.

RESULTS

Sample description

A total of 1196 participants were recruited into the study (403 African American, 393 Asian/Pacific Islander, and 400 Latino MSM). Several characteristics of the sample demographic profile differed by racial/ethnic subgroup. African American men tended to be older (mean = 41 vs. 33 for Asian/Pacific Islander and 35 for Latino MSM; $p < .001$), more likely to be born in the United States (94% vs. 43% for Asian/Pacific Islander and 61% for Latino MSM; $p < .001$), more likely to identify as bisexual or heterosexual/other (40% vs. 14% for Asian/Pacific Islander and 23% for Latino MSM; $p < .001$), more likely to have a history of being married to a woman (26% vs. 9% for Asian/Pacific Islander and 15% for Latino MSM; $p < .001$), and to report being HIV-positive (50% vs. 13% for API and 43% for Latino MSM; $p < .001$). API men were better educated (61% college degree vs. 14% for African American and 21% for Latino; $p < .001$). Asian/Pacific Islander MSM were most likely to be

foreign-born, to identify as gay, to have never been married to a woman, and to report being HIV-negative.

Use of alcohol and illicit drugs

Table 1 describes the prevalence of use of various substances over the prior six months for the total sample and by racial/ethnic subgroup. Alcohol use was common among this sample, however, significant inter-group differences existed. Rates of use were lowest among African Americans (both with respect to any alcohol consumption and heavy alcohol use). Latino men were most likely to drink heavily on a day in which they drank alcohol. The most commonly used illicit substance was marijuana or hashish; Latino MSM were most likely to report its use in the prior six months. While prevalence of use of various stimulant drugs varied significantly by racial/ethnic subgroup (crack cocaine being most common among African American and least common among Asian/Pacific Islander men; Ecstasy/MDMA use being most common among Asian/Pacific Islander and least common among African American MSM), the overall prevalence for use of any stimulant drug was comparable across groups: approximately one-quarter of the sample. Significant differences existed by race/ethnicity with respect to poly-drug use as well, with African American MSM being least likely to report such a pattern. Injection drug use was not common among this sample of racial/ethnic minority MSM. As a trend existed for higher prevalence among Latino men within the prior six months (see Table 1), we examined lifetime injection drug use, and found statistically significant differences between groups (11.6% of Latino men versus 6.5% of African American and 5.4% of Asian/Pacific Islander men; $p < .05$).

Factors associated with use of illicit drugs

Table 2 describes the results of bivariate and multivariate regression analyses of the associations between poly-drug use and sample characteristics, discrimination variables and the interaction of discrimination variables with race/ethnicity. Youth, being native-born rather than foreign-born, and experiences of racism within the general community were positively associated with poly-drug use among racial/ethnic minority MSM. There was a significant interaction between race/ethnicity and two types of discrimination.

Perceived homophobia among heterosexual friends was significantly associated with reduced risk for poly-drug use among Latino MSM, but not to poly-drug use by African American or Asian/Pacific Islander MSM. Estimates indicate that each one-point increase in perceived homophobia among heterosexual friends was associated with substantially lower odds of poly-drug use for Latino MSM (29% reduction, CI ranges from 6 to 46% reduction). Estimates for the other groups are uncertain, but suggest increased risk. Perceived racism within the gay community was significantly associated with reduced risk for poly-drug use among Asian/Pacific Islander MSM, but not to poly-drug use by African American or Asian/Pacific Islander MSM. Each one-point increase in perceived racism within the gay community was associated with substantially lower odds for Asian/Pacific Islander MSM (38% reduction, CI range of 9 to 57% reduction), with a suggestion of increased risk for the other groups.

Table 3 describes the results of the multivariate analysis looking at the associations of the same variables with any stimulant drug use. Being foreign-born rather than native-born, and being African American (vs. Latino) were associated with reduced risk for stimulant drug use. Having less than a college degree, a self-reported identification as bisexual (rather than heterosexual/other), and experiences of racism within the general community were positively associated with stimulant drug use. It should be noted here that (consistent with Table 1), the bivariate results indicated no differences in stimulant use by race/ethnicity; it was only in multivariate analyses where this difference emerged. There were no statistically significant interactions of any discrimination variables with race/ethnicity, indicating that these factors had comparable effects across the racial/ethnic groups.

DISCUSSION

Our study expands upon the limited research published to date on substance use among ethnic minority MSM. Our initial analyses describe the use of alcohol and various illicit drugs among subgroups of African American, Asian/Pacific Islander and Latino MSM. While it is difficult to compare the specific prevalence rates of use of various substances reported upon here with those rates of use reported elsewhere; certain patterns are consistent with some prior research on ethnic minority populations. These include relatively low rates of any alcohol and illicit drug use among African American men in contrast to other ethnic minority subgroups (Kandel, 1991), and higher rates of heavy drinking among Latino men, particularly Mexican-American men (Grant et al., 2004; Naimi et al., 2003; Randolph et al., 1998).

Our analyses of the impact of racism and homophobia on poly-drug and stimulant drug use included several demographic covariates; relationships identified were largely consistent with prior research findings. Being U.S.- rather than foreign-born has been previously associated with illicit drug use (Blake et al., 2001; Operario et al., 2006; Wong et al., 2007), as has lower education attainment (Chatterji, 2006), and younger age, although youth has been found a less powerful determinant among sexual minority populations (Hughes & Eliason, 2002). We found no significant association between HIV status and stimulant drug use or poly-drug use in bivariate and multivariate analyses. This would seem to be at odds with research that has found such a link (e.g., Gorman et al., 2004; Pappas & Halkitis, 2011; Stall et al., 2001; Vaudrey et al., 2007); it should be noted that our confidence intervals did not include the effects noted in the literature. While statistically significant associations have generally been found among MSM samples which include large numbers of white men, it may be that this relationship differs with exclusively ethnic minority MSM samples.

The primary aim of the study was to explore the potential impact of various forms of minority stress on poly-drug use and use of stimulant drugs (an important factor in HIV transmission among MSM). Our results provide support for minority stress theory in some respects; however, some of our findings do not. Experienced racism within the general community was a powerful predictor of both poly-drug use and stimulant drug use among ethnic minority MSM. This is consistent with prior research among some ethnic minority subgroups of MSM; the chronic nature of stress related to racism has been suggested as a possible reason for its relative power for ethnic minority MSM (Meyer, Schwartz & Frost,

2008). The authors suggest that an individual's race/ethnicity may confer social disadvantage from an early age, both through direct personal experiences of stigmatization and through less direct forces of institutionalized racism.

We found a differential (and somewhat unexpected) impact of racism within the gay community by race/ethnicity with regard to poly-drug use. Asian/Pacific Islander MSM who perceived the mainstream gay community to be racist were less likely to be poly-drug users; this was not found with our African American and Latino MSM samples. As perceived racism within the mainstream gay community was associated with greater psychological/emotional distress among Asian/Pacific Islander MSM (Choi et al., 2013), it might be anticipated that this would lead to greater poly-drug use. The apparent differential impact of racism within the gay community on Asian/Pacific Islander versus African American and Latino MSM requires further exploration to elucidate its dynamics. However, an important consideration is that there are powerful determinants of substance use within the gay community quite distinct from minority stress (Ross & Williams, 2001). The social dynamics of discrimination within the gay community may have important ramifications for the social dynamics of substance use within the same community.

Gay community/subculture norms are viewed as being far more permissive with respect to illicit drug use than those of the general public, drugs are viewed as readily accessible, and substance use may be associated with such factors as sense of affiliation to the larger gay community, gay bar/club attendance, the degree to which one is “out” to others, patterns of sexual behavior and sexual disinhibition (Cochran, Grella & Mays, 2012; Diaz et al., 2005; Halkitis & Jerome, 2008; Hatzenbuehler et al., 2008; McKirnan & Peterson, 1989; Semple, Patterson & Grant, 2002; Stall et al., 2001; Thiede et al., 2003).

Perceived racism within the mainstream gay community may be experienced as exclusion from or reduced access to that community for social and sexual mixing. However, MSM of different ethnic minority groups may vary with respect to their responses to such perceived racism. Those who react by avoiding or limiting socializing in such gay-identified spaces may also avoid opportunities for substance use – given that level and types of gay community involvement may impact use of “recreational drugs.” In this interpretation, greater substance use among ethnic minority MSM might be associated with a stronger sense of identification with the mainstream gay community.

With respect to experiences of homophobia, we found only one significant effect: perceived homophobia among friends was associated with reduced risk of poly-drug use for Latino MSM only. Again, without more data, it is difficult to offer a mechanistic interpretation of this finding. It may be that such perceived homophobia impacts the composition of friendship networks of Latino MSM with respect to size, gender, race/ethnicity and sexual orientation. Any effort to interpret this relationship must be speculative, given the complex social, interpersonal and psychological dynamics that may influence drug use. It is unclear if a sense of exclusion from or marginalization within heterosexual friendship networks results in participating in social networks in which norms and background rates of illicit drug use are lower.

Surprisingly, experienced homophobia within the family had no statistically significant association to increased risk for substance use in our analyses. Although the association appeared to be in the anticipated direction, we failed to replicate the findings of other research in this area (e.g., Ryan, Huebner, Diaz & Sanchez, 2009). It may be that the impact of such familial sources of homophobia is most acute among younger lesbians, gay men and bisexuals; in that case, such a statistical association might be weakened by the broader age range of our respondents. The relative impacts overall of racism and homophobia with respect to substance use in our sample may be due in part to a key distinction in those two types of minority status. Race/ethnicity is readily discernible, whereas sexual minority status is a stigmatized trait that is potentially concealable (Pachankis, 2007), thereby creating both different types of stress and potentially different responses to such stress.

We must acknowledge the limitations of our study. First, the sample of African American, Asian/Pacific Islander and Latino MSM was recruited in Los Angeles County; this may limit the degree to which the findings may be generalized. Los Angeles is a major metropolitan area with a relatively high concentration of Asian/Pacific Islanders and Latinos, as well as clearly identifiable ethnic neighborhoods. It also has a well-established and highly visible mainstream gay community. In other population areas with differing demographics, experiences of stigmatization and concomitant associations may be different. As the sample was obtained via chain referral, it may not be representative of the general African American, Asian/Pacific Islander, and Latino MSM communities – even within Los Angeles County. Our sample had a high prevalence of HIV-positive men, likely due to our initial recruitment of some of our sample from those seeking services at the AIDS Project Los Angeles, and their subsequent recruitment of men within their own social networks. Our measures of substance use and of discrimination were self-report, and may be subject to recall bias or distortion. Two points should be noted, however, with respect to these potential limitations. First, much of the literature on substance use and abuse relies on just such self-report measures. Second, a recent meta-analytic review of the impact of perceived racism among Black American adults found that the robust associations reported did not appear to be affected by type of scale or measurement precision (Pieterse et al., 2012), suggesting that these self-reports do capture an underlying existing phenomenon.

The conclusions that may be drawn from our analyses also must be treated with caution, as our data is cross-sectional and causal inferences cannot be drawn. There may be some unexamined factor(s) that may both increase sensitivity to identifying experiences of discrimination (Ruggiero & Taylor, 1997) and make an individual more susceptible to particular patterns of substance use. We have only looked at the potential effects of discrimination in a relatively broad manner. We did not test any complex models exploring experiences of discrimination, mediating or moderating variables, and substance use. We also could only examine substance use based upon our data, and we did not ask about substance abuse or substance use-related problems. Problematic levels of illicit drug use might be anticipated to have different relationships to minority stress, and better differentiate use related to avoidance coping or secondary to emotional distress associated with experiences of minority status-related stigmatization and discrimination.

Clearly, this area of research with ethnic minority MSM is in its infancy; the questions that remain to be investigated are many. Illicit drug use is determined by multiple factors and serves multiple functions. Disentangling those complex factors and varying trajectories of use over the life course is critical to identifying the mechanisms by which experiences of different forms of minority stress (and potential social exclusion) may promote or reduce the likelihood of substance use – and problematic substance use. We did not examine factors that might help to provide a more nuanced understanding of the differences we found with respect to minority stress experienced by African American, Asian/Pacific Islander and Latino MSM.

There are many questions that remain to be explored in further research, utilizing both qualitative and quantitative methods. To what degree are the predictors and pathways for substance use among African American, Asian/Pacific Islander and Latino MSM a composite of those rooted in ethnic minority status and sexual minority status; to what degree are there unique factors based upon those multiple statuses? There is much more to be learned about the manner in which participation of ethnic minority MSM in mainstream gay community life impacts their use of alcohol and illicit drugs. What might be some of the factors determining variations in use among different ethnic minority MSM, and how might those differ from those of white MSM? It is important to explore potential protective factors available to ethnic minority MSM (distinct from those of white MSM) based upon ethnic minority identity (Brook, Balka, Brook & Gursen, 1998; Corwin & Benda, 2000; Cuadrado & Lieberman, 1998; Dolezal, Carballo-Diéguez, Nieves-Rosa & Díaz, 2000). Some of these protective factors available to other ethnic minority individuals would seem to be embedded within coethnic social ties (Pearson & Geronimus, 2011), and may therefore not be available to ethnic minority MSM due to homophobia within their communities of origin (Greene, 1994). Similarly, future research might clarify the degree to which resilience factors previously noted in research on drug use with primarily white MSM samples may be utilized or accessible to ethnic minority MSM. There may be distinct resources of their own which are developed by ethnic minority MSM.

While many questions remain unanswered in this area, several points should be noted. Our findings add to the current literature in highlighting that the experiences of racism are a powerful determinant of health behaviors for ethnic minority MSM, and that ethnic minority stress should be addressed in any programs addressing substance use among MSM that hope to be effective. Furthermore, any program working with ethnic minority MSM concerned about their substance use needs to explore what may be a very complex interplay of factors that determine such use or abuse.

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Table 1

Percentage of Respondents Reporting Use of Substances (Prior 6 Months)

Substance Used	African American (N=400)	Asian/PI (N=392)	Latino (N=398)	Total (N=1190)	p-value
Any alcohol	55.3%	73.7%	64.8%	64.5%	*
5 or more alcohol drinks/day	10.5%	12.5%	18.6%	13.9%	*
Marijuana or hashish	30.3%	31.4%	37.7%	33.1%	*
Inhalant nitrites	8.3%	17.6%	13.3%	13.0%	**
Any stimulant drug ^a	25.0%	24.2%	27.9%	25.7%	
Crack cocaine	15.0%	4.6%	10.8%	10.2%	***
Powder cocaine	6.3%	9.7%	11.1%	9.0%	
Methamphetamines	11.0%	13.0%	17.6%	13.9%	<.10
Other amphetamines	1.8%	2.8%	4.8%	3.1%	
Ecstasy, MDMA, other forms of MDA	4.0%	13.3%	8.3%	8.5%	***
Psychedelics/ Hallucinogens	1.0%	1.0%	2.3%	1.4%	
Other "party drugs"	0.5%	1.0%	2.3%	1.3%	
Barbiturates, tranquilizers or sedatives	1.5%	2.3%	3.8%	2.5%	
Heroin, opiates, pain killers like Demerol	0.5%	1.3%	3.0%	1.6%	<.10
Poly-drug use (3 or more drugs)	10.5%	14.3%	15.3%	13.4%	*
Injection drug use	2.5%	2.8%	6.0%	3.8%	<.10

* p<.05

** p<.01

*** p<.001

^a"Any stimulant drug" includes crack cocaine, powder cocaine, methamphetamines, other amphetamines or "uppers," and Ecstasy/MDMA.

Table 2

Factors Associated With Poly-Drug Use^a in the Prior 6 Months: Results of Multivariate Logistic Regression Analysis

	Bivariate AOR (95% CI) ^b	Multivariate AOR (95% CI)
Age		
18 – 29 (vs. 50+)	2.37 (1.27, 4.42)**	2.14 (1.10, 4.14)*
30 – 39 (vs. 50+)	1.65 (0.83, 3.27)	1.47 (0.73, 2.98)
40 – 49 (vs. 50+)	1.85 (0.95, 3.60)	1.90 (1.00, 3.60)
Nativity		
Foreign-born (vs. U.S.-born)	0.63 (0.42, 0.93)*	0.52 (0.35, 0.77)**
Race/Ethnicity		
African American (vs. Latino)	0.63 (0.41, 0.98)*	0.24 (0.06, 1.04)
Asian/PI (vs. Latino)	0.90 (0.64, 1.28)	2.28 (0.75, 7.00)
Education		
Less than high school graduate (vs. college graduate)	0.93 (0.55, 1.57)	---
High school graduate (vs. college graduate)	1.38 (0.91, 2.10)	
Some college (vs. college graduate)	1.23 (0.81, 1.89)	
Self-reported sexual orientation		
Bisexual (vs. heterosexual/other)	2.24 (0.97, 5.16)	2.14 (0.96, 4.76)
Gay (vs. heterosexual/other)	1.77 (0.80, 3.91)	1.96 (0.91, 4.22)
Marital Status		
Ever-married (vs. never-married)	0.88 (0.49, 1.57)	---
Self-reported HIV status		
Positive (vs. negative/unknown)	0.83 (0.59, 1.17)	---
Perceived homophobia among heterosexual friends		
	1.00 (0.84, 1.19)	
<i>Perceived homophobia among heterosexual friends by race ethnicity (interaction):</i>		
		**
African American		1.16 (0.91, 1.46)
Asian/PI		1.04 (0.74, 1.47)
Latino		0.71 (0.54, 0.94)*
Experiences of homophobia within general community	1.04 (0.92, 1.18)	0.88 (0.75, 1.03)
Perceived homophobia within family	1.05 (0.89, 1.23)	---
Perceived racism within gay community	1.03 (0.84, 1.28)	
<i>Perceived racism within with gay community by race/ethnicity (interaction):</i>		
		**
African American		1.06 (0.72, 1.55)
Asian/PI		0.62 (0.43, 0.91)*
Latino		1.20 (0.85, 1.69)
Experiences of racism within general community	1.22 (1.10, 1.36)***	1.42 (1.22, 1.64)***

“NA” = not applicable; “---” = not included in the final model.

^a“Poly-drug use” refers to the use of 3 or more different illicit drugs in the prior 6 months.

^bAOR = adjusted odds ratio; 95% CI = 95% confidence interval.

*
p<.05

**
p<.01

p<.001

Table 3

Factors Associated With Stimulant Drug Use in the Prior 6 Months: Results of Multivariate Logistic Regression Analysis

	Bivariate AOR (95% CI)	Multivariate AOR (95% CI)
Age		---
18 – 29 (vs. 50+)	1.12 (0.74, 1.69)	
30 – 39 (vs. 50+)	0.87 (0.53, 1.41)	
40 – 49 (vs. 50+)	0.86 (0.53, 1.40)	
Nativity		
Foreign-born (vs. U.S. born)	0.52 (0.39, 0.71) ***	0.51 (0.37, 0.70) ***
Race/Ethnicity		
African American (vs. Latino)	0.87 (0.64, 1.18)	0.59 (0.40, 0.87) **
Asian/PI (vs. Latino)	0.81 (0.58, 1.13)	1.11 (0.78, 1.56)
Education		
Less than high school graduate (vs. college graduate)	1.02 (0.68, 1.55)	1.02 (0.65, 1.60)
High school graduate (vs. college graduate)	1.63 (1.15, 2.32) **	1.65 (1.14, 2.39) **
Some college (vs. college graduate)	1.70 (1.24, 2.35) **	1.62 (1.15, 2.28) **
Self-reported sexual orientation		
Bisexual (vs. heterosexual/other)	1.87 (1.03, 3.41) *	1.93 (1.04, 3.56) *
Gay (vs. heterosexual/other)	1.39 (0.79, 2.46)	1.52 (0.83, 2.79)
Marital status		---
Ever-married (vs. never-married)	1.35 (0.85, 2.14)	
Self-reported HIV status		---
Positive (vs. negative/unknown)	1.19 (0.85, 1.65)	
Perceived homophobia among heterosexual friends	0.95 (0.79, 1.14)	0.88 (0.73, 1.06)
Experiences of homophobia within general community	1.07 (0.97, 1.17)	---
Perceived homophobia within family	1.05 (0.89, 1.23)	---
Perceived racism within the gay community	1.00 (0.86, 1.15)	---
Experiences of racism within general community	1.21 (1.11, 1.31) ***	1.24 (1.13, 1.37) ***

“NA” = not applicable; “---” = not included in the final model.

^a AOR = adjusted odds ratio; 95% CI = 95% confidence interval.

* p<.05

** p<.01

*** p<.001