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## Substance Use and Sexual Risk Behavior in Sexual Minority Hispanic Adolescents

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### Abstract

**Purpose**—This study examines substance use and sexual risk in sexual minority Hispanic adolescents (SMHA) relative to their heterosexual counterparts.

**Methods**—Baseline data (Total n=1,632; SMHA n=195) from five completed trials of a family-based intervention for Hispanic adolescents were synthesized. SMHA were identified by self-reported anal/vaginal/oral sex with a partner of the same gender (SMHA vs. non-SMHA). Dichotomous outcomes were lifetime and past 90-day cigarette, alcohol and illicit drug use, past 90-day condomless sex and condom use at last sex. Logistic regression models controlled for sociodemographic and study-level characteristics testing the association between sexual minority status and each outcome.

**Results**—SMHA reported significantly more substance use than non-SMHA, including lifetime cigarette and illicit drug use. Adjusted odds of lifetime use for all substances and past 90-day cigarette use (AOR=3.07; 95% CI: 1.50–6.31) were significantly higher in SMHA.

**Conclusion**—SMHA substance use etiology should be explored to inform tailored intervention development.

### Keywords

adolescent; sexual minority; substance use; sexual risk; Hispanic; Latino; cigarette; alcohol; drug; gay

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Hispanics engage in risk behaviors, such as substance use and unprotected sex, more than their non-Hispanic white counterparts. For example, Hispanic adolescents report higher lifetime drug use than white and black ethnic/racial adolescents; Hispanic adolescents also

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have the highest prevalence of unprotected sex.<sup>1</sup> Studies also indicate significantly higher sexual risk behavior<sup>2,3</sup> and substance use and earlier initiation of use for sexual minority (e.g., same-sex attracted, same-sex sexual contact, bisexual) youths compared to heterosexuals.<sup>4,5</sup>

Both Hispanics and sexual minorities are well-established, high-risk population subgroups disproportionately impacted by unprotected sex and substance use; however, minimal research has examined how the intersection of these identities may differentially influence risk behavior engagement during adolescence.<sup>4</sup> It may be that sexual minority Hispanic adolescents (SMHA) exhibit even higher engagement in these behaviors, but the low prevalence of same-sex behaviors among adolescents has hindered the ability to study this population.<sup>4</sup> To our knowledge, no previous study has explored differences in these risk behaviors in SMHA and compared to their non-sexual minority Hispanic adolescent (non-SMHA) counterparts. This study examines and compares substance use and sexual risk in SMHA to non-SMHA.

## Methods

Individual-level baseline data from five separate and completed trials of Familias Unidas, a family-based, parent-centered prevention intervention were synthesized.<sup>6</sup> Across studies, adolescents aged 12–18 years of age were recruited through the Miami-Dade County Public School system during the academic school year via distribution of flyers and word-of-mouth. Familias Unidas consists of trained facilitators guiding parents in group and individual sessions. The intervention is parent-centered in that the adolescent's participation is limited to four of the twelve intervention sessions. Specifically, Familias Unidas is delivered in 8 two-hour multi-parent group sessions and 4 one-hour family sessions. The primary goal of the parent groups is to bring parents together for the purposes of establishing parental investment, increasing parental support, and providing a context for parent participation in a conjoint skills learning environment. The primary goal of the family sessions is to provide parents with an opportunity to transfer the competencies learned (e.g., communication skills) in the group sessions to their adolescent. Familias Unidas has been repeatedly proven to reduce substance use and sexual risk behavior in adolescents.<sup>6</sup>

Using Audio Computer Assisted Self-Interview Survey (ACASI), parent and adolescent participants separately completed comprehensive and confidential baseline assessments on a range of topics, including lifetime and recent substance use and sexual risk behaviors. Adolescent responses for all variables were used in analyses except for family income, which was ascertained from parent surveys. Slight differences in responses across studies were harmonized to facilitate analysis. For example, two studies combined lifetime anal, vaginal and oral sex into one question whereas the remaining three studies asked these questions separately; responses were combined for the last three studies for consistency and comparability.

SMHA were classified based on self-reported having anal, vaginal, or oral sex with at least one sexual partner of the same gender (SMHA vs. non-SMHA). Past 90-day and lifetime cigarette, alcohol and illicit drug use were dichotomized (any vs. none), similar to those

utilized in Monitoring the Future.<sup>7</sup> Sexual risk behaviors were operationalized as past 90-day anal or vaginal sex with a condom (not always vs. always) and condom use at last sexual encounter, respectively.

Pearson chi-square statistics were used to test for associations between sexual minority status (SMHA vs. non-SMHA) and sociodemographic characteristics (gender, family income, nativity status, time in the US) and substance use and sexual risk behavior indicators. Independent samples t-test assessed for mean age difference between sexual orientation strata.

Univariate and multivariable binary logistic regression models tested for the association between sexual behavior and each substance use and condomless sex indicator, respectively. Multivariable models controlled for sociodemographic characteristics (listed above) and a covariate to reflect the different studies from which the participants were drawn. An a priori significance level was set at  $\alpha=0.05$  for all analyses and 95% confidence intervals reported. This study was approved by the University of Miami Social and Behavioral Sciences IRB.

## Results

SMHA were significantly different than non-SMHA for all sociodemographic characteristics and substance use indicators, but not for sexual risk behavior (see Table 1). The mean age was 14.2 (SD= 1.2) for SMHA participants and 13.8 (SD=1.1) for non-SMHA participants. SMHA were more likely to be male (73.2% vs. 52.2%;  $p<0.001$ ), live in a home with a family income below \$25,000 (78.5% vs. 70.4%;  $p=0.02$ ), born outside the US (58.8% vs. 45.1%;  $p=0.001$ ) and be in the US fewer than three years (26.9% vs. 16.1%;  $p<0.001$ ). Furthermore, SMHA endorsed significantly more substance use than non-SMHA, including lifetime cigarette (32.1% vs. 13.1%;  $p<0.001$ ) and illicit drug (26.4% vs. 11.4%;  $p<0.001$ ) use.

Adjusted odds of lifetime use for all substances (cigarette, alcohol, illicit drug) and past 90-day cigarette use (AOR=3.07; 95% CI: 1.50–6.31) were significantly higher in SMHA, but not for past 90-day alcohol or illicit drug use (see Table 2). Point estimates were not statistically significant for risky sex indicators but suggest higher engagement.

## Discussion

This unique study examined substance use and sexual risk behavior in SMHA and compared to their non-SMHA counterparts by combining baseline data from five studies. Multiple studies of sexual minority adolescents suggest higher engagement in all of the behaviors reported in our study, including substantially higher use of cigarettes, alcohol and drugs.<sup>2,4,5</sup> Condomless sex behavior outcomes, however, did not reach statistical significance, but were suggestive of higher engagement and indicate the need for further research.<sup>3,4</sup> The substantially and consistently higher cigarette use observed in our sample of SMHA suggests potential long-term impact on future substance use and abuse. Evidence suggests that nicotine exposure may cause genetic changes that sensitize the brain to other drugs and prime it for future substance abuse.<sup>8</sup>

There are a number of important limitations and opportunities for future research to consider. Relative to using a sample from a single study, the pooling of data across studies increased the number of SMHA; however, for some indicators, namely those pertaining to condom use, wide confidence intervals suggest that analyses were underpowered. We were also unable to formally test the interaction between Hispanic ethnicity and sexual minority status. Evidence indicates that black and Hispanic men who have sex with men report lower frequency of substance use compared to their white counterparts.<sup>2</sup>

The cross-sectional nature of our study precluded the ability to determine the sequencing of same-sex sexual contact with these risk behaviors. Other measures of sexual orientation (e.g., attraction) have shown differential associations with these risk behaviors in other studies;<sup>2,3</sup> however, it is important to note that sexual behavior is a stronger predictor of risk behavior than attraction and identity measures.<sup>9</sup> In addition to examining engagement in condomless sex behaviors in this population, factors that influence intentions and expectations surrounding sexual behavior and risk-taking, such as self-efficacy, perceived norms, and social support should be included in future research.<sup>10</sup> Potential mediating and moderating factors such as those in the minority stress theory framework<sup>11</sup> (e.g., stigma, victimization events) or parental awareness and/or acceptance of adolescent sexual orientation<sup>12</sup> were unavailable and could have expanded interpretation of our results. Finally, data on perceived and actual patterns of discrimination and social and economic dislocation among Hispanic subgroups were not collected, but are important when developing future models to study substance use and sexual risk behavior in this population.

Efforts to thoroughly research risk behaviors in adolescent sexual minorities may have been delayed and largely ignored until recently.<sup>4</sup> Ethnic/racial sexual minorities are especially in need of attention in drug use and sexual risk prevention efforts due to recent increase in HIV incidence in these groups.<sup>4</sup> This study provides preliminary evidence currently lacking in the adolescent and sexual minority literature to further understanding and promote evidence-based action.

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## References

1. CDC. [Accessed March 3, 2016] Youth Risk Behavior Surveillance System: Selected 2011 National Health Risk Behaviors and Health Outcomes by Race/Ethnicity. 2011. [http://www.cdc.gov/healthyyouth/yrbs/pdf/us\\_disparityrace\\_yrbs.pdf](http://www.cdc.gov/healthyyouth/yrbs/pdf/us_disparityrace_yrbs.pdf)
2. Kann L, Olsen EO, McManus T, et al. Sexual identity, sex of sexual contacts, and health-risk behaviors among students in grades 9–12—youth risk behavior surveillance, selected sites, United States, 2001–2009. *Morbidity and mortality weekly report. Surveillance summaries*. 2011; 60(7):1–133.
3. Everett BG, Schnarrs PW, Rosario M, Garofalo R, Mustanski B. Sexual orientation disparities in sexually transmitted infection risk behaviors and risk determinants among sexually active adolescent males: results from a school-based sample. *Am J Public Health*. 2014; 104(6):1107–1112. [PubMed: 24825214]

4. Institute of Medicine (U.S.). Committee on Lesbian Gay Bisexual and Transgender Health Issues and Research Gaps and Opportunities. The health of lesbian, gay, bisexual, and transgender people building a foundation for better understanding. Washington, DC: National Academies Press; 2011. <http://www.ncbi.nlm.nih.gov/books/NBK64806>[http://www.nap.edu/catalog.php?record\\_id=13128](http://www.nap.edu/catalog.php?record_id=13128)<http://www.myilibrary.com?id=321342&ref=toc>
5. Marshal MP, Friedman MS, Stall R, et al. Sexual orientation and adolescent substance use: a meta-analysis and methodological review. *Addiction*. 2008; 103(4):546–556. [PubMed: 18339100]
6. Prado G, Pantin H. Reducing Substance Use and HIV Health Disparities among Hispanic Youth in the U.S.A.: The Familias Unidas Program of Research. *Intervencion psicosocial*. 2011; 20(1):63–73. [PubMed: 21743790]
7. Johnston, L., O'Malley, P., Bachman, J., Schulenberg, J. Monitoring the future national results on drug use: 2012 overview, key findings on adolescent drug use. Ann Arbor: Institute for Social Research, The University of Michigan; 2013.
8. Yuan M, Cross SJ, Loughlin SE, Leslie FM. Nicotine and the adolescent brain. *J Physiol*. 2015; 593(16):3397–3412. [PubMed: 26018031]
9. Brewster KL, Tillman KH. Sexual orientation and substance use among adolescents and young adults. *Am J Public Health*. 2012; 102(6):1168–1176. [PubMed: 22021322]
10. Buhi ER, Goodson P. Predictors of adolescent sexual behavior and intention: a theory-guided systematic review. *J Adolesc Health*. 2007; 40(1):4–21. [PubMed: 17185201]
11. Meyer IH, Dean L. Patterns of sexual behavior and risk taking among young New York City gay men. *AIDS Educ Prev*. 1995; 7(5 Suppl):13–23. [PubMed: 8664094]
12. Ryan C, Russell ST, Huebner D, Diaz R, Sanchez J. Family acceptance in adolescence and the health of LGBT young adults. *J Child Adolesc Psychiatr Nurs*. 2010; 23(4):205–213. [PubMed: 21073595]

### **Implications and Contributions**

Given the increased recognition of sexual orientation health disparities, this study provides important preliminary information regarding an understudied sexual minority ethnic subgroup – Hispanic adolescents. Findings indicate substantially higher engagement in substance use prompting the need for additional research and eventual development of targeted preventive intervention efforts.

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Sociodemographic characteristics and prevalence of substance use and sexual risk behavior indicators for Familias Unidas participants by sexual minority status.

**Table 1**

	SMHA		Non-SMHA		p-value
	n	mean (SD)	n	mean (SD)	
Age	192	14.2 (1.2)	1,420	13.8 (1.1)	<0.001
	n	%	n	%	p-value
<b>Sociodemographic Characteristics</b>					
Gender					
Male	142	73.2	750	52.1	<0.001
Female	52	26.8	688	47.9	
Nativity Status					0.001
US Born	66	41.2	724	54.9	
Foreign Born	94	58.8	595	45.1	
Family Income					0.022
<\$25,000	146	78.5	955	70.4	
\$25,000+	40	21.5	402	29.6	
Time in US					<0.001
<3 yrs	52	26.9	231	16.1	
3 yrs+	141	73.1	1,204	83.9	
	<b>Substance Use (Yes %)</b>				
Lifetime					
Cigarette	54	32.1	175	13.4	<0.001
Drug	51	26.4	162	11.4	<0.001
Alcohol	75	38.9	321	22.6	<0.001
Past 90-Day					
Cigarette	31	27.9	64	10.1	<0.001
Drug	29	20.4	89	11.5	0.004
Alcohol	37	25.2	145	17.6	0.031
	<b>Sexual Risk Behavior</b>				
Past 90-Day Condom Use					0.913

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	SMHA		Non-SMHA		p-value
	n	mean (SD)	n	mean (SD)	
Not Always	40	74.1	85	73.3	
Always	14	25.9	31	26.7	
Condom Use at Last Sex					0.1
No	36	41.4	64	31.4	
Yes	51	58.6	140	68.6	



Unadjusted and adjusted odds ratios of substance use and condomless sex behaviors in sexual minority Hispanic adolescents relative to their non-sexual minority counterparts.

**Table 2**

	Unadjusted		Adjusted*	
	OR	95% CI	AOR	95% CI
Lifetime				
Cigarette	3.05	2.13–4.38	2.94	1.84–4.69
Alcohol	2.18	1.59–2.99	2.29	1.55–3.40
Drug	2.80	1.95–4.01	3.77	2.35–6.05
Past 90-Day				
Cigarette	3.45	2.12–5.63	3.07	1.50–6.31
Alcohol	1.57	1.04–2.38	1.74	0.97–3.10
Drug	1.98	1.24–3.14	1.28	0.60–2.74
Not Always Use Condom	1.04	0.50–2.17	1.53	0.46–5.08
No Condom Use at Last Sex	1.54	0.92–2.60	0.98	0.46–2.11

\* All adjusted models included the following covariates: age, gender, nativity status, family income, time in the US and study.