Short Communication

Structural stigma and sexual orientation disparities in adolescent drug use

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HIGHLIGHTS

- Sexual-orientation disparities in drug use are greater in states with more stigma.
- Results were robust to adjustment for individual- and state-level confounders.
- Study identifies social determinants of sexual-orientation disparities in drug use.

ARTICLE INFO

ABSTRACT

Although epidemiologic studies have established the existence of large sexual orientation disparities in illicit drug use among adolescents and young adults, the determinants of these disparities remain understudied. This study sought to determine whether sexual orientation disparities in illicit drug use are potentiated in states that are characterized by high levels of stigma surrounding sexual minorities. State-level structural stigma was coded using a previously established measure based on a 4-item composite index: (1) density of same-sex couples; (2) proportion of Gay–Straight Alliances per public high school; (3) 5 policies related to sexual orientation discrimination (e.g., same-sex marriage, employment non-discrimination); and (4) public opinion toward homosexuality (aggregated responses from 41 national polls). The index was linked to individual-level data from the Growing Up Today Study, a prospective community-based study of adolescents (2001–2010). Sexual minorities report greater illicit drug use than their heterosexual peers. However, for both men and women, there were statistically significant interactions between sexual orientation status and structural stigma, such that sexual orientation disparities in marijuana and illicit drug use were more pronounced in high-structural stigma states than in low-structural stigma states, controlling for individual- and state-level confounders. For instance, among men, the risk ratio indicating the association between sexual orientation and marijuana use was 24% greater in high- versus low-structural stigma states, and for women it was 28% greater in high- versus low-structural stigma states. Stigma in the form of social policies and attitudes may contribute to sexual orientation disparities in illicit drug use.

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1. Introduction

Lesbian, gay, and bisexual (LGB, or sexual minority) populations are at greater risk for substance use and substance disorders than heterosexuals (Cochran, Keenan, Schober, & Mays, 2000; Drabble, Midanik, & Trocki, 2005). These well-documented disparities emerge early in development, with LGB youth using substances at significantly higher rates than their heterosexual peers (e.g., Austin et al., 2004; Corliss et al., 2010).

Although research has tended to focus on individual and interpersonal risk factors for sexual orientation disparities in health more broadly, and in substance use specifically, researchers have begun to identify structural determinants of these disparities. One structural risk factor to emerge in the literature is structural stigma, which refers to societal-level conditions, cultural norms, and institutional practices and policies that constrain the resources and opportunities of the stigmatized (Hatzenbuehler & Link, 2014). State-level policies that

differentially target gays and lesbians for social exclusion, such as constitutional amendments that ban same-sex marriage (e.g., Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010), represent one example of structural stigma.

LGB populations who live in communities with greater structural stigma have higher rates of adverse health outcomes compared to LGB populations living in low structural stigma communities (Hatzenbuehler, 2014). For instance, gay and lesbian youth living in counties whose school districts had fewer protective antibullying policies were over two times more likely to have attempted suicide compared to those living in counties with more protective policies (Hatzenbuehler & Keyes, 2013). Conversely, sexual orientation health disparities are significantly reduced, or even eliminated, in communities with low levels of structural stigma (Hatzenbuehler, Keyes, & Hasin, 2009). Drawing on this literature, we hypothesized that sexual orientation disparities in illicit drug use would be more pronounced in high structural stigma environments compared to low-structural stigma environments.

2. Methods

2.1. Sample

The Growing Up Today Study (GUTS) is a national, prospective cohort study of youth. Women in the Nurses' Health Study II (NHSII) cohort who were mothers of children ages 9 to 14 years (N = 34,174) were initially contacted; of this sample, 18,526 (54%) consented and provided information on over 26,000 children. In 1996, letters and baseline questionnaires were mailed to the children whose mothers had granted consent (13,261 girls and 13,504 boys). Approximately 68% of the girls (N = 9033) and 58% of the boys (N = 7842) returned completed questionnaires. Follow-up questionnaires have been administered annually or biennially since 1996. For the current analyses, we used data from 5 waves spanning 2001–2010. Demographics of the study sample are provided in Table 1.

2.2. Measures

2.2.1. Sexual orientation

In the fall of 1999, a sexual-orientation question was added to the GUTS survey, and participants were asked this item again in subsequent waves. The measure was adapted from the Minnesota Adolescent Health Survey (Remafedi, Resnick, Blum, & Harris, 1992) and asked about feelings of attraction using the following 6 mutually exclusive response options: "Which one of the following best describes your feelings? (1) Completely heterosexual (attracted to persons of the opposite sex), (2) mostly heterosexual, (3) bisexual (equally attracted to men and women), (4) mostly homosexual, (5) completely homosexual (gay/lesbian, attracted to persons of the same sex), or (6) not sure."

Table 1
Demographics and study variables of youth participating in the longitudinal Growing Up Today Study (2001–2010).

Variable	Heterosexual (N = 9934)	Sexual Minority[a] (N = 2789)	Chi-square statistic or independent-samples T-test, df, p-value
Demographics	N (%)	N (%)	
Sex			$X^2(1) = 294.4, p = <.0001$
Female	5508 (55.4)	2050 (73.4)	
Male	4426 (44.6)	739 (26.6)	
Race/ethnicity			$X^2(1) = 25.3, p = <.0001$
White	9323 (93.8)	2542 (91.1)	
Other	611 (6.2)	247 (8.9)	
Family income (in 2001)			$X^2(2) = 17.5, p = 0.0002$
<$49,000	1019 (10.3)	300 (10.8)	
>$50,000	6968 (70.1)	2040 (73.1)	
Missing	1947 (19.6)	449 (16.1)	
Independent variable[b]	Mean (SD)	Mean (SD)	
State-level structural stigma	1.07 (3.16)	1.56 (3.26)	$t = 6.96, p < 0.0001$
State-level covariates[b]	Mean (SD)	Mean (SD)	
Income inequality[c]	44.94 (2.02)	45.20 (2.05)	$t = 6.01, p < 0.0001$
Median household income	54.49 (6.56)	55.48 (6.89)	$t = 6.65, p < 0.0001$
Marijuana prevalence	7.45 (0.95)	7.56 (0.97)	$t = 4.97, p < 0.0001$
Illicit drug (other than marijuana) prevalence	5.14 (0.52)	5.12 (0.52)	$t = -1.52, p = 0.1273$
Marijuana[d]	N (%)	N (%)	
2001	1416 (20.9)	369 (48.3)	$X^2(1) = 314.4, p < 0.001$
2003	2166 (25.7)	471 (55.6)	$X^2(1) = 345.9, p < 0.001$
2005	2340 (28.4)	672 (55.5)	$X^2(1) = 354.0, p < 0.001$
2007	1966 (26.6)	876 (52.9)	$X^2(1) = 431.7, p < 0.001$
2010	1498 (22.8)	624 (46.6)	$X^2(1) = 319.8, p < 0.001$
All years	9386 (25.1)	3012 (52.1)	$X^2(1) = 1779.6, p < 0.001$
Illicit drugs[d]	N (%)	N (%)	
2001	299 (4.4)	138 (17.5)	$X^2(1) = 249.9, p < 0.001$
2003	579 (6.9)	211 (24.3)	$X^2(1) = 326.1, p < 0.001$
2007	624 (8.6)	376 (23.1)	$X^2(1) = 280.5, p < 0.001$
2010	427 (6.7)	244 (18.9)	$X^2(1) = 203.7, p < 0.001$
All years	1929 (6.7)	969 (21.2)	$X^2(1) = 1089.5, p < 0.001$

Notes:
[a] The sexual minority group is composed of individuals who self-identified as mostly heterosexual, bisexual, mostly homosexual and completely homosexual.
[b] State-level structural stigma and state-level covariates were measured in 2000.
[c] State-level income inequality was determined by calculating the ratio of the top fifth to the bottom fifth of household income for each state using Census data from 1998–2000 (Bernstein et al., 2000).
[d] To create age-standardized prevalence estimates for marijuana and illicit drugs, we created weights based on the proportion of individuals in each age category among the total sample and then used those weights to adjust the age proportions of the sexual minorities and heterosexuals to be equivalent. We did this to control for potential confounding by age because the sexual orientation observations in GUTS tend to be slightly older than the heterosexuals.