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Sexual minority specific and related traumatic experiences are associated with increased risk for smoking among gay and bisexual men ☆

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ABSTRACT

Objective: This study examined the hypothesis that sexual minority specific stress and trauma histories may explain some of the risk for smoking among gay/bisexual men.
Methods: Patients at a Boston community health center were invited to complete a 25-item questionnaire assessing demographics, general health, trauma history, and substance use. Of the 3103 who responded, 1309 identified as male and gay or bisexual (82.8% White and mean age of 38.55 [sd = 9.76]).
Results: A multinomial logistic regression with never smoked as referent group and covariates of age, education, employment, HIV status, and race, showed that the number of sexual minority stressors/traumas were significantly related to the odds of both current and former smoking. In comparison to participants with no trauma history, those who reported 1, 2, 3, and 4 traumas had respectively 1.70 (OR = 1.70: 95% CI: 1.24-2.34), 2.19 (OR = 2.19: 95% CI: 1.48-3.23), 2.88 (OR = 2.88: 95% CI: 1.71-4.85), and 6.94 (OR = 6.94: 95% CI: 2.62-18.38) the odds of identifying as a current smoker. Adjusted logistic regression analysis revealed a significant dose effect of number of sexual minority stressors/traumas with odds of ever smoking. Experiencing intimate partner violence, anti-gay verbal attack, anti-gay physical attack, and childhood sexual abuse were each independently associated with increased odds of the smoking outcomes.
Conclusion: A sexual minority specific trauma history may represent a vulnerability for smoking among gay/bisexual men. Interventions that address trauma may enhance the efficacy of smoking cessation programs and improve the mental health of gay/bisexual men.

Introduction

Researchers found that among gay and bisexual men 48% currently smoked [1,2] and 71% had a smoking history [3] and the driving forces behind the high smoking prevalence in gay and bisexual men may be partially explained by sexual minority stress and trauma histories. A Sexual Minority Stress Model, proposed by Meyer [4], posits that common environmental factors interact with sexual minority status and sexual minority identity to contribute to general stress, distal minority stress processes (e.g., prejudice events, including discrimination and violence) and proximal stress processes (e.g., fear of rejection and internalized homophobia) which, together, contribute to mental health outcomes such as increased substance abuse. Better understanding of the empirical link between smoking and sexual minority stress and traumas among gay and bisexual men, has clear implications for target outcomes in smoking cession treatment and potential major health benefits for this population.

Rates of reported traumas (e.g., sexual and physical abuse, and intimate partner violence) are high among gay, bisexual, and other men who have sex with men (MSM) [5–7]. For instance, a meta-analysis of 12 studies by Lloyd and Operario [5] found that 27.3% of MSM in a total sample of 15,622 reported a history of childhood sexual abuse. In addition, MSM experience intimate partner violence at a high rate (15–39% estimated prevalence rates of physical assault) [8]. To further compound the high rates of physical and sexual abuse histories among MSMs, they are often verbally and physically attacked due to their sexual minority status [9,10]. Individuals who have stressful experiences and resulting psychological distress, but limited adaptive coping resources may engage in maladaptive coping strategies such as smoking [11–13].

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MSM are the single largest risk group of HIV-positive Americans [14] and the prevalence of tobacco use among HIV-positive persons has been estimated at between 50 and 70% [15–18]. At the intersection of smoking and HIV, gay and bisexual men may well find themselves with a distinct vulnerability and at a substantial health disadvantage. Tobacco use has been implicated in myriad negative health outcomes among HIV-positive smokers including increased risk of respiratory diseases, medication nonadherence, decreased effectiveness of HIV medication, virologic failure, and accelerated disease progression [19–22]. Being HIV positive may also increase gay and bisexual men's risk for exposure to violence due to HIV related stigma [23] as well as their decisions to remain in abusive intimate relationships because of fear of being alone or getting sick [8,24].

In sum, gay/bisexual men report high rates of smoking and experience sexual minority specific stress as well as other traumas (e.g., intimate partner violence) that may increase their vulnerability to smoking. In addition, smoking has negative consequences for their overall health and perhaps even greater consequences for those who are HIV-positive. The present study investigated whether sexual minority stress and traumas are factors that may account for the high rates of smoking among gay/bisexual men and hypothesized that sexual minority stress/traumas would be associated with increased risk for smoking. The study also explored whether HIV status moderated the relations between sexual minority stress/traumas and smoking.

Method

Setting and population

Participants were patients receiving care at a large, community-based health clinic in Massachusetts that focuses on serving sexual minorities. The sociodemographic characteristics of the subsample we analyzed (male-identified and sexual minority) are shown in Table 1. Transgender men were not a part of this subsample because the survey did not capture information distinguishing whether clients identified as transgender men or women. The sample was predominantly White, although 16.7% of patients included identified as racial/ethnic minorities.

Procedures

As part of ongoing patient surveys, all clinic patients who attended visits during a 12-month period are offered an opportunity at intake to complete a 25-item survey. A total of 3103 patients completed the survey out of the 10,549 individuals who were listed as clinic patients. Study protocol was reviewed by the health center's Institutional Review Board and exempted from IRB oversight, as the analysis was restricted to secondary data analysis in a de-identified data set.

Measures

Sexual minority identity

Participants were invited to identify as heterosexual, gay, bisexual, or "not sure/undecided," or other. All heterosexual identified participants were excluded from analyses.

Socio-demographics

Socio-demographic variables included age, race/ethnicity, education level, employment status, and income.

HIV status

Participants had the option to select HIV-negative, HIV-positive, unknown/never tested, or prefer not to say.

Table 1
Sample socio-demographic characteristics.

	Whole sample (n = 1309) Mean (SD) or frequency (%)
Age	38.55 (9.76)
Race/ethnicity	
Asian	44 (3.4%)
Black/African America	63 (4.8%)
Latino/Hispanic	80 (6.1%)
Native American	7 (.5%)
White	1084 (82.8%)
Bi-racial	5 (.4%)
Other	19 (1.5%)
Declined	7 (.5%)
Education	
<High school	10 (.8%)
High school/GED	129 (9.9%)
Some college	330 (25.2%)
College degree	492 (37.6%)
Graduate degree	342 (26.1%)
Declined	6 (.5%)
Family income	
<$20,000	234 (17.9%)
$20,000–$34,999	265 (20.2%)
$35,000–$49,000	267 (20.4%)
>$50,000	489 (37.4%)
Declined	54 (4.1%)
Employment status	
Full-time	870 (66.5%)
Part-time	96 (7.3%)
Unemployed	157 (12.0%)
Retired	18 (1.4%)
Student	101 (7.7%)
Homemaker	3 (.2%)
Other	55 (4.2%)
Declined	9 (.7%)
HIV status	
HIV-negative	851 (65%)
HIV-positive	279 (21.3%)
Unknown	161 (12.3%)

Tobacco use

Participants were presented with the question, "In your lifetime, and in the past six months, have you used tobacco?" Three variables were created from participant responses: current smokers (0 = not current, 1 = current), which comprised all participants who indicated smoking within the past 6 months, former smokers (0 = not former, 1 = current), participants who indicated only lifetime smoking and excluding participants who endorsed current smoking, and ever smokers (0 = never, 1 = ever), consisting of all participants who reported ever smoking during their lifetime or the past six months. For analyses, current smokers and former smokers formed a multinomial variable using never smokers as the referent group.

Sexual minority stressors and trauma

To capture sexual minority stress, participants were asked: "Have any of the following happened to you because you are lesbian/gay/bisexual/transgender?" and, under it, participants had the option of selecting yes to "Physically Attacked" and "Verbally Attacked." Additionally, to assess for intimate partner violence, participants were asked to indicate if they had ever been "physically or sexually hurt by [their] spouse (or former spouse), a boyfriend/girlfriend, or some other intimate partner." Childhood sexual abuse was captured with, "Were you ever sexually harmed as a child (under 15 years old)?" Five variables were created from participant responses: physically attacked due to non-heterosexual identity (yes/no), verbally attacked due to non-heterosexual identity (yes/no), intimate partner violence (yes/no), childhood sexual abuse (yes/no), and a categorical variable of the count of all four potentially traumatic events (1, 2, 3, 4 with 0 as reference group).