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Brief report
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Smoking Cessation Awareness and Utilization Among Lesbian, Gay, Bisexual, and Transgender Adults: An Analysis of the 2009–2010 National Adult Tobacco Survey

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Abstract

Introduction: Each year, there are more than 480 000 deaths in the United States attributed to smoking. Lesbian, gay, bisexual and transgender (LGBT) adults are a vulnerable population that smokes at higher rates than heterosexuals.

Methods: We used data collected from the National Adult Tobacco Survey 2009–2010, a large, nationally representative study using a randomized, national sample of US landline and cellular telephone listings, (N = 118 590). We compared LGBT adults to their heterosexual counterparts with regard to exposure to advertisements promoting smoking cessation, and awareness and use of tobacco treatment services, including quitlines, smoking cessation classes, health professional counseling, nicotine replacement therapy, and medications.

Results: Fewer GBT men, compared to heterosexual men, were aware of the quitline. However, LGBT individuals have similar exposure to tobacco cessation advertising, as well as similar awareness of and use of evidence based cessation methods as compared to heterosexual peers.

Conclusions: The similarly of awareness and use of cessation support indicates a need for LGBT-specific efforts to reduce smoking disparities. Potential interventions would include: improving awareness of, access to and acceptability of current cessation methods for LGBT patients, developing tailored cessation interventions, and denormalizing smoking in LGBT community spaces.

Introduction

Smoking is the leading cause of preventable death and disease in the United States, and the prevalence of smoking among lesbian, gay, bisexual and transgender (LGBT) individuals is between 1.5 and 2.5 times higher than that of their heterosexual/straight counterparts.[1] According to the 2009–2010 National Adult Tobacco Survey, 32.8% of LGBT individuals reported smoking cigarettes, compared to 19.5% of heterosexual/straight respondents. Among the National Adult Tobacco Survey cohort, however, LGBT individuals did not differ from their heterosexual counterparts in their desire to quit smoking cigarettes.[2] This lack of disparity suggests that although the LGBT population disproportionately uses cigarettes, LGBT smokers may be receptive to cessation efforts.

Currently, there are a wide variety of programs and services intended to support successful smoking cessation. Best practice guidelines for tobacco control include conducting media campaigns

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and improved access to evidence-based tobacco treatment, including brief, simple advice from physicians, individual and group cessation counseling sessions, medications (eg, nicotine replacement therapy, varenicline/Chantix), and Quitlines.[3–10]

A recent review of the literature suggests that outcomes from traditional tobacco cessation treatment do not vary between LGBT and heterosexual individuals.[11] Grady and colleagues compared outcomes from two nontailored clinical trials and determined that LGBT participants were equally as likely as their heterosexual counterparts to stop smoking. Covey and colleagues also examined nontailored tobacco treatment success and found no differences between GB and heterosexual men.

It is currently unknown whether there are differences in the awareness or use of this array of cessation programs and tobacco treatment services between LGBT and heterosexual smokers, because the majority of smoking cessation programs do not measure sexual orientation or gender identity. The increased prevalence of cigarette smoking among LGBT individuals may be explained by a number of factors, including potential differences in awareness or use of tobacco treatment support among LGBT smokers. The purpose of this study was to compare LGBT and heterosexual smokers with regard to exposure to advertisements promoting smoking cessation, as well as awareness and use of tobacco treatment services.

Methods

Sample

The National Adult Tobacco Survey was conducted in 2009–2010 using a randomized, national sample of US landline and cellular telephone listings.[12] Sampling procedures, survey design, and data collection details are reported elsewhere.[12] Overall, 118 590 respondents completed the survey with response rates of 40.4% for landlines, and 24.9% cell phones. Sampling weights were not employed in this analysis.

Measures

Gender was defined by asking, "Are you male or female?" (male, female, don't know, other), but narrowed for the purposes of this analysis to "male" and "female" responses due to respondents rarely (n = 4) selecting "don't know" or "other". Sexual orientation status was defined by asking, "Do you consider yourself to be…?" (heterosexual, gay or lesbian, bisexual, transgender, don't understand, don't know, refused, or other). Measures of smoking cessation were developed from the survey questions in Table 1 and smoking cessation questions were only asked of current smokers. Current smokers were defined as individuals who had smoked at least 100 cigarettes in their lifetime and at least once in the past month. The question of healthcare use was asked of all respondents, but responses only of current smokers were included for the purposes of this analysis.

Data Analysis

Frequencies for current smoking by sexual orientation were calculated, as were frequencies by sexual orientation for all smoking cessation-related measures. Prevalence of smoking cessation-related measures was determined among current smokers. Respondents were grouped by self-reported gender, due to known differences in smoking among LGBT males and females.[2] Respondents identifying as heterosexual were compared to those identifying as LGBT using Pearson's chi-square tests. Current smokers selecting sexual orientation status of "don't understand" (n = 57), "don't know/not sure" (n = 60), "refused" (n = 535), or "other" (n = 19) were excluded from this analysis. Analysis was conducted in Stata v13.0.

Table 1. Smoking Cessation Measures, National Adult Tobacco Survey (NATS), 2009–2010

Measure	Question(s)	Response for inclusion
Current Smoker	"Have you smoked at least 100 cigarettes in your entire life?" AND "During the past 30 days, on how many days did you smoke cigarettes?"	Yes AND >1 cigarette
Seen Ads for Quitting	"In the past 30 days, have you seen, read, or heard any ads about quitting cigarettes?"	Yes AND Current Smoker
Quitline Awareness	"A telephone Quitline is a free telephone-based service that connects people who smoke cigarettes of other tobacco products with someone who can help them quit. Are you aware of any telephone Quitline services that are available to help you quit using tobacco?"	Yes AND Current Smoker
Quitline Use	"When you quit smoking/the last time you tried to quit smoking did you call a telephone quitline?"	Yes AND Current Smoker
Provider Recommendations	"In the past 12 months, did any doctor, dentist, nurse, or other health professional advise you to quit smoking cigarettes or using any other tobacco products?"	Yes AND Current Smoker
Class Use	"When you quit smoking/the last time you tried to quit smoking, did you use a class or program to help you quit?"	Yes AND Current Smoker
Health Professional Counseling	"When you quit smoking/the last time you tried to quit smoking, did you use one-on-one counseling from a health professional to help you quit?"	Yes AND Current Smoker
Medications	"When you quit smoking/the last time you tried to quit smoking, did you use any of the following medications: a nicotine patch, nicotine gum, nicotine lozenges, nicotine nasal spray, a nicotine inhaler, or pills such as Wellbutrin, Zyban, buproprion, Chantix, or varenicline to help you quit?"	Yes AND Current Smoker
Plan to Use Meds	"When you try to quit smoking, do you plan to use a nicotine patch, nicotine gum, lozenges, nasal spray, an inhaler, or pills such as Wellbutrin, Zyban, buproprion, Chantix, or varenicline to help you quit?"	Yes AND Current Smoker
Plan to Use Quit Assistance	"When you try to quit smoking, do you plan to use a telephone quitline, a class or program or one-on-one counseling from a healthcare provider to help you quit?"	Yes AND Current Smoker
Healthcare Use	"In the past 12 months, have you seen a doctor, dentist, nurse, or other health professional?"	Yes AND Current Smoker

Results

A total of 110 832 respondents were included in this analysis, where 59.31% (n = 65 739) of the total sample identified as heterosexual female, 1.11% as LBT female (n = 1228), 38.49% heterosexual male (n = 42 663) and 1.08% GBT male (n = 1202). Of these, 25.8% of LBT females were current smokers as compared with 13.22% heterosexual females (P < .01), and 27.7% of GBT males were current smokers while 15.9% heterosexual males reported current smoking (P < .01).[13] Overall, 29% of respondents reported being a "former smoker." Among females, 26.6% of LBT and 25.9% of heterosexual participants reported being former smokers. A higher percentage of heterosexual males reported being former smokers versus GBT men (33.9% vs. 28%, P = .002).

The majority of current smokers across all sexual orientations had seen an ad for quitting (range 86.2%–95.6%), with no differences across groups (Table 2). Among males, significantly fewer GBT males were aware of the quitline compared to their heterosexual counterparts (GBT males: 66.7% vs. heterosexual males: 83.9%, P < .01). There were no differences between LBT females and heterosexual females in quitline awareness. Additionally, past use of the quitline was uniformly low among all respondents; there were no differences in quitline use between sexual minority and heterosexual males or females.

The majority of all current smokers across sexual orientation status had been advised to stop smoking by a healthcare provider, and there were no differences between sexual minority and heterosexual males or females (LBT females: 66.9% vs. heterosexual females: 66.6%; GBT males: 69.4% vs. heterosexual males: 68.5%). This confirms previous reports by King et al.[13]

The majority of current smokers did not use other evidence-based methods to support previous smoking cessation attempts regardless of sexual orientation. In previous quit attempts, few respondents participated in classes (LBT females: 5.0% vs. heterosexual females: 5.0%; GBT males: 4.8% vs. heterosexual males: 4.0%) or health professional counseling (LBT females: 4.7% vs. heterosexual females: 4.9%; GBT males: 5.7% vs. heterosexual males: 3.7%). There was also no difference between LGBT and heterosexual males or females in use of medication during a past quit attempt (LBT females: 21.8% vs. heterosexual females: 23.8%; GBT males: 24.0% vs. heterosexual males: 19.8%). Similarly, no differences were found between LGBT and heterosexual males and females in plans to incorporate quit assistance other than medications (LBT females: 9.1% vs. heterosexual females: 8.9%; GBT males: 9.9% vs. heterosexual males: 7.1%).

Discussion

This study contributes to the literature in demonstrating that LGBT and heterosexual individuals have equal exposure to tobacco advertising, are equally as aware of traditional, evidenced-based smoking cessation methods and use them at similar rates. We found few subgroup differences, with one exception finding that fewer GBT men than heterosexual men were aware of the Quitline.

Previous studies have indicated that LGBT individuals are at a higher risk for smoking than heterosexuals,[1,12] yet there is no difference between the groups in their desire to quit.[2] The currently available literature suggests that current smoking cessation programs are similarly effective for both LGBT and heterosexual populations.[14,15] The results of this study suggest that the increased smoking prevalence in the LGBT community is not due to differences exposure to current tobacco cessation programs. The persistence of increased smoking rates among LGBT groups despite similar rates of desire to quit and engagement with cessation support suggest that additional efforts to reduce the disparities in the smoking rate among LGBT individuals are needed.

Tailored community-based interventions have been developed for this population, but thus far have lacked rigorous evaluation.[11] Given LGBT specific risk factors for smoking (eg, tobacco industry targeting,[16] minority stress and discrimination), more research is needed to develop and test targeted interventions.[11] Studies are needed to establish an evidence base for tailored tobacco treatment programs to be implemented in LGBT community spaces (eg, LGBT community centers).

Table 2. Smoking Cessation Awareness and Utilization Among Heterosexual and Sexual Minority Current Smokers, National Adult Tobacco Survey (NATS) 2009–2010

	Females			Males		
	LBT, n = 1228	Heterosexual, n = 65 739		GBT, n = 1202	Heterosexual, n = 42 663	
	n (%)	n (%)	P	n (%)	n (%)	P
Current Smokers	**317 (25.8%)**	**8691 (13.22%)**	<.001*	**333 (27.7%)**	**6773 (15.9%)**	<.001*
Seen Ads for Quitting	303 (95.6%)	7908 (91.0%)	.547	287 (86.2%)	6159 (90.9%)	.515
Quitline Awareness	249 (78.5%)	5779 (66.5%)	.053	222 (66.7%)	5680 (83.9%)	.009*
Quitline Use	12 (3.8%)	310 (3.6%)	.843	9 (2.7%)	172 (2.5%)	.857
Provider Recommendations	212 (66.9%)	5784 (66.6%)	.957	231 (69.4%)	4638 (68.5%)	.883
Class Use	16 (5.0%)	431 (5.0%)	.946	16 (4.8%)	270 (4.0%)	.478
Health Professional Counseling	15 (4.7%)	429 (4.9%)	.875	19 (5.7%)	249 (3.7%)	.070
Medications	69 (21.8%)	2067 (23.8%)	.512	80 (24.0%)	1341 (19.8%)	.130
Plan to Use Meds	48 (15.1%)	1458 (16.8%)	.515	57 (17.1%)	945 (14.0%)	.165
Plan to Use Quit Assistance	29 (9.1%)	777 (8.9%)	.907	33 (9.9%)	480 (7.1%)	.074
Healthcare Use	256 (80.8%)	7479 (86.1%)	.457	279 (83.8%)	5070 (74.9%)	.176

Bold values indicate that the calculated P values were minuscule and statistical guidelines suggest reporting as P < .001 rather than a rounding at three digits to zero.
LGBT = lesbian, gay, bisexual and transgender.
*Indicates statistically significant difference at P < .01.

Results of a recent study of smoking cessation treatment preferences among Colorado LGBT smokers indicated that these individuals were unlikely to seek tobacco cessation during a clinical encounter.[17] This indicates that community wide interventions to denormalize smoking in LGBT community spaces may have wide reaching impact, particularly as cultural norms may at least partly explain the smoking disparity that persists despite equal exposure to and awareness of cessation resources. For example, among young men who have sex with men in Los Angeles, California, more time in gay bars was associated with more smoking.[18] In addition, patrons of LGBT bars are more likely to be exposed to secondhand smoke than patrons of non-LGBT bars,[19] indicating LGBT spaces may be more permissive of tobacco use. Although HIV prevention efforts in LGBT bars have been successful, few tobacco control interventions have been implemented in these spaces.[20] Community policy interventions, including smoke-free LGBT bars in states that do not have smoke-free ordinances, and smoke or tobacco-free Pride festivals,[21,22] have the potential to promote in the denormalization of smoking in the LGBT community.

Our findings, along with this growing body of literature, suggest several possible approaches to reducing smoking among LGBT adults: (1) further increasing awareness of the traditional cessation methods; (2) implementing tailored tobacco cessation programs; and (3) promoting efforts to denormalize smoking in the LGBT community. Given the diversity of tobacco use patterns among LGBT adults and the unique risk factors they face, it is crucial to determine the optimal mix of intervention approaches for this population.

Limitations of this study include the reliance on participant self-report, the cross-sectional nature of the study, the exclusion of military and institutionalized populations, the use of only one measure sexual orientation, and the combination of sexual orientation and gender identity in a single item. Gender identity and sexual orientation are not the same, and thus, this single, combined question is an inherent limitation of this dataset that deserves reconsideration in future iterations of the National Adult Tobacco Survey. It should also be noted that LGBT respondents tended to be younger than their heterosexual counterparts and this may have contributed to differences in awareness of cessation services; however, there were no observed differences in healthcare use. Lastly, this study did not employ sample weighting procedures due to a lack of agreement in the literature on sexual minority prevalence.

Conclusion

LGBT individuals have similar exposure to tobacco advertising, as well as similar awareness of and use of evidence based cessation methods as compared to heterosexual peers, yet continue to have disproportionately high prevalence of cigarette smoking. To reduce this gap, efforts to prevent smoking and promote tobacco treatment in LGBT populations need to go beyond raising awareness of and promoting traditional tobacco treatment efforts. Results of this study underscore the need to develop and rigorously test a greater variety of tailored cessation interventions and work toward denormalization of smoking in LGBT spaces.

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Declaration of Interests

None declared.

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