Prevalence of Smoking Among the Lesbian, Gay, Bisexual, Transsexual, Transgender and Queer (LGBTTQ) Subpopulations in Toronto – The Toronto Rainbow Tobacco Survey (TRTS)

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ABSTRACT

Objectives: Research in the United States has found a higher likelihood of smoking among lesbian, gay and bisexual people compared to the general population. Moreover, the smoking prevalence of these subpopulations in Canada is not well documented. The objective of this study was to determine the prevalence of smoking among the LGBTTQ subpopulations in Toronto, Ontario.

Methods: A self-report questionnaire was administered from April to July 2006 to a convenience sample of lesbian, gay, bisexual, transsexual, transgender and queer (LGBTTQ) community members in Toronto, Ontario. Items measured included: past and current smoking behaviour, sexual orientation, gender identity, age and residential area.

Results: In total, 3,140 LGBTTQ community members completed the Toronto Rainbow Tobacco Survey (TRTS). Overall, 36% of LGBTTQ participants reported current smoking. 25% were former smokers and 39% had never smoked. The smoking prevalence rates ranged from 24% to 45% across the different sexual orientation and gender identity groups of the sample, with bisexual women and bisexual men reporting the highest smoking rate at 45%. The study also reports the first known smoking prevalence rate for gender queer people at 44%. Younger LGBTTQ participants reported even higher smoking rates.

Conclusion: This study corroborates prior research done in other jurisdictions by finding similar and higher smoking rates among Toronto’s LGBTTQ subpopulations compared to the “mainstream” population. The relatively higher rates among LGBTTQ youth, bisexual and gender queer people have implications for targeted awareness and cessation initiatives. Need for future research is discussed.

Key words: Smoking; sexual behaviour; homosexuality; health surveys

La traduction du résumé se trouve à la fin de l’article.

The Rainbow Tobacco Intervention Project (RTIP)* conducted the Toronto Rainbow Tobacco Survey to determine the prevalence of smoking in Toronto’s LGBTTQ subpopulations. Additional objectives were to investigate tobacco use in a Canadian LGBTTQ population outside of BC and to address the lack of data on tobacco use among bisexual and trans populations.

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Conflict of Interest: None to declare.

* RTIP is a community coalition whose members include the Canadian Cancer Society, Centre for Addiction and Mental Health (CAMH) – [Nicotine Dependence Clinic, Public Education Program, Rainbow Health Service], The Council for a Tobacco Free Toronto (CTFT), Rainbow Health Network, Sherbourne Health Centre and Toronto Public Health. RTIP’s goal is to reduce tobacco-related morbidity and mortality within the Lesbian, Gay, Bisexual, Transgender, Transsexual and Queer (LGBTTQ) communities in Toronto.
METHODS

The research proposal was approved by the Research and Evaluation Ethics Review Process at Toronto Public Health. The Toronto Rainbow Tobacco Survey (TRTS) gathered data from a convenience sample of Toronto’s LGBTQ subpopulations from April to July 2006. Convenience sampling was used since it is typically difficult to identify this population efficiently and effectively using more robust techniques. Issues of disclosure and the fluid nature of sexual behaviour and gender identification have both been identified as barriers to the inclusion of questions about sexual orientation and gender identification in population surveys. Two questions were used for people to self-identify their sexual orientation and gender. These were developed with input from the expert RTIP panel.

Two modes of data collection were used. The first was a self-administered, one-page, nine-question questionnaire. The smoking behaviour questions asked on the postcard were those now used in virtually all smoking prevalence studies. Respondents were also asked for the first three characters of their postal code (Forward Sortation Area or FSA as designated by Canada Post) in order to determine the general location of their residence. A copy of the postcard questionnaire is provided in Figure 1.

Participants were recruited at a diverse range of LGBTQ community events and group meetings including a health fair, a gay and lesbian film festival, a women’s soccer league and Pride Week events. Recruitment was purposefully broad and strategic in an attempt to include as representative a sample as possible. The data collection also avoided recruiting in bars because of the strong relationship between bar attendance and smoking. TRTS researchers described the survey and gave consenting participants the postcard to complete.

The second mode of data collection was a web-based survey asking the same questions. Advertising outreach for the web survey was done through e-mail networks and local LGBTQ media. The web survey was implemented to attract a broader base of respondents beyond downtown Toronto and to encourage responses from LGBTQ members who do not attend public events or wish to remain anonymous.

Eligible participants were self-identified LGBTQ residents of Toronto.

Ethical approval was received from Toronto Public Health. All data were analyzed using SPSS version 14.0, and descriptive statistics and bivariate analysis were performed.

RESULTS

A total of 4,080 LGBTQ participants completed the questionnaire; of these, 77% were residents of Toronto, for a final convenience sample of 3,140. Postcard surveys were completed by 2,548 participants and 542 respondents completed the survey online.

The demographic question for sexual orientation included the response categories “Lesbian”, “Gay”, “Bisexual”, “Heterosexual” and “Other” and the question for gender identity included the response categories “Male”, “Female”, “MTF Trans”, “FTM Trans”, “Gender Queer”, “Lesbian”, “Gay”, “Bisexual”, “Heterosexual”, “Queer Men”, “Queer Women”, “Bisexual Men”, “Bisexual Women”, “Gay Men”, “Lesbians”, “Male to female transwoman”, “Female to male transman”, “Male to female transmen”, “Female to male transmen”, “Male to female transwoman”, “Female to male transman”, “Male to female transmen”, “Female to male transmen”, “Male to female transwoman”, “Female to male transman”, “Male to female transmen”, “Female to male transmen”, “Male to female transwoman”, “Female to male transman”, “Male to female transmen”, “Female to male transmen”, “Male to female transwoman”, “Female to male transman”, “Male to female transmen”, “Female to male transmen”, “Male to female transwoman”, “Female to male transman”, “Male to female transmen”, “Female to male transmen”, “Male to female transwoman”, “Female to male transman”, “Male to female transmen”, “Female to male transmen”, “Male to female transwoman”, “Female to male transman”, and “Other”. Participants who chose “Other” were free to specify their sex-orientation and these responses were further coded to create the three additional categories of “Queer Women”, “Queer Men”, and “Gender Queer”.

A small percentage of responses could not be coded into any of these categories and are labeled “Cannot Classify”.

Sample profile

The sexual orientation and gender identities of the sample are shown in Table 1. The majority of participants identified themselves as gay (41.9%) or lesbian (30.3%). There was wide variation in the sample sizes for the different sexual orientation and gender identity groups, which limits between-group comparisons; the results for groups with smaller sample sizes should be interpreted with caution. There was similar participation from non-trans women (45.3%) and non-trans men (46.7%), with a smaller group of transgender and transsexual participants (5.6%). The mean age of the sample was 35.3 years (range: 13 to 91 years) (see Table 1). Characteristics of Survey Respondents

<table>
<thead>
<tr>
<th>Self-identify as…</th>
<th>N</th>
<th>%</th>
<th>Age (Mean, SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbians</td>
<td>951</td>
<td>30.3</td>
<td>36.1 (10.4)</td>
</tr>
<tr>
<td>Gay men</td>
<td>1,316</td>
<td>41.9</td>
<td>37.4 (11.9)</td>
</tr>
<tr>
<td>Bisexual women</td>
<td>312</td>
<td>9.9</td>
<td>29.0 (9.8)</td>
</tr>
<tr>
<td>Bisexual men</td>
<td>114</td>
<td>3.6</td>
<td>33.7 (12.2)</td>
</tr>
<tr>
<td>Queer women</td>
<td>159</td>
<td>5.1</td>
<td>29.6 (9.5)</td>
</tr>
<tr>
<td>Queer men</td>
<td>39</td>
<td>1.2</td>
<td>34.7 (14.0)</td>
</tr>
<tr>
<td>Male to female transwomen</td>
<td>53</td>
<td>1.7</td>
<td>39.3 (11.6)</td>
</tr>
<tr>
<td>Female to male transmen</td>
<td>72</td>
<td>2.3</td>
<td>31.5 (9.8)</td>
</tr>
<tr>
<td>Gender queer</td>
<td>49</td>
<td>1.6</td>
<td>28.0 (7.2)</td>
</tr>
<tr>
<td>Cannot classify</td>
<td>75</td>
<td>2.4</td>
<td>36.1 (13.2)</td>
</tr>
<tr>
<td>Total</td>
<td>3,140</td>
<td>100</td>
<td>35.3 (11.5)</td>
</tr>
</tbody>
</table>

†† Queer is an umbrella term that seeks to encompass a broad range of sexual orientation identities, behaviours and expressions. Sometimes it is used as a short form that includes lesbian, gay, and bisexual.

‡‡ A person who forms physical and emotional relationships with other men (sometimes also used to refer to women).

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* A person who identifies their gender outside the gender binary system of male and female and may be fluid with gender presentation or not conform to gender stereotypes.

†† Non-trans women are lesbians, bisexual women and queer women while non-trans men are gay men, bisexual men and queer men.

‡‡‡ A person whose gender expression transgresses gender norms or crosses society’s idea of gender lines.

§§ A person whose gender identity is different from the biological sex that they were assigned at birth and who may choose to change their sex.

* A woman who forms physical and emotional relationships with other women.

† A man who forms physical and emotional relationships with other men (sometimes also used to refer to women).

‡ A person who forms physical and emotional relationships with men and women.

§ A male to female transwoman.

|| A female to male transman.
Smoking prevalence

Overall, 36% (95% CI 34.0-37.4) of LGBTTQ participants reported that they were currently smoking, 25% (95% CI 23.9-26.9) were former smokers and 39% (95% CI 37.2-40.6) had never smoked. This compares with the Canadian Community Health Survey (CCHS 2005) which found a smoking prevalence among Toronto adults (15+) of 18.9% (95% CI 17.2-20.6) currently smoking, 33.5% (95% CI 31.3-35.6) having smoked in the past and 47.7% (95% CI 39.5-54.1) never having smoked. A comparison of the smoking status rates also varied across the different sexual orientation and gender identity groups of the sample (see Table 2), with bisexual men most likely to be daily smokers (36%, (95% CI 28.1-45.9)) and to those over 60 years of age (22%, (95% CI 19.6-25.3)) more likely to be current smokers compared to participants in the 55-59 year age group (24%, (95% CI 19.6-25.3)) and those over 60 years of age (14%, (95% CI 11.8-16.2)) least likely to report never smoking.

Smoking status

The smoking status rates also varied across the different sexual orientation and gender identity groups of the sample (see Table 2), with bisexual men most likely to be daily smokers (36%, (95% CI 28.1-45.9)) and to those over 60 years of age (22%, (95% CI 19.6-25.3)) more likely to be current smokers compared to participants in the 55-59 year age group (24%, (95% CI 19.6-25.3)) and those over 60 years of age (14%, (95% CI 11.8-16.2)).

Smoking behaviour

The average number of cigarettes per day for LGBTTQ current smokers was 10.8 (95% CI 10.2-11.4), ranging from 8.5 cigarettes/day for smokers under the age of 15 (95% CI 6.7-10.3) to 18.5 cigarettes/day for smokers over the age of 60 (95% CI 14.3-22.7). It is interesting to note that while smoking prevalence is lower among the older age groups, it appears that those who do smoke, smoke more cigarettes than younger smokers. In the general Toronto population based on data from the CCHS 2005, the average number of cigarettes per day for current smokers age 15+ was 10.59 (95% CI 9.6-11.6) while for the group 60+ years, it was markedly lower at 12.3 (95% CI 9.2-15.4).
The average number of cigarettes per day varied across the different sexual orientation and gender identity groups of the sample. A gender difference was found in the average number of cigarettes/day within the different sexual orientation groups of the sample, as bisexual men smoked the greatest number of daily cigarettes (15.2, (95% CI 11.2-19.2)) and bisexual women smoked the least (7.3, (95% CI 6.0-8.6)). Further, gay men smoked more daily cigarettes than lesbians (12.5 vs. 9.5, (95% CI 11.5-13.5 and 8.5-10.6 respectively)).

On a daily basis, 64% (95% CI 60.3-66.7) of smokers were light smokers (<15 cigarettes), 24% (95% CI 20.9-26.6) were moderate smokers (15-24 cigarettes), and 13% (95% CI 10.7-15.2) were heavy smokers (25+ cigarettes).

**DISCUSSION**

The evidence from this study suggests that Toronto’s LGBTQQ people are more likely to smoke cigarettes than the city’s general population (36% versus 19%, respectively). These findings support and are supported by other studies investigating smoking prevalence among selected subgroups of the LGBTQQ subpopulations. This difference seems to be particularly strong for young people (15-19 year age group) at 57% prevalence. The highest rates were found for bisexual women and men at 34% and 36%, respectively. Rates of “never smokers” among LGBTQQ subgroups were lower (39%) than among the general population (48%) (CCHS 2005 prevalence rates reported for Toronto for 15+ years). This is the first study that identifies smoking prevalence relative to nine subgroupings of LGBTQQ population, which is important because these subgroups may correspond to “communities” with distinct prevalence, vulnerabilities and pathways to risk for smoking.

The main limitation of the study is the use of a convenience sample, which makes it difficult to generalize results since the representativeness of the sample is unknown. Convenience sampling is often used in surveying LGBTQQ community members because of their low incidence in the population and the consequent expense of obtaining a representative sample, as well as issues associated with willingness to disclose sexual orientation. The challenges in surveying this population are evidenced by data from the Canadian Community Health Survey 2005, in which approximately 2% of the population 18 to 59 years reported that they considered themselves homosexual or bisexual, a substantially lower percentage than expected compared to estimates for the Toronto LGBTQQ population discussed above. Given these statistics and the sample size of the Canadian Tobacco Use Monitoring Survey (n=20,000 for Canadians 15+ years of age), for example, it is unlikely that the results would be reportable if questions on sexual orientation were included. A second limitation was the omission of questions on income or education levels, which are known correlates to smoking behaviour. A third limitation is that, as in other research, data are most robust for gays and lesbians because of the size of the population, and weaker for other categories. The small sample sizes of trans subgroups meant that these categories were collapsed into “other”, thereby limiting our findings about these small but important subgroups. Finally, the reliability of the two questions used to identify sexual orientation and gender is unknown. Some research has suggested that beyond asking about sexual identity, attention also needs to be directed to sexual attraction and actual sexual behaviour.

Toronto is thought to have the largest LGBTQQ population in Canada. Other studies have identified unique smoking issues and cessation needs for the LGBTQQ population. At the time of the study, there were only two smoking cessation programs in the city directed and tailored to this population, each serving between 9 and 15 participants. Treatment resources need to be expanded to address the most at-risk LGBTQQ subpopulations, including youth, bisexual people and gender queer people. Further, the providers of mainstream tobacco cessation programs and services need to be educated about LGBTQQ smoking issues and their particular cessation concerns. In terms of health promotion, tobacco control efforts targeting the LGBTQQ subpopulations in Toronto are warranted, including social marketing campaigns to raise awareness and educate LGBTQQ people about this significant health issue in their communities.

Given higher smoking prevalence rates and the associated health problems, future research in this area should focus on the development of techniques for effectively identifying the LGBTQQ population and conducting health/lifestyle surveys to produce more information about LGBTQQ smoking and other substance use across Canada. Small-scale studies will be necessary to determine prevalence rates in the tran subgroups that are smaller in size and where data are currently weakest. Further research is also needed to identify the reasons for tobacco use initiation and continuation among LGBTQQ subpopulations in order to enhance the effectiveness of health promotion, prevention and treatment efforts. Recognition and consideration of the differences between the LGBTQQ subpopulations and thoughtful selection of questions to identify sexual orientation and gender are advised.

**REFERENCES**


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RÉSUMÉ


Méthode : Un questionnaire d’auto-évaluation a été administré entre avril et juillet 2006 à un échantillon de commodité de personnes lesbiennes, gaies ou homosexuelles, bisexuelles, transgenres, bispirituelles et allosexuelles (LGBTBA) résidant à Toronto (Ontario). Éléments mesurés : l’usage passé et actuel du tabac, l’orientation sexuelle, l’identité de genre, l’âge et le quartier résidentiel.

Résultats : En tout, 3 140 membres de la communauté LGBTBA ont répondu à l’enquête Toronto Rainbow Tobacco Survey (TRTS). Globalement, 36 % des participants LGBTBA ont dit fumer actuellement, 25 % étaient d’anciens fumeurs, et 39 % n’avaient jamais fumé. Les taux de prévalence du tabagisme variaient de 24 % à 45 % entre les différents groupes d’orientation sexuelle et d’identité de genre compris dans l’échantillon ; les femmes bisexuelles et les hommes bisexuels ont déclaré les taux de tabagisme les plus élevés, à 45 %. L’étude fait également état du premier taux connu de prévalence du tabagisme chez les personnes allosexuelles (queer), à 44 %. Les jeunes participants LGBTBA ont déclaré des taux de tabagisme encore plus élevés.

Conclusion : Cette étude corrobore les résultats de recherches antérieures menées dans d’autres endroits – les taux de tabagisme observés dans les sous-populations LGBTBA de Toronto sont supérieurs ou égaux aux taux constatés dans la population en général. Les taux relativement plus élevés chez les jeunes LGBTBA et les personnes bisexuelles et allosexuelles devraient être pris en compte dans les initiatives ciblées de sensibilisation et d’arrêt du tabac. L’étude aborde aussi la nécessité de pousser la recherche sur certains aspects.

Mots clés : tabagisme; comportement sexuel; homosexualité; enquêtes de santé