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Drug use among transgender people in Ontario, Canada: Disparities and associations with social exclusion

Ayden I. Scheim*, Greta R. Bauer, Mostafa Shokoohi

Department of Epidemiology & Biostatistics, Schulich School of Medicine & Dentistry, The University of Western Ontario, K201 Kresge Building, London, ON N6A 5C1, Canada

A B S T R A C T

Introduction: We identified the prevalence and correlates of past-year illicit drug use among transgender people in Ontario, Canada, and disparities with the age-standardized non-transgender population.

Methods: Data on transgender persons aged 16 + (n = 406) were obtained from Trans PULSE, a respondent-driven sampling (RDS) survey (2009–2010). Overall and sex-specific estimates of past-year drug use (cocaine and amphetamines, based on data availability) in the reference population were obtained from Ontario residents aged 16 + (n = 39, 980) in the Canadian Community Health Survey (2009–2010), and standardized to the overall and gender-specific transgender age distributions. For regression analyses with Trans PULSE data, past-year drug use included drug types associated with high risk of physical, psychological, and social harm to the user, and RDS-II weights were applied to frequencies and prevalence ratios (PR) derived from blockwise logistic regression models.

Results: An estimated 12.3% (95% CI: 7.7, 17.0) of transgender Ontarians had used at least one of the specified drugs in the past year, with no significant difference by gender identity. Transgender Ontarians were more likely to use both cocaine (standardized prevalence difference; SPD = 6.8%; 95% CI = 1.6, 10.9) and amphetamines (SPD = SPD = 1.3%, 95% CI = 0.2, 3.1) as compared to the age-standardized non-transgender population. History of transphobic assault, homelessness or underhousing, and sex work were associated with greater drug use among transgender persons.

Conclusions: The prevalence of cocaine and amphetamine use among transgender people in Ontario, Canada was higher than in the age-standardized reference population. Social exclusion predicted within-group variation in drug use among transgender persons.

1. Introduction

Transgender (trans) persons are those with a gender identity that differs from their birth-assigned sex, including individuals who are transfeminine (male birth-assigned sex with female or non-binary gender identity) or transmasculine (female birth-assigned sex with male or non-binary identity). While population size estimates are not available for Canada, data from the United States indicate that trans persons constitute an estimated 0.6% of the adult population (Flores, Herman, Gates, & Brown, 2016).

Trans people continue to experience profound social stigma and exclusion, which contribute to discrimination, violence, internalized stigma, and limited health care access (Bauer et al., 2009; Bockting, Miner, Swinburne Romine, Hamilton, & Coleman, 2013; Marcellin, Bauer, & Scheim, 2013; White Hughto, Reisner, & Pachankis, 2015). Little substance use research has explicitly included trans persons (Flentje, Bacca, & Cochran, 2015), and quantitative data on substance use among trans persons in Canada have been unavailable. However, limited existing evidence and the theory of minority stress (Hendricks & Testa, 2012; Meyer, 1995; Reisner, Greytak, Parsons, & Ybarra, 2015; Testa, Habarth, Peta, Balsam, & Bockting, 2015) suggest that trans populations experience disparities in drug use related to social stigma and exclusion. Disparities in drug use may also be related to gender dysphoria, or psychological distress caused by lack of alignment between one's sex characteristics and gender identity.

Research to date on substance use in trans populations has primarily focused on urban transfeminine persons living with or at high risk of acquiring HIV, finding high levels of cocaine and methamphetamine use (Nuttbrock et al., 2014; Reback & Fletcher, 2014; Santos et al., 2014). However, samples from HIV prevention studies are not representative of the broader transfeminine population in Ontario, Canada, among whom HIV risk is low overall (Bauer & Hammond, 2015).

* Corresponding author.
E-mail address: ascheim@uwo.ca (A.I. Scheim).

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Moreover, drug use is an important outcome in its own right, irrespective of its association with sexually-transmitted HIV, given substantial impacts on morbidity and mortality (Degenhardt et al., 2013). Also, a respondent-driven sampling survey (n = 433) in Ontario found that transmasculine persons had a higher prevalence of binge drinking than their transfeminine counterparts (Scheim, Bauer, & Shokoohi, 2016). These facts underscore the need to examine substance use in broader trans populations, inclusive of multiple gender identities.

Data from mixed-gender convenience samples of trans adults indicate that drug use in these samples is lower than in HIV prevention research settings but potentially higher than in the broader population. For example, one in five participants in a Massachusetts trans survey reported any past-year non-cannabis illicit drug use (Keuroghlian, Reisner, White, & Weiss, 2015), while one in ten participants to an online survey of trans people in the United States reported such use in the past three months (Horvath, Iantaffi, Romine, & Bockting, 2014). In comparison, non-cannabis illicit drug use was reported by approximately 2% of all Canadians aged 15 + over the previous year (Health Canada, 2015) and 3% of all Americans aged 12 + over the previous month (Substance Abuse and Mental Health Services Administration, 2014) in 2013. Few data on substance use in trans populations are available from high-income country settings outside the United States. In a report from an Australian trans convenience sample, 29% reported past-year illicit drug use (including cannabis) (Hyde et al., 2014).

Social stigma and exclusion have been associated with substance use among trans persons, and may partially account for the higher levels of use observed. For example, studies in the United States found that reported anti-transgender discrimination (Reisner, Gamarel, & Nemoto, 2014; Rowe, Santos, McFarland, & Wilson, 2015) and violence (Nuttbrock et al., 2014; Testa et al., 2012) predicted increased drug use among transfeminine adults. Depression consequent to stigma exposure may mediate the association (Nuttbrock et al., 2014). Socioeconomic marginalization (e.g., unemployment, poverty), which is common in trans populations (Bauer, Travers, Scanlon, & Coleman, 2012; James et al., 2016), is associated with drug use in the broader population (Merline, O'Malley, Schulenberg, Bachman, & Johnston, 2004; Peck & Plant, 1986). In a context of barriers to formal employment, trans people report high levels of sex work involvement (Hoffman, 2014), and sex work predicts greater drug use in trans samples (Keuroghlian et al., 2015; Nuttbrock et al., 2014). Conversely, social inclusion may be protective against substance use within trans populations. For instance, family support is associated with lower substance use among trans and sexual minority individuals (Benotsch et al., 2016; Newcomb, Heinz, & Mustanski, 2012).

In addition to social stigma and exclusion, gender dysphoria may potentiate substance use as a coping strategy. By alleviating gender dysphoria, medical gender transition through hormones and/or surgery may contribute to improved mental health (Bauer, Scheim, Pyne, Travers, & Hammond, 2015) and reduced substance use. However, gender transition may also increase exposure to minority stressors. Findings on the association between medical transition and substance use have been mixed, with one study of trans women in San Francisco finding lower drug use among those who have taken hormones or had surgery (Wilson, Chen, Arayasirikul, Wenzel, & Raymond, 2015), and another in New York finding the opposite (Nuttbrock et al., 2014).

1.1. The present study

The present study draws on data from a respondent-driven sampling survey of 433 trans people in Ontario, Canada's most populous province, and from the Canadian Community Health Survey. We sought to compare past-year use of select substances (cocaine or crack and amphetamines, based on data availability) to the age-standardized cisgender male and female population of Ontario, hypothesizing that past-year prevalence would be higher among trans persons overall. Considering that drug use may be impacted both by biological sex and social gender, we did not have a priori hypotheses regarding transgender-cisgender disparities by gender identity.

Next, we built exploratory blockwise regression models to evaluate the impacts of socio-demographic characteristics, gender transition, and social stigma or exclusion factors on past-year use of drugs associated with high risk of physical, psychological, and social harm to users. Considering potential inter-relationships between social stigma and exclusion and both sex work and depression, these were included as covariates. We hypothesized that indicators of social stigma and exclusion (transphobia, transphobic violence, lower social support, lack of parental support for gender, lack of employment, low income, and underhousing or homelessness), sex work, and depressive symptoms would be associated with higher prevalence of drug use.

2. Methods

2.1. Transgender study population

The Trans PULSE community-based participatory research project recruited 433 trans Ontarians via respondent-driven sampling (RDS) in 2009–2010, including 406 who completed substance use measures. Eligible participants needed to be 16 years of age or older; live, work, or receive health care in Ontario; and consider themselves trans, based on self-identification. Participants were not required to have undergone any social or medical gender transition. RDS is a network-based chain-referral sampling and analysis method developed for stigmatized populations lacking appropriate sampling frames (Heckathorn, 1997). Using analytic methods that account for unequal recruitment probabilities, RDS has been shown to produce unbiased estimates when assumptions are met (Wejnert, 2009) and is frequently used for prevalence estimation in hidden populations (Sabin & Johnston, 2014).

Recruitment began with 16 seed participants selected for demographic diversity. Each respondent was provided with three tracked coupons for recruiting their peers. Twenty-two additional seeds were added after 4–5 waves of recruitment, and data collection continued until a maximum of 10 recruitment waves were obtained. Respondents completed the 60–90-min questionnaire online or by visually identical paper copy. They were compensated with a $20 gift card or could opt to donate the honorarium to a trans-related charity. Secondary incentives for recruitment of peers ($5 gift cards) were only offered in the final months of the study and had no detectable impact on recruitment rates. The study received approval from Research Ethics Boards at The University of Western Ontario and Wilfrid Laurier University. Additional information about the Trans PULSE study has been published previously (Bauer et al., 2012).

2.2. Cisgender study population

Data on the prevalence of past-year cocaine or amphetamine use among Ontarians aged 16 and above (n = 39,980) were obtained from the 2009–2010 data cycles of the Canadian Community Health Survey (CCHS). Data on Trans PULSE-comparable items regarding the use of other drugs (e.g., heroin) were not made available by Statistics Canada due to small cell sizes. CCHS is an annual multi-stage, stratified, cluster sampling cross-sectional survey of Canadians aged 12 and above employing computer-assisted personal and telephone interviews. CCHS covers over 97% of the Canadian population, excluding institutionalized persons and those living on First Nations reserves. Additional information about CCHS methodology has been previously published online (Statistics Canada, 2010). Measures to identify trans respondents are not currently included in CCHS, and therefore we have assumed respondents to be cisgender. Applying national U.S. estimates (Flores et al., 2016), we would expect approximately 0.6% of this cisgender comparison group to be misclassified, with no anticipated substantive impact on results.