Drug and Alcohol Dependence 147 (2015) 160–166

Contents lists available at ScienceDirect

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep

Prevalence and correlates of substance use among trans*female youth ages 16–24 years in the San Francisco Bay Area

Chris Rowe, Glenn-Milo Santos, Willi McFarland, Erin C. Wilson*

Center for Public Health Research, San Francisco Department of Public Health, 25 Van Ness Avenue, San Francisco, CA 94102, United States

ARTICLE INFO

Article history:
Received 25 July 2014
Received in revised form
20 November 2014
Accepted 21 November 2014
Available online 15 December 2014

Keywords:
Substance use
Transgender
Trans*female youth
Posttraumatic stress disorder
Discrimination
Health disparities

ABSTRACT

Background: Substance use is highly prevalent among transgender (trans*) females and has been associated with negative health outcomes, including HIV infection. Little is known about psychosocial risk factors that may influence the onset of substance use among trans*female youth, which can contribute to health disparities during adulthood.

Methods: We conducted a secondary data analysis of a study on HIV risk and resilience among trans*female youth ($N = 292$). Prevalence of substance use was assessed and multivariable logistic regression models were used to examine the relationship between posttraumatic stress disorder (PTSD), psychological distress, gender-related discrimination, parental drug or alcohol problems (PDAP) and multiple substance use outcomes.

Results: Most (69%) of the trans*female youth reported recent drug use. In multivariable analyses, those with PTSD had increased odds of drug use [AOR = 1.94 (95% CI = 1.09–3.44)]. Those who experienced gender-related discrimination had increased odds of drug use [AOR = 2.28 (95% CI = 1.17–4.44)], drug use concurrent with sex [AOR = 2.35 (95% CI = 1.11–4.98)] and use of multiple drugs [AOR = 3.24 (95% CI = 1.52–6.88)]. Those with psychological distress had increased odds of using multiple heavy drugs [AOR = 2.27 (95% CI = 1.01–5.12)]. Those with PDAP had increased odds of drugs use [AOR = 2.62 (95% CI = 1.43–4.82)], drug use concurrent with sex [AOR = 2.01 (95% CI, 1.15–3.51)] and use of multiple drugs [AOR = 2.10 (95% CI = 1.22–3.62)].

Conclusions: Substance use is highly prevalent among trans*female youth and was significantly associated with psychosocial risk factors. In order to effectively address substance use among trans*female youth, efforts must address coping related to gender-based discrimination and trauma. Furthermore, structural level interventions aiming to reduce stigma and gender-identity discrimination might also be effective.

1. Introduction

Substance use, which has been associated with a wide range of negative health outcomes and societal consequences, is highly prevalent among gender and sexual minority populations, including trans*females (Bowers et al., 2011; Garofalo et al., 2006; Marshall et al., 2011; Rapues et al., 2013; Rehm et al., 2009; Sevelius et al., 2009; U.S. Department of Health and Human Services, 2014). Weighted estimates of trans*female samples in the United States reveal high prevalence of crack and other illicit drug use (26.7%) and marijuana use (20.2%) as well as a higher prevalence of problems with alcohol and other drugs (13.7%) relative to the general population (Grant et al., 2004; Herbst et al., 2008). Furthermore, substance use has been associated with HIV-related sexual risk behaviors and HIV infection among trans*females, who have 34.21 fold greater odds of HIV infection compared to the US general adult population (Baral et al., 2013; Reback and Fletcher, 2014; Santos et al., 2014; Sevelius et al., 2009). Given the link between substance use and negative health outcomes in this population, including HIV infection, it is imperative to understand risk factors that may contribute to the use of illicit drugs. This is particularly important among trans*female youth, when events that develop early in life and cause later risk can be intervened upon. Based on limited data from non-probability-based estimates, there is a sharp increase in the prevalence of HIV infection between samples of trans*female youth (4–19%) and trans*female adults in the US (27.7%), highlighting the critical nature of HIV risk factors that influence behaviors during adolescence and early adulthood (Herbst et al., 2008; Wilson, 2014). Furthermore, compared to both males and females, trans*females have the lowest five-year survival probability after AIDS in San

* Corresponding author. Tel.: +001 4155549021.
E-mail addresses: erincwilson@gmail.com, erin.wilson@sfdph.org (E.C. Wilson).

http://dx.doi.org/10.1016/j.drugalcdep.2014.11.023
0376-8716/

Francisco, suggesting that this increase in prevalence from youth to adulthood cannot be fully explained by the increase in cumulative HIV prevalence in older age groups (San Francisco Department of Public Health, 2012). Moreover, adolescent onset of drug and alcohol consumption has been shown to predict consumption levels in early and later adulthood (Clark et al., 1998; Grant and Dawson, 1998; Grant et al., 2001; Hingson et al., 2006a,b; Moss et al., 2014; Swift et al., 2008).

However, despite the high burden of substance use and HIV among the overall trans*female population, little is known about the prevalence and correlates of substance use in trans*female youth (Conron et al., 2014; Hotton et al., 2013). Due to the limitations in the classification of gender in broader surveillance surveys in the US, significant gaps in the understanding of the unique health and risk patterns among trans*females remain (Conron et al., 2014). Compounding the problem, the limited data for trans*females are also rarely disaggregated by age (Herbst et al., 2008; Hotton et al., 2013). These gaps make gender minorities – particularly young gender minorities – a vastly understudied population, hindering the development of effective public health interventions that specifically target trans*female and youth-specific health issues (Conron et al., 2014; Institute of Medicine, 2011).

Trans*female youth may face a unique set of challenges that make them particularly vulnerable to substance use. Certain mental health outcomes, associated sequelae, and traumatic experiences may be more prevalent among young trans*females, including elevated prevalence of suicide, engagement in sex work, and victimization by violence and trauma (Bradford et al., 2013; Budge et al., 2013; Clements-Nolle et al., 2001; Garofalo et al., 2006; Grant et al., 2011; Grossman and D'Augelli, 2007; Hoffman, 2014; Testa et al., 2012; Wilson et al., 2009). In turn, these co-morbidities have been associated with substance use; for example, posttraumatic stress disorder (PTSD), psychological distress and depression have been associated with the use of individual substances as well as multiple substances (Booth et al., 2010; Conway et al., 2006; Deykin and Buka, 1997; Falck et al., 2002; Glasner-Edwards et al., 2009; Grant et al., 2004; Haller and Chassin, 2014; Hien et al., 2005; Tang et al., 2007). Similarly, perceived discrimination has been linked to substance use in multiple populations (Clark, 2014; Hunte and Finlayson, 2013; Otiniano Verissimo et al., 2014; Respress et al., 2013). Additionally, drug and alcohol use of parents has been shown to predict adolescent drug and alcohol use (Bahr et al., 2005; Li et al., 2002; Merikangas et al., 1998; Patrick et al., 2014; Rhee et al., 2003; Yu, 2003; Yule et al., 2013). The role of these psychosocial conditions among trans*female youth has not yet been fully elucidated. This study sought to address these gaps in the literature by describing the prevalence of substance use in a sample of trans*female youth, age 16 to 24 years at enrollment, in an on-going cohort study. This study also sought to explore the relationships between psychosocial risk factors and substance use outcomes in this population.

In this article, we have used the word "trans*females" throughout, but we should note that participants identified as transgender, female, genderqueer and a variety of other genders along the gender spectrum. Our decision to use "trans*females" is the result of a community process that was undertaken in San Francisco, California, to agree on the most inclusive terms to capture the spectrum of male-to-female transgender identities while also respecting individuals along the age spectrum (Rapues et al., 2013).

2. Materials and methods

2.1. Study sample and data collection

The SHINE study is a longitudinal study of HIV risk and resilience among trans*female youth; the present analysis uses baseline data from enrollment visits between August, 2012 and December, 2013 as a cross-sectional sample. The target sample size for the study was 300. Study participants were initially recruited using a peer-referral method to obtain a diverse sample of this hard-to-reach population. Slow recruitment chains resulted in adaptations to the sampling methodology including allowance of e-referrals and expanding the number of referrals that successful recruiters could have (Truong et al., 2013). In total, 100 participants were recruited through peer referral. In addition to peer referral, participants were recruited through outreach on social networking sites (e.g., Facebook, Tumblr) and in-person at events attended by trans*female youth (e.g., Trans March, Queer Prom) as well as with referrals from both community-based organizations that provide social services to transgender women and youth and gender-specific health clinics. Individuals were eligible for the study if they [1] self-identified as any gender other than that associated with their assigned male sex at birth, [2] were 16–24 years of age, and [3] lived in the San Francisco Bay Area. Informed consent was obtained before starting the behavioral survey, which was administered via handheld tablet computers. All study procedures were approved by the Institutional Review Board at the University of California, San Francisco. Written consent was obtained from all youths aged 18 years or older and written assent was given by younger participants (in accordance with a review board waiver of parental consent).

2.2. Measures

Psychosocial exposures measured included PTSD, psychological distress, gender-related discrimination and a parental drinking or drug problem (PDAP). PTSD symptoms were determined by use of the four-item Primary Care PTSD Screen (PC-PTSD) with a cutoff of three out of four symptoms in the last twelve months (Boscarino et al., 2011). Psychological distress was measured with the 18 item version of the Brief Symptom Inventory (BSI-18), converting the BSI-18 Global Severity Index (GSI) to *T*-scores and using a validated clinical cutoff of $T > 62$ for symptomatic psychological distress in the last seven days (Asner-Self et al., 2006; Derogatis, 2000; Mustanski et al., 2011). The BSI-18 *T*-scores calculated in this study had high internal consistency (Cronbach's alpha = 0.91). Gender-related discrimination was determined by questions that asked whether participants had ever experienced poor treatment from parents/caregivers, faced difficulties obtaining employment, lost a job/career or educational opportunity, changed schools and/or dropped out of school, or moved away from friends or family due to discrimination based on gender identity or gender presentation. Experience of any of the above types of discrimination at any time was defined as having gender-related discrimination in a dichotomous variable for this exposure. PDAP was determined by a single question based on the DSM-IV criteria for substance abuse, which asked whether parents or immediate caregivers had ever "had a drinking or drug problem that got in the way of their work and/or relationships" (American Psychiatric Association, 1994).

Socioeconomic status was determined using self-reported household annual income while accounting for the number of individuals dependent on that income using the US Department of Housing and Urban Development's FY2014 Income Limits for the San Francisco, CA HUD Metro Federal Market Rent (FMR) Area (Department of Housing and Urban Development, 2013). HIV status was obtained by rapid HIV testing. Rapid finger prick tests were offered by the research assistants to all participants (The Clearview® HIV 1/2 STATPAK®, Alere, Waltham, MA, USA) regardless of self-reported HIV status. Participants were asked to stay for their results but were not required. All participants who tested positive were referred to the San Francisco Department of Public Health Linkage Integration Navigation Comprehensive Services program which provides and coordinates comprehensive HIV care for newly tested positives and known positives who are currently out of care. Other measures such as whether or not participants had been sexually active in the last six months, highest level of education completed, immigration status, and length of time in the San Francisco Bay Area were also collected.

2.3. Outcomes

Primary outcomes of interest were [1] drug use, defined as any use of marijuana, methamphetamine, crack, cocaine, non-prescribed prescription drugs, ecstasy, GHB, ketamine, heroin or poppers; [2] alcohol use; [3] drug use before or during sex, measured by the question, "how often did you use drugs other than alcohol before or during sex in the last 6 months?", which was converted into a binary variable to assess presence or absence of any drug use before or during sex; [4] use of multiple drugs; [5] use of multiple light substances and no heavy drugs; and [6] use of multiple heavy drugs, regardless of the use of light substances, in the last six months. "Light" substances included marijuana, poppers and alcohol. "Heavy" drugs included methamphetamine, crack, cocaine, ecstasy, GHB, ketamine and heroin. These definitions, except for the alcohol use (outcome 2) and use of multiple light substances (outcome 5), exclude the use of alcohol and are consistent with prior analyses of polydrug use (Patterson et al., 2005). We use the term "substances" to refer to both drugs and alcohol, whereas we use the term "drugs" to refer to drugs exclusive of alcohol. Although not a primary outcome, binge drinking was defined as 5 or more drinks on one occasion.