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Differential HIV risk for racial/ethnic minority trans*female youth and socio-economic disparities in housing, residential stability and education

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Abstract

Introduction—One of the biggest threats to the health of trans*emales is HIV, particularly for those who are part of racial/minority groups. Yet health disparities for racial/ethnic minority trans*female youth remain understudied.

Methods—We examined baseline data from 282 trans*female youth ages 16–24 years old in the San Francisco Bay Area. We conducted Chi-squared tests for distributional differences between racial/ethnic minority and white participants in socio-demographic factors, HIV-related risk behaviors and syndemic factors.

Results—A total of 4.8% of trans*female youth were HIV positive. Racial/ethnic minority and white trans*female youth differed significantly in their gender identities and sexual orientations. Racial/minority youth also had significantly lower educational attainment, were less likely to live with their parents of origin as a child, and were significantly more likely to engage in recent condomless anal intercourse compared to whites.

Conclusions—Important disparities in HIV-related sexual risk behavior, education, and residential stability exist between racial/ethnic minority and white trans*female youth. Efforts to assess the impact of multiple minority stress for racial/minority trans*female youth are imminently needed. Additionally, macro-level disparities must be addressed in prevention efforts for trans*female youth, especially for those from racial/ethnic minority groups, in order to prevent incident cases of HIV and reduce disparities.

INTRODUCTION

Trans*female youth up to age 24 (i.e., youth whose gender identity is different from that typically associated with their male sex assigned at birth) are disproportionately at risk for HIV and other poor health and social outcomes^{1–3}. In 2010, youth ages 13–24 years made up 17% of the US population, but accounted for 26% of all new HIV infections⁴. Two studies of trans*female youth found one in five are HIV-infected before the age of 25 years^{5,6}. These rates presage the high HIV prevalence in adult transwomen. In San Francisco, adult transwomen age 18 and older have the highest HIV prevalence of any

population at 39.5%, the highest proportion of AIDS cases among youth, and the highest mortality due to AIDS⁷.

Adolescence is the period of greatest importance for setting patterns of future risk behavior⁸. HIV prevention efforts with youth may be best informed by identifying the correlates of risk behavior, rather than HIV-related risk behavior alone, in order to effectively intervene. For example, Sevelius et al.⁹ found inconsistent condom use was associated with stimulant use, among other factors⁹. Identifying patterns of risk behaviors is particularly relevant for trans*female youth, who may not be infected until years after they establish such behaviors.

Macro-level factors are also an important influence on individual risk for HIV and may be even more prevalent among racial/minority youth¹⁰. Latina and African Americans have been over-represented in studies of transwomen when compared to the general population^{5,7,11,12} and exist at the intersection of multiple stigmatized social identities, including sexual orientations and gender identities that transgress culturally accepted social norms. Much like gay racial/minority youth, trans*female youth may be more likely to face poverty and social instability, factors that have been found to underpin HIV epidemics via less engagement in preventative care and more engagement in HIV-related risk behaviors due to stress-induced mental health conditions^{10,13}. For racial/ethnic minority trans*female youth, experiences of racism may cause heightened exposure to HIV risk factors due to discrimination in education, housing and residential stability¹⁴. For example, one study of Latinos and African Americans in 12 high HIV prevalence areas in Broward County Florida found that those with a lower education were more likely to hold stigmatizing beliefs against those living with AIDS, and were less likely to engage in HIV prevention community mobilization and perceived themselves to be at increased HIV risk¹⁵.

There are limited data that describe the way racism impacts risk behaviors for transgender people, but evidence from numerous studies suggests that racial/ethnic minority transwomen are disproportionately affected by HIV^{11,16,17}. Of all HIV transgender HIV cases diagnosed in San Francisco between 2006–2012, Latinas and African Americans accounted for the largest proportion of HIV diagnoses (35% and 27%, respectively¹⁸. A recent population-based study of HIV prevalence among transwomen in San Francisco found that African Americans made up almost half of all HIV-positive cases¹⁹. Addressing racial inequities specific to HIV that are prevalent among trans*female youth may be the path forward to effective prevention efforts.

The present analysis examines HIV prevalence and HIV risk behaviors in a sample of 282 trans*female youth ages 16 to 24 years in the San Francisco Bay Area. The goal of this analysis was to determine differences in socio-demographics and risk behaviors by stratifying our sample by racial/ethnic minority youth and whites. We hypothesized that racial/ethnic minority trans*female youth would engage in more HIV-related sexual and drug use behaviors as a coping mechanism for discrimination and identity threat^{20,21}.

We also sought to assess both interpersonal and macro-level factors by testing of a model of syndemic risk for this population. Singer²² described a syndemic as multiple co-occurring health problems that work together in an environment of social inequality. Previous

syndemics work with trans*female youth assessed the additive and associated risk for HIV caused by low self-esteem, poly-substance use, victimization related to transgender identity, and intimate partner violence²³. In the analysis, Brennan et al. found that sex work and incarceration were significantly related to their syndemic index, speaking to the importance of structural factors associated with social marginalization²³. We proposed to assess psychosocial and macro-level factors of depression, trauma, violence in school, stigma towards transgender people, unstable housing, and parental rejection, in constructing a syndemic of risk for trans*female youth. To our knowledge, this is the largest sample of the trans*female youth population in the scientific literature to date.

METHODS

Recruitment

The SHINE study is a longitudinal study of HIV risk and resilience among trans*female youth; the present analysis uses data from the baseline assessment. Study participants were initially recruited using a peer-referral method to obtain a diverse sample of this hard-to-reach population²⁴. After a formative assessment phase, which included focus groups with trans*female youth, we selected 10 diverse (e.g., with respect to age, race/ethnicity, education, and geography) trans*female youth to function as recruiter “seeds.” They were asked to recruit as many as 5 participants, who in turn were asked to recruit a subsequent wave of as many as 5 participants, and so on. To complete the cohort study sample, we included direct referrals from community-based organizations, outreach at events, and online outreach through social networks.

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 ages 16 to 24 years, and (3) reported living in the San Francisco Bay Area. Signed informed consent/assent were obtained before starting the behavioral survey, which was interviewer-administered using hand-held tablet computers. Rapid HIV testing was offered to all participants regardless of self-reported HIV status. Positive rapid HIV tests were confirmed using a secondary rapid test of a different brand and testing method. All study procedures were approved by the IRB 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).

Measures

Socio-demographic factors—Basic demographic factors assessed were age, gender, race/ethnicity, whether youth were born in the U.S. or abroad, sexual orientation (straight/heterosexual, lesbian/gay, queer, bisexual, pansexual, questioning, no preference), HIV status, education (in school/GED/HS graduate; highest grade attained); income (inclusive of all sources of income and dichotomized to those above and below the federal poverty level); unstable housing currently and as a child between the kindergarten and age 16 (Y/N responses); and living situation as a child (i.e. with parents of origin, family caregiver, were adopted or lived in foster care). Racial discrimination was measured with items that ask about ever experiencing racial discrimination in Racial discrimination in school, getting a

job, at work, housing, medical care, getting services, getting credit, a loan or mortgage, on the street/in public, or from the police or in courts from Krieger et al.'s "Experiences of Discrimination" instrument²⁵. Comparisons between racial/ethnic minority youth and white youth were made on this set of factors.

HIV-related risk behaviors—Measures of sexual risk behavior were recent (i.e. past six months) condomless anal intercourse (CAI), condomless insertive anal intercourse (CIAI), and condomless receptive anal intercourse (CRAI). Youth were defined as having used substances if they reported binge drinking 25 times or more in the past 6 months, used methamphetamine once a week or more in the last six months or used cocaine once a week or more in the past 6 months. Youth were coded positive to a response of having ever injected drugs. The main outcome for the final analysis of HIV risk was CAI.

Syndemic Factors—(1) *Depressive symptoms in the last week* was assessed using the short version of the Center for Epidemiological Studies-Depression Scale (CES-D)²⁶. (2) *Trauma* in the last year was assessed using items from Boscarino's brief New York PTSD Risk Score, including the primary care PTSD screen, trauma exposure, and sleep disturbances items²⁷. (3) *Trans-related discrimination* was assessed using measures from the Experiences of Transphobia Scale, which is an adaptation of a measure of homophobia developed by Rafael Díaz and colleagues²⁸. (4) *Unstable housing* was scored positive if when asked about their current housing situation, a youth participant responded "yes" to living in a single room occupancy (SRO) or being homeless currently. (5) *Bullied* while growing up was coded "yes" if youth responded anything other than "never" on a Likert scale of responses to the question, "As you were growing up (any time before 16), how often were you bullied (regularly harassed, threatened, and/or physically harmed) at school because of your gender identity or gender presentation?" (6) *Parental rejection* was coded "yes" if the youth participant responded positively to the question, "Have your parents/caregivers ever treated you poorly because of your gender identity or gender presentation?"

Data Analysis

We conducted Chi-squared tests to examine distributional differences between racial/ethnic minority and white participants for the assessment of socio-demographic factors, HIV-related risk behaviors and syndemic factors. For the assessment of the syndemic index, bivariate statistics comparing white and racial/ethnic minority youth were calculated for the six domains. To assess the proposed syndemic index, we created a variable for the number of syndemic factors, then categorized this variable into the following groups: 0–1, 2, 3, 4, and 5–6 factors. CAI was the dependent variable. We did not include RDS adjustments in any analysis given that RDS was not fully used to recruit participants. We conducted all analyses in R. P-values at the level of $p = 0.05$ were considered significant.

RESULTS

Our study included 282 trans*female youth ages 16–24 years who resided in the San Francisco Bay Area. Demographic factors are presented in Table 1. Nearly one-fourth (23.5%) were between ages 16–19 years, while 76.5% were between 20–24. Youth

primarily responded with the terms genderqueer (i.e. neither identify as woman nor man) or transgender when asked their gender identity (45.4% and 33.1%, respectively). The sample was 36.8% white, 21.9% Latina, 15.2% mixed race, 13% African American, 5.9% Asian and 7.1% identified as “other”. The majority of youth were born in the U.S. (84%). The most frequently reported sexual orientation was heterosexual (30.5%), followed by lesbian/gay (19.7%) and pansexual (13.4%). Almost one-half of youth had some college education or more (45.1%); three-fourths lived on less than \$1000 per month (74.2%) and of those making \$1000 or less, 36.5% were currently in school. A total of 29.1% were currently unstably housed. As a child (i.e. under age 18), 81.8% lived with their parents of origin, and 38.3% moved two or more times. Overall, 13 (4.8%) of the 269 trans*female youth for which we have data were living with HIV. All 13 youth living with HIV knew their status at the time of participation.

Racial/ethnic minority youth were significantly more likely to identify as transgender compared to whites (40.6% vs. 20.2%, $p < .001$), while whites were much more likely to identify as genderqueer (57.6% vs. 38.2%, $p < .001$). Racial/ethnic minority youth were also significantly more likely than whites to identify as gay/lesbian (22.4% vs. 15.2%) or heterosexual (38.2 vs. 17.2%) ($p < .001$). Racial/ethnic minority youth were significantly less likely than white youth to have some college education or more (35.7% vs. 61.5%, $p < .001$). Racial/ethnic minority youth were also much more likely to have lived with a family caregiver (12.4% vs. 2%) or be adopted (12.9% vs. 4%) than white youth ($p < .001$). Racial/ethnic minority youth were significantly more likely to have experienced racial discrimination compared to their white peers (57.2% vs. 15.3%, $p < 0.001$). Racial/ethnic minority youth were more likely to be currently unstably housed (25.9% vs. 15.2%, $p = 0.06$), and to have moved frequently as a child (42.6% vs. 30.9%, $p = 0.08$), but these findings were not statistically significant. Racial/ethnic minority trans*female youth were evenly split between the younger (16–21 year old) vs. older age range (22–24), while only 34% of white youth were under the age of 22 ($p = 0.06$).

Condomless anal intercourse (CAI) within the last 6 months was reported by 37.2% of participants; of those reporting CAI, 33.8% reported condomless receptive anal intercourse (CRAI) in the last six months and 12.3% reported condomless insertive anal intercourse (CIAI) (Table 2.). Engagement in other HIV-related risk behaviors such as substance use (illicit drug use and/or binge drinking) and injection drug use were low (16% and 10%, respectively) relative to engagement in other risk behaviors. Engagement in sexual risk behavior was significantly different between racial/ethnic minority and white youth. Specifically, CRAI was the most significantly different; 38.8% of racial/ethnic minority youth reported CRAI compared to 25.3% of white youth ($p = 0.03$). CAI in the last 6 months was also different with 41.8% of racial/ethnic minority youth reporting CAI compared to 29.3% of whites ($p = 0.06$), but this findings was not statistically significant.

Table 3 shows responses for syndemic factors in the sample overall and a comparison of syndemic factors between white and racial/ethnic minority youth. Overall, the sample had high reports of trauma within the last year (60.8%), transphobia during their youth (79.8%), and experiences with violence while growing up (63%). There were no significant

differences between groups or in assessing the additive impact of syndemic factors on engagement in condomless anal intercourse (Table 4).

DISCUSSION

A total of 4.8% (n=13) of trans*female youth in this study were HIV-positive, which is an elevated risk compared to the general population, but a much lower prevalence than that found in the San Francisco transwomen population as a whole. Recent surveillance data through March 2013 found that there was a cumulative total of 352 HIV/AIDS cases among transgender people in San Francisco²⁹. Based on these recent surveillance results, trans*female youth comprise a very small proportion of local transgender HIV cases, and HIV may be most prevalent among transgender adults over the age of 24²⁹. Cross-sectional surveys conducted by the San Francisco Department of Public Health measure HIV prevalence among transwomen accelerating from 0% at 15 to 18 years to over 35% by age 60 years - and we do not yet know the causal factors that explain why. Compared to prior research, this study had markedly lower HIV rates. Wilson et al.¹ found that 19% of the sample of 151 youth ages 16–24 years old self-reported being HIV positive, as did 22% of a sample of 51 youth ages 16–25 years old in Garofalo et al.⁶. These findings have two possible implications. One is that this is a cautionary tale and prevention efforts are needed to curb the evolution from a relatively small epidemic to the large epidemic seen among adult transwomen. Alternatively, there may be an age cohort effect wherein younger transwomen are less affected by HIV, due to a natural evolution of the epidemic in this population in addition to or because of effective public health prevention efforts. In either case, it is clear that trans*female youth are still significantly impacted by HIV.

Though the HIV prevalence in this study was lower than that found in prior research, the socio-economic situation of trans*female youth in the sample was worse. More trans*female youth in this sample were low income compared to past research (i.e. <\$1000 per month) (74.2% vs. 67% in Wilson et al.¹) and similar proportions of youth were unstably housed (21.9% vs. 18% in Garofalo et al.⁶). Findings on the substantial proportion of low income youth in this study are troubling as poverty is an important driver of HIV, with particular impact on partner selection and access to HIV prevention services.^{10,30} Yet more youth in this sample had some college education (45% compared to 8% in Wilson et al.), and more than 35% of low income youth in this sample were those who were students; thus, many low income youth may have better job opportunities as a result of higher education to help them move out of poverty in the near future.

When the sample was stratified by race/ethnicity it became clear that prevention efforts need to specifically address macro-level structural factors and racial disparities among trans*female youth. There were 25% more white youth who had some college education compared to racial/ethnic minority youth, and this difference was statistically significant. And though data on housing were not significant, 10% more racial/ethnic minority youth responded that they were currently unstably housed and experienced housing instability as a child. Racial/ethnic minority trans*female youth were also significantly more likely than whites to have engaged in CRAI in the last 6 months, which is the most risky sexual behavior for HIV.. Not surprisingly, racial/ethnic minority youth in this sample also

experienced racism more than their white peers. Racial stigma on top of gender-based stigma may exert a profound effect on engagement in HIV-related risk behaviors among trans*female youth. Members of racial/ethnic minority groups have been found to cope with racism-related stressors like internalized racial stigma with substance use^{20,31}. Racial stigma specifically has been found to affect condom use via the influence on decreased levels of self-control and subsequent substance use as has been demonstrated among African American adolescents^{32,33}. Trans*female youth who experience racial stigma may use substances to cope and be less inclined to use condoms while under the influence^{9,13,17,34}. For racial/minority trans*female youth who manage multiple marginalized social identities (i.e., racial minorities who are gender minorities), experience extreme heightened stress and fewer coping mechanisms may be what ultimately leads to important health disparities in HIV³⁵.

Interesting demographic characteristics emerged from these data, including a difference in the way young people express gender identity compared to findings from research with adults. A recent 2010 surveillance study of transwomen found that almost half (47.8%) of transwomen in San Francisco identified as female, while in this sample only about 16% of youth identified as female¹⁹. Instead, most youth identified as genderqueer followed by transgender. This difference may reflect one step in a gender transition, it may represent an overall change in the way youth in the trans*female community see gender in non-binary terms, or both. Researchers in the past five years have suggested that the trans-female community is not monolithic in terms of gender identity and have described differences within the population^{36,37}. For example, Kuper et. al's online gender identity study of 292 transgender people ages 18–73 study found that the oldest age group (35+) was significantly less likely than the younger group to identify as genderqueer³⁸. However, little research has focused specifically on age cohorts, the ways in which conceptions of gender identity may be changing in the youth community, and how these changes are relevant for surveillance efforts and health education. This study demonstrated that gender identity varies within the trans*female youth community, and more in-depth research is needed to identify unmeasured confounding and explore these identities in depth. Sexual orientation was also diverse and well distributed among a variety of identities. The largest proportion of youth identified as heterosexual, but when separated by racial/ethnic minority vs. white youth, the two largest identities for whites were bisexual and pansexual, while racial/ethnic minority youth mostly identified as heterosexual or lesbian/gay. These data may help inform efforts of researchers and providers to better identify risk behaviors and tailor prevention messages.

This study is limited by the fact that data are not probability-based and therefore extrapolating to the general population is not possible. There have been calls for national HIV surveillance efforts within the trans*female population^{9,19}, and these data suggest the importance of the inclusion of youth in such efforts. More research to understand the temporal order of risk factors to risk behaviors and HIV are also needed from longitudinal data. In addition, like our recent surveillance study¹⁹ recruitment of Asian trans*female youth was low. Asian transwomen are known to be particularly hard to reach, which has been attributed to lack of ties to the transgender community. Targeted studies may be needed to reach this population. Another important limitation is the collapsing of racial/minority youth into a single category, which was done to test an overall theory of disparities in

macro-level factors that may impact individual health behaviors. Future analyses are currently underway that focus on specific racial/ethnic groups within the population.

Despite limitations, this study indicates important opportunities for primary prevention of HIV in a younger cohort of trans*female youth in the San Francisco Bay area. To date, there are no evidence-based HIV prevention interventions for trans*female youth. These are the only set of recent data from a large sample of trans*female youth, and as such, can be used to guide efforts for developing evidence-based interventions. These data also make it clear that there are important disparities in engagement in HIV-related risk behaviors and access to education, stable housing, and residential stability as a child for racial/ethnic minority youth. Interventions that focus upstream on addressing racial inequalities to reduce stressors that compromise mental health and lead to coping through substance use and risky sexual behavior may have the most impact on HIV risk within the trans*female community. Public health efforts that prioritize access to housing, education, and jobs and move away from the focus solely on individual behaviors and behavior change alone will likely demonstrate the most health and wellness benefits for this important, understudied and underserved community of trans*female youth.

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Table 1

Demographic characteristics of trans*female youth ages 16–24 in the San Francisco Bay Area, 2012–2013

Variable	Overall (%, n)	Racial/Ethnic Minority n (%)	White n (%)	P-value
Age				
16–17	18 (6.7)	14 (8.2)	4 (4.0)	.06
18–19	39 (14.5)	26 (15.3)	13 (13.1)	
20–21	62 (23)	45 (26.5)	17 (17.2)	
22–23	108 (40.1)	65 (38.2)	43 (43.4)	
24	42 (15.6)	20 (11.8)	22 (22.2)	
Gender				
Genderqueer	122 (45.4)	65 (38.2)	57 (57.6)	<i>P</i> < 0.001*
Transgender	89 (33.1)	69 (40.6)	20 (20.2)	
Female	42 (15.6)	27 (15.9)	15 (15.2)	
Other ¹	16 (5.9)	9 (5.3)	7 (7.1)	
Race/ethnicity				
Asian	16 (5.9)	16 (9.4)	–	–
African American	35 (13.0)	35 (20.6)	–	
Latina	59 (21.9)	59 (34.7)	–	
Mixed	41 (15.2)	41 (24.1)	–	
White	99 (36.8)	–	99 (100.0)	
Other ²	19 (7.1)	19 (11.2)	–	
Born in the US				
Yes	225 (84.0)	129 (76.3)	96 (97.0)	–
No	43 (16.0)	40 (23.7)	3 (3.0)	
Sexual Orientation				
Lesbian, Gay	53 (19.7)	38 (22.4)	15 (15.2)	<i>P</i> < 0.001*
Bisexual	36 (13.4)	12 (7.1)	24 (24.2)	
Heterosexual	82 (30.5)	65 (38.2)	17 (17.2)	
Pansexual	36 (13.4)	12 (7.1)	24 (24.2)	
Questioning	19 (7.1)	13 (7.6)	6 (6.1)	
Other ³	18 (6.7)	8 (4.7)	10 (10.1)	
HIV Status				
HIV positive	13 (4.8)	11 (6.5)	2 (2.0)	0.18
HIV negative or unknown	256 (95.2)	159 (93.5)	97 (98.0)	
Education				
High School or Less	145 (54.9)	108 (64.3)	37 (38.5)	<i>P</i> < 0.001*
Some college or more	119 (45.1)	60 (35.7)	59 (61.5)	

Variable	Overall (% n)	Racial/Ethnic Minority n (%)	White n (%)	P-value
Income				
<\$1000 per month	198 (74.2)	121 (72.0)	77 (77.8)	0.37
\$1000 or more per month	69 (25.8)	47 (28)	22 (22.2)	
Unstable Housing currently				
Yes	59 (21.9)	44 (25.9)	15 (15.2)	0.06
No	210 (78.1)	126 (74.1)	84 (84.8)	
Moved 2+ times as a child				
Yes	102 (38.3)	72 (42.6)	30 (30.9)	0.08
No	164 (61.7)	97 (57.4)	67 (69.1)	
Living situation as a child				
With parents of origin	220 (81.8)	127 (74.7)	93 (93.9)	<i>P</i> <0.001*
With family caregiver	23 (8.6)	21 (12.4)	2 (2.0)	
Adopted	26 (9.7)	22 (12.9)	4 (4.0)	
Foster				
Experienced racial discrimination ever				
Yes	106 (41.2)	91 (57.2)	15 (15.3)	<i>P</i> <0.001*
No	151 (58.8)	68 (42.8)	83 (84.7)	

* denotes a significant *P* <.05

¹ Other gender identities included such gender as Agender, androgenous, feminine, femme, princess and 24/7 crossdresser

² Other race/ethnicities included such race/ethnicities as Iranian, Lebanese, Indian, Argentinian Arab, Portuguese

³ For "other" sexual orientation there was no option to fill in a sexual orientation

⁴ Racial discrimination in school, getting a job, at work, housing, medical care, getting services, getting credit, a loan or mortgage, on the street/in public, or from the police or in courts

Table 2

Reported HIV-related risk behaviors among trans*female youth in the sample overall and comparing racial/ethnic minority youth to white youth.

Variable	Overall	Racial/Ethnic Minority n (%)	White	P-value
CAI within last 6 months ¹	100 (37.2)	71 (41.8)	29 (29.3)	0.06
CIAI within last 6 months ²	33 (12.3)	21 (12.4)	12 (12.1)	1
CRAI within last 6 months ³	91 (33.8)	66 (38.8)	25 (25.3)	0.03**
Substance use (illicit substance use and/or binge drinking) within last 6 months	41 (16.0)	31 (19.1)	10 (10.6)	0.11
History of injection drug use ever	27 (10.0)	13 (7.6)	14 (14.1)	0.13

** denotes a significant P-value <.05

¹ CAI refers to condomless anal intercourse

² CIAI refers to condomless insertive anal intercourse

³ CRAI refers to condomless receptive anal intercourse

Table 3

Reported prevalence of syndemic factors in the sample overall, and differences in prevalence of syndemic factors between racial/minority and white youth.

Variable	Overall	Racial/Ethnic Minority	White	P-value
Depressive symptoms currently				0.66
No	211 (78.7)	135 (79.9)	76 (76.8)	
Yes	57 (21.3)	34 (20.1)	23 (23.2)	
Trauma in last year ¹				0.39
No	105 (39.2)	70 (41.4)	35 (35.4)	
Yes	163 (60.8)	99 (58.6)	64 (64.6)	
Experienced Trans-related discrimination				1
No	53 (20.2)	33 (19.9)	20 (20.6)	
Yes	210 (79.8)	133 (80.1)	77 (79.4)	
Unstable housing currently				0.06
No	210 (78.1)	126 (74.1)	84 (84.8)	
Yes	59 (21.9)	44 (25.9)	15 (15.2)	
Bullied while growing up				0.67
No	98 (37.0)	60 (35.7)	38 (39.2)	
Yes	167 (63.0)	108 (64.3)	59 (60.8)	
Parental rejection ever ²				1
No	185 (77.1)	121 (77.1)	64 (77.1)	
Yes	55 (22.9)	36 (22.9)	19 (22.9)	

¹ Primary care PTSD screen, trauma exposure, and sleep disturbances

² Ever treated poorly by parents because of your gender identity or gender presentation

Table 4

Logistic Regression of Condomless Anal Intercourse (CAI) on syndemic factors for trans*female youth in San Francisco, CA

# of Syndemic factors	CAI Overall, OR (95% CI)	CAI Racial/Ethnic Minority, OR (95% CI)	CAI White, OR (95% CI)
Number of conditions			
0–1	1.00	1.00	1.00
2	0.9 (0.4, 2.2)	0.9 (0.3, 2.6)	0.8 (0.2, 4.5)
3	1.7 (0.7, 3.9)	2.1 (0.7, 6.1)	1.3 (0.3, 6.2)
4	2.0 (0.8, 4.8)	1.4 (0.5, 4.3)	3.9 (0.7, 21.1)
5–6	1.9 (0.7, 5.4)	3.1 (0.9, 11.5)	0.8 (0.1, 6.3)

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