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Sexual minority, justice-involved youth: a hidden population in need of integrated mental health, substance use, and sexual health services

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Abstract

Purpose: We sought to compare the demographic characteristics, drug and alcohol use, sexual behaviors, delinquency, and mental health indicators of sexual minority and non-sexual minority first-time offending, court-involved, not incarcerated (FTO CINI) adolescents.

Methods: Using adolescent- and caregiver-reported baseline data from the Epidemiologic Study Involving Children in the Court (EPICC), a prospective cohort study of 423 adolescent-caregiver dyads recruited from a Northeastern family court system, we compared demographic and behavioral health characteristics of sexual minority and non-sexual minority FTO CINI adolescents.

Results: Nearly one-third of the adolescents (31.4%, n=133) were classified as a sexual minority; 19.6% (n=81) self-identified with a non-heterosexual sexual orientation. Sexual minority adolescents were more likely than their non-sexual minority peers to identify as female, to have used psychiatric services or psychotropic medications, to have used an illicit drug or alcohol or to know peers who use these substances, to report alcohol/drug use during sex, to endorse more severe mental health problems, to have more recent post-traumatic symptoms, and to have engaged in self-harm behaviors. However, sexual minority adolescents did not differ from non-sexual minority adolescents in other demographic characteristics (including school performance) or delinquent behavior.

Conclusions: One-third of court-involved, not incarcerated adolescents may be sexual minorities. Specific screening methods are necessary to identify these adolescents and to address

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their unique risk characteristics, which include more severe mental health difficulties and higher rates of high-risk sexual behavior and drug/alcohol use compared with their non-sexual minority peers.

Keywords

Adolescent; Sexual and Gender Minorities; Sexual Behavior; Criminal Law; Sexual Behavior; Mental Health; Substance-Related Disorders

Introduction

Between 2005 and 2014, the percentage of US adolescents who were detained following referral to juvenile court was consistently less than 30% [1]. Instead, the majority of court-referred adolescents were referred to community-based supervision; in this report, we refer to these adolescents as court-involved, non-incarcerated (CINI). Previous research has documented high rates of substance use and other psychiatric disorders and sexually transmitted infections (STIs) among detained adolescents [2]; however, far less is known about the health status of their CINI peers. Limited data in this population suggest significantly higher rates of mental illness [3], high-risk sexual behavior [4, 5], and earlier onset and more frequent use of alcohol and other drugs [5,6], compared with adolescents in the general population.

Sexual minority adolescents (broadly defined as those who identify as lesbian, gay, bisexual, or another non-heterosexual orientation; are transgender or are gender nonconforming; and adolescents who endorse same-sex attraction or behaviors), represent a vulnerable, marginalized population [7]. Results from the 2015 Youth Risk Behavior Surveillance System (YRBSS) reveal that approximately 11.2% of US adolescents in grades 9-12 identify with a non-heterosexual orientation; in addition, 6.3% reported sexual contact with someone of the same sex [8]. Among detained adolescents, approximately 30% identify as sexual minorities [9], though the corresponding percentage among CINI adolescents is unknown. In the general population, sexual minority adolescents are more likely than their non-sexual-minority peers to report victimization and self-harm behaviors [10], to meet diagnostic criteria for multiple mood and anxiety disorders [7, 11], and to engage in hazardous alcohol and drug use [12, 13] and high-risk sexual behavior [14-16]. Even less is known about the characteristics and behavioral patterns of sexual minority first-time offending (FTO) CINI adolescents.

From a public health perspective, these data are critical because (1) sexual minority identity and court involvement both confer profound health risks that may have negative synergistic effect when combined; (2) sexual minority adolescents may not be recognized in the justice system without appropriate and sensitive screening methods; (3) quantifying the prevalence and characteristics of these adolescents are essential precursors to designing cost-effective and tailored interventions, and (4) adolescents' first court contact represents a unique opportunity to prevent worsening of preexisting health risks and further entrenchment in the justice system. Results of this study may serve as a foundation for subsequent longitudinal analyses to test causal relationships among demographic, behavioral, and mental health

characteristics and recidivism, and interventions to meet the unique risks of sexual minority, FTO CINI youth.

Using data from a cohort of FTO CINI adolescents, we sought to examine the prevalence of sexual minority, FTO CINI adolescents and to compare their demographic and mental health characteristics, sexual behaviors, and alcohol and drug use patterns with their non-sexual minority peers. We hypothesized that (1) the prevalence sexual minority adolescents among FTO CINI youth would approximate rates found in detained samples (i.e., roughly 30%) and (2) sexual minority FTO CINI adolescents, compared with their non-sexual minority peers, would demonstrate similar demographic characteristics but elevated rates of mental health difficulties and riskier sexual behavior and substance use patterns based on risk behavior and mental health patterns among non-justice-involved, sexual minority adolescents.

Methods

Participants

Participants were drawn from the Epidemiologic Study Involving Children in the Court (EPICC), a longitudinal, prospective cohort study examining HIV/STI risk, substance use, and mental health outcomes of FTO CINI youth [17]. Adolescents (ages 12-18 years) were recruited from a large, Northeastern juvenile court; assessments were completed between June 2014 and July 2016. In addition to FTO classification, inclusion criteria for adolescents included: English-language proficiency (caregivers could be proficient in Spanish or English), participation of an involved caregiver (i.e., a biological parent or legal guardian who had been living with the adolescent for at least 6 months and was willing to participate in the study). Exclusion criteria included: being a repeat offender and presence of a cognitive impairment (in either the adolescent or caregiver) that would prevent completion of study assessments (see Figure S1 for participant flowchart).

Procedure and design

Baseline data were collected from 423 FTO CINI youth and caregiver dyads. Caregivers of FTO adolescents were notified about study potential participation through a letter that accompanied standard court paperwork sent to the home ahead of the first court-related appointment. In collaboration with the court, trained research assistants approached all adolescent/caregiver dyads during their first meeting with an intake coordinator. Adolescents were sampled with a goal of recruiting roughly equal numbers of participants with status (i.e., actions that are prohibited only because the offender is a minor such as truancy and running away from home) and delinquent (i.e., all other crimes committed by minors such as disorderly conduct, assault, and shoplifting) offenses. Computer-administered surveys were completed at locations that were convenient for participants and allowed for privacy, including participant homes, the project field office, or other community-based locations (e.g., libraries). The principal investigator's university and collaborating sites' institutional review boards approved all recruitment and study procedures. A federally issued Certificate of Confidentiality was obtained to further protect participant privacy. See Supplementary Methods for additional details.

Measures

Sexual minority status: Sexual minority adolescents were identified by endorsement of at least 1 of the following 5 criteria: (1) non-gender binary (i.e., chose “other” for gender), (2) same-sex sexual behavior (i.e., endorsed any previous sexual behavior with an individual of the same sex), (3) same-sex attraction (i.e., endorsed being “sexually attracted to” individuals of the same sex), (4) non-heterosexual sexual orientation (i.e., endorsed “sexual orientation” as homosexual [gay, lesbian, or queer], bisexual, undecided [questioning], or other), or (5) victim of sexual-orientation or gender-identity based victimization (i.e., endorsed having been bullied or kicked out of their home because of their gender expression or sexual orientation within the past year, adopted from reference [9]) (Appendix Table S1). The final criterion regarding gender expression- or sexual orientation-based victimization was drawn from a study of detained sexual minority adolescents [9].

Demographics, mental health service use, and offending charge: Age, gender, race, ethnicity, employment status, and current school grades were self-reported by adolescents. Family income was provided by the caregiver. History of repeated grades, history of expulsion, and receipt of special education services or an individualized education plan (a formalized educational plan through the special education system) or a 504 plan (accommodations, support services, or modifications for students with disabilities) were drawn from a combination of adolescent and caregiver responses (i.e., the item was considered a “yes” response if either adolescent or caregiver endorsed it). Parental report of adolescents’ lifetime use of any mental health services (e.g., outpatient and inpatient psychiatric care, day/partial hospitalization, residential treatment) and prescription of a psychotropic medication were summarized in 2 dichotomous variables. Court records were used to determine first offense type (status or delinquent).

Substance use: Adolescents were asked about lifetime use of alcohol, cannabis, and other drugs (e.g., heroin, cocaine, non-prescribed use of prescription medications). Adolescents’ perceptions of the consequences of substance use over the past 4 months were measured using the 24-item Brief Young Adult Alcohol Consequences Questionnaire [18] and the 21-item Brief Marijuana Consequences Questionnaire [19]; for each measure, the total number of items endorsed (e.g., “I have passed out from drinking”) were summed to yield a total score ranging from 0-24 and 0-21, respectively. Adolescents were also asked about perceived “occasional” and “regular” peer use of alcohol, cannabis, and other drugs using the Peer Tolerance of Substance Use scale [20]; 2 items were provided for each substance and were coded on a 5-point scale (i.e., 0, none of them; 1, a few; 2, some; 3, many; 4, most; 5, all). A mean score for each substance was calculated.

Sexual behavior: Adolescents were asked whether they had any sexual encounters (oral, vaginal, or anal) during their lifetime and recently (within the past 4 months), as well as how many lifetime and recent sexual partners they had. Items were based on a modified version of the AIDS-Risk Behavior Assessment, which draws from multiple, previously validated measures of sexual behavior [21]. Adolescents who endorsed recent sex were asked how often they or their partners were “using alcohol, marijuana, or other drugs” during vaginal or anal sex; responses were recoded into a single, dichotomous variable: any versus none self-

or partner-reported substance use during sexual activity. A 4-month retrospective recall falls within the 3-month [22] to 18-month [23] recall range for adolescent sexual behavior applied in previous studies.

Delinquency: Adolescents completed the National Youth Survey Self-Reported Delinquency scale [24]; the General Delinquency subscale was used for these analyses. It included 23 delinquent acts for which the total number of lifetime delinquent acts (e.g., larceny, fighting) ranged from 0-23.

Behavioral and mental health symptoms: Adolescents completed the Behavior Assessment System for Children, Second Edition (BASC-2) [25] to assess for behavioral, social, and emotional challenges; for these analyses, age- and sex-adjusted *t*-scores were dichotomized into “clinical” (i.e., *t*-scores ≥ 60) and “non-clinical” (i.e., *t*-scores < 60) categories.

Post-traumatic symptoms: Adolescents completed the 9-item National Stressful Events Survey Post-Traumatic Stress Disorder Short Scale [26] to assess distress associated with post-traumatic symptoms within the past 7 days (e.g., “being ‘super alert,’ on guard, or constantly on the lookout for danger”). Items were scored on a 5-point scale (i.e., 0, not at all; 1, a little bit; 2, moderately; 3, quite a bit; 4, extremely); mean scores ranged from 0-4 with higher scores indicating more post-traumatic symptoms.

Traumatic event exposure: Adolescents self-reported whether they had ever witnessed inter-partner violence against a parent, and, as adapted from the YRBSS, whether they themselves had been the victim of dating violence or unwanted sexual advances within the past 4 months [27].

Self-injurious behavior: One adolescent self-report item from the Functional Assessment of Self-Mutilation [28] was used to assess for lifetime self-harm behavior: “Have you ever intentionally cut your body using pins, knives, razorblades, safety pins, or other things?”

Data Analysis

First, percentages of adolescents classified in each of the 5 sexual minority categories (and in *any* of the 5 categories), as well as the sum of the total number of categories attributed to each adolescent were calculated. Previous research among bisexual-identifying young women has suggested that a sizable minority change their self-identified orientation to heterosexual in early adulthood [29]; thus, we examined the percentage of youth who identified as bisexual, undecided (questioning), or other. Second, descriptive statistics were calculated to characterize the sociodemographic characteristics of FTO CINI youth by sexual minority status. Demographics, sexual behavior, drug and alcohol use, and mental health indicators of sexual minority and non-sexual minority were compared using appropriate tests (i.e., *t*-tests or Mann-Whitney (*U*-tests for continuous variables, chi-squared or Fisher’s exact tests for categorical variables). Analyses were performed using Stata,

version 15 (StataCorp LP); all p -values were two-sided with $\alpha=.05$, and we applied the Benjamini-Hochberg procedure [30] to reduce the type I error at 5% across all comparisons.

Results

Sexual minority status

Among the 423 adolescents who completed the baseline assessment, 31.4% ($n=133$) were classified as sexual minorities by at least 1 definition (Table 1; see Table S2 for item-level analysis of sexual-orientation or gender-identity based victimization). Among these adolescents, those who endorsed a non-heterosexual orientation ($n=81$), same-sex sexual attraction ($n=79$), and experienced discrimination as a result of their sexual orientation or gender identity ($n=73$) were most represented, compared with those who endorsed same-sex sexual behavior ($n=43$) and non-binary gender identity ($n=2$). Further, 18.0% ($n=76$) of all adolescents were classified as sexual minorities by 2 or more definitions. Among females who identified with a non-heterosexual orientation ($n=65$), 83.1% ($n=54$) identified as bisexual, undecided (questioning), or other; similarly, among males who identified with a non-heterosexual orientation ($n=13$), 76.9% ($n=10$) identified as bisexual, undecided (questioning), or other. Further, 63.1% ($n=41$) of non-heterosexual females identified as bisexual only, compared with 46.2% ($n=6$) of males.

Demographics, academics, and offense history

In the entire sample, adolescents had a mean age of 14.6 years ($SD=1.5$) and 46.0% were female. The sample was racially diverse (38.0% white, 12.9% African American, and 49.2% other) and 43.6% of adolescents identified ethnically as Latinx (Table 2). Compared with non-sexual minority adolescents, sexual minority adolescents were more likely to define their gender as female (71.5% vs. 34.6%, $p<.001$), to have used any psychiatric services (82.7% vs. 65.9%, $p=.002$) and to have been prescribed a psychotropic medication (46.6% vs. 30.0%, $p=.003$). The two groups did not differ significantly by age, race, ethnicity, employment status, family income, school-related characteristics, or charge type (Table 2).

Substance use

Sexual minority adolescents were more likely to endorse lifetime use of alcohol (46.6% vs. 26.6%, $p<.001$), cannabis (59.9% vs. 44.3%, $p=.009$), or other drugs (20.2% vs. 10.3%, $p=.014$; Table 3). Among sexual minority and non-sexual minority adolescents who endorsed use of alcohol and cannabis, their subjective perceptions of the consequences of substance use did not significantly differ from substance-using, non-sexual minority adolescents. However, sexual minority adolescents were more likely to endorse peer use of alcohol, cannabis, and any alcohol or drug (Table 3).

Sexual risk

Sexual minority and non-sexual minority adolescents endorsed similar rates of lifetime sexual behavior (45.9% vs. 37.5%, $p=.191$) and in the past 4 months (33.8% vs. 28.0%, $p=.251$), as well as similar numbers of sexual partners over their lifetime ($p=.112$) and in the past 4 months ($p=.219$) (Table 3). Because of the skewed distribution of number of sexual partners, we also compared the 2 groups using three-level variables (i.e., 0, 1, or 2

partners), which yielded similar results (data available upon request). However, sexual minority adolescents were more likely to endorse that either they or their sexual partner were intoxicated during sex in the past 4 months (68.2% vs. 40.3%, $p=.009$).

Mental health and delinquency

Sexual minority adolescents were more likely than non-sexual minority adolescents to endorse symptoms on the BASC-2 within the clinical range for Internalizing Problems (24.8% vs. 10.5%, $p=.001$), Inattention/Hyperactivity (22.7% vs. 12.0%, $p=.012$), the Emotional Symptoms Index (27.3% vs. 9.1%, $p<.001$), and Personal Adjustment (21.1% vs. 3.6%, $p<.001$) (Table 4). Sexual minority adolescents were no more likely than their non-sexual minority adolescent peers to endorse symptoms within the clinical range for School Problems (13.9% vs. 9.4%, $p=.226$) or to endorse past delinquent behaviors ($p=.112$).

Trauma and self-harm

Sexual minority adolescents endorsed more post-traumatic symptoms than non-sexual minority adolescents ($p=.001$) and were more likely to have ever witnessed interpersonal violence against their caregiver (26.3% vs. 11.9%, $p=.001$) (Table 5). However, sexual minority adolescents were not more likely than non-sexual minority adolescents to endorse being the victim of dating partner violence (11.2% vs. 8.1%, $p=.470$) or of unwanted dating partner sexual advances (4.6% vs. 2.8%, $p=.479$) in the past 4 months. Sexual minority adolescents were also more likely to endorse a history of self-injurious behavior (46.5% vs. 12.6%, $p<.001$).

Sensitivity analysis

Most previous studies that have applied a multi-dimensional definition of sexual minority status have not included sexual orientation or gender-based victimization; therefore, we repeated the analyses, removing victimization from the definition of sexual minority status. With this alternative classification, the pattern of significant differences was similar to the main analysis, with the following exceptions: the number of sexual partners, endorsement of lifetime sexual intercourse, and degree of alcohol-use consequences were now significantly higher among sexual minority adolescents, and receipt of any psychotropic medications and clinically significant BASC-2 inattention/hyperactivity scores were no longer significantly different (Tables S3-S6).

Discussion

Healthy People 2020 aims to collect “nationally representative data on LGBT Americans” and to explore “sexual/gender identity among youth” [31]. In addition, the National Center for Mental Health and Juvenile Justice has drawn attention to the mental health needs of court-involved youth [32]. This report addresses these public health concerns by examining sexual minority status and behavioral health within a unique cohort of court-involved adolescents.

Sexual minority adolescents, comprising nearly one-third of this cohort of FTO CINI adolescents, were more likely to be female, to have used mental health services, to endorse

higher self-reported lifetime rates and perceived peer use of drugs and alcohol, more frequent intoxication during recent sexual activity, more severe mental health difficulties and post-traumatic symptoms, and higher prevalence of self-injurious behavior. Sexual minority adolescents did not differ significantly from non-sexual minority adolescents in other demographic characteristics or self-reported illicit behavior; however, our data suggest that this is a subgroup of justice-involved youth who have significant psychiatric and substance use needs.

These results suggest that FTO CINI sexual minority youth exhibit a unique set of behavioral health risk characteristics; however, despite these characteristics that may predict worse mental health, medical, and forensic trajectories, sexual minority adolescents were otherwise indistinguishable from their peers. Thus, if sexual minority status is not specifically queried and in multiple ways, these adolescents remain under-recognized and their distinct needs will be unmet.

This study presents at least two innovations. First, we integrated multiple definitions of sexual minority status to capture diverse ways that adolescents may choose to label their non-heterosexual or non-cis-gendered identities. Previous research suggests that adolescents are more likely to respond positively to questions about sexual attraction instead of behavior or orientation [33], and best-practice guidelines recommend asking about sexual minority status in multiple formats [34]. Among the 31.5% (n=133) of adolescents who were classified as sexual minorities, a substantial fraction (42.8%, n=57) were only identified by one of the five categories, suggesting that if only a single question were used, many of these adolescents would have gone unidentified. Our finding that nearly one-third of our sample could be classified as sexual minorities is consistent with the 30% found in previous research with detained sexual minority adolescents [9]. As this is the first study, to our knowledge, to apply 5 dimensions of sexuality to define sexual minority status, assessing the validity of this approach is challenging. In large part, the pattern of significant differences remained similar even after removing the victimization criterion thereby suggesting the robustness of our results. Replication of our findings in different samples using these same definitions will be important to further validate these study results.

Second, we surveyed FTO CINI adolescents, about which little is known compared with adolescents in custody. Previous research by our group [35] and others [5, 36] has demonstrated a unique set of behavioral risk characteristics in this sizable population of court-involved youth. The results of the current study represent the first to specifically examine the specific characteristics of sexual minorities within this community-supervised population.

An unexpected result was the few (n=2) adolescents who identified as non-gender binary, given the well-established over-representation of transgender adults in the criminal justice system [37]. This finding may be explained by timing: Adolescents in this sample may have not yet solidified their transgender or non-gender-binary identities, a process that may occur later in development [38].

Several limitations should be considered. Our definition of sexual minority status, in attempting to capture all adolescents with non-heterosexual orientations, attractions, behaviors, and transgender identities, may have inadvertently included adolescents who may subsequently develop non-sexual minority identities [39]. However, sensitivity analyses yielded similar results after victimization had been excluded in the sexual minority definition, suggesting the robustness of our categorization. In addition, we did not comprehensively assess for histories of traumatic experiences or suicidal ideation because of limited baseline survey data; however, we did examine dating- and caregiver-related violence (experienced or witnessed) and lifetime self-injurious behavior. Further, we were unable to compare demographics of those who did and did not enroll in the study because caregivers and adolescents who were either ineligible for or declined participation did not provide study consent or assent to record these data. The sample does, however, have strengths in representing the actual proportion of youth coming into the court with a first-time status versus delinquent offense (50% each) in any given year. As one of our primary objectives was to examine unique characteristics and risk factors among sexual minority FTO CINI adolescents in this unique cohort, we chose not to control for demographic characteristics (e.g., age, sex, race/ethnicity). The cross-sectional analysis design prevents us from analyzing the dynamic nature of sexual/gender identity among adolescents over time and drawing causal inferences. Last, our limited sample size may have introduced type II error, accounting for some of the nonsignificant comparisons; subsequent studies with larger sample sizes among FTO CINI adolescents may help confirm our findings.

The benefits of proactively identifying sexual minority, FTO CINI adolescents must be balanced by safety considerations. Identified FTO CINI sexual minority adolescents may encounter sexual-orientation- or gender-identity-based discrimination and harassment without adequate safeguards. Therefore, before implementing screening initiatives, justice settings will need to design appropriate protections, such as maintaining strict confidentiality of sexual minority status, training court staff, and maintaining vigilance for covert forms of harassment.

In conclusion, this study is the first to classify and characterize FTO CINI sexual minority adolescents. These results indicate that sexual minority adolescents would likely go unidentified if not specifically queried about their sexual orientations, attractions, and behaviors; as a result, their increased behavioral health needs would not be addressed. Future research will examine the developmental trajectory of sexual minority FTO CINI adolescents. These analyses will inform empirically supported interventions designed to mitigate the unique risks of these vulnerable youth.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Abbreviations:

BASC-2	Behavior Assessment System for Children, Second Edition
B-MACQ	Brief Marijuana Consequences Questionnaire
B-YAACQ	Brief Young Adult Alcohol Consequences Questionnaire
EPICC	Epidemiologic Study Involving Children in the Court
FTO CINI	first-time offending, court-involved, not incarcerated
IEP	individualized education plan
NYS-SRD	National Youth Survey Self-Reported Delinquency
YRBSS	Youth Risk Behavior Surveillance System

References

- [1]. Hockenberry S, Puzzanchera C. Juvenile Court Statistics, 2014. National Center for Juvenile Justice 4 2017.
- [2]. Golzari M, Hunt SJ, Anoshiravani A. The health status of youth in juvenile detention facilities. *J Adolesc Health* 2006;38:776–782. [PubMed: 16730615]
- [3]. Fazel S, Doll H, Langstrom N Mental disorders among adolescents in juvenile detention and correctional facilities: a systematic review and metaregression analysis of 25 surveys. *J Am Acad Child Adolesc Psychiatry* 2008;47:1010–1019. [PubMed: 18664994]
- [4]. Belenko S, Dembo R, Rollie M, et al. Detecting, preventing, and treating sexually transmitted diseases among adolescent arrestees: an unmet public health need. *Am J Public Health* 2009;99:1032–1041. [PubMed: 19372535]
- [5]. Dembo R, Belenko S, Childs K, et al. Drug use and sexually transmitted diseases among female and male arrested youths. *J Behav Med* 2009;32:129–141. [PubMed: 18979194]
- [6]. Dembo R, Belenko S, Childs K, et al. Gender differences in drug use, sexually transmitted diseases, and risky sexual behavior among arrested youths. *J Child Adolesc Subst Abuse* 2010;19:424–446. [PubMed: 21221415]
- [7]. Mustanski BS, Garofalo R, Emerson EM. Mental health disorders, psychological distress, and suicidality in a diverse sample of lesbian, gay, bisexual, and transgender youths. *Am J Public Health* 2010;100:2426–2432. [PubMed: 20966378]
- [8]. Kann L, Olsen EO, McManus T, et al. Sexual identity, sex of sexual contacts, and health-related behaviors among students in grades 9-12 - United States and selected sites, 2015. *MMWR Surveill Summ* 2016;65:1–202.
- [9]. Irvine A "We've had three of them": addressing the invisibility of lesbian, gay, bisexual, and gender nonconforming youths in the juvenile justice system. *Colum J Gender & L* 2010;20:675.
- [10]. Liu RT, Mustanski B. Suicidal ideation and self-harm in lesbian, gay, bisexual, and transgender youth. *Am J Prev Med* 2012;42:221–228. [PubMed: 22341158]
- [11]. Solorio MR, Milburn NG, Andersen RM, et al. Emotional distress and mental health service use among urban homeless adolescents. *The Journal of Behavioral Health Services & Research* 2006;33:381–393. [PubMed: 17061161]

- [12]. Marshal MP, Friedman MS, Stall R, et al. Sexual orientation and adolescent substance use: a metaanalysis and methodological review. *Addiction* 2008;103:546–556. [PubMed: 18339100]
- [13]. Marshal MP, Friedman MS, Stall R, et al. Individual trajectories of substance use in lesbian, gay and bisexual youth and heterosexual youth. *Addiction* 2009;104:974–981. [PubMed: 19344440]
- [14]. Garofalo R, Deleon J, Osmer E, et al. Overlooked, misunderstood and at-risk: exploring the lives and HIV risk of ethnic minority male-to-female transgender youth. *J Adolesc Health* 2006;38:230–236. [PubMed: 16488820]
- [15]. Valleroy LA, MacKellar DA, Karon JM, et al. HIV prevalence and associated risks in young men who have sex with men. Young Men's Survey Study Group. *JAMA* 2000;284:198–204. [PubMed: 10889593]
- [16]. Coker TR, Austin SB, Schuster MA. The health and health care of lesbian, gay, and bisexual adolescents. *Annu Rev Public Health* 2010;31:457–477. [PubMed: 20070195]
- [17]. Tolou-Shams M, Brown LK, Marshall BDL, et al. The behavioral health needs of first-time offending justice-involved youth: substance use, sexual risk and mental health 2018:Submitted for peer review.
- [18]. Kahler CW, Strong DR, Read JP. Toward efficient and comprehensive measurement of the alcohol problems continuum in college students: the brief young adult alcohol consequences questionnaire. *Alcohol Clin Exp Res* 2005;29:1180–1189. [PubMed: 16046873]
- [19]. Simons JS, Dvorak RD, Merrill JE, et al. Dimensions and severity of marijuana consequences: development and validation of the Marijuana Consequences Questionnaire (MACQ). *Addict Behav* 2012;37:613–621. [PubMed: 22305645]
- [20]. Chassin L, Pillow DR, Curran PJ, et al. Relation of parental alcoholism to early adolescent substance use: a test of three mediating mechanisms. *J Abnorm Psychol* 1993;102:3–19. [PubMed: 8436697]
- [21]. Donenberg GR, Emerson E, Bryant FB, et al. Understanding AIDS-risk behavior among adolescents in psychiatric care: links to psychopathology and peer relationships. *J Am Acad Child Adolesc Psychiatry* 2001;40:642–653. [PubMed: 11392341]
- [22]. Santelli JS, Lindberg LD, Abma J, et al. Adolescent sexual behavior: estimates and trends from four nationally representative surveys. *Fam Plann Perspect* 2000;32:156–65, 194. [PubMed: 10942357]
- [23]. Halpern CT, Young ML, Waller MW, et al. Prevalence of partner violence in same-sex romantic and sexual relationships in a national sample of adolescents. *J Adolesc Health* 2004;35:124–131. [PubMed: 15261641]
- [24]. Piquero AR, Macintosh R, Hickman M. The validity of a self-reported delinquency scale: comparisons across gender, age, race, and place of residence. *Sociological Methods & Research* 2002;30:492–529.
- [25]. Reynolds CR, Kamphaus RW. *Manual: Behavior Assessment System for Children-Second Edition*. Circle Pines, MN, American Guidance Service, 2004.
- [26]. LeBeau R, Mischel E, Resnick H, et al. Dimensional assessment of posttraumatic stress disorder in DSM-5. *Psychiatry Res* 2014;218:143–147. [PubMed: 24746390]
- [27]. Centers for Disease Control and Prevention (CDC). Youth Risk Behavior Surveillance System (YRBSS) [Online]. Available at: <https://www.cdc.gov/healthyyouth/data/yrbs/index.htm>, Accessed: November 5, 2017.
- [28]. Nock MK, Prinstein MJ. A functional approach to the assessment of self-mutilative behavior. *J Consult Clin Psychol* 2004;72:885–890. [PubMed: 15482046]
- [29]. Diamond LM. Was it a phase? Young women's relinquishment of lesbian/bisexual identities over a 5-year period. *J Pers Soc Psychol* 2003;84:352–364. [PubMed: 12585809]
- [30]. Benjamini Y, Hochberg Y. Controlling the false discovery rate: a practical and powerful approach to multiple testing. *J Royal Stat Soc, Ser B* 1995;57:289–300.
- [31]. U.S. Department of Health and Human Services. Lesbian, gay, bisexual, and transgender health [Online]. Available at: <https://www.healthypeople.gov/2020/topics-objectives/topic/lesbian-gay-bisexual-and-transgender-health>, Accessed: December 21, 2017.
- [32]. Policy Research Associates. Co-occurring disorders [Online]. Available at: <https://www.ncmhjj.com/topics/co-occurring-disorders/>. Accessed: December 21, 2017.

- [33]. Saewyc EM, Bauer GR, Skay CL, et al. Measuring sexual orientation in adolescent health surveys: evaluation of eight school-based surveys. *J Adolesc Health* 2004;35:345.e1–345.15.
- [34]. Sexual Minority Assessment Research Team (SMART). Best practices for asking questions about sexual orientation on surveys 2009.
- [35]. Tolou-Shams M, Dauria E, Conrad SM, et al. Outcomes of a family-based HIV prevention intervention for substance using juvenile offenders. *J Subst Abuse Treat* 2017;77:115–125. [PubMed: 28476263]
- [36]. Dembo R, Belenko S, Childs K, et al. Individual and community risk factors and sexually transmitted diseases among arrested youths: a two level analysis. *J Behav Med* 2009;32:303–316. [PubMed: 19224357]
- [37]. Buist CL, Stone C. Transgender victims and offenders: failures of the United States criminal justice system and the necessity of queer criminology. *Critical Criminology* 2014;22:35–47.
- [38]. Morgan SW, Stevens PE. Transgender identity development as represented by a group of transgendered adults. *Issues Ment Health Nurs* 2012;33:301–308. [PubMed: 22545637]
- [39]. Ott MQ, Corliss HL, Wypij D, et al. Stability and change in self-reported sexual orientation identity in young people: application of mobility metrics. *Arch Sex Behav* 2011;40:519–532. [PubMed: 21125325]

Implications and contribution:

This study suggests that settings that serve justice-involved youth should reconsider how they identify and address the specific behavioral health needs of sexual minority youth relative to non-sexual minority justice-involved youth. Addressing these needs in a culturally informed way may offset health risk behaviors and legal-system entrenchment into young adulthood.

Table 1:
Classification of sexual minority status among FTO CINI adolescents (N=423)^a

	N	%
Non-gender binary conforming	2	0.5
Same-sex sexual behavior	43	10.2
Same-sex sexual attraction	79	18.7
Non-heterosexual sexual orientation (i.e., gay, lesbian, bisexual)	81	19.6
Experienced discrimination from sexual orientation or gender identity	73	17.3
Sexual minority status by any definition	133	31.4
Total number of sexual minority categories		
0	290	68.6
1	57	13.5
2	27	6.4
3	29	6.9
4	20	4.7
5	0	0.0

^aSee text and Table S1 for operational definitions used for each category of sexual minority status

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Table 2:
Demographic, academic, court-related, and mental health service use characteristics of FTO CINI sexual minority and non-sexual minority adolescents

	Source ^a	Total sample (n=423)	Sexual minorities (n=133)	Non-sexual minorities (n=290)		
					<i>t</i> (df)	<i>p</i>
Mean age at interview, in years (SD)	A	14.6 (1.5)	14.6 (1.4)	14.5 (1.6)	-.04 (421)	.660
					X²	<i>p</i>
Female, n (%) ^b	A	193 (46.0)	93 (71.5)	100 (34.6)	49.20	<.001
Latinx, n (%)	A	181 (43.6)	52 (39.4)	129 (45.6)	1.40	.326
Race, n (%)	A				1.86	.464
White		156 (38.0)	54 (41.2)	102 (36.4)		
African American		53 (12.9)	13 (9.9)	40 (14.3)		
Other ^c		202 (49.2)	64 (48.9)	138 (49.3)		
Employed, n (%)	A	44 (10.8)	12 (9.4)	32 (11.4)	.38	.594
Annual family income, n (%)	C				.56	.773
\$0-\$19,999		193 (47.9)	58 (46.0)	135 (48.7)		
\$20,000-\$39,999		120 (29.8)	37 (29.4)	83 (30.0)		
>\$39,000		90 (22.3)	31 (24.6)	59 (21.3)		
Ever repeated a grade, n (%)	C, A	153 (36.2)	47 (35.3)	106 (36.6)	.05	.809
Ever been expelled, n (%)	C, A	69 (16.4)	18 (13.5)	51 (17.7)	1.12	.385
Current grades, n (%)	A					
A's and B's		76 (18.7)	28 (21.7)	48 (17.3)	4.59	.427
B's and C's		152 (37.4)	42 (32.7)	110 (39.6)		
C's and D's		94 (23.1)	27 (20.9)	67 (24.1)		
D's		34 (8.4)	11 (8.5)	23 (8.3)		
Failing all classes		51 (12.5)	21 (16.3)	30 (10.8)		
Ever received special education, n (%)	C, A	160 (37.8)	53 (39.9)	107 (36.9)	.33	.606
Ever had IEP or 504, n (%)	C, A	185 (43.7)	65 (48.9)	120 (41.4)	2.08	.239
Charge type, n (%)	Court records				.39	.604
Status offender		194 (45.9)	58 (43.6)	136 (46.9)		
Delinquent offender		229 (54.1)	75 (56.4)	154 (53.1)		
Mental health service use, lifetime, n (%)						
Any psychiatric services ^d	C, A	301 (71.2)	110 (82.7)	191 (65.9)	12.61	.002
Prescription of psychotropic medications	C, A	149 (35.2)	62 (46.6)	87 (30.0)	11.03	.003

Abbreviation: IEP, individualized education plan

Bolded values indicate significant differences between sexual-minority and non-sexual-minorities, $p < .05$. The Benjamini-Hochberg procedure was applied to control the false-discovery rate at 5%.

^aDenotes caregiver (C), adolescent (A), or both (C, A) respondents.

^bBiological sex was self-reported by adolescents.

^c“Other” includes American Indian, Asian, Native Hawaiian or other Pacific Islander, mixed or multi-racial, and “other”

^dIncludes history of inpatient psychiatric or drug/alcohol-related hospitalization, residential treatment center, intensive or routine outpatient psychiatric or drug/alcohol-related services, crisis center, in-home mental health services, or “professional help” from a mental health clinician

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Table 3:
Substance use and perceptions and sexual activity among FTO CINI sexual minority and non-sexual minority adolescents

	Total sample (n=423)	Sexual minorities (n=133)	Non-sexual minorities (n=290)		
				X²	p
Self-endorsed substance use, n (%)					
Alcohol	138 (32.9)	62 (46.6)	76 (26.6)	16.51	<.001
Cannabis	204 (49.3)	79 (59.9)	125 (44.3)	8.66	.009
Other drugs ^a	55 (13.4)	26 (20.2)	29 (10.3)	7.44	.014
Any drug or alcohol	222 (52.7)	89 (66.9)	133 (46.2)	15.69	<.001
Had sexual intercourse, lifetime (%) ^b	166 (40.2)	61 (45.9)	105 (37.5)	2.62	.191
Had sexual intercourse, past 4 months (%) ^b	124 (29.9)	45 (33.8)	79 (28.0)	1.46	.251
Adolescent or partner was intoxicated during sex, past 4 months (%) ^c	61 (50.4)	30 (68.2)	31 (40.3)	8.73	.009
				t(df)	p
Consequences of substance use, total score (SD) ^d					
B-YAACQ	2.6 (3.4)	3.0 (3.8)	2.2 (3.0)	-1.33 (136)	.264
B-MACQ	2.6 (3.2)	3.0 (3.7)	2.3 (2.7)	-1.52 (199)	.216
Peer tolerance of substance use, mean score (SD)					
Alcohol use	.7(1.2)	1.0 (1.4)	.7(1.1)	-2.89 (399)	.010
Cannabis use	1.6 (1.8)	2.0 (1.9)	1.4 (1.7)	-3.15 (404)	.006
Other drug use ^e	.5 (1.1)	.7 (1.3)	.4 (1.0)	-2.16 (399)	.066
Any drug or alcohol use	.9 (1.1)	1.2 (1.3)	.8 (1.0)	-3.09 (406)	.007
				z	p
Median number of sexual partners, lifetime (IQR) ^b	0 (0-2)	0 (0-2)	0 (0-1)	-1.89	.112
Median number of sexual partners, past 4 months (IQR) ^b	0 (0-1)	0 (0-1)	0 (0-1)	-1.53	.219

Abbreviations: B-MACQ, Brief Marijuana Consequences Questionnaire; B-YAACQ, Brief Young Adult Alcohol Consequences Questionnaire

Bolded values indicate significant differences between sexual-minority and non-sexual-minorities, $P < .05$. The Benjamini-Hochberg procedure was applied to control the false-discovery rate at 5%. All variables in this table were derived from adolescent self-report.

^aIncludes synthetic cannabis, inhalants, synthetics (e.g., bath salts), methamphetamines, cocaine, injection drugs (e.g., cocaine, heroin), club or psychedelic drugs, tranquilizers/benzodiazepines, misuse of prescription drugs, and misuse of other drugs (e.g., steroids).

^bDefined as oral, vaginal, or anal sex

^cAmong adolescents who endorsed having sex within the past 4 months

^dWithin the past 4 months, excludes adolescents who denied use of alcohol (B-YAACQ) or cannabis (B-MACQ)

^eDefined as "other drugs besides marijuana"

Table 4:
Mental health and delinquency among FTO CINI sexual minority and non-sexual minority adolescents

Measure	Total sample (n=423)	Sexual minorities (n=133)	Non-sexual minorities (n=290)		
				χ^2	p
BASC-2, n (%) ^a					
Internalizing Problems	61 (15.1)	32 (24.8)	29 (10.5)	14.04	.001
Inattention/Hyperactivity	64 (15.4)	30 (22.7)	34 (12.0)	7.92	.012
Emotional Symptoms Index	60 (14.9)	35 (27.3)	25 (9.1)	23.12	<.001
Personal Adjustment	37 (9.9)	27 (21.1)	10 (3.6)	32.39	<.001
School Problems	44 (10.8)	18 (13.9)	26 (9.4)	1.85	.266
				t(df)	p
NYS-SRD general delinquency score, mean (SD) ^b	2.1 (2.7)	2.5 (2.9)	1.9 (2.6)	-1.91 (408)	.112

Abbreviations: BASC-2, Behavior Assessment System for Children, Second Edition; NYS-SRD, National Youth Survey Self-Reported Delinquency

Bolded values indicate significant differences between sexual-minority and non-sexual-minorities, $P < .05$. The Benjamini-Hochberg procedure was applied to control the false-discovery rate at 5%. All variables in this table were derived from adolescent self-report.

^aRepresents the percentage of adolescents whose BASC-2 subscale scores fall within the “clinical” range.

^bThe published NYS-SRD subscale contains 24 items; however, due to an error in the survey-administration software, 1 item was inadvertently omitted (“Have you had sexual intercourse with a person who was not your serious partner when involved in a relationship?”) and therefore the score range for this study is 0-23.

Table 5:
Trauma and self-harm among FTO CINI sexual minority and non-sexual minority adolescents

Measure	Total sample (n=423)	Sexual minorities (n=133)	Non-sexual minorities (n=290)		
				t(df)	p
NSESSS total score, mean (SD)	1.1 (1.1)	1.5 (1.3)	1.0 (.9)	-3.99 (333)	.001
				X²	p
Witnessed inter-partner violence against their caregiver, lifetime	69 (16.5)	35 (26.3)	34 (11.9)	13.61	.001
Victim of dating-partner violence, past 4 months	25 (9.2)	11 (11.2)	14 (8.1)	.73	.470
Victim of unwanted dating-partner sexual advances, past 4 months	14 (3.4)	6 (4.6)	8 (2.8)	NA ^a	.479
Self-injurious behavior, lifetime	96 (23.2)	60 (46.5)	36 (12.6)	57.23	<.001

Abbreviations: NSESSS, National Stressful Events Survey PTSD Short Scale

Bolded values indicate significant differences between sexual-minority and non-sexual-minorities, $P < .05$. The Benjamini-Hochberg procedure was applied to control the false-discovery rate at 5%. All variables in this table were derived from adolescent self-report.

^aFisher's exact test used to compare groups