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Substance Use and Mental Health Disparities among Sexual Minority Girls: Results from the Pittsburgh Girls Study

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Abstract

Purpose—To examine substance use and mental health disparities between sexual minority girls and heterosexual girls.

Methods—Data from the Pittsburgh Girls Study were analyzed. All girls were 17 years old. Girls were included if they were not missing self-reported sexual orientation and mental health data (N = 527). Thirty-one girls (6%) endorsed same-sex romantic orientation/identity or current same-sex attraction. Bivariate analyses were conducted to test group differences in the prevalence of substance use and suicidal behavior, and group differences in depression, anxiety, borderline personality disorder (BPD), oppositional defiant disorder (ODD), and conduct disorder (CD) symptoms.

Results—Compared with heterosexual girls, sexual minority girls reported higher past-year rates of cigarette, alcohol, and heavy alcohol use, higher rates of suicidal ideation and self-harm, and higher average depression, anxiety, BPD, ODD, and CD symptoms.

Conclusions—Sexual minority girls are an underrepresented group in the health disparities literature, and compared with heterosexual girls, they are at higher risk for mental health problems, most likely because of minority stress experiences such as discrimination and victimization. The disparities found in this report highlight the importance of discussing sexual orientation as part of a comprehensive preventive care visit.

Keywords

LGBT health; Sexual minority girls; Adolescent substance use; Adolescent mental health disparities

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Introduction

The adolescent preventive health care visit addresses a broad range of topics and includes identification of health risk behaviors such as substance use and screening for mental health concerns. It can be useful for clinicians who provide adolescent preventive health services to understand which of their patients may be at increased risk for these problems. Two decades of research suggests that, compared with heterosexual youth, sexual minority youth (those who report same-sex sexual attraction, behavior, or gay/lesbian or bisexual identity/orientation) report significant mental health disparities, including depression, suicidality, and substance use.[1,2]

When gender differences are explored, mental health disparities in sexual minority youth are even more pronounced among female compared to male patients. For example, sexual minority girls (SMGs) were on average 400% more likely to use drugs and alcohol compared with heterosexual girls, whereas sexual minority boys were on average 180% more likely compared with heterosexual boys.[2] Other recent studies have also identified gender differences in psychosocial health disparities between sexual minority and heterosexual youth.[3,4] Thus, examining disparities within genders is warranted to help gain a better understanding of the etiology and potential underlying causal mechanisms within gender subgroups. A recent Institute of Medicine report concluded that more research with SMGs is needed to understand the development of these disparities.[5] The goals of this study were to replicate and extend the results in the current literature by examining substance use and mental health disparities among a sample of urban SMGs.

Methods

The Pittsburgh Girls Study (PGS) is a multiple cohort, multi-informant, prospective study that was designed to investigate the developmental precursors and risk factors of conduct problems and substance use and abuse among urban girls. Participants were recruited from a sample of 103,238 households in the City of Pittsburgh. The original sample comprised 2451 girls (52% African American, 41% European American) who were 5–8 years old at the start of data collection in 2000. Over 8 years, the average participation rate has been 93.3%, with 89.2% retention of the original sample by the end of the wave used in the analyses (Year 9).

Attrition analyses have indicated that the PGS is not differentially losing families that may be more difficult to track, or losing girls with heavier substance use. A detailed description of recruitment methods, retention rates, and other methodological characteristics are described elsewhere.[6]

The assessment of sexual orientation in the PGS began in the oldest cohort (age 8 at Year 1 of the project) in 2008 as a pilot project. Girls were included in these analyses if they were not missing information regarding their sexual orientation/identity, thus the subsample used for this study consisted of 527 seventeen-year-old urban girls, which represents 85% (527/622) of the original cohort. Home-based, face-to-face, computer-assisted interviews with girls were conducted examining a wide range of psychosocial factors and mental health outcomes. Analysis for this work was based on data collected in a single home interview during Wave 9 of the longitudinal study. The study was approved by the University of Pittsburgh Institutional Review Board, and parental consent was obtained prior to all interviews.

Sexual minority girls (n = 31, 6% of the total sample) were identified if they endorsed having a lesbian/gay or bisexual identity (n = 29) or if they endorsed a heterosexual identity but also endorsed current same-sex romantic attraction (n = 2). Among the SMGs who

endorsed a sexual minority identity, 21 (67.7%) identified as bisexual and 8 (25.8%) identified as gay/lesbian. Also, 26 (83.9%) of identified SMGs endorsed current same-sex attraction, 3 (9.7%) reported only current opposite-sex attraction, and 2 (6.4%) reported being unsure.

All outcome variables asked about symptoms and behaviors experienced in the past year. Outcome variables included: (a) prevalence of cigarette, marijuana, alcohol, and heavy alcohol use (5 or more drinks in 1 sitting); (b) average symptom scores on self-reported oppositional defiant disorder (ODD) and conduct disorder (CD) symptoms[7]; (c) average symptom scores on self-reported internalizing symptoms, including depression, anxiety, and borderline personality disorder (BPD) symptoms[7–9]; and (d) suicidality, including suicidal ideation and self-harm.

Results

Bivariate analyses (chi-square tests) showed that there were no significant group differences regarding the racial background and socioeconomic indicators across groups (see Table 1). Due to the lack of group differences in race and socioeconomic status, the small sample of SMGs, the even smaller subset of African-American (or multiracial) SMGs (n = 18), and the very narrow age range in this subsample of the PGS (all girls were 17 years old), multivariate analyses and subgroup analyses were not conducted. Bivariate analysis results (chi-square tests and *t* tests) are presented in Table 2. Compared with heterosexual girls, SMGs reported higher rates of cigarette and alcohol use; higher average ODD and CD symptoms; higher average depression, anxiety, and BPD symptoms; and higher rates of suicidal ideation and self-harm. Some group differences appeared clinically meaningful but did not achieve traditional levels of statistical "significance" because of low statistical power. For example, SMGs were almost 140% more likely to report marijuana use ($P = .11$), but power to detect this effect at $P = .05$ was approximately 0.63.

Discussion

A comprehensive preventive visit for an adolescent seeking reproductive health care addresses many topics and includes a discussion of sexual orientation, identification of risk behaviors such as substance use, and screening for mental health issues.[10] A better understanding of the increased vulnerabilities of SMG would be useful to clinicians providing such care. However, to our knowledge, very few studies to date have focused exclusively on SMGs and their risk for mental health problems.

This study showed that compared with heterosexual girls, the 17-year-old urban SMGs in this sample reported higher rates of mental health symptoms and substance use that might put them at risk for long-term health problems, as demonstrated in longitudinal studies of substance use as sexual minority youth transitioned into young adulthood.[11] Thus, if substance use and other mental health problems among this vulnerable population go unrecognized and untreated, SMGs could be at increased risk for mental health and substance use disorders in adulthood.

Our study's results showing higher rates of substance use, depression, and suicidal ideation among SMGs are consistent with previous research examining such disparities among both boys and girls.[1,2] Other studies have reported higher rates of some individual delinquent behaviors such as fighting or carrying a weapon to school,[12] and higher rates of conduct disorder compared with heterosexual youth.[13] Our results build on these findings by highlighting significant group differences in externalizing behaviors specifically among girls. Furthermore, to our knowledge, findings such as ours that SMGs report higher levels

of ODD and CD have not been previously reported and highlight the need for further study of externalizing problems in this group. This line of inquiry will be particularly important given that sexual minority youth are more likely to receive legal sanctions for criminal behavior above and beyond what could be explained by group disparities in such behavior.[14]

As with all sexual minority populations, there was significant heterogeneity within SMGs in this sample with regard to their demographic characteristics, their level of attraction to same-sex and opposite-sex peers, their sexual identity (ie, bisexual vs lesbian/gay), and more. Furthermore, this heterogeneity has been shown to be associated with psychosocial health outcomes among sexual minority youth.[15] Future studies that aim to examine risk and resilience among SMGs would be strengthened by describing and examining such heterogeneity (in larger samples) and how it is associated with long-term health and well-being.

Sexual minority girls, their families, health care providers, and researchers would benefit from more research that: (1) adds sexual orientation assessment items to their assessment to make sexual minority youth research possible; (2) uses larger samples (with more statistical power) and longitudinal data to describe and explain long-term mental health disparities; (3) examines and describes differential effects across age, race, ethnicity, and other important demographic variables; and (4) examines the role of protective factors such as social support or risk for mental health problems among SMGs.

Finally, we agree with a recent report sponsored by the National Institutes of Health and conducted by the Institute of Medicine that asserts that minority stress experiences such as discrimination and violence victimization are central driving mechanisms underlying the etiology of mental health disparities among sexual minority populations.[16] Thus, it is imperative that more research be conducted to elucidate how these mediating mechanisms work to increase risk among SMGs.

Implications for Clinical Practice

Our recent review of several large government health organizations revealed a surprising dearth of information available for health care providers that might help them identify and treat mental health and substance use problems among sexual minority populations.[2] The Substance Abuse and Mental Health Services Administration was a notable exception.[17] Recent scholarly publications have also offered clinicians useful recommendations tailored specifically to the sexual minority adolescent population.[18,19]

During a preventive health visit, obtaining a complete psychosocial history of an adolescent patient to identify both her strengths and her risks provides an opportunity to build rapport. An approach to obtaining a psychosocial history during a medical interview that progresses from the least to most sensitive questions is outlined in the HEEADSSS history.[20] Many clinicians use a written questionnaire to augment their interview, such as the GAPS questionnaire developed by the American Medical Association.[21]

For some sexual minority patients, the sexual history may be the most sensitive part of the health care visit. Although preventive health care visits for adolescents often start with the patient and parent together, the adolescent patient should have the opportunity to speak alone with her health care provider and to be reassured of her privacy unless a life-threatening problem is identified.[22] Even when parents are aware of the information discussed, adolescents may be more comfortable discussing sensitive topics alone with the clinician. When obtaining a sexual history from an adolescent, it is helpful to introduce the topic by first asking open-ended questions about romantic relationships, to explain that an accurate sexual history promotes better health care, and to avoid using gender-specific

terms, such as “boyfriend,” which assume heterosexuality.[15] It is also important to remember that although same-sex experimentation often precedes self-identification as gay/lesbian, an adolescent’s sexual behavior and sexual orientation may not be consistent. Sexual identity, attraction, and behavior also may change over time. Finally, a sensitive and nonjudgmental attitude and reassurance of confidentiality can help adolescents feel safe to openly discuss their sexual health, as well as other issues such as substance use and mental health symptoms. Lesbian and gay youth value the same clinician characteristics desired by all adolescents[23]; they seek health care providers who demonstrate respect, honesty, and a nonjudgmental attitude and who treat gay youth the same as other youth.[24]

Despite the higher average rates of substance use and mental health problems observed among SMGs in this sample, it is important to note that a significant proportion of SMGs did not endorse many of these behaviors and symptoms. More research is needed to identify SMGs who demonstrate a high level of resilience in the face of adversity such as sexual minority stress, and to better understand the mechanisms of such resiliency in order to design effective prevention and intervention programs that can help protect SMGs who are in need.

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Table 1

Demographic Characteristics of Sexual Minority Girls and Heterosexual Girls (N = 527), n (%)

	Sexual minority girls (n=31)	Heterosexual girls (n=496)
Ethnic minority race[a]	18 (58.1)	298 (60.2)
Received public assistance, past year	8 (25.8)	155 (31.5)
Resided in single-parent household	16 (51.6)	242 (49.1)
≤ 12 y of education (parent)	16 (51.6)	226 (45.8)

[a]Over 91% of ethnic minority girls were African-American and 8% were multiracial.

Table 2

Differences between Sexual Minority Girls and Heterosexual Girls in Rates of Mental Health Symptoms and Problems (N = 527)

	Sexual minority girls (n=31)	Heterosexual girls (n=496)	Effect size (95% CI)
Substance use (past y)			
Cigarette use (n)	36% (11)	19% (92)	OR=2.42* (1.12–5.22)
Alcohol use (n)	58% (18)	37% (182)	OR=2.37* (1.13–4.95)
Heavy alcohol use (n/no. of drinkers)	67% (12/18)	41% (75/182)	OR=2.85* (1.03–7.94)
Marijuana use (n)	32% (10)	21% (102)	OR=2.39 (0.84–4.03)
Externalizing symptoms			
ODD (SD)	7.1 (4.2)	5.1 (3.7)	d =.48**
CD (SD)	2.2 (3.0)	1.3 (2.0)	d =.35*
Internalizing symptoms			
Depression (SD)	11.4 (6.6)	7.5 (4.7)	d =.69**
Anxiety (SD)	19.4 (12.1)	15.5 (9.5)	d =.58*
Borderline personality (SD)	4.2 (2.8)	2.8 (2.2)	d =.37**
Suicidal ideation, past 2 wk (n)	12.9% (4)	3.4% (17)	OR=4.17** (1.31–13.36)
Suicidal ideation, past 12 mo (n)	29.0% (9)	7.7% (38)	OR=4.93*** (2.12–11.46)
Self-harm, past 12 mo (n)	12.9% (4)	2.0% (10)	OR=7.20*** (2.12–24.45)

Abbreviations: CD, conduct disorder; CI, confidence interval; d, Cohen's d, or standardized mean difference; ODD, oppositional defiant disorder; OR, odds ratio; SD, standard deviation

* $P < .05$

** $P < .01$

*** $P < .001$