

Sexual Risk Behaviors of Sexual Minority Students in Rhode Island, 2007–2013

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The Centers for Disease Control and Prevention (CDC)'s pooled Youth Risk Behavior Survey (YRBS) data show that nationally, 1.3% of high school students identified themselves as gay or lesbian, 2.5% reported having intercourse with same sex only, and 3.3% reported having sex with both sexes.^{1,2} Sexual minority students are adolescents who identify themselves as gay or lesbian, bisexual, or unsure of their sexual identity or students who have had sexual contact with same sex only or with both sexes.¹ This study found that sexual health disparities exist in sexual minority students. In particular, the study found that sexual minority students were more likely to report having had intercourse, to have had intercourse before 13 years of age, and to have had intercourse with four or more people compared to heterosexual students. Gay or lesbian students were less likely to have used a condom at the last intercourse than heterosexual students.^{1,2}

Earlier age of first intercourse, number of sexual partners, and lack of condom use are associated with increased risk of getting cancer-related pathogens, for instance, human papilloma virus (HPV).³ Risk sexual behaviors are also related to teenage pregnancy and sexually transmitted infections (STIs) among sexual minority students.

In order to address the needs of sexual minority students and implement intervention programs effectively, Rhode Island needs statewide data on the sexual behaviors of this population. The objectives of this study were to focus on variability among sexual minorities, examine differences between sexual identity and sexual behavior, as well as examine differences between sex of sexual contacts and sexual behaviors using the Rhode Island-pooled YRBS data.

METHODS

Data source: The YRBS is an anonymous and voluntary survey among random samples of high school students in over 60 states and municipalities. The CDC developed the YRBS to monitor risk behaviors related to the major causes of mortality, disease, injury, and social problems among youth and adults in the United States. These weighted, self-reported data are representative of 9th to 12th grade public high school students statewide and can be used to make important inferences concerning health-risk behaviors. In order to increase the sample size, we combined the 2007, 2009, 2011, and 2013 Rhode Island high school YRBS data. The overall response rates across these four years ranged from 66% to 71%.

Measures: Demographic characteristics included sex (male or female), grade (9th–12th), and race/ethnicity (White, Black, Hispanic/Latino, and other).

Sexual minority students are determined by sexual identity and/or by sex of sexual contacts. Sexual identity was based on the state-added question, "Which of the following best describes you?" 1) heterosexual (straight); 2) gay or lesbian; 3) bisexual; and 4) not sure. Sex of sexual contacts was based on "What is your sex?" 1) female; 2) male and the stated-added question, "During your life, with whom have you had sexual contact?" 1) I have never had sexual contact; 2) females; 3) males; 4) females and males. We classified students as having had opposite-sex contact only, same-sex contact only, both-sex contact, or as never had sexual contact. For this study, sexual minority students were defined as those who identified as gay or lesbian, bisexual or unsure or who had same-sex contact or both-sex contact.

Sexual risk behaviors in this study include: ever had sexual intercourse; had sexual intercourse for the first time before age 13 years; had sexual intercourse with four or more people during their life; had sexual intercourse with one or more people during the past three months; had sexual intercourse during the past three months and had not used a condom during last sexual intercourse; and had sexual intercourse during the past three months and had not used birth control pills to prevent pregnancy before last sexual intercourse.

Statistics analyses: We calculated unweighted frequency and weighted percentages. We conducted all analyses with the Surveyfreq Procedure in SAS version 9.3 (SAS Institute, Inc, Cary, North Carolina) to account for the complex design of the YRBS.

RESULTS

Table 1 shows the number and proportions of major demographic characteristics. In the Rhode Island pooled data, 90.3% of high school students identified as heterosexual, 1.9% as gay or lesbian, 5.1% as bisexual, and 2.7% as unsure. More than half of the students (53.6%) reported having had sexual contact with the opposite sex, 2.7% reported having had sexual contact with the same sex, 4.8% reported having had sexual contacts with both sexes, and 38.9% reported having had no sexual contact.

Table 2 shows the distribution of sexual contacts by sexual identity for public high school students. Among sexually active students, more than half who engaged in same-sex

behavior identified as heterosexual (54.3%) while over a quarter identified as gay or lesbian (28.5%) and 11.9% identified as bisexual. Among those who had sexual contact with both sexes, 31.8% identified as heterosexual while 51.0% identified as bisexual, and 10.9% were not sure of their sexual identity.

Table 3 shows the distribution of sexual behavior by sexual identity for public high school students. Gay or lesbian, bisexual, or students not sure of sexual identity were more likely than heterosexual students to report having ever had intercourse, having had intercourse before 13 years of age, and having had intercourse with ≥ 4 people. Those students were less likely to report having used a condom or birth control pills during their last sexual intercourse compared to heterosexual students.

Table 4 shows the distribution of sexual behaviors by sex of sexual contacts for public high school students. Students having had sexual contact with both sexes were more likely to have ever had intercourse, to have had intercourse before 13 years of age, to have had intercourse with ≥ 4 people, and to have had intercourse with ≥ 1 person in the past 3 months than students having had sexual contact with the opposite sex only. Students who had sex with both sexes were also less likely to have used a condom or birth control pills at the last intercourse compared to students having opposite sex only.

DISCUSSION

Rhode Island high school students who identify as gay or lesbian or as bisexual exhibit more sexual risk behaviors than their self-identified heterosexual peers. In addition, students who have had sexual contact with both males and females are at higher risk than their peers who have had sexual contact with the opposite sex only. Moreover, those who have had sexual contact with the same sex engage in sexual risk behaviors that are generally similar as students having opposite sex only. This potentially presents a somewhat more complex picture than previous studies in which sexual minorities exhibit higher risk across the board than their heterosexual peers.⁴⁻⁶ However, due to relatively small sample sizes, it is hard to determine the extent to which this pattern would hold up under further study.

Gay or lesbian students were more likely not to use birth control pills during their last sexual intercourse than heterosexual peers (**Table 3**). Students with same sex sexual contact are at the same level of risk that is surprisingly close to those with opposite sex contact only, except the percentage

of not using birth control pills is highest among the three groups (**Table 4**). Females whose last intercourse was with another female may contribute to the high percentages of no birth control pill use among gay or lesbian (92.2%) or those with same sex sexual contact only (88.6%).

Because of social stigma or peer pressure or as part of their identity exploration process, some self-reported lesbians may have sex with males, and some self-reported gays may have sex with females.^{4,7} This occasional experimentation will result in the higher rate of teenage pregnancies than their heterosexual peers.^{2,8} The sexual risk behaviors revealed by sexual minority students often reflect reactions to non-acceptance by peers.⁹ If sexual minority students continue to engage in the sexual risk behaviors, they will be

Table 1. Demographic characteristic of high school students, Rhode Island 2007–2013

Characteristic	n	Weighted %
Sex		
Male	5,544	50.2
Female	6,002	49.8
Grade		
9th grade	3,280	28.5
10th grade	3,291	25.6
11th grade	2,610	23.4
12th grade	2,264	22.5
Race/Ethnicity		
White, non-Hispanic	6,219	68.4
Black/African American	890	8.6
Hispanic/Latino	2,951	18.4
Other	1,220	4.5
Sexual identity		
Heterosexual (straight)	10,364	90.3
Gay or lesbian	229	1.9
Bisexual	631	5.1
Not sure	322	2.7
Sex of sexual contacts		
Opposite sex only	5,992	53.6
Same sex only	343	2.7
Both sexes	568	4.8
Never had sexual contact	4,643	38.9

Table 2. Sex of sexual contacts by sexual identity among high school students, Rhode Island 2007–2013

Sex of sexual contacts	Weighted % (95% Confidence Interval)			
	Heterosexual (straight)	Gay or lesbian	Bisexual	Not sure
Opposite sex only	95.8 (95.1-96.4)	0.5 (0.3-0.7)	2.4 (1.9-2.9)	1.4 (1.0-1.8)
Same sex only	54.3 (47.7-60.9)	28.5 (22.9-34.0)	11.9 (8.0-15.8)	5.4 (2.9-7.9)
Both sexes	31.8 (27.2-36.3)	6.3 (4.3-8.4)	51.0 (45.9-56.2)	10.9 (7.2-14.6)
Never had sexual contact	92.6 (91.8-93.4)	1.4 (1.0-1.8)	2.7 (2.1-3.3)	3.3 (2.8-3.8)

Table 3. Percentage of sexual behavior by sexual identity among high school students, Rhode Island 2007–2013

Sexual behavior	n (weighted %)	Weighted % (95% Confidence Interval)			
		Heterosexual (straight)	Gay or lesbian	Bisexual	Not sure
Had sex ever	4,310 (42.4)	41.0 (38.8-43.2)	62.7 (54.7-70.6)	65.1 (59.8-70.4)	40.4 (33.8-46.9)
Had sex before 13	574 (5.0)	4.3 (3.6-5.1)	19.2 (11.5-26.8)	10.2 (7.7-12.8)	11.5 (7.7-15.3)
Had sex with ≥4 people in life	1,050 (10.1)	9.2 (8.0-10.3)	20.4 (12.6-28.3)	23.0 (19.0-27.0)	13.2 (9.0-17.5)
Had sex with ≥1 people 3 months	3,072 (30.7)	29.5 (27.7-31.3)	50.9 (43.6-58.2)	48.3 (42.8-53.9)	28.5 (22.6-34.3)
Not used condom during last sex	1,133 (36.4)	34.7 (32.3-37.1)	65.6 (51.4-79.8)	44.2 (38.3-50.1)	48.2 (33.7-62.6)
Not used birth control pills last sex	2,347 (76.7)	76.1 (73.4-78.7)	92.2 (82.6-101.9)	78.1 (72.4-83.8)	82.1 (71.2-93.0)

Table 4. Percentage of sexual behavior by sex of sexual contact among high school students, Rhode Island 2007–2013

Sexual behavior	n (weighted %)	Weighted % (95% Confidence Interval)		
		Opposite sex only	Same sex only	Both sexes
Had sex ever	4,283(69.7)	69.1 (66.4-71.9)	69.0 (63.3-74.8)	76.7 (72.8-80.6)
Had sex before 13	564(8.1)	7.5 (6.2-8.8)	10.8 (6.6-15.0)	14.0 (11.0-17.0)
Had sex with ≥4 people in life	1,039(16.5)	15.4 (13.6-17.2)	12.2 (7.9-16.5)	32.0 (26.8-37.2)
Had sex with ≥1 people 3 months	3,054(50.4)	49.8 (47.4-52.2)	48.6 (40.8-56.3)	58.0 (52.3-63.6)
Not used condom during last sex	1,122(36.2)	34.2 (32.0-36.4)	46.8 (35.2-58.3)	52.3 (46.1-58.5)
Not used birth control pills last sex	2,334(76.7)	75.9 (73.2-78.6)	88.6 (79.9-97.2)	80.3 (74.5-86.2)

more likely to contract sexually transmitted infections and to have cancers during adulthood.³

Sexual minority students are at high risk of being bullied by peers, and this victimization elevates the risk for depression and attempted suicide.^{2,9} Creating safe school environments is important to help prevent this. For instance, schools may form Gay-Straight Alliances (GSAs) and/or adopt policies, procedures and programs that support safe school environments.^{1,6,9,10} Teachers should set positive norms of student attitudes and behaviors to protect sexual minority students.¹⁰ With proper support and guidance, most sexual minority students will become adults without significant elevated sexual risk behaviors compared with their peers.²

Physicians or nurses can play an important role when care is confidential and the office staff is welcoming and nonjudgmental to sexual minority youth. Pediatricians or primary care providers should realize that the internalized stigma of being a sexual minority teenager often results in distress and depression and increases risk behaviors, and acknowledge that being a sexual minority adolescent is not a risk behavior.¹¹ They can use gender-neutral terms to encourage sexual minority adolescents to discuss their sexual orientation or sexual behaviors. Physicians have an obligation to discuss sexual behaviors with respect to HIV/AIDS, STIs, and teen pregnancy; promote condom use for all sexual activities; and reinforce abstinence as a preferred method of STIs prevention and unwanted pregnancies, regardless of sexual orientation.²

There are three limitations of this study. First, if the same school was examined in the 2007, 2009, 2011 and 2013, some duplication of participants was possible. Second, the

YRBS-pooled data are cross-sectional and only can draw associations between sexual identity and sexual behaviors, or sex of sexual contact and sexual behaviors. Third, due to sample size, we cannot prove sexual risk behaviors among sexual minority students are the same across racial/ethnic groups or between both sexes.

Although there are limitations, there are some strengths as well. First, YRBS is the only population-based surveillance data in Rhode Island that monitors the prevalence of sexual risk behaviors among sexual minority students defined by sexual identity and sex of sexual contacts. Second, sexual minority students represent a relatively small proportion of all students. In order to make policy and intervention decisions, use of large population-based samples is important for obtaining the most generalizable and highest quality data. Third, we analyzed sexual risk behavior data by sexual identity and sex of sexual contacts. This enabled us to make finer distinctions of numerous groups including students who reported being not sure of their sexual identity.

In summary, there is some discrepancy between how students identify themselves sexually and their self-reported behavior in terms of the sex of sexual contacts (**Table 2**). Students who identify as gay/lesbian have higher sexual risk than their heterosexual peers and similar to (if not even higher than) their bisexual peers (**Table 3**). Based on the findings from **Table 3**, one would expect elevated risks of students who reported same sex only sexual contacts, yet those whose prior behavior appears gay/lesbian have risk levels that are similar to those with heterosexual behavior and lower than those with bisexual behavior (**Table 4**).

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