

UNSEEN RISKS: HIV-RELATED RISK BEHAVIORS AMONG ETHNICALLY DIVERSE SEXUAL MINORITY ADOLESCENT FEMALES

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High rates of HIV-related sexual risk behaviors among lesbian and bisexual female adolescents have been documented. However, previous research has not adequately described racial/ethnic subgroup differences in risk behaviors within this population. We examined HIV-related sexual risk behaviors among an ethnically diverse sample of sexual minority girls ($N = 244$). Compared to their White peers, girls who identified their race/ethnicity as mixed had more than four times the odds of reporting both unprotected vaginal sex with a male and multiple male sex partners. All subgroups exhibited risk behaviors, indicating that sexual minority girls must be included in HIV-prevention efforts targeting adolescent females.

INTRODUCTION

Women who have sex with women are generally considered a low-risk group for HIV infection, compared to other populations, given the relative inefficiency of HIV transmission through female-female sexual contact (Goodenow, Szalacha, Robin, & Westheimer, 2008). However, it is increasingly appreciated that these women may be at risk through their ongoing sexual behaviors with men (Fethers, Marks, Mindel, & Estcourt, 2000; Goodenow et al., 2008). Infections that occur through those encounters are counted as “heterosexual” transmissions in surveillance data, making it difficult to know the disease burden among women who identify as lesbian or bisexual.

Epidemiologic research on risk behaviors suggests that sexual minority females (lesbian and bisexual women and girls) are at risk for HIV infection. Specifically, sexual minority adolescent girls report higher rates of HIV-related risk behaviors

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This research was supported by grant MH072381 from the National Institute for Mental Health. The authors would like to acknowledge Jennifer Pritchard and Karen Wohlleiter for their efforts in study coordination, as well as Laura Vaughn, Lida Rogers, Trevor Wright, and William Brown for their assistance with data collection. We are grateful to the Attic Youth Center, BAGLY, Indiana Youth Group, and SMAAC for their cooperation in housing the project. This study was approved by the Institutional Review Board at the University of Utah.

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than their heterosexual peers, including having sex with multiple partners, engaging in unprotected vaginal intercourse, and using injection drugs (Goodenow et al., 2008; Saewyc et al., 2006). In addition, many sexual minority adolescent girls engage in sexual relations with high-risk partners, including gay or bisexual men and injection drug users (Maguen, Floyd, Bakeman, & Armistead, 2002; Rosario, Hunter, Maguen, Gwadz, & Smith, 2001).

Whereas the behavioral risks that sexual minority girls engage in with males have been increasingly well-documented, relatively less is known about whether those risk behaviors are equally distributed across racial/ethnic groups. Understanding possible racial/ethnic disparities is critical, given that research in the general population has documented dramatically higher HIV infection rates among racial/ethnic minority girls and women (Kraut-Becher et al., 2008; Valleroy, MacKellar, Karon, Janssen, & Hayman, 1998), particularly those who identify as African American (DiClemente et al., 2004; Marshall, Crepaz, & O'Leary, 2010). We identified only two studies with racial/ethnic minority samples adequate enough to examine this issue. In one study of 184 sexual minority girls, racial/ethnic minority girls were more likely than White girls to have only female sex partners (Goodenow et al., 2008), placing them at lower risk. In another study which included 276 female sexual minority college students, non-White females were more likely to report multiple recent partners than White females when controlling for sexual minority status, placing them at higher risk (Eisenberg, 2001). Neither of these studies had racial/ethnic minority samples large enough to report rates of risk behaviors among specific racial/ethnic minority groups.

These limited and mixed results paint an unclear portrait of possible racial/ethnic disparities in HIV risk behaviors among sexual minority girls. Thus, the purpose of this study was to add to the research on HIV risk among sexual minority adolescent girls, with an emphasis on helping to build the scant literature on possible racial/ethnic group differences within this population.

METHOD

Sexual minority adolescents ages 14–19 were recruited for participation in the Diverse Adolescent Sexuality and Health (DASH) study. Participants were eligible for the study if they either (1) self-identified as lesbian, gay, or bisexual, or (2) reported any same-sex sexual contact within the past year. Participants were recruited in four cities in the United States (Indianapolis, IN, Boston, MA, Philadelphia, PA, and Oakland, CA) using peer-to-peer outreach, advertisements, and direct outreach to community-based organizations providing social and educational services for sexual minority adolescents. Participants responded to surveys using Audio Computer Assisted Self-Interview (ACASI) at each community center. The ACASI program allows the interviewee to listen to questions through earphones and enter their responses into a laptop computer. The increased privacy of this data collection method has been found to elicit higher response rates from adolescents on potentially sensitive variables such as same-sex sexual behaviors (Supple, Aquilino, & Wright, 1999; Turner, Ku, Sonenstein, & Pleck, 1996).

While 589 participants responded to the survey, 244 adolescents who identified their biological sex at birth as female and had not undergone gender reassignment surgery were selected for the current study. Ages within this sample ranged from 14 to 19 ($M = 17.31$, $SD = 1.35$). The sample was racially and ethnically diverse, with

35.7% identifying as White, 34% as mixed race/ethnicity, 18.9% as African American or Black, and 10.7% as another race/ethnicity (including girls identifying as Latina/Hispanic, Asian, Pacific Islander, or Native American). A single item assessing self-identified sexual orientation was used to operationalize sexual orientation in the present study. Most participants identified their sexual orientation as lesbian or gay (56.6%), 32% identified as bisexual, and 11.5% identified as queer or another sexual orientation (e.g., pansexual, gender blind).

A variety of sexual behaviors were assessed in the DASH survey. First, all female participants were asked: "Have you ever had sexual contact with a male?" For this study, sexual contact was defined as any genital contact. Participants were also asked how many male sexual partners they had had in the past six months. For girls reporting male partners in the past six months, the number of partners was dichotomized (one male partner vs. multiple male partners). In addition, all females were asked about specific sexual risk behaviors with males, including any vaginal sex without a condom in the past six months. This variable was also dichotomized for purposes of analyses (none vs. any unprotected vaginal sex).

RESULTS

To determine the covariates to be used in the analyses, we examined which demographic variables were associated with either our primary predictor of interest (ethnicity) or with the sexual behavior outcomes. Self-identified sexual orientation was associated with any sexual contact with a male in the past six months ($\chi^2 = 41.78, p < .001$) and multiple male sex partners in the past six months ($\chi^2 = 7.80, p = .020$). Race/ethnicity was associated with city of recruitment ($\chi^2 = 119.29, p < .001$). Age was not associated with either race/ethnicity or sexual behaviors. Thus, it was not included as a covariate in subsequent analyses. See Table 1 for percentages of participants engaging in each behavior across demographic characteristics.

Logistic regression was used to model all outcomes as a function of race/ethnicity and other demographic covariates, including sexual orientation and city where participant was recruited (see Table 1 for results). No racial/ethnic differences were found in the likelihood of having had sexual contact with a male in the past six months. Unsurprisingly, self-identified sexual orientation had clear associations with sexual behaviors. Girls who identified their sexual orientation as bisexual and those who identified as queer or with another sexual orientation were more likely than girls who identified as lesbian to report sexual contact with a male in the past six months. Notably, however, 21% of girls identifying as lesbian or gay also reported sexual contact with a male in the past six months.

Next, we selected the subset of girls who reported some sexual behavior with a male in the past six months and examined specific sexual risk behaviors in that group (see Table 1). Girls identifying their race/ethnicity as mixed had more than four times the odds of reporting unprotected vaginal sex with a male in the past six months, and more than four times the odds of reporting multiple male partners, relative to girls identifying as White. Girls who identified their race/ethnicity as African American or Black also had more than four times the odds of reporting multiple male partners in the past six months, relative to girls identifying as White. Interestingly, across sexual orientations, girls were equally likely to report unprotected vaginal sex, and, notably, 9% of all girls identifying as lesbian or gay had engaged in

TABLE 1. Logistic Regression Model Estimates for HIV-Related Sexual Risk Behaviors Predicted by Race/Ethnicity and Other Demographic Characteristics

Characteristic	Any sex with male in past 6 months ^a				Unprotected vaginal sex in past 6 months ^b				Multiple male partners in past 6 months ^b						
	n	% reporting behavior	Bivariate OR	Multivariate OR	n	95% CI	% reporting behavior	Bivariate OR	Multivariate OR	n	95% CI	% reporting behavior	Bivariate OR	Multivariate OR	95% CI
Race/Ethnicity															
White	87	39.1	REF	REF	34		47.1	REF	REF			41.2	REF	REF	
Black	46	36.9	0.946	0.788	17	[-274, 2.271]	52.9	1.266	2.709		[-576, 12.732]	64.7	2.619	4.479†	[-890, 22.554]
Mixed	83	36.1	0.882	0.775	30	[338, 1.777]	66.7	2.250	4.299*		[1.095, 16.880]	70.0	3.333*	4.211*	[1.094, 16.218]
Other	26	38.5	1.039	0.742	10	[253, 2.177]	30.0	0.482	0.605		[.118, 3.097]	40.0	0.952	0.851	[-.175, 4.146]
City															
Oakland	31	51.6	REF	REF	16		37.5	REF	REF			68.8	REF	REF	
Boston	62	37.1	0.479	0.533	23	[-177, 1.608]	52.2	1.818	4.151		[-787, 21.889]	52.2	0.496	1.084	[-215, 5.453]
Indianapolis	75	36.0	0.457	0.359	27	[-113, 1.139]	55.6	2.083	4.317		[-764, 24.403]	48.1	0.422	1.147	[2.04, 6.458]
Philadelphia	76	34.2	0.423	0.438	26	[-163, 1.179]	57.7	2.273	2.301		[-556, 9.531]	57.7	0.620	0.742	[-.166, 3.310]
Sexual Orientation															
Lesbian/Gay	137	21.2	REF	REF	29		41.4	REF	REF			34.5	REF	REF	
Bisexual	78	64.4	7.034***	7.375***	51	[3.883, 14.008]	62.7	2.386	2.574		[-950, 6.972]	66.7	3.800**	5.038**	[-1.734, 14.636]
Queer/Other	27	44.4	2.9979*	2.830*	12	[1.166, 6.868]	33.3	0.708	0.657		[-.132, 3.282]	58.3	2.660	3.426	[-.709, 16.553]

Note. Multivariate odds ratio calculated with all covariates in the model, and 95% confidence interval estimated around multivariate odds ratio. ^aAnalyses conducted on full sample (n = 244). ^bAnalyses conducted on subsample of girls reporting sexual contact with male in past 6 months (n = 92). ***p < .001. **p < .01. *p < .05. †p = .069.

this behavior in the past six months (41% of the lesbian/gay girls who were sexually active with males).

Given the elevated levels of risk behavior observed among girls of mixed race/ethnicity, descriptive analyses were conducted to explore these girls' racial/ethnic identification more specifically. Sixty-eight percent of the girls of mixed race/ethnicity indicated some African-American or Black identification, 52% indicated some White or Caucasian identification, 52% indicated some Hispanic or Latina identification, 35% indicated some Native American identification, and 11% indicated some Chinese identification. No clear patterns of sexual risk emerged from post-hoc analyses exploring associations with the specific racial/ethnic identifications within the group of mixed race/ethnicity girls.

DISCUSSION

Sexual minority girls of all races and ethnicities reported high levels of sexual risk behaviors with males, and risk behaviors were exhibited even among girls self-identifying their sexual orientation as lesbian or gay. Differences in risk behaviors across racial/ethnic subgroups were identified, as girls identifying with multiple races/ethnicities were more likely than girls identifying as White to report both unprotected vaginal sex with a male and having had multiple male partners in the past six months. In addition, there is some indication that girls identifying as African American in this sample were more likely to report multiple male sexual partners in the past six months, when compared to their White peers.

Studies of the general population of adolescent girls (i.e., largely heterosexuals) have found few differences in the frequencies of risk behaviors among racial/ethnic groups (Hallfors, Iritani, Miller, & Bauer, 2006; Lehrer, Shrier, Gortmaker, & Buka, 2006), but the current study's results indicate these findings might not generalize to girls who identify as nonheterosexual. Like several previous studies of sexual minority girls (Goodenow et al., 2008; Maguen et al., 2002; Rosario et al., 2001; Saewyc et al., 2006), our findings document nontrivial amounts of risk behaviors with males, even among girls identifying as lesbian and gay. Further, we also found greater risk behaviors among certain racial/ethnic minority girls, relative to girls identifying as White—a finding that is consistent with one of the few other studies of nonheterosexual adolescents that had an adequate sample size to do racial/ethnic group comparisons (Goodenow et al., 2008).

The current study indicates that girls who identify their race/ethnicity as mixed and girls who identified as bisexual reported the highest levels of HIV-related sexual risk behaviors with males. Post hoc analyses were conducted in order to determine whether girls who identify their race/ethnicity as mixed were more likely to identify their sexual orientation as bisexual. While previous research has postulated that mixed race/ethnicity, or biracial, individuals could be more likely to identify as bisexual because of increased comfort with liminal identities (Dworkin, 2002; Fukuyama & Ferguson, 2000), girls identifying as mixed in this sample were not more likely than others to identify as bisexual. However, it is possible that commonalities between identifying as both mixed race/ethnicity and bisexual, including not belonging to an easily-identifiable in-group and having no predictable model of identity development (Reynolds & Pope, 1991; Ross, Dobinson, & Eady, 2010), could create additional minority stress for these girls, which could be linked to compromised sexual health outcomes.

The results of this study are limited by convenience sampling. Given the manner in which adolescents were recruited, participants might underrepresent girls who were less open about their sexual orientation, or who are completely closeted. However, population-based samples attempting to identify sexual minority subsamples also carry significant limitations, given the questions used to indirectly discern an adolescent's sexual orientation (e.g., relying solely on attractions or behaviors, rather than self-identification). Thus, triangulating findings from population-based and convenience samples minimizes the limitations of any single approach.

CONCLUSIONS

The results of this study have multiple implications for HIV prevention research and interventions with female adolescents. Sexual minority girls of all races and ethnicities reported risk behaviors with males, and if HIV transmission did occur during one of these behaviors, it would be categorized in state and national surveillance as a heterosexual transmission. While biologically accurate, this practice obscures the fact that many of these girls do not identify as heterosexual and might not respond to HIV prevention messages targeted toward heterosexuals. Moreover, the settings in which these girls might be effectively reached for prevention efforts could differ, given the sometimes segregated nature of the locations in which lesbian, gay, and bisexual individuals socialize and engage with community services. Thus, when heterosexual girls are prioritized and targeted for HIV prevention services, sexual minority girls could easily be missed. Future HIV-prevention efforts for adolescent girls must include sexual minority girls and consider the possibility that unique strategies might be required to effectively reduce risks in this population. Moreover, future research should continue to explore the possibility that behavioral risks in this population might not be equally distributed across racial/ethnic groups.

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