condoms, in and of itself, may increase sexual risk; however, the outcomes of our study indicate the opposite. These findings show the continuing need for further policy efforts that ensure condom education in schools.[10] ■

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Contributors

B. Dodge led the writing of this article. M. Reece and D. Herbenick designed the study, managed all study protocols, and contributed to the writing of the article.

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The institutional review board of Indiana University–Bloomington approved all study protocols.

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Comparisons of Intimate Partner Violence Among Partners in Same-Sex and Opposite-Sex Relationships in the United States

John R. Blosnich, MPH, and Robert M. Bossarte, PhD

Using 2005–2007 Behavioral Risk Factor Surveillance System data, we examined intimate partner violence (IPV) by same-sex and opposite-sex relationships and by Metropolitan Statistical Area status. Same-sex victims differed from opposite-sex victims in some forms of IPV prevalence, and urban same-sex victims had increased odds of poor self-perceived health status (adjusted odds ratio = 2.41; 95% confidence interval = 1.17, 4.94). Same-sex and opposite-sex victims experienced similar poor health outcomes, underscoring the need both of inclusive service provision and consideration of sexual orientation in population-based research. (*Am J Public Health.* 2009;99:2182–2184. doi:10.2105/AJPH.2008.139535)

Intimate partner violence (IPV) remains a significant public health problem, but IPV in same-sex relationships is not universally acknowledged, thus inhibiting treatment of its victims.[1,2] Reasons for this disparate acknowledgment range from lack of statutes in some jurisdictions legitimizing same-sex relationships to perceptions that deemphasize the severity of same-sex IPV.[3,4] Previous studies have found higher rates of same-sex IPV than of opposite-sex IPV.[5,6] However, few studies have explored whether these higher IPV rates disproportionately affect health outcomes among victims of same-sex IPV. Additionally, research has shown urban–rural differences in the severity of IPV,[7,8] but none has examined how these differences affect same-sex IPV victims.

Using population-based data, we examined the prevalence of different forms of IPV among same-sex and opposite-sex victims and differences in health and quality-of-life indicators by place of residence (Metropolitan Statistical Area vs non–Metropolitan Statistical Area, hereafter referred to as urban and rural areas, respectively).

METHODS

We obtained cross-sectional data from the 2005–2007 Behavioral Risk Factor Surveillance System survey, collected annually from a nationally representative sample of adults in US states and territories. The median response rates for the years 2005, 2006, and 2007 were 51.1%, 51.4%, and 50.6%, respectively.[9]

Data on IPV victimization came from an optional IPV module that was administered in 12 states and territories in 2005, 8 states and territories in 2006, and 4 states and territories in 2007. The analyses presented here included respondents who indicated that they were victims of IPV and identified their relationships with the perpetrators (n = 561 for 2005; n = 5445 for 2006; and n = 1992 for 2007). IPV victimization included lifetime verbal abuse, physical violence, and unwanted sexual intercourse.

In 2005, response options for relationships included boyfriend (current or former), girlfriend (current or former), male (date), female (date), husband or male live-in partner (current or former), and wife or female live-in partner (current or former). In 2006 and 2007, response options for fiancé or fiancée and dating history (currently dating or first date) were added. Same-sex couples were identified by

matching the respondent's sex with the identified sex of the IPV perpetrator. Independent samples of male and female victims of same-sex IPV were determined to be too small for analytic purposes and were combined to form a single same-sex category.

Outcome measures included 7 or more days of poor mental health in the past 30 days, fair or poor self-reported health status, and low satisfaction with life. Female victims of opposite-sex IPV were used as the reference category because of their predominance in our sample. Control variables included activity limitations due to health problems, age, race/ethnicity, education, and income. Because of different rates of IPV severity in urban and rural areas, the higher prevalence of female same-sex victimization in urban than in rural areas, and a significant interaction between same-sex IPV victimization and rural residency for poor self-perceived health status identified in preliminary analyses (odds ratio [OR] = 0.27; 95% confidence interval [CI] = 0.09, 0.86), separate regression models were calculated for the full analytic sample, for urban areas, and for rural areas. Final weighted analyses were computed with SAS version 9.13 (SAS Institute Inc, Cary, North Carolina) and SUDAAN version 9.01 (Research Triangle Institute, Research Triangle Park, North Carolina). We managed missing data using listwise deletion.

TABLE 1—Prevalence of Intimate Partner Violence (IPV) in Same-Sex and Opposite-Sex Relationships: Behavioral Risk Factor Surveillance System, 2005–2007

	Victims of Male Perpetrators		Victims of Female Perpetrators	
	Men (n = 88), No. (%)	Women (n = 6139), No. (%)	Men (n = 1686), No. (%)	Women (n = 85), No. (%)
Type of IPV				
Verbal	67 (81.2)	4817 (77.4)	1038 (63.4)	67 (86.5)*
Physical	80 (89.9)	5524 (88.8)	1619 (97.2)	78 (89.1)
Sexual	25 (31.4)	2694 (45.5)	179 (12.1)	40 (51.6)*
Living in rural area	44 (26.7)	2600 (27.9)	714 (23.9)	24 (12.1)*

*$P < .05$ for χ^2 comparisons between male and female victims in perpetrator category.

RESULTS

Although male victims of same-sex IPV reported more verbal abuse than male victims of opposite-sex IPV ($\chi^2 = 4.75$; $P = .03$), they did not differ significantly regarding physical abuse ($\chi^2 = 1.27$; $P = .26$) or sexual abuse ($\chi^2 = 3.52$; $P = .06$). Female victims of same-sex IPV and opposite-sex IPV did not differ by type of IPV, but differences between female victims of same-sex IPV and male victims of opposite-sex IPV were identified (Table 1).

Overall, there were no differences in health and quality-of-life outcomes between same-sex and opposite-sex IPV victims; in urban areas, however, same-sex victims were more than twice as likely as were female opposite-sex victims to report poor self-perceived health status (Table 2). Male opposite-sex IPV victims

TABLE 2—Health Indicators Among Victims of Same-Sex and Opposite-Sex Intimate Partner Violence, by Residency: Behavioral Risk Factor Surveillance System, 2005–2007

	Overall		Urban Residency		Rural Residency	
Intimate Partner Violence	%	AOR (95% CI)	%	AOR (95% CI)	%	AOR (95% CI)
More than 7 d of poor mental health in past 30 d						
Same sex	44.6	1.68 (0.93, 3.05)	43.8	1.85 (0.89, 3.87)	47.6	1.24 (0.61, 2.56)
Male victim, female perpetrator	23.3	0.61* (0.47, 0.81)	22.5	0.62* (0.43, 0.87)	25.1	0.61* (0.42, 0.87)
Female victim, male perpetrator (Ref)	33.7	1.00	32.5	1.00	36.8	1.00
Poor self-perceived health status						
Same sex	79.0	1.46 (0.82, 2.59)	84.1[a]	2.41* (1.17, 4.94)	58.3	0.59 (0.23, 1.53)
Male victim, female perpetrator	83.5	1.34 (0.90, 1.99)	84.2	1.32 (0.79, 2.19)	81.8	1.39 (0.97, 1.99)
Female victim, male perpetrator (Ref)	77.0	1.00	78.4[b]	1.00	73.5	1.00
Low satisfaction with life						
Same sex	85.0	1.32 (0.60, 2.92)	85.8	1.27 (0.44, 3.70)	81.7	1.20 (0.39, 3.63)
Male victim, female perpetrator	85.6	0.91 (0.66, 1.26)	86.2	0.92 (0.60, 1.41)	85.0	0.95 (0.64, 1.42)
Female victim, male perpetrator (Ref)	85.8	1.00	86.6	1.00	83.9	1.00

Note. AOR = adjusted odds ratio; CI = confidence interval. Data are adjusted for age, race/ethnicity (White, African American, Hispanic, multiple race, and other), education, income, and activity limitations because of health problems. "Urban residency" and "rural residency" are defined as living inside and outside of a Metropolitan Statistical Area, respectively.
[a]$\chi^2 = 3.42$; $P = .064$ (compared with rural residency).
[b]$\chi^2 = 7.86$; $P = .005$ (compared with rural residency).
*$P < .05$.

were less likely to report more than 7 days of poor mental health in the past 30 days than female opposite-sex IPV victims, although this could be an artifact of underreporting by males.[10]

DISCUSSION

Unlike Tjaden et al.,[5] we found no differences among females in type of victimization between same-sex and opposite-sex IPV, and no differences in physical and sexual abuse for male same-sex and opposite-sex victims; detection of the latter may have been affected by small sample sizes. When examined across perpetrator categories (Table 1), female victims of same-sex IPV reported higher percentages of verbal and sexual abuse than male victims of opposite-sex IPV; however, the small sample of victims of same-sex IPV limited the ability to make detailed comparisons.

We note important limitations. First, because of small sample sizes, male and female victims of same-sex IPV were combined, which precluded exploration of potential differences. Future studies should include male and female categories of same-sex IPV. Second, the small 2005 sample could be a result of survey procedures in which only participants who reported being a victim of IPV in the past 12 months were asked to identify their relationships with the perpetrators; in 2006 and 2007, all respondents to the IPV module were given an opportunity to do so. Additionally, this analysis used a behaviorally deduced measure of sexual orientation; participants did not report their sexual identity. Finally, the delicacy of self-reported violence victimization presents potential underreporting and selection bias.

Although similar patterns of victimization were reported, victims of same-sex IPV and of opposite-sex IPV differed by some types of IPV. However, the lesbian, gay, bisexual, transgender, and transsexual community may still face service-related and legal challenges that limit recognition of IPV victimization.[1,2] Location-associated effects on health outcomes among victims of same-sex IPV warrant further research, particularly among rural victims. Moreover, the differences in prevalence of types of IPV among same-sex and opposite-sex victims call for consideration of sexual orientation in population-based research to better explore these nuances. Finally, similarities in health outcomes among victims of same-sex and opposite-sex IPV underscore the importance of providing inclusive victims' services. ■

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Contributors

J.R. Blosnich conducted analyses and wrote the introduction and the Results and Discussion sections. R.M. Bossarte identified the data set and measures for analysis and wrote the Methods section.

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Changes in Postmenopausal Hormone Replacement Therapy Use Among Women With High Cardiovascular Risk

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After randomized trials failed to support the use of hormone replacement therapy (HRT) for preventing cardiovascular disease (CVD), HRT use for postmenopausal women declined. Our analysis of 1999–2000 and 2003–2004 National Health and Nutrition Surveys (NHANES) shows that HRT use decreased 19% (from 27.6 to 8.4%; $P<.001$) among women with CVD versus 3% (from 19.8 to 16.8%; $P=.68$) among low-risk women, suggesting that most of the drop in HRT use may be among women prescribed HRT as an unproven treatment to prevent CVD. (*Am J Public Health.* 2009;99:2184–2187. doi:10.2105/AJPH.2009.159889)

In the early 1990s, on the basis of findings from observational studies, hormone replacement therapy (HRT) was widely promoted to decrease cardiovascular disease (CVD) in