

# Patterns and Correlates of Same-Sex Sexual Activity Among U.S. Teenagers and Young Adults

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**CONTEXT:** Little is known about the prevalence and correlates of same-sex sexual activity among teenagers and young adults, particularly those who do not identify themselves as gay, lesbian or bisexual. Effective interventions to prevent STDs require accurate understanding of youths' sexual behavior.

**METHODS:** Descriptive and regression analyses of data from the 2002 National Survey of Family Growth examined patterns and correlates of same-sex sexual activity among a sample of 2,688 never-married, noncohabiting men and women aged 15–21. Same-sex behavior was assessed separately by gender, as well as by heterosexual experience and sexual attraction and identity.

**RESULTS:** Eleven percent of women and 4% of men reported same-sex sexual experience. Youth who were attracted only to the opposite sex had a decreased likelihood of reporting same-sex activity (rate ratio, 0.1 for each gender), while women and men who identified themselves as homosexual or bisexual had an elevated likelihood of such activity (5.1 and 5.9, respectively). However, among women who were attracted exclusively to men, those who had had heterosexual sex were more than four times as likely as those who had not to have engaged in same-sex activity. Finally, among youth who reported any same-sex attraction, women and men who said they were homosexual or bisexual had an elevated likelihood of having engaged in same-sex behavior (4.7 and 5.6, respectively).

**CONCLUSION:** A significant proportion of “straight” youth engage in same-sex activity, and so information on risks associated with such behavior should be included in sex education programs and targeted to all youth.

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The prevalence of HIV and other STDs remains high among adolescents and young adults,<sup>1</sup> and clinicians' reports suggest that even youth who abstain from vaginal intercourse have contracted STDs, prompting calls for research to address a broad range of adolescent sexual behaviors.<sup>2,3</sup> Consequently, researchers have focused on documenting patterns of heterosexual oral and anal sex among teenagers, including those who have not yet engaged in vaginal intercourse.<sup>4–6</sup> However, very little is known about same-sex sexual experiences among teenagers, particularly those who do not identify themselves as gay, lesbian or bisexual.

Anecdotal evidence suggests that same-sex experience is not uncommon among young women<sup>7,8</sup> and young men,<sup>8</sup> although it carries a greater stigma for men.<sup>8</sup> Moreover, one survey of adults found that almost 4% of men had experienced some sexual contact with a male partner during adolescence, but not after age 18, a rate twice as high as that among women,<sup>9</sup> in another survey, the proportion of respondents reporting any same-sex activity in their lifetime was twice as high among women as among men, and the gender disparity was even greater among young people.<sup>10</sup> However, to determine the prevalence and correlates of same-sex experience among U.S. teenagers and young adults—and to target public health interventions to reduce their risk of contracting STDs—research needs to examine nationally representative samples of youth.

To address this critical gap in the literature and to enhance our understanding of the development of sexual identity, the current study uses data from a nationally representative sample of never-married 15–21-year-olds. Our goal is to expand the knowledge base that informs health promotion efforts targeted to young people who are making the transition to sexual activity. We have three aims: to estimate the prevalence of same-sex sexual activity among both males and females; to evaluate relationships between same-sex activity and characteristics associated with having opposite-sex partners; and to assess the association of same-sex activity with heterosexual experience and self-reported sexual identity and attraction.

## BACKGROUND

### Research on Same-Sex Experience

In response to concerns over the emergence of HIV and AIDS in the gay population, most research on same-sex activity initially focused on clinic-based samples of self-identified homosexual male youth and, not surprisingly, characterized them as emotionally troubled and at risk for multiple mental health, physical and social problems.<sup>11</sup> Later research used school- or population-based<sup>12–14</sup> or nationally representative<sup>15,16</sup> samples of youth to explore characteristics associated with sexual minority identity

(i.e., labeling oneself homosexual or bisexual), same-sex sexual activity or sexual attraction to same-sex individuals. While such studies have improved our understanding of sexual minority youth, no study has drawn on nationally representative data to examine sexual experience using measures that distinguish among sexual behavior, identity and attraction.

Social normative pressures shape youths' sexual decision making, including decisions about engaging in particular behaviors.<sup>17</sup> Support for gays and lesbians is growing, and more than half of Americans now view gay and lesbian relations as morally acceptable.<sup>18</sup> Yet stigma still exists: In a study of 7,261 lesbian, gay, bisexual and transgender 13–21-year-olds, 85% reported being verbally harassed in school in the past year because of their sexual orientation, 40% reported being physically harassed and 19% reported being physically assaulted.<sup>19</sup>

The stigma of homosexuality may be particularly strong for young males, because homophobia is central to how they prove their masculinity.<sup>20,21</sup> Consistent with a theory of compulsory heterosexuality, research based on interviews with adolescent males concluded that boys are coerced to be heterosexual.<sup>21</sup> Ethnographic research found that high school students believe that “*fag* [is] the worst epithet one guy could direct at another.”<sup>20(p. 55)</sup> Therefore, young males constantly police their behavior to prevent the possibility of being considered homosexual, distance themselves from femininity and avoid the “*fag*” label.<sup>20,21</sup> This stigma has received increased attention following news coverage of a number of suicides committed by gay teenagers and other male youth who were targeted with gay-related taunts.<sup>22</sup> In contrast, same-sex behavior among girls and young women does not appear to carry the same stigma, perhaps because of its apparent appeal to heterosexual males. A study of high school students found that homosexual insults do not generally apply to girls and that being a lesbian is considered “cool” in some cases.<sup>20</sup> Indeed, popular portrayals of lesbianism and same-sex eroticism among women became increasingly widespread in the 1990s.<sup>23,24</sup> Heterosexual behavior, however, remains the norm for both young women and men, and those who defy the norm are at increased risk of being harassed and assaulted.

Given the social stigma associated with homosexuality and the normative nature of heterosexuality, youth may commonly engage in heterosexual activity prior to experimentation with same-sex sexual activity, regardless of their sexual attractions. If this is the case, youth who have not engaged in heterosexual activity may be relatively unlikely to have engaged in same-sex activity. New York City youth in one study followed this pattern: Two-thirds of those who had engaged in same-sex activity also reported having had heterosexual experience, while a third did not.<sup>12</sup> Overall, however, youths' same-sex activity may be less predictably patterned and more closely linked to sexual identity than is heterosexual behavior.

## Research on Heterosexual Experience

A substantial body of research has indicated that the propensity to engage in heterosexual intercourse is correlated with demographic, family and social characteristics.<sup>25–27</sup> We speculate that many of these background factors will also be associated with youths' same-sex sexual behavior.

Age, gender, and race and ethnicity are powerful predictors of youths' early heterosexual experiences. The likelihood of experiencing first intercourse and heterosexual oral sex increases rapidly through the teenage years and into the early 20s.<sup>4,25,28,29</sup> As young people age, they may also be increasingly likely to engage in alternative forms of sexual behavior, particularly if they have experienced same-sex attractions.

The sexual decision making and behavior of youth also vary by gender.<sup>21,30,31</sup> Males are more likely than females to engage in heterosexual sex, and do so at younger ages.<sup>25,29</sup> By contrast, young women are more likely than men to acknowledge same-sex attractions.<sup>32</sup> While a study in New York City found no gender difference in the proportion of sexually active youth reporting only same-sex activity (3%), a higher proportion of females than of males reported having had partners of both genders (9% vs. 4%).<sup>12</sup> Prior research has also suggested that female sexuality may be more “fluid” and adaptive to social contexts than male sexuality.<sup>33,34</sup> On the basis of all this research, we expect to see a greater prevalence of same-sex experience among young women than among young men.

Racial and ethnic differences in young people's heterosexual experiences are well documented: Black youth experience first intercourse earlier than their white, Hispanic and Asian peers,<sup>29,35</sup> and white youth report heterosexual oral sex at higher rates than other youth.<sup>4,6,36</sup> However, it is unclear whether black youth are more likely than others to engage in same-sex experiences. Opinion polls have suggested that blacks, on average, are less tolerant of homosexuality than Americans of other racial and ethnic backgrounds.<sup>37,38</sup> This may inhibit black youths' involvement in same-sex activity, even though anecdotal evidence and small-scale community studies have noted the “down low” phenomenon,<sup>39</sup> in which black men engage in same-sex activity despite reporting a firm heterosexual identity and engaging in heterosexual sex.<sup>40,41</sup> Hence, black youth, particularly black males, may be less likely than others to identify as homosexual or bisexual, but no less likely to engage in same-sex sexual activity.

Youth from intact families, immigrant families and families of relatively high socioeconomic status tend to delay first intercourse, presumably because they are more closely supervised and perceive the risk of adverse consequences of sexual activity as unacceptably high.<sup>25,27–29,42</sup> At the same time, youth from intact families and young women of relatively high socioeconomic status who have refrained from intercourse are more likely than their peers to engage in heterosexual oral sex.<sup>4</sup> In general, the higher youths' socioeconomic status, the more likely they are to engage in noncoital activities,<sup>6</sup> perhaps as a means

of “protecting” themselves from the risk of nonmarital pregnancy. Yet, socioeconomic status may also be positively associated with youths’ likelihood of experimenting with same-sex activity. Acceptance of nontraditional sexual behavior tends to increase with level of education,<sup>9</sup> and the children of parents with greater education may adopt more liberal social norms. Furthermore, we expect that many immigrant families come from cultures that hold traditional beliefs about sexuality,<sup>43</sup> which may be associated with the likelihood that immigrant youth will engage in same-sex activity.

Religious background is also related to youths’ sexual behavior. Mainstream religious affiliations tend to proscribe nonmarital and nonheterosexual sexual behavior, and religious congregations serve as “moral communities” that help to shape youths’ sexual behaviors.<sup>37</sup> Attendance at religious services is associated with reduced levels of heterosexual activity<sup>4,26</sup> and less tolerant views of same-sex activity.<sup>37,38</sup> We expect that service attendance and mainstream affiliation are negatively associated with the likelihood of engaging in same-sex activity.

Finally, youths’ behaviors and attitudes may also be associated with community characteristics. For example, individuals living in large communities report greater tolerance for homosexuality than those living in smaller ones.<sup>44</sup> In addition, compared with living outside of an urban environment, residing in an urban area is associated with earlier first coitus, more frequent intercourse<sup>25,45</sup> and higher prevalence of heterosexual oral sex.<sup>4</sup> Urban residence has also been associated with an increased likelihood of adults’ engaging in same-sex behavior.<sup>9</sup> We anticipate that urban youth will have an elevated likelihood of engaging in same-sex activity.

**METHODS**

**Data**

The analyses draw on data from Cycle 6 of the National Survey of Family Growth (NSFG), conducted in 2002. Designed to produce national estimates of trends and differentials in fertility and reproductive health, the NSFG was based on a multistage area probability sample representative of individuals aged 15–44 in the household population of the United States.<sup>46</sup> Respondents were interviewed in-person via computer-assisted personal interviewing; sensitive questions were administered via audio computer-assisted self-interviewing (audio-CASI), in which respondents entered answers directly into laptops. Information about sampling and content is available elsewhere.<sup>46</sup>

The full sample included 7,643 females and 4,928 males. Because our interest is in the stage of the life course during which individuals’ sexual identities are developing, our analyses are limited to never-married, noncohabiting respondents aged 15–21 (1,402 females and 1,418 males). We excluded five females and six males who reported that their only sexual experience was forced. (Experience was defined as vaginal intercourse with an

**TABLE 1. Percentage of 15–21-year-olds reporting same-sex sexual experience, by selected characteristics, according to gender, National Survey of Family Growth, 2002**

Characteristic	Females (N=1,345)	Males (N=1,343)
<b>Ever had same-sex experience†</b>	10.5 (0.01)	3.7 (0.01)
<b>Ever had heterosexual sex‡</b>	64.2 (0.02)	66.7 (0.02)
$\chi^2$	29.86***	2.61
<b>Sexual attraction</b>		
Only women	0.4 (0.00)	94.5 (0.01)
Only men	85.1 (0.01)	0.7 (0.00)
Both	14.5 (0.01)	4.8 (0.01)
$\chi^2$	387.11***	265.38***
<b>Sexual identity</b>		
Heterosexual	86.6 (0.01)	92.9 (0.01)
Homosexual	0.8 (0.00)	1.0 (0.00)
Bisexual	5.5 (0.01)	1.9 (0.00)
Other	7.1 (0.01)	4.2 (0.01)
$\chi^2$	336.82***	335.84***
<b>Age</b>		
15	14.8 (0.01)	14.3 (0.01)
16	16.2 (0.01)	15.0 (0.01)
17	16.9 (0.01)	13.5 (0.01)
18	14.9 (0.01)	17.4 (0.01)
19	13.8 (0.01)	14.9 (0.01)
20	11.6 (0.01)	12.7 (0.01)
21	11.9 (0.02)	12.2 (0.01)
$\chi^2$	10.49	6.03
<b>Race/ethnicity</b>		
Black	15.9 (0.02)	13.1 (0.01)
Hispanic	13.7 (0.02)	15.5 (0.02)
White	64.4 (0.03)	65.7 (0.02)
Other	6.0 (0.01)	5.6 (0.01)
$\chi^2$	7.96*	7.07
<b>Foreign-born</b>	7.3 (0.01)	9.1 (0.01)
$\chi^2$	5.54*	0.06
<b>Lived with two parents through age 15</b>	59.1 (0.02)	63.8 (0.02)
$\chi^2$	3.44	2.56
<b>Mother’s education</b>		
<high school	13.9 (0.01)	11.7 (0.01)
High school graduate	59.2 (0.02)	58.9 (0.02)
College graduate	26.9 (0.02)	29.3 (0.02)
$\chi^2$	1.73	2.42
<b>Residence</b>		
Central city	46.5 (0.04)	50.1 (0.03)
Suburb	30.4 (0.03)	31.1 (0.03)
Nonmetropolitan	23.1 (0.05)	18.8 (0.04)
$\chi^2$	0.66	3.96
<b>Religious affiliation at age 14</b>		
Catholic	32.1 (0.02)	36.0 (0.02)
Protestant		
Baptist	19.1 (0.02)	19.1 (0.02)
Fundamentalist§	15.8 (0.02)	14.0 (0.01)
Nonfundamentalist§	16.5 (0.02)	13.7 (0.01)
Other	5.5 (0.01)	6.1 (0.01)
None	10.9 (0.01)	11.2 (0.01)
$\chi^2$	14.85*	4.03
<b>Attended any religious services at age 14</b>	85.4 (0.01)	82.6 (0.01)
$\chi^2$	19.71***	4.36*

\*p<.05. \*\*\*p<.001. †For males, this refers to oral or anal sex; for females, it refers to “any sexual experience” with another female. ‡Vaginal, anal or oral sex. §Excludes Baptists. Notes: Ns are unweighted, and percentages are weighted. Figures in parentheses are linearized standard errors. Rao–Scott chi-square tests assessed associations between same-sex activity and each covariate, and were adjusted for sample design.

opposite-sex partner or, among young men, oral or anal sex with a male partner.) We also dropped respondents who had missing data on the dependent variable or covariates; our final sample included 1,345 females and 1,343 males.

## Measures

•**Dependent variable.** The outcome variable was a dichotomous indicator of whether respondents had ever engaged in consensual same-sex sexual behavior. Questions regarding this behavior were administered using audio-CASI. Male respondents were asked whether they had ever had oral or anal sex with another male. Female respondents were asked whether they had ever had “any sexual experience of any kind with another female.”

•**Other sexuality-related variables.** Sexual attraction was measured by whether respondents reported having had only opposite-sex sexual attractions, only same-sex sexual attractions or sexual attractions to people of both genders. Sexual identity was measured by whether respondents identified themselves as heterosexual, homosexual, bisexual or “other” (referred to in the survey as “something else”). Information on sexual attraction and sexual identity was obtained using audio-CASI. Heterosexual sexual experience, ascertained in the main interview, was a dichotomous indicator of whether respondents had ever had heterosexual vaginal, anal or oral sex. Levels of missing data on these sensitive items were negligible, and response patterns were comparable with those in earlier surveys with similar items.<sup>36</sup>

•**Demographic characteristics.** Respondents’ age was measured in years; all other covariates are categorical indicators. The race and ethnicity variable differentiated among blacks, Hispanics, whites, and people of other racial or ethnic backgrounds. Nativity status distinguished foreign-born respondents from all others. As a measure of intact family structure, respondents were asked whether they had lived with two parents (biological or adoptive) through age 15. Family socioeconomic status was represented by mother’s educational attainment, coded as less than high school, high school graduate (or GED) or college graduate (bachelor’s degree). The residence measure indicated whether respondents lived in the central city of a census-designated metropolitan statistical area, a suburban area or a nonmetropolitan area. Religious affiliation at age 14 was categorized as Catholic, Baptist, non-Baptist fundamentalist Protestant, non-Baptist nonfundamentalist Protestant, “other” or none. Respondents were also asked whether they had attended any religious services at age 14.

## Analysis

Analyses were performed with version 11 of the Stata SE software using the *svy* commands to adjust for the multistage sampling design of the NSFG. Because initial analyses revealed significant gender differences, all estimates were calculated by gender. Where appropriate,

**TABLE 2. Percentage of 15–21-year-olds reporting heterosexual and same-sex sexual experience, by sexual attraction and identity, according to gender**

Measure	Females	Males	F
<b>SEXUAL ATTRACTION</b>			
<b>Only to opposite sex</b>	(N=1,125)	(N=1,261)	
Ever had heterosexual sex	61.4	66.7	4.27*
Ever had same-sex sex	3.1	1.4	9.03**
<b>Any to same sex</b>	(N=220)	(N=82)	
Ever had heterosexual sex	81.3	70.4	3.00†
Ever had same-sex sex	52.0	42.7	1.23
<b>SEXUAL IDENTITY</b>			
<b>Heterosexual</b>	(N=1,172)	(N=1,244)	
Ever had heterosexual sex	62.7	67.3	3.36
Ever had same-sex sex	5.0	1.7	21.95***
<b>Homosexual/bisexual</b>	(N=84)	(N=38)	
Ever had heterosexual sex	82.5	60.2	4.28*
Ever had same-sex sex	77.9	58.9	2.67
<b>Other</b>	(N=89)	(N=61)	
Ever had heterosexual sex	65.4	56.5	1.32
Ever had same-sex sex	18.4	10.2	1.18

\*p<.05. \*\*p<.01. \*\*\*p<.001. †p<.10. Note: Ns are unweighted, and percentages are weighted.

we reported F statistics from design-adjusted Wald tests for gender differences. Bivariate associations between same-sex sexual activity and each covariate were evaluated using Rao-Scott chi-square tests. The covariates’ net associations with same-sex activity were estimated using complementary log-log regression analysis, an alternative to logistic regression that is better suited to low-prevalence outcomes like same-sex sexual behavior; t statistics in these models were based on linearized standard errors. All estimates are generalizable to the national population of never-married, noncohabiting youth aged 15–21 in 2002.

## RESULTS

### Descriptive Findings

Same-sex sexual activity was much less common than heterosexual activity, but was reported by a notable proportion of youth, particularly young women (Table 1). In fact, the proportion who reported same-sex activity was almost three times as high among young women as among young men—11% vs. 4% (F=30.9, p<.001). The proportion of youth who identified themselves as homosexual or bisexual was smaller than the proportion reporting same-sex experience—6% of young women and 3% of young men (F=10.2, p<.01). Fewer than 1% of either gender reported being attracted exclusively to individuals of the same sex.

Rao-Scott chi-square tests revealed that more social and demographic characteristics were associated with engagement in same-sex sexual behavior for young women than for young men. Among the former, same-sex activity was associated with race and ethnicity, nativity, religious affiliation and attendance at religious services. Among young men, same-sex activity was associated only with

**TABLE 3. Rate ratios from complementary log-log regression analysis assessing associations between selected characteristics and the likelihood that 15–21-year-olds reported same-sex sexual experience, by gender**

Characteristic	Females (N=1,345)	Males (N=1,270)
<b>Ever had heterosexual sex</b>	1.96 (0.57)*	1.78 (0.62)†
<b>Sexual attraction</b>		
Only to opposite sex	0.09 (0.02)***	0.06 (0.02)***
Any to same sex (ref)	1.00	1.00
<b>Sexual identity</b>		
Homosexual/bisexual	5.11 (1.38)***	5.93 (2.37)***
Heterosexual/other (ref)	1.00	1.00
<b>Age</b>	1.10 (0.07)	0.93 (0.07)
<b>Race/ethnicity</b>		
Black	1.14 (0.36)	3.64 (1.61)**
Hispanic	0.94 (0.31)	1.43 (0.75)
White (ref)	1.00	1.00
Other	0.71 (0.27)	u
<b>Foreign-born</b>	0.38 (0.19)*	0.76 (0.43)
<b>Lived with two parents through age 15</b>	0.72 (0.17)	0.80 (0.30)
<b>Mother's education</b>		
<high school	1.26 (0.41)	0.41 (0.24)
≥high school (ref)	1.00	1.00
<b>Residence</b>		
Central city	0.73 (0.16)	1.08 (0.41)
Suburb (ref)	1.00	1.00
Nonmetropolitan	0.57 (0.17)†	2.56 (1.30)†
<b>Religious affiliation at age 14</b>		
Catholic	0.52 (0.15)*	2.42 (1.20)†
Protestant		
Baptist	0.80 (0.29)	0.59 (0.37)
Fundamentalist‡	0.50 (0.23)	2.92 (2.24)
Nonfundamentalist‡ (ref)	1.00	1.00
Other	0.40 (0.29)	1.58 (1.08)
None	0.61 (0.22)	1.08 (0.79)
<b>Attended any religious services at age 14</b>	0.57 (0.15)*	0.45 (0.17)*

\*p<.05. \*\*p<.01. \*\*\*p<.001. †p<.10. ‡Excludes Baptists. Notes: u=unavailable, because of lack of variation in the outcome variable for the 73 respondents in this group. ref=reference category. Figures in parentheses are linearized standard errors.

attendance at services. Sexual attraction and sexual identity were associated with same-sex activity for both genders, as was having had heterosexual sex among women.

Most respondents, regardless of sexual identity or attraction, reported having had heterosexual sex (range, 57–83%—Table 2, page 145). Interestingly, the proportion appeared to be higher among women who reported any same-sex attraction or who identified themselves as homosexual or bisexual (81–83%) than among women or men who identified themselves as heterosexual (63–67%) or who reported sexual attraction exclusively to the opposite sex (61–67%).

Same-sex activity appeared to be more strongly associated with sexual attraction and identity than did sexual experience with an opposite-sex partner. Half of young women and two-fifths of young men who reported any

same-sex attraction had had a same-sex experience, compared with just 3% of women and 1% of men who reported being attracted exclusively to the opposite sex. Engagement in same-sex activity appeared to be most common among those who said they were homosexual or bisexual: Seventy-eight percent of these young women and 59% of their male peers reported such experience. The proportions were 18% and 10%, respectively, among women and men who identified themselves as “other,” and 5% and 2%, respectively, among women and men who said they were heterosexual.

The descriptive results also suggest that in each subgroup of attraction and identity, a higher proportion of young women than of young men had engaged in same-sex activity. However, these differences were statistically significant in only two groups: youth who reported being attracted exclusively to the opposite sex and those who identified themselves as heterosexual.

### Regression Findings

Women who had ever had heterosexual sex were more likely than those who had not to report same-sex activity (rate ratio, 2.0), whereas this association was only marginally significant among men (Table 3). Not surprisingly, same-sex activity was most strongly associated with the other dimensions of sexuality. Young men and women who said they were attracted exclusively to the opposite sex had reduced likelihoods of reporting any same-sex activity (0.1 for each). Furthermore, women and men who identified themselves as homosexual or bisexual were 5–6 times as likely to have had a same-sex experience as were their peers who said they were heterosexual or of other sexual identity (5.1 and 5.9, respectively).

Our multivariate models revealed few associations between same-sex activity and social and demographic characteristics. Age, family structure and maternal education—all predictors of engaging in heterosexual sex<sup>4,29,42</sup>—were not associated with same-sex activity for either females or males. Race and ethnicity were significant only among young men: Blacks were more likely than whites to report any same-sex activity (rate ratio, 3.6). Foreign-born women were less likely than their U.S.-born counterparts to have had same-sex experience (0.4). Living outside of a metropolitan area was marginally associated with a decreased prevalence of same-sex activity among women and an increased prevalence among men.

Both of our indicators of adolescent religious experience were associated with same-sex experience. Compared with young women who reported being non-Baptist nonfundamentalist Protestant, those who said they were Catholic at age 14 were less likely to have had a same-sex experience (rate ratio, 0.5). Their male peers had a marginally elevated likelihood of reporting same-sex behavior. Young women and men who had attended religious services at age 14 were less likely than their counterparts who had not to have engaged in sexual activity with a same-sex partner (0.6 and 0.5, respectively).

Given the magnitude of the associations between sexual attraction and sexual experience, we ran separate regression models for respondents who indicated attraction only to members of the opposite sex and those who reported otherwise (Table 4). Among young women who were attracted exclusively to men, those who had had heterosexual sex were more than four times as likely as those who had not to report same-sex activity (rate ratio, 4.2). Hispanic ethnicity and religious service attendance were marginally associated with a reduced likelihood of such behavior.

Heterosexual experience was not associated with same-sex activity among women who reported any sexual attraction to other women. Rather, among these young women, those who identified themselves as lesbian or bisexual were nearly five times as likely as others to report same-sex experience (rate ratio, 4.7). Net of other factors, Catholics were less likely than their Protestant peers to have engaged in same-sex activity (0.6), and women born outside the United States were less likely than native-born women to have done so (0.4). Among women who expressed at least some attraction to females, the likelihood of reporting same-sex experience was marginally associated with increasing age, as well as with living in a suburban area, as opposed to a nonmetropolitan area.

In the model that examined same-sex experience among men who said they were attracted exclusively to women, two variables attained marginal significance. Heterosexual experience was associated with an elevated rate of same-sex activity, and failure of their mother to complete high school was associated with a reduced rate.

Among the small number of young men who reported any same-sex attraction, those who identified as gay or bisexual were nearly six times as likely as others to have engaged in same-sex activity (rate ratio, 5.6). Furthermore, in this model, black men were marginally more likely than whites to report having had sex with another man.

## DISCUSSION

Although same-sex sexual activity was considerably less common than heterosexual activity, a notable proportion of youth aged 15–21 had engaged in some form of consensual same-sex contact. The prevalence of such activity differed by gender, but for both women and men, sexual attraction to members of the same gender was the strongest correlate of same-sex behavior, followed closely by self-reported homosexual or bisexual identity. Thus, the affective and cognitive dimensions of sexuality were strongly linked to the sexual behaviors of teenagers and young adults.

At the same time, a nontrivial percentage of young people who said they were attracted only to members of the opposite sex or who identified themselves as exclusively heterosexual reported same-sex activity. What might predict the occurrence of such behavior in the absence of same-sex attractions? None of the social and demographic

**TABLE 4. Rate ratios from complementary log-log regression analysis assessing associations between selected characteristics and the likelihood that 15–21-year-olds reported same-sex sexual experience, by gender and attraction**

Characteristic	Females		Males	
	Attracted only to men (N=1,125)	Any attraction to women (N=220)	Attracted only to women (N=1,188)	Any attraction to men (N=82)
<b>Ever had heterosexual sex</b>	4.23 (2.40)*	1.50 (0.51)	4.62 (3.67)†	0.96 (0.44)
<b>Sexual identity</b>				
Homosexual/bisexual	na	4.68 (1.15)***	na	5.62 (2.35)***
Heterosexual/other (ref)	na	1.00	na	1.00
<b>Age</b>	0.92 (0.10)	1.16 (0.10)†	0.86 (0.08)	0.98 (0.14)
<b>Race/ethnicity</b>				
Black	0.83 (0.39)	1.21 (0.48)	2.63 (1.63)	4.79 (3.82)†
Hispanic	0.32 (0.19)†	1.37 (0.56)	2.46 (1.94)	1.00 (0.61)
White (ref)	1.00	1.00	1.00	1.00
Other	1.10 (0.72)	0.43 (0.27)	u	u
<b>Foreign-born</b>	0.45 (0.50)	0.35 (0.18)*	1.39 (1.22)	0.40 (0.29)
<b>Lived with two parents through age 15</b>	0.56 (0.20)	0.83 (0.23)	0.83 (0.44)	0.70 (0.30)
<b>Mother's education</b>				
<high school	1.14 (0.70)	1.26 (0.57)	0.22 (0.19)†	0.75 (0.52)
≥high school (ref)	1.00	1.00	1.00	1.00
<b>Residence</b>				
Central city	0.69 (0.28)	0.70 (0.17)	0.63 (0.40)	2.02 (1.10)
Suburb (ref)	1.00	1.00	1.00	1.00
Nonmetropolitan	0.72 (0.34)	0.50 (0.19)†	2.29 (1.40)	2.65 (1.94)
<b>Religious affiliation at age 14</b>				
Catholic	0.66 (0.24)	0.55 (0.16)*	2.69 (1.85)	2.23 (1.34)
Protestant (ref)	1.00	1.00	1.00	1.00
Other/none	0.45 (0.27)	0.66 (0.24)	0.53 (0.60)	1.84 (1.26)
<b>Attended any religious services at age 14</b>	0.45 (0.21)†	0.60 (0.20)	0.43 (0.29)	0.47 (0.28)

\*p<.05. \*\*\*p<.001. †p<.10. Notes: na=not applicable. u=unavailable, because of lack of variation in the outcome variable for the 73 respondents in this group. ref=reference category. Figures in parentheses are linearized standard errors.

characteristics that are predictive of heterosexual intercourse were correlated with same-sex activity among those attracted only to the opposite sex. The only associated characteristic was having had heterosexual sex, a pattern that was also seen in a study of New York City youth in which two-thirds of those who reported same-sex activity had had heterosexual sex as well.<sup>12</sup> We suspect that these findings describe a minority of youth who are prone to sexual experimentation. Alternatively, once youth have made the transition to sexual activity via the more socially normative and less stigmatized route (i.e., heterosexual contact), it may be easier to consider alternative options for sexual gratification.

Thus, it appears that sexual behavior, attraction and identity represent distinct dimensions of sexuality at this stage of the life course. Given the young age of our sample and the rather fluid nature of sexual identity, we believe that youth may have same-sex attractions and engage in same-sex behavior while still determining their sexual identity. Many youth explore and reassess their sexual identity during adolescence and young adulthood,<sup>15,47</sup> and

**Women were more likely than men to have engaged in same-sex activity even when they professed attraction only to [men].**

our results point to important gender differences in the patterning of sexual attraction, identity and behavior.

Our findings support the supposition that women may be more likely than men to act on same-sex attractions. Of greater interest to us, however, is the finding that women were more likely than men to have engaged in same-sex activity even when they professed attraction only to members of the opposite sex. Why might these women engage in sexual relations with someone to whom they are not attracted? Some social commentators and researchers have remarked upon the emergence of a “bisexual chic” that glamorizes same-sex contact among young women and often portrays these behaviors as being attractive to heterosexual men.<sup>23,24</sup> Ethnographic research has documented college women’s engaging in same-sex eroticism for men.<sup>48</sup> The cultural meanings of young men’s same-sex behaviors have not been similarly framed. In fact, boys often establish their masculinity by proving their heterosexuality and using homophobic insults.<sup>20,21</sup> We speculate that young women may be more likely than young men to receive suggestions or face pressures to engage in same-sex activity, and that sometimes they undertake this activity to please or attract the attention of men. However, population-based research is needed to establish the prevalence of such activities, particularly in light of the high rates of harassment and assaults reported by lesbian, gay and bisexual youth.<sup>19</sup>

While heterosexual sex may act as a “gateway” activity leading to alternative forms of sexual experience for youth who report only opposite-sex attractions, it does not appear to act in this way for youth who report at least some same-sex attractions. For these youth, the transition to same-sex activity appears to be most closely tied to the development of a nonheterosexual identity. Our findings also suggest that as young women with same-sex attractions move from adolescence into young adulthood, they become increasingly likely to act on their sexual attractions to other women. We found no evidence that men follow this behavior pattern. One study has found that young men reach most sexual identity milestones—first same-sex attractions, identification as homosexual or bisexual, and same-sex activity, but not public disclosure of their identity—at an earlier age than do young women.<sup>31</sup> Given a cultural environment that remains hostile toward males who engage in same-sex activity, young men who are attracted to men may simply be more inhibited than women in their exploration of same-sex activity, particularly during their adolescent and early adult years.

The likelihood that women who were attracted to women had also engaged in same-sex activity was reduced among those living in nonmetropolitan areas and Catholics. These findings are not surprising. Communities that are less urban tend to have less diverse populations and, accordingly, provide less tolerant normative environments. Indeed, people living in smaller communities in the United States report less tolerance for homosexuality than those in larger communities.<sup>44</sup> Furthermore,

nonmetropolitan areas may also have fewer potential same-sex partners because there is unlikely to be a “critical mass” of people to facilitate contacts between like-minded individuals.<sup>49</sup> Thus, “bisexual chic” is relatively unlikely to be a part of the normative environment in nonmetropolitan areas. Although nonmetropolitan residence was only marginally significant, we believe this finding is worth noting because few significant demographic correlates were found and, more generally, because of the lack of nationally representative studies of youths’ same-sex attraction. In addition, the Catholic faith has traditionally held strict prohibitions against sexual activity outside of heterosexual marriages, particularly same-sex activity and sexual behavior of young unmarried women. We found that while exposure to the Catholic faith during childhood was associated with a reduced likelihood of young women’s reporting same-sex behavior, such behavior still occurred. Notably, we found no correlation between the sexual behaviors of young men who were attracted to men and residence or religious affiliation. We speculate that cultural taboos against male same-sex activity are more pervasive than are taboos against female same-sex activity.

Rather unexpectedly, our results suggested that racial and ethnic background was linked to young men’s likelihood of experiencing same-sex contact. Among men who were attracted to other men, blacks were marginally more likely than whites to have acted on their attractions. In light of the small sample size and relatively large number of covariates, this finding, while not attaining statistical significance, is noteworthy. Additional analyses (available upon request) indicated that these black men were more likely than their white counterparts to have engaged in both anal and oral sex (giving and receiving for both behaviors), and were more likely to have identified themselves as homosexual or bisexual. Perhaps the lower tolerance for homosexuality in the black community<sup>37,38</sup>—coupled with the general stigma of homosexuality—pressures young black men to avoid publicly acknowledging their sexual identity, yet has less impact on the more private aspects of identity, attraction and behavior. Similar patterns among adult black men have been documented as part of the “down low” phenomenon.<sup>40,41</sup> Furthermore, according to one study, blacks may be more likely than others to identify themselves as gay after their first same-sex encounter rather than before.<sup>50</sup> More research into racial differences in same-sex behavior is clearly warranted.

### Limitations

Our findings are based on a nationally representative sample that provides insights not found in smaller, nonrandom samples; however, our data have limitations. One is the age of the data, which were collected in 2002. An important task for future research will be comparing our findings with more recent data, including the 2006–2008 wave of the NSFG, which was not available until after this article was completed. A second limitation is the lack of information on the relative timing of sexual behaviors, which

makes it impossible to determine whether heterosexual activity preceded or followed same-sex activity.

A third limitation is that while the questions in the NSFG are the most comprehensive available in a nationally representative format, they have several shortcomings. For example, the data were based on self-reports and thus may contain inconsistencies, exaggerations or other errors. The use of audio-CASI, however, should have reduced social desirability bias. Also, while items about same-sex sexual activity are quite specific in the male questionnaire, the female questionnaire includes only a single question about “any sexual experience” with another female. It is unclear how respondents interpreted this question; to the extent that they construed sexual relations broadly, the gender difference in the prevalence of same-sex activity reported here may be overstated. Other research has pointed to the substantial variation in the meanings Americans attach to “sex” and “sexuality,” suggesting the need for questionnaires to include specific definitions of key terms to minimize error and maximize reliability.<sup>51</sup> Hence, we urge caution in placing too much emphasis on the exact magnitude of gender differences in same-sex behavior. Instead, we focus on the statistically significant nature of this difference, along with gender differences in the correlates of same-sex behavior. More specific questions about women’s giving and receiving oral sex with a same-sex partner were added to the NSFG in 2006, and preliminary results suggest a significant gender gap in same-sex activity (e.g., among 15–44-year-olds, 9% of women had engaged in oral sex with a woman, and 5% of men had engaged in oral or anal sex with a man).<sup>10</sup>

## Conclusions

The prevalence estimates reported here suggest that more than 552,000 young men and almost 1.5 million young women aged 15–21 have engaged in consensual same-sex sexual activity.<sup>52</sup> The majority of these youth do not categorize themselves as homosexual or bisexual, and many do not even acknowledge having sexual attractions to people of the same gender. These findings argue for the need to broaden research to examine the diversity of behaviors reported by youth of all sexual attractions and identities. They also argue for the need to expand reproductive health education programs to include information on same-sex sexual behaviors. Romantic relationships and sexual experimentation are normative during adolescence and early adulthood, and the narrow focus of sexuality programs on vaginal intercourse needlessly restricts the information that youths receive, including critical information on health-related risks and protections associated with the alternative sexual activities in which many participate.

## REFERENCES

1. Centers for Disease Control and Prevention, *Sexually Transmitted Disease Surveillance, 2008*, Atlanta: U.S. Department of Health and Human Services, 2009.
2. Kalmuss D et al., Preventing sexual risk behaviors and pregnancy among teenagers: linking research and programs, *Perspectives on Sexual and Reproductive Health*, 2003, 35(2):87–93.

3. Remez L, Oral sex among adolescents: Is it sex or is it abstinence? *Family Planning Perspectives*, 2000, 32(6):298–304.
4. Brewster KL and Tillman KH, Who’s doing it? Patterns and predictors of youths’ oral sexual experience, *Journal of Adolescent Health*, 2008, 42(1):73–80.
5. DeRosa CJ et al., Sexual intercourse and oral sex among public middle school students: prevalence and correlates, *Perspectives on Sexual and Reproductive Health*, 2010, 42(3):197–205.
6. Lindberg LD, Jones R and Santelli JS, Noncoital sexual activities among adolescents, *Journal of Adolescent Health*, 2008, 43(3): 231–238.
7. Kennedy S, Lesbian, for now, *The Advocate*, Oct. 10, 2006, p. 26.
8. Marikar S, Bisexual in Hollywood: ok for girls, not guys, ABC News, June 5, 2008, <<http://abcnews.go.com/Entertainment/story?id=5000714>>, accessed Oct. 7, 2010.
9. Laumann EO et al., *The Social Organization of Sexuality: Sexual Practices in the United States*, Chicago: University of Chicago Press, 1994.
10. Chandra A et al., Sexual behavior, sexual attraction, and sexual identity in the United States: data from the 2006–2008 National Survey of Family Growth, *National Health Statistics Reports*, 2011, No. 36.
11. Savin-Williams RC, A critique of research on sexual minority youths, *Journal of Adolescence*, 2001, 24(1):5–13.
12. Pathela P and Schillinger JA, Sexual behaviors and sexual violence: adolescents with opposite-, same-, or both-sex partners, *Pediatrics*, 2010, 126(5):879–886.
13. Remafedi G et al., Demography of sexual orientation in adolescents, *Pediatrics*, 1992, 89(4):714–721.
14. Saewyc EM et al., Protective factors in the lives of bisexual adolescents in North America, *American Journal of Public Health*, 2009, 99(1):110–117.
15. Savin-Williams RC and Ream GL, Prevalence and stability of sexual orientation components during adolescence and young adulthood, *Archives of Sexual Behavior*, 2007, 36(3):385–394.
16. Ueno K, Same-sex experience and mental health during the transition between adolescence and young adulthood, *Sociological Quarterly*, 2010, 51(3):484–510.
17. Buhi ER and Goodson P, Predictors of adolescent sexual behavior and intention: a theory-guided systematic review, *Journal of Adolescent Health*, 2007, 40(1):4–21.
18. Saad L, Americans’ acceptance of gay relations crosses 50% threshold, Princeton, NJ: Gallup, May 25, 2010, <<http://www.gallup.com/poll/135764/americans-acceptance-gay-relations-crosses-threshold.aspx>>, accessed Oct. 26, 2010.
19. Kosciw JG et al., *The 2009 National School Climate Survey: The Experiences of Lesbian, Gay, Bisexual and Transgender Youth in Our Nation’s Schools*, New York: Gay, Lesbian and Straight Education Network, 2010.
20. Pascoe CJ, *Dude, You’re a Fag: Masculinity and Sexuality in High School*, Berkeley: University of California Press, 2007.
21. Tolman DL, Striipe MI and Harmon T, Gender matters: constructing a model of adolescent sexual health, *Journal of Sex Research*, 2003, 40(1):4–12.
22. Kimmel M, Gay bashing is about masculinity, *Ms. Magazine*, Oct. 11, 2010, <<http://msmagazine.com/blog/blog/2010/10/11/gay-bashing-is-about-masculinity/>>, accessed Oct. 26, 2010.
23. Butler AC, Gender differences in the prevalence of same-sex sexual partnering: 1988–2002, *Social Forces*, 2005, 84(1): 421–449.

24. Diamond LM, "I'm straight, but I kissed a girl": the trouble with American media representations of female-female sexuality, *Feminism & Psychology*, 2005, 15(1):104–110.
25. Lammers C et al., Influences on adolescents' decision to postpone onset of sexual intercourse: a survival analysis of virginity among youths aged 13 to 18 years, *Journal of Adolescent Health*, 2000, 26(1):42–48.
26. Meier AM, Adolescents' transition to first intercourse, religiosity and attitudes about sex, *Social Forces*, 2003, 81(3):1031–1052.
27. Miller BC, Family influences on adolescent sexual and contraceptive behavior, *Journal of Sex Research*, 2002, 39(1):22–26.
28. Miller BC et al., The timing of sexual intercourse among adolescents: family, peer, and other antecedents, *Youth & Society*, 1997, 29(1):54–83.
29. Upchurch DM et al., Gender and ethnic differences in the timing of first sexual intercourse, *Family Planning Perspectives*, 1998, 30(3):121–127.
30. Halpern-Felsher BL et al., Oral versus vaginal sex among adolescents: perceptions, attitudes, and behavior, *Pediatrics*, 2005, 115(4):845–851.
31. Savin-Williams RC and Diamond LM, Sexual identity trajectory among sexual-minority youths: gender comparisons, *Archives of Sexual Behavior*, 2000, 29(6):607–627.
32. Bos HMW et al., Same-sex attraction, social relationships, psychosocial functioning, and school performance in early adolescence, *Developmental Psychology*, 2008, 44(1):59–68.
33. Baumeister RF, Gender differences in erotic plasticity: the female sex drive as socially flexible and responsive, *Psychological Bulletin*, 2000, 126(3):347–374.
34. Diamond LM, Female bisexuality from adolescence to adulthood: results from a 10-year longitudinal study, *Developmental Psychology*, 2008, 44(1):5–14.
35. Smith EA and Udry JR, Coital and non-coital sexual behaviors among white and black adolescents, *American Journal of Public Health*, 1985, 75(10):1200–1203.
36. Mosher WD, Chandra A and Jones J, Sexual behaviors and selected health measures: men and women 15–44 years of age, United States, 2002, *Advance Data from Vital and Health Statistics*, 2005, No. 362.
37. Lewis GB, Black-white differences in attitudes toward homosexuality and gay rights, *Public Opinion Quarterly*, 2003, 67(1):59–78.
38. Negy C and Eisenman R, A comparison of African American and white college students' affective and attitudinal reactions to lesbian, gay, and bisexual individuals: an exploratory study, *Journal of Sex Research*, 2005, 42(4):291–298.
39. Denizet-Lewis B, Double lives on the down low, *New York Times*, Aug. 3, 2003, <<http://www.nytimes.com/2003/08/03/magazine/double-lives-on-the-down-low.html>>, accessed Oct. 28, 2010.
40. King JL, *On the Down Low: A Journey into the Lives of Straight Black Men Who Sleep with Men*, New York: Broadway Books, 2004.
41. Miller M, Serner M and Wagner M, Sexual diversity among black men who have sex with men in an inner-city community, *Journal of Urban Health*, 2005, 82(Suppl. 1):i26–i34.
42. Zimmer-Gembeck MJ and Helfand M, Ten years of longitudinal research on U.S. adolescent sexual behavior: developmental correlates of sexual intercourse, and the importance of age, gender, and ethnic background, *Developmental Review*, 2008, 28(2):153–224.
43. Afaible-Munsuz A and Brindis CD, Acculturation and the sexual and reproductive health of Latino youth in the United States: a literature review, *Perspectives on Sexual and Reproductive Health*, 2006, 38(4):208–219.
44. Andersen R and Fetner T, Cohort differences in tolerance of homosexuality: attitudinal change in Canada and the United States, 1981–2000, *Public Opinion Quarterly*, 2008, 72(2):311–330.
45. Billy JOG, Brewster KL and Grady WR, Contextual effects on the sexual behavior of adolescent women, *Journal of Marriage and the Family*, 1994, 56(2):387–404.
46. U.S. Department of Health and Human Services, *Public Use Data File Documentation: National Survey of Family Growth, Cycle 6, 2002, User's Guide*, 2004, <[http://www.cdc.gov/nchs/data/nsfg/UserGuide\\_2002NSFG.pdf](http://www.cdc.gov/nchs/data/nsfg/UserGuide_2002NSFG.pdf)>, accessed Dec. 1, 2010.
47. Ott MQ et al., Stability and change in self-reported sexual orientation identity in young people: application of mobility metrics, *Archives of Sexual Behavior*, 2010, 40(3):519–532.
48. Hamilton L, Trading on heterosexuality: college women's gender strategies and homophobia, *Gender & Society*, 2007, 21(2):145–172.
49. Fischer CS, The subcultural theory of urbanism: a twentieth-year assessment, *American Journal of Sociology*, 1995, 101(3):543–577.
50. Dubé EM and Savin-Williams RC, Sexual identity development among ethnic sexual minority male youths, *Developmental Psychology*, 1999, 35(6):1389–1399.
51. McCabe J, Tanner AE and Heiman J, The impact of gender expectations on meanings of sex and sexuality: results from a cognitive interview study, *Sex Roles*, 2010, 62(3–4):252–263.
52. U.S. Census Bureau, U.S. population clock, 2007, <<http://www.census.gov/>>, accessed June 23, 2008.

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