Lesbian and Bisexual Women in Small Cities—At Risk for HIV?

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SYNOPSIS

Objectives. Women who have sex with women are a relatively hidden group that has been overlooked in most AIDS research and prevention efforts, primarily because the efficiency of HIV transmission between female partners is believed to be low. Although data are scant, it is commonly assumed that members of this population are not at high risk for HIV infection. However, a recent study of lesbian and bisexual women living in the San Francisco Bay area reported a relatively high seroprevalence rate and has raised additional questions about this group's HIV risk. The present study, the first to focus on lesbian and bisexual women living outside major AIDS epicenters, provides additional evidence. It describes risk factors for HIV transmission among lesbian and bisexual women living in small cities in four geographic regions of the United States.

Methods. On three consecutive evenings in 1992, members of the research team distributed anonymous structured written surveys to women patrons as they entered gay bars in each of 16 small cities.

Results. Almost 17% of bisexual respondents and 0.5% of lesbians reported having had unprotected vaginal or anal sex with a male during the two months prior to the survey. Almost 10 percent of bisexual women and 8.8% of lesbians in the sample reported a history of injection drug use. Among those women surveyed who said they had been tested, 1.4% reported they were infected with HIV.

Conclusions. Self-identified sexual orientation was highly consistent with recent sexual behavior. HIV risk related to sexual behavior was concentrated among self-identified bisexual women. The prevalence of injection drug use was substantial among both bisexual and lesbians. Developers of HIV risk behavior programs should take the prevalence of these risk behaviors into consideration in the design of effective HIV prevention interventions tailored to the needs of this hidden population.

Since the beginning of this decade, new concerns and questions have emerged about the potential for HIV transmission among women who have sex with women.[1-4] Until recently, relatively little research has focused on the HIV risk of this population. AIDS surveillance reports from the Centers for Disease Control (CDC) indicate that women with AIDS who report having sexual contact only with women also report risk factors, including injection drug use and having had blood transfu-

sions before 1985.[5-9] As a result, it is widely assumed that women who have sex with women are at relatively low risk for HIV/AIDS. However, a recent study of lesbian and bisexual women living in the San Francisco Bay area showed a higher than anticipated seroprevalence rate.[1] Overall, 1.2% were found to be infected with HIV, a prevalence at least three times higher than that estimated for other adult and adolescent women in the area. This finding reinforces previous concerns[10] among sexual minorities that the actual risk of HIV transmission among women who have sex with women has not been accurately quantified by the CDC and indicates a need for further study.

On three consecutive evenings during the winter of 1992, men and women who entered gay bars in each of 16 cities were asked to complete an anonymous questionnaire.

A variety of behaviors beyond female-to-female sexual transmission may put women who have sex with women at risk for HIV. For instance, some women who have same-sex partners and consider themselves to be lesbians also have sex with men. Sexual orientation is not a dichotomous variable. Contrary to common stereotypes, the social categories of heterosexual and homosexual are not discrete and sexual behavior is not always congruent with self-described sexual orientation. The interplay between sexual behavior and sexual orientation is extremely complex, and is shaped by the social contexts of women's lives.[11]

A review of several studies has found that as many as half of all women who self-identify as lesbians "periodically have some sex with men."[12] Three-quarters of self-identified lesbian respondents to a 1987 Kinsey Institute survey reported having engaged in sexual intercourse with men at some time during their lifetimes, and nearly half (46%) said they had engaged in sex with men in the past five years. Of those sexual contacts, approximately one-third involved vaginal or anal sex with gay or bisexual men. Fewer than 10% of respondents consistently used condoms.[13] A survey of urban lesbian and bisexual women conducted by the San Francisco Department of Public Health AIDS Office Prevention Services Branch[14] found that 22% of women who self-identified as lesbians and 71% of those who self-identified as bisexual had been sexually active with both men and women in the previous three years. Of those who had sex with men, 70% reported unprotected vaginal intercourse with male primary partners (those with whom respondent has a committed relationship), and 43% with male secondary (occasional or casual) partners in the previous three years. Latex barrier use was also infrequent and inconsistent with both primary and secondary female partners, even at times when there was potential for exchange of vaginal secretions, including blood.

A survey of 1086 lesbian and bisexual women polled at venues in or near Eastern U.S. cities between 1989 and 1991[10] found that 53% of self-defined lesbian respondents had had sex with at least one man since 1978; of those men, 13% were known or presumed to be gay or bisexual and 3% had a history of injection drug use. Ninety percent of the women who identified themselves as bisexual had sexual contact with men, 42% of whom were known or presumed to be gay or bisexual and 13% of whom used injection drugs. Only 10% of those who had sex with a gay or bisexual partner and 4% of those who had sexual contact with an injection drug user used a condom consistently.

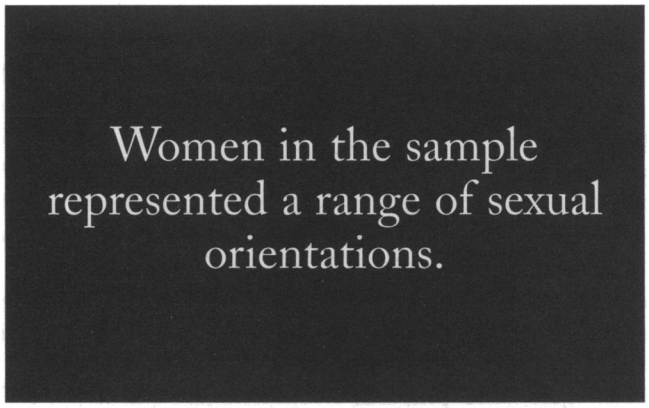
There is also evidence that a substantial minority of men who identify as gay have sex with women. Because the prevalence rates of HIV among behaviorally bisexual men are higher than among the general population, they can be very high risk partners for women who have unprotected intercourse with them.[15] A study of 5480 men visiting a sexually transmitted disease clinic who reported having had sex with another man found that those men who identified themselves as bisexual or "straight" had high rates of seropositivity (12% for the self-identified bisexuals and 8% for the self-identified heterosexuals), often reported multiple female partners, used condoms inconsistently, and had relatively high rates of injection drug use.[16] Other recent reports have described heterosexual intercourse patterns among bisexual men.[17,18]

In the San Francisco Bay area study of lesbian and bisexual women, 10.4% of respondents reported injection drug use; of these women, 71% reported sharing needles.[1] Other research has also documented a relatively high prevalence of injection drug use among some women who report sexual contact with women, especially among those infected with HIV/AIDS.[12] Other risk scenarios for bisexual and lesbian women—as for heterosexual women—include rape, paid sex work, sexual practices such as sadomasochism with bloodletting, tattooing with shared needles, artificial insemination, and blood transfusions.

The biologic risk of HIV infection through female-to-female sex remains unknown. A comprehensive review of the literature indicates that a woman's risk is related to the complex interplay of a variety of factors. These include frequency of exposure, the titer of virus present, the types and sites of exposure, the bodily fluids involved in the exposure, the woman's immunity, and the presence of sexually transmitted diseases, especially ulcerative conditions such as genital herpes.[12]

Although numerous studies have documented HIV risk among gay and bisexual men in both urban and nonurban settings[19-21] and a few studies have looked at lesbian and bisexual women living in major urban areas, to our knowledge, no large-scale studies have been conducted of lesbian and bisexual women living outside major urban areas.

The present study explores the HIV risk patterns of lesbian and bisexual women who frequented gay bars in 16 small and moderate-sized cities located in four different geographic regions of the United States. It provides information about the sexual behaviors, knowledge of AIDS risk, history of HIV testing, perceptions of HIV risk, history of injection drug use, and demographic characteristics of 1057 women. These data were collected as part of a research project undertaken to determine the efficacy of an AIDS prevention program targeting gay men.



Methods

On three consecutive evenings during the winter of 1992, men and women who entered gay bars in each of 16 cities were asked to complete an anonymous questionnaire to provide information that would be used to improve AIDS prevention programs. These gay bars, which welcome both men and women, were selected as the survey venue because they are among the few public places in small cities where large numbers of lesbian and bisexual women regularly congregate. Study cities were selected to be representative of smaller to moderate-sized communities outside major AIDS epicenters. Criteria for selection included size (population between 50,000 and 180,000), location (at least 50 miles from any other city of the same or larger size), and the presence of at least one gay bar within the city. Cities were situated in the following regions: the Northwest (two cities in Washington State and two cities in Montana), the Midwest (four cities in northern Wisconsin), the Northeast (four cities in upstate and western New York State), and the Southeast (two cities in West Virginia and two cities in North Carolina).

Male and female research team members asked incoming patrons to fill out surveys as they entered the bar; patrons who were visibly intoxicated were not invited to complete surveys. We have previously reported on the findings with respect to HIV risk among gay and bisexual men who were surveyed.[17,21]

Each woman who agreed to participate was given a clipboard, was asked to complete the survey by herself, and was asked to place the survey in a box after completion. Ninety-one percent of the women who were approached completed the survey (N=1057); response rates in individual bars ranged from 78% to 100%.

Measure. A 50-item self-report survey collected information on demographics, social and drug behaviors, and AIDS knowledge. The survey took approximately 15 minutes to complete; its format was similar to that of the survey used for male patrons.[21]

Respondent characteristics. Demographic characteristics included educational level, age, and ethnicity. Sexual orientation was reported using a five-point scale: exclusively heterosexual, primarily heterosexual, bisexual, primarily homosexual, exclusively homosexual.

AIDS risk knowledge. Knowledge about AIDS and sexual risk behavior was assessed using a 14-item true-false measure. The items included statements such as: "Women who only have sex with heterosexual men are at no risk for contracting the AIDS virus," "A woman can transmit the AIDS virus to her unborn child," and "Sexual activity between women cannot spread the AIDS virus." The items were selected to measure women's understanding of HIV transmission and sexual risk behaviors. The measure was scored to yield total correct responses ranging from 0 to 14.

Sexual practices. Respondents were asked to indicate the number of times and the number of male and female partners with whom they had engaged in specific sexual activities with and without latex barriers. A two-month time frame was selected to facilitate more accurate recall.[22] In addition, respondents were asked whether they considered themselves exclusively partnered (involved in a sexual relationship with only one other person). Respondents were also asked to indicate to the best of their knowledge whether any of their male or female sexual partners during the past two months had a history of injection drug use or sexual intercourse with males.

HIV testing and injection drug use. All respondents were asked whether they had been tested for HIV. Those who had been tested were asked about their serostatus and the length of time since their most recent test. All respondents were also asked whether they had ever used intravenous drugs.

Data analysis. Descriptive statistics were used to analyze these data. We focused on demographics and on the occur-

rence of the two primary HIV risk behaviors of unprotected sexual intercourse with men and injection drug use.

Results

Respondent characteristics. Data were collected from a sample of 1057 women. The average survey respondent was 29.9 years of age and had 13.7 years of education. Ninety percent were European American, 3% African American, 3% Native American, 1% Hispanic, and 3% other ethnicities. Since no ethnic minority group was well represented, respondents were recoded as "women of color" or "white" for purposes of analysis. Respondents reported having visited the gay bar in which they were surveyed an average of nine times in the previous two months. Sixty-three percent lived or attended school within 50 miles of the bar.

Women in the sample represented a range of sexual orientations: 57.1% (565) indicated they were exclusively homosexual, 17.3% (171) indicated they were primarily homosexual, 5.1% (50) reported being primarily heterosexual, 6.5% (64) chose the "bisexual" designation, and 14% (139) categorized themselves as exclusively heterosexual. For the purpose of analysis, the primarily homosexual and primarily heterosexual categories were collapsed into the bisexual category. With a small number of exceptions, sexual orientation was congruent with sexual behavior. Only six (1%) self-identified lesbians reported having had intercourse with a male partner during the previous two months, and only seven (5%) self-identified heterosexuals reported having had sex with a female partner during that time period. Within the combined bisexual group, 10.6% reported having had sex with one or more male partners, 82.5% with one or more female partners, and 6.9% with partners of both sexes during the preceding two months.

Table 1 presents the demographic characteristics and HIV-related risk behaviors of the lesbian and combined bisexual groups.

AIDS risk knowledge. Respondents, including lesbian, bisexual, and heterosexual women, were generally well informed about HIV transmission. The average score for the 14 true-false knowledge questions was 13.4. Each item was answered correctly by at least 90% of respondents.

Sexual practices. Of the self-identified lesbian and bisexual respondents 9.4% (80) reported having had one or more male sexual partners during the two months prior to the survey. Of these women, 16.5% (47) of bisexual respondents and 0.5% (3) of lesbians reported having had unprotected vaginal or anal sex with a male during the two months prior to the survey.

Among the bisexual women who were currently sexually active with a male partner, 39% reported having had sex with a man they knew or suspected had sex with other men and 20% reported having had sex with someone they knew or suspected had a history of injection drug use.

Injection drug use. Nine point eight percent of bisexual women and 8.8% of lesbians in the sample reported a history of injection drug use. Those who used drugs did not differ significantly from other respondents in ethnicity, education, or age.

HIV testing. Approximately 44% of lesbian and bisexual respondents said they had been tested for HIV at least once, and 61% of those said they had been tested within the past year. Women in Northwest communities in the United States were more likely to have been tested than those in other areas of the country ($P<.05$).

Among those who said they had been tested, five lesbian and bisexual respondents reported being infected with HIV, translating into a prevalence rate for HIV infection of 1.4% among test-seekers. All five of those who were positive were European Americans and had at least a high school educa-

Table 1. Demographic characteristics and HIV-related risk behaviors among lesbian and bisexual women patrons of gay bars in small cities, 1992 (*N* = 850)

	Number	*Percent*
Age (in years)		
17–29	430	53.0
≥ 30	382	47.0
Education		
Less than high school graduate	40	4.7
High school graduate	233	27.6
Some college	321	38.0
College	251	29.7
Sexual orientation		
Lesbian	565	66.5
Bisexual	285	33.5
Ethnicity		
White	756	89.9
Women of color	85	10.1
Ever used injection drugs		
Bisexuals	28	9.8
Lesbians	50	8.8
Had unprotected sex with ≥1 male partner(s) in past two months		
Bisexuals	47	16.5
Lesbians	3	0.5
HIV Status		
Tested for HIV	363	44.0
Of those tested, HIV positive	5	1.4

NOTE: Fifty heterosexual respondents and 68 respondents who did not indicate their sexual orientation were excluded from this analysis. Sizes of *n*'s vary slightly due to missing data for the demographic variables.

tion. Three of the women who were HIV-positive identified themselves as exclusively lesbian; each of the three acknowledged a history of injection drug use. Two of the five HIV-positive women were bisexual. In addition, one woman who did not indicate her sexual orientation also reported that she was infected.

Discussion

Little research attention has been directed toward the study of HIV risk among women who have sex with women, presumably because of the relative inefficiency of HIV transmission during sex between women. Our data indicate that, quite apart from the question of the risk of female-to-female transmission, a considerable number of women who have sex with women are at risk for HIV infection because of their own history of injection drug use or because of unprotected sex with men, especially men who engage in high risk behaviors—including injection drug use. The majority of respondents who reported having sex with male partners did not consistently use condoms. In addition, 9.1% of lesbian and bisexual women in this sample reported a history of injection drug use and may have been exposed to HIV through needle sharing.

Among the bisexual women who were currently sexually active with a male partner, 39% reported having had sex with a man they knew or suspected had sex with other men and 20% reported having had sex with someone they knew or suspected had a history of injection drug use.

Our findings can be interpreted from the perspective of a transtheoretical model of how people change behaviors.[23] The women who participated in this survey are well informed about HIV transmission and prevention. Additional findings from this survey, not cited here, indicated that many respondents knew people who were infected with HIV or had died from AIDS and many were considering the feasibility of behavioral changes. The stages-of-change model suggests that people who are contemplating the use of latex barriers can benefit from support and encouragement from others. For instance, it has been shown that information about successful strategies for making a contemplated change, especially information from people who have been successful in modifying their own behavior, can help people to change.[24]

However, women who have sex with women but are also engaging in more risky behaviors may not be receiving much support for adopting safer behaviors. Women who have sex with women have been told repeatedly that they are not at risk for HIV. As a result, such women may possess a false sense of security based on the assumption that they are members of a safe group of people who are not likely to become infected.[13,25] Bisexual women may be at even more acute risk, not only because of their sexual behavior but also because of their relative social isolation. Despite bisexual chic's current popularity on the talk show circuit and among urban intellectuals, bisexuals, especially those living outside major metropolitan areas, tend to be a socially isolated population.[26] Since members of this group may not be fully accepted by either "straights" or lesbians, they often remain deeply closeted. Anecdotally, in some of the bars where the surveys were conducted, we found little, if any, acknowledgement that bisexuality existed. Thus women who are neither exclusively lesbian nor exclusively heterosexual may have few confidantes and may receive little support either for incorporating risk reduction behaviors into their sexual repertoires or for being tested.

A potential problem for women who have chosen to be open about their lesbian identity is that AIDS educators and medical care providers may make assumptions about their sexual behavior that are not entirely accurate. A resulting failure to discuss possible risk factors may reinforce a false sense of security. As the findings from this study once again demonstrate, sexual orientation is somewhat fluid and may not always be congruent with sexual behavior. Accordingly, educators and clinicians should explore with all women, regardless of their professed or presumed sexual orientation, the various ways in which they may be at risk and counsel them regarding appropriate protection strategies.[27]

This study has a number of limitations. For instance, the two-month time frame for reporting sexual behaviors may have been too limiting. Also, although the sample was large and was drawn from diverse geographic areas, it was comprised exclusively of women who were bar patrons and who visited gay bars, on average, at least twice a week. The extent to which these findings generalize, for example, to lesbian and bisexual women who never or seldom visit gay bars is unknown. In addition, the majority of respondents were white. While ethnic differences may exist, the ethnic diversity among the small group of women of color we surveyed makes it impossible to draw any conclusions.

In summary, high risk behaviors, specifically injection drug use and unprotected sex with a male partner among bisexual women, occurred with surprising frequency in the

sample studied and appeared to be comparable to the frequencies of high risk behaviors reported among lesbian and bisexual women in urban areas. These findings have implications that should not be ignored. They underscore the importance of efforts focused on reducing high risk behaviors among women who identify with the lesbian community, especially bisexual women, a population neglected in most AIDS prevention programs to date. In some communities, bisexual identity and behavior may not be well accepted among either lesbians or heterosexuals. Where that is the case, this minority within a minority may be very hidden and its members may find scant encouragement for learning safer sex behaviors. Creative, appealing, and carefully evaluated programs are key in determining what approaches will prove effective in reaching this hidden minority.

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