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Lesbians' Drinking Patterns: Beyond the Data[#]

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ABSTRACT

Early studies report very high rates of ''alcohol abuse'' and alcoholism among lesbians. However, serious methodological problems, including nonrepresentative samples that were often recruited in lesbian or gay lesbian bars, limit the validity of findings from these studies. In this article, I briefly review the literature on lesbians' use of alcohol and present findings from a recent study conducted in Chicago (USA). This study recruited a race- and age-diverse sample of lesbians and a demographically matched group of heterosexual women. Rates of ''heavy'' alcohol use and alcohol-use-related problems among lesbians were much lower in

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this study than in early studies. However, lesbians were more likely than their heterosexual counterparts to be in recovery and to have been in treatment for alcohol-use-related problems. Further, high rates of childhood sexual abuse, depression, and suicidal ideation reported by lesbians suggest that at least some groups may be at heightened risk for "heavy" drinking and drinking-related problems. Nevertheless, results of this and other studies suggest that reports of heavy drinking and drinking-related problems among lesbians may have been inflated in earlier studies, or that heavy drinking and drinking-related problems may have declined among lesbians.

Key Words: Lesbian; Homosexuality; Sexual orientation; Alcohol use; Substance use; Mental health risks.

INTRODUCTION

Lesbians and gay men have historically been considered at high risk for "alcohol abuse" and alcoholism. This is not surprising given the fact that lesbians and gay men were considered mentally ill, simply by virtue of the fact of their sexual orientation, until 1973 when homosexuality was removed from the DSM (*Diagnostic and Statistical Manual of Mental Disorders*). Although homosexuality is no longer a diagnosable mental disorder, the belief that lesbians are at high risk for alcohol abuse and alcoholism continues to be accepted widely by both researchers and clinicians. This belief persists despite a dearth of reliable data. In fact, it is common to see statements in the literature suggesting that at least one-third of lesbians are alcoholic or have serious alcohol-use-related problems. It is important to look beyond these estimates because much of the research on lesbians' use of alcohol is limited by serious methodological problems, including small homogeneous samples, lack of appropriate control or comparison groups, absence of standard measures of drinking and drinking-related problems, and inconsistent definitions of sexual orientation (Hughes and Wilsnack, 1997).

For example, in one of the earliest and most frequently cited studies, Fifield and colleagues (1977) estimated that 33% of lesbians from Los Angeles County, California, were "alcohol abusers" or were alcoholic. However, authors who cite this study sometimes fail to mention that Fifield's sample was recruited primarily in gay-oriented bars. Several other studies conducted during the 1970s (Lewis et al., 1982; Morales and Graves, 1983; Saghir et al., 1970) also used gay bars to obtain at least a portion of their samples, all report high rates of alcohol use or alcoholism among lesbians.

Studies conducted in the 1980s reported lower rates of "heavy" drinking among lesbians than did earlier ones. However, these studies also suggested that, compared with heterosexual women, lesbians were more likely to drink and more likely to experience problems related to alcohol use. For example, in the National Lesbian Health Care Survey, (NLHS) Bradford and Ryan (1987) found 16% of the 1925 women surveyed had sought help for alcohol- or other drug-use-related problems.

In another study conducted in the mid-1980s, and one of the largest to date, McKirnan and Peterson (1989) obtained a sample of 2652 gay men and 748 lesbians from a wide variety of sources in Chicago. Data on alcohol consumption and problems related to drinking collected from lesbians and gay men were compared with data from an earlier study of women and men in the general population (Clark and Midanik, 1982). Based on these comparisons, the researchers concluded that lesbians were less likely than heterosexual women (15% compared with 35%) to abstain from the use of alcohol, more likely to be "moderate" users (76% and 59%), and about as likely to be "heavy" drinkers (9% and 7%). Although not over represented among heavy drinkers, lesbians reported rates of problems related to alcohol use that were almost three times as high as those reported by heterosexual women (23% and 8%). Unlike women in the general population, among women use of marijuana and cocaine was very rare, rates of use among lesbians were similar to those of gay men. Further, lesbians' and gay men's use of alcohol, marijuana, and cocaine showed less decline with age than is typical of women and men in the general population (McKirnan and Peterson, 1989).

Skinner used a design similar to that of McKirnan and Peterson in a large study of lesbians and gay men in Lexington and Louisville, Kentucky (Skinner, 1994; Skinner and Otis, 1992; Skinner and Otis, 1996). By using a geographically matched subsample of women from the 1988 National Household Survey of Drug Abuse (NHSDA) as a basis for comparison, more lesbians (87%) than women in the NHSDA (64%) reported alcohol consumption in the past year. Lesbians in this study also reported more drinking days and more binge drinking (5 or more drinks on one occasion) than did heterosexual women.

Findings from studies conducted outside the United States are generally consistent with those from the studies just described. For example, studies of lesbians in Sweden (Bergmark, 1999) and in New Zealand (Welch et al., 1998) found high rates of current drinking. In addition, Bergmark also found small gender differences and little evidence of age-related declines in drinking among lesbians and gay men in her study.

In one of the few studies of lesbians' drinking to use probability sampling, and one of the few to include a heterosexual comparison group, Bloomfield (1993) discovered findings that differ somewhat from those of studies that used convenience samples. In this study, 52 lesbians and 6 bisexual women were compared with 397 heterosexual women in a household sample of San Francisco residents 18 to 50 years old. No significant differences were found between lesbians' and bisexual women's levels of drinking and those of the heterosexual women. Only the number of recovering alcoholics significantly differed for the two groups; 11% of the lesbian and bisexual women and 7% of the heterosexual women reported being in recovery.

Similarly, Hughes et al. (2000) found no differences in levels of drinking among lesbians in a large, multisite study conducted in Chicago, New York City, and Minneapolis, Minnesota. A convenience sample of lesbians ($n = 550$) was recruited by using a broad variety of sources and recruitment strategies. Lesbians who participated in the study were given a color-coded duplicate copy of the paper-and-pencil survey questionnaire to pass along to a heterosexual woman who had a work-role similar to the lesbians' own. By using this method, a sample of 279 heterosexual women who were demographically very similar to the lesbian sample was recruited to serve as the comparison group. This sampling method resulted in findings more similar to those reported by Bloomfield than to those of other studies described above. Lesbians were significantly more likely than the matched group of heterosexual women to report abstention, but there were no differences in levels of drinking among current drinkers. In addition, although the questionnaire did not include specific questions about recovery, significantly more lesbians (14%) than heterosexual women (6%) reported that they had been in treatment for problems related to alcohol or drug (AOD) use. Like McKirnan and Peterson's (1989) findings, problems related to alcohol use among lesbians did not decline with age; however, the heterosexual comparison group also showed little age-related decline in their reports of drinking-related problems. These and other studies of lesbians' drinking are summarized in Table 1.

Three other recent studies also deserve mentioning (Cochran and Mays, 2000; Gilman et al., 2001; Sandfort et al., 2001). Investigators in these studies used data from large national population-based databases to compare women who reported any same-sex partners with those who reported only male partners. As reflected in Table 2, each of these studies found a substantially higher rate of alcohol dependency among women who reported same-sex partners. Because questions about self-identity were not included, it cannot be assumed that these women are lesbian.

However, the findings suggest that same-sex sexual behavior and alcohol dependence are strongly associated and emphasize the need for including multiple measures of sexual orientation, rather than a single question about sexual behavior, in all large-scale, population-based studies.

In summary, when taken as a whole, findings in the literature suggest that some groups of lesbians are at heightened risk for alcohol-use-related problems. However, existing research provides relatively little information about factors that may increase (or decrease) lesbians' risk.

Since the mid-1990s, my colleagues and I have been conducting research focusing on drinking patterns and drinking-related problems among lesbians. Findings presented here are from a pilot study of lesbians and heterosexual women conducted in 1997–1998 in Chicago (Hughes et al., 2001; Hugheset et al., accepted). This study was designed to replicate, as closely as possible, the National Study of Health and Life Experiences of Women (NSHLEW), a longitudinal study of women's drinking (Wilsnack et al., 1984; Wilsnack et al., 1991).

Subsequent to the pilot study, in 2000–2001, we conducted a larger study of 451 lesbians, funded by the National Institute of Alcohol Abuse and Alcoholism and the Office for Research on Women's Health. Additional funding has been obtained to conduct a three-year longitudinal follow-up study of these women in 2003–2004.

Study Methods

These studies were designed to address as many of the limitations of previous research as possible. For example, in order to obtain a more diverse sample, we focused much of our recruiting efforts on the following groups of lesbians: 1) under 25 or over 50 years old; 2) annual household incomes of $10,000 or less; 3) high school education or less; and 4) women of color (especially African American and Hispanic).

We used a variety of recruitment sources, including newspaper and radio advertisements, distribution of flyers at formal and informal organizations and gatherings, and extensive use of social network referrals. Information provided summarized study eligibility (participants were required to be 18 years old or older and self-identity as lesbian) and instructed interested women to call the research office. Each lesbian who participated in the study was asked to help recruit a heterosexual woman of the same race/ethnicity who had a work-role similar to the lesbians' own. Prior to the interview, the women were asked to read a detailed consent form, ask any questions they had, and indicate their

Table 1. Study findings related to alcohol use among lesbians.

Authors/date	Location/scope	Sampling method	Sample size/ composition	Age range	Major findings regarding alcohol use lesbian/ bisexual women	Heterosexual or other comparison group
Fifield et al. (1977)	Los Angeles County	Convenience	200 bar patrons and 98 bar tenders or "observers" from gay bars	Not reported	21% of lesbians "heavy" drinkers or serious alcohol use-related problems	None
Lewis et al. (1982)	Chicago, San Francisco, St. Louis	Convenience (mailing lists; snowball)	57 lesbians	31 yrs	28% of lesbians classifed as alcoholic (lifetime) compared with 5% of heterosexual controls	43 single heterosexual women; mean age 29
Bradford and Ryan (1987)	National (US)	Convenience	1925 (majority were lesbian)	17–80 yrs; mean age approx. 35	6% of lesbians drank daily; 16% reported alcohol user treatment	None reported
McKirnan and Peterson (1989)	Chicago	Convenience	748 lesbians	Mean 32 yrs	Lesbians more likely to drink, but no difference in current levels of drinking. More likely to report alcohol use-related problems	Data from women in an earlier general population survey (see Clark & Midanik, 1982)

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Bloomfield (1993)	San Francisco	Random telephone survey	52 lesbians, 6 bisexual	Mean approx. 35 yrs	Lesbians less likely to drink; no differences in levels of drinking. More likely to be in recovery	397 heterosexual women
Skinner and Otis (1996)	Louisville and Lexington, Kentucky	Mailing lists, gay pride celebration	482 lesbians	Mean 34 yrs	Lesbians more likely to drink, drink frequently, and binge drink	Subsample of women in NHSDA
Welch et al. (1998)	New Zealand (national)	Convenience (mailing list)	561 lesbians	19–66 yrs; most 25-50	10% abstainers; overall low rates of drinking and "heavy" drinking.	None reported
Heffernan (1998)	Various cities in the United States	Convenience (variety of sources)	263	19–65 yrs; mean 37	28% abstainers, 0% "heavy" drinkers. Perceived stress and social resources did not differ	Published norms for women in the general population
Bergmark (1999)	Sweden (national)	Convenience (gay/lesbian organization mailing list)	Approx. 500 lesbians	34 yrs	5% abstainers; lesbians drinking patterns and problems more similar to gay men's that to other women	2 national general population surveys in Sweden
Hughes et al. (2000)	Chicago, New York City, Minneapolis	Convenience	550 lesbians	20–86 yrs; mean = 42 yrs	Lesbians less likely to drink, more likely to report alcohol user treatment	279 demographically matched heterosexual women

Table 2. General population studies.

Authors/year (source of data)	Alcohol dependence: Same-sex partner (%)	Alcohol dependence: No same-sex partners (%)
Cochran and Mays (2000) (U.S. National Household Survey, $n = 84$[a])	7	2.2
Sanfort et al. (2001) (Netherlands, NEMESIS Study, $n = 43$[a])	11.6	1.8
Gilman et al. (2001) (U.S. National Comorbidity Survey, $n = 51$[a])	15.3	4.1

[a]Number of women in sample reporting same-sex partners.

consent to participate by signing the consent form. After obtaining informed consent, face-to-face interviews were conducted by one of nine trained interviewers in private settings by using a slightly adapted version of the instrument from the NSHLEW. The interviewers were all women; three were Hispanic, three African American, and three were white. Most of them held graduate degrees in public health or education and all identified as lesbian or bisexual, or as a lesbian/bisexual "ally." Interviews were conducted in private settings, primarily in respondents' homes, and lasted about 90 minutes. The participants were given $25.00 in appreciation for their time.

Instrument and Measures

The Health and Life Experiences of Women (HLEW) questionnaire has been developed over the past 20 years and used in five waves of data collection (1981, 1986, 1991, 1996, and 2001) with almost 2000 U.S. women. The HLEW was designed in cooperation with the National Opinion Research Center to gather data on drinking behavior and drinking-related problems, physical and mental health, and a variety of life experiences. The 86-page instrument contains more than 400 questions that assess the individual and combined effects of a large number of variables identified in previous theory or research as being associated with women's drinking (e.g., social roles, relationship characteristics, depression and anxiety, physical and sexual abuse). Questions, indexes, and scales used in the initial (1981) HLEW were selected, whenever possible, from instruments that had been well validated in previous research. The HLEW has been extensively pretested prior to each wave

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of data collection and refined over time to retain variables with the greatest predictive value. We also pretested the questionnaire in two focus groups of lesbians in Chicago.

Sexual Orientation

Several studies have found that health risks differ substantially when same-sex sexual behavior vs. lesbian (or gay) self-identity is used as the criteria for sample selection or analysis (Chng and Geliga-Vargas, 2000; Gomez et al., 1996; Markovic et al., 2001). Because we are most interested in how sexual identity influences drinking behaviors, we used responses to the following question as our criterion for sample selection and for analysis: "Recognizing that sexuality is only part of your identity, how do you define your sexual identity?" Women are included in the heterosexual group if they answered "only heterosexual" or "mostly heterosexual" to the question about sexual identity. Similarly, lesbians are those who answered that they are "mostly or only" homosexual, or lesbian, or gay. Because we did careful telephone screening prior to scheduling interviews, no bisexual women were included in the pilot study.

The HLEW includes a number of other questions that ask about sexual attraction and sexual behavior over the lifetime and the past five years, and about current and past relationships. By including multiple measures of sexual orientation, alcohol use and other health behaviors can be examined by using different dimensions of sexual orientation.

Drinking Variables

The instrument includes numerous measures that assess drinking patterns, drinking-related problems, and attitudes toward drinking (e.g., drinking expectancies). Respondents also were asked about drinking contexts, including drinking settings and companions (e.g., frequency of drinking in bars, drinking at home alone). The analyses reported here focus on drinking levels and drinking-related problems.

Drinking levels. Drinking frequency, quantity, average drink sizes, and alcohol content for all types of beverages were combined to calculate average daily consumption in ounces of ethanol and to classify respondents' levels of drinking as "light" drinkers (<0.22 ounces/day), "moderate" drinkers (0.22–0.99 ounces/day), and "heavy" drinkers (≥ 1 ounce/day).

Drinking-related problems. We included several measures of drinking-related problems, including questions about adverse drinking

consequences (e.g., driving while drunk or high from alcohol, complaints about drinking by a partner, or having an accident related to drinking). Examples of questions that assess symptoms of alcohol dependence include those related to blackouts, rapid drinking, and inability to stop drinking before becoming intoxicated. Included in the alcohol dependence measure are the four (CAGE) questions (Mayfield et al., 1974). We also asked each respondent whether she had ever worried that she was developing a drinking problem and whether she had ever been treated for problems related to alcohol use.

Although the interviewer asked questions about multiple risk factors commonly linked to alcohol use among women in the general population, only a few of these will be discussed, including childhood sexual abuse (CSA), adult sexual assault, depression and anxiety, and suicidal ideation and attempts.

Childhood sexual abuse was measured by using questions developed by Russell (1983), Wyatt (1985), and others, that were pretested with three samples of women, one of which included members of a sexual abuse support group (Wilsnack et al., 1997). Questions ask about the following eight types of experiences before age 18: exposure (of the respondent's genitals), exhibitionism (by the perpetrator), touching/fondling (as initiator and recipient), sexual kissing, oral-genital activity (as initiator and recipient), and vaginal or anal intercourse. For each activity reported, follow-up questions ask about the number of other persons involved, the other person's or persons' relationship to the respondent; the respondent's and other persons' ages at first occurrence, and the respondent's feelings about the experience at the time it occurred. Consistent with definitions and ages used in previous analyses of data from the NSHLEW (Wilsnack et al., 1997) and the work of Wyatt (1985), the first measure of CSA (Wyatt CSA) included 1) any intrafamilial sexual activity before age 18 that was unwanted by the respondent or involved a family member five or more years older than the respondent or 2) any extrafamilial sexual activity that occurred before age 18 and was unwanted, or that occurred before age 13 and involved another person five or more years older than the respondent. A second measure (self-perception of CSA) consisted of responses to a single question (following the series of questions above) asking if the respondent felt that she had been sexually abused when she was growing up.

Adult sexual assault was measured by using the following single question: "Since you were 18 years old was there a time when someone forced you to have sexual activity that you really did not want (yes/no)?" Follow-up questions asked whether the unwanted sexual activity happened with: 1) a stranger or strangers; 2) a steady date or romantic

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partner; 3) current partner; 4) family member; 5) someone in a position of influence over the respondent (e.g., employer, teacher, therapist); or 6) someone else known to the respondent but not a family member.

Depression and anxiety. Lifetime experience of depression was measured by questions and diagnostic criteria of the NIMH Diagnostic Interview Schedule (Robins et al., 1981). We dichotomized lifetime depressive episodes into none vs. one or more. Lifetime and current anxiety was assessed by asking "have you ever/do you now consider yourself a nervous or anxious person about things that others would not usually worry about?"

Suicidal ideation and suicide attempts. Respondents were asked if they had ever felt so low that they wanted to die, and if they had ever attempted suicide. Age when the suicide attempts occurred was also assessed.

RESULTS

Description of the Sample

The sample included 63 lesbians and 57 heterosexual women. Although small, the sample is more diverse than those in most studies of lesbian health, which have consisted of predominately white, middle class, well-educated, and relatively young women. As reflected in Table 3, only a little more than one-third of the lesbians and heterosexual woman in the sample is white. More than one-fourth of the sample is African American and about one-fourth is Hispanic (Mexican, Puerto Rican, or Cuban). The remainder are Asian, Native American, or of another race/ethnicity. Because one of the criteria for participation in the study was fluency in the English language, all of the participants were born in the United States or had been in the United States for a number of years. No acculturation data were collected. The participants' ages ranged from 19–69 years; mean ages were 39 years for lesbians in the study and 42 years for heterosexual women. Although more than one-half of the sample had some post-high-school education, 16% of lesbians and 14% of heterosexual women had a high school education or less.

Relationship status was similar for the two groups: about one-half of both the lesbian and heterosexual women were either married or living with a partner in a committed relationship. Contrary to what many people assume about lesbians, almost 30% of the lesbian sample had been legally married. Only one lesbian was married at the time of

Table 3. Selected demographic characteristics of heterosexual and lesbian samples.

	Heterosexual women ($N = 57$) N (%)	Lesbians ($N = 63$) N (%)
Age		
18–19	1 (2)	1 (2)
20–29	13 (23)	17 (27)
30–39	14 (25)	21 (33)
40–49	10 (18)	7 (11)
50–59	12 (21)	12 (19)
60 or older	7 (12)	5 (8)
Race/ethnicity		
African American	16 (28)	17 (27)
White	22 (39)	23 (37)
Hispanic[a]	13 (23)	17 (27)
Other	6 (11)	6 (10)
Education		
High school or less	8 (14)	10 (16)
Some college or B.A./B.S.	30 (53)	37 (58)
Advanced degree	19 (33)	16 (25)
Employment		
Full-time	36 (63)	34 (54)
Part-time	9 (16)	11 (18)
Unemployed looking for work	5 (9)	6 (10)
Retired/disabled	6 (11)	6 (10)
Not looking for work	1 (2)	5 (8)
Annual income		
< $10,000	9 (16)	14 (22)
$10,000–49,999	35 (61)	33 (52)
$50,000 or greater	13 (23)	16 (25)
Relationship status[b]		
Married/in committed relationship	33 (58)	36 (57)
Living with partner/spouse	23 (40)	22 (35)
Children living at home	15 (26)	7 (11)

[a]Hispanic respondents were Mexican, Puerto Rican, or Cuban.
[b]Relationship categories are not mutually exclusive.

the interview. The fact that a substantial percentage of lesbians and heterosexual women lived alone is reflected in the findings on income: 22% of lesbians and 16% of heterosexual women reported household incomes of less than $10,000 per year. Less than one-fourth of the sample had household incomes of $50,000 or more.

Other than marital status, there were no significant differences between the lesbian and heterosexual groups on any of the key demographic variables. Because the two groups differed very little except for sexual orientation, differences more confidently can be attributed to sexual orientation.

Drinking Levels

Like the more recent studies reviewed earlier (i.e., Bloomfield, 1993; Hughes et al., 2000), in this study more lesbians (24%) than heterosexual women (16%) reported that they had not consumed alcohol in the past 12 months, though this difference was not statistically significant. However, a statistically greater percentage of lesbians (16%) than heterosexual women (2%) reported that they were in recovery ($p < 0.05$), a finding consistent with other studies of lesbians' drinking. Furthermore, significantly more lesbians (18%) than heterosexual women (2%) reported that they had been treated for problems related to AOD use ($p < 0.01$).

Among current drinkers, the majority of both lesbians and heterosexual women reported "light" (less than 1 drink/day on average) or "moderate" (1–2 drinks/day) drinking. Only 5% of lesbians and 2% of heterosexual women reported that they drank more than two drinks per day on average.

To explore earlier suggestions in the literature that lesbians may be more likely than heterosexual women to experience problems related to their alcohol use—even when levels of drinking are similar—we compared rates of adverse drinking consequences and dependence symptoms reported by each group. Lesbians were significantly more likely than heterosexual women to report having experienced one or more adverse drinking consequences in the past 12 months (36%, 15%; $p < 0.001$); a greater proportion of lesbians than heterosexual women also reported one or more dependence symptoms (27%, 15%) and CAGE symptoms (17%, 12%) in the past 12 months; however, differences were not statistically significant for these two measures.

One of the most dramatic differences between the two groups was found on responses to the question about self-perception of drinking problems. Almost one-half of lesbians (46%) compared with only 16% of the heterosexual women reported that they have wondered at some point in the past that they might be developing a drinking problem ($p < 0.001$). This finding may reflect greater knowledge about, or sensitivity to, issues related to excessive drinking in the lesbian community (Welch et al., 1998).

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Risk Factors

Childhood sexual abuse. In this study, rates of sexual abuse were very high for both lesbians (68%) and for heterosexual women (47%), but significantly more lesbians met Wyatt's definition of CSA ($p = 0.05$) (3 lesbians [5%] and 8 heterosexual women [14%] provided insufficient information to determine whether their sexual experiences met Wyatt's criteria for CSA). In addition, more lesbians reported that they perceived themselves as having been sexually abused as a child ($p < 0.05$). Interestingly, both lesbian and heterosexual women in the sample were more likely to meet the Wyatt CSA criteria than to perceive themselves as having been sexually abused as children. However, percentage agreement between these two measures was higher for lesbians (55%) than for heterosexual women (30%).

Rates of adult sexual assault (ASA) were similar for lesbians (39%) and heterosexual women (42%). However, although not statistically significant at the 0.05 level, there was a clear trend toward heterosexual women being more likely to report having been sexually assaulted by a current partner or by a date and lesbians being more likely to report sexual assault by a family member.

Depression and anxiety. Reports of depression and anxiety also were high in both groups of women. Based on measures included in the Diagnostic Interview Schedule, a measure that approximates the DSM criteria for clinical diagnosis of depression, 67% lesbians and 53% ($p = 0.08$) of the heterosexual women reported at least one episode of depression. There were no statistically significant differences in anxiety, either current (31%, 31%) or lifetime (51%, 41%).

Suicidal ideation and attempts. There was, however, a statistically significant difference between lesbians and heterosexual women on suicidal ideation. More lesbians (65%) than heterosexual women (40%) reported that they had considered killing themselves at some point in the past; 30% of lesbians and 21% of heterosexual women had made at least one suicide attempt. Most suicide attempts reported by lesbians occurred during their teens and 20s, ages that likely coincide with early stages in the process of sexual identity development, or ''coming out,'' which are often times of great uncertainty and stress.

We have begun to test some basic predictive models of alcohol abuse by using these data (Hughes et al., 2001). A latent measure of alcohol abuse was constructed from the three alcohol use problem measures and used in LISREL models. We found that CSA was associated with lifetime alcohol abuse in both lesbians and heterosexual women, but ASA was associated with alcohol abuse only in heterosexual women. This

finding may reflect different forms or severity of ASA experienced by lesbians and heterosexual women.

SUMMARY

The high rates of recovery and reports of previous alcohol user treatment, as well as the high rates of some of the posited risk factors such as CSA, depression, and suicidal ideation suggest that at least some lesbians are at heightened risk for alcohol abuse and problems related to alcohol use. However, findings from this and other recent research also suggest that alcohol abuse may be declining among lesbians as a group. Some reasons for this include the lessening social stigma and oppression of lesbians and gay men, greater awareness of substance abuse problems and concern for overall health, and changing norms associated with drinking in some lesbian and gay communities.

Clearly, the variables examined here do not fully explain which lesbians may be at heightened risk for problems related to alcohol use. A better understanding of a broader range of risk factors, including individual, environmental, and other systemic factors, as well as interactions among these factors are greatly needed. For example, we need to understand why some lesbians who were sexually abused as children develop problems related to alcohol use and others do not. Or, why some lesbians deal with stigma and discrimination by turning to alcohol to cope, while others use healthy coping strategies. Some women may have personal characteristics that make them more resilient to stress. Or, they may have access to environmental resources such as families or communities that are more tolerant and supportive. This hypothesis is supported by research focusing on depression among lesbians, indicating that lesbians, who have social support from friends and family are less likely to be depressed (Ayala and Coleman, 2000; Oetjen and Rothblum, 2000).

Implications for Research and Policy

To encourage the trend toward moderate alcohol use, more research is needed to better understand the dimensions of both "risk" and the "protective" factors for heavy drinking and drinking-related problems among lesbians and the necessary conditions for them to operate. However, myriad political obstacles, such as those that have prevented the inclusion of sexual orientation questions in national alcohol and drug

surveys, and methodological challenges, including problems recruiting representative samples, have thwarted research on lesbian health issues. With virtually no large-scale random surveys, and few large studies of any kind, public health researchers and policy makers have had to rely on small studies that use convenience samples. As pointed out elsewhere (e.g., Hughes et al., accepted), because the demographic profile of lesbians who participate in research often differs substantially from that of women in the general population, such comparisons can lead to erroneous conclusions.

Nevertheless, existing data, albeit limited, have clear implications for policy changes. For example, confidential counseling and support services in schools for lesbian, bisexual, or questioning youth are greatly needed. Early intervention programs that identify and treat young girls who have been sexually abused would also go a long way toward reducing the actual and/or potential ''risk'' of substance abuse and other mental health and adaptational problems.

Policies that address discrimination based on sexual orientation are needed. Despite a steady increase in the acceptance of homosexuality over the past two decades, there is still a great deal of discrimination against lesbians and gay men in the United States and in many other parts of the world. Stigma and discrimination are potent stressors that undoubtedly play a role in lesbians' use of alcohol (and other drugs). Laws are needed that protect against discrimination on the basis of sexual orientation in employment, housing, child custody, and adoption. Domestic partner benefits equal to those of married heterosexual couples are needed to provide protection for committed same-sex couples. Policy changes also are needed in health insurance policies, which routinely fail to cover same-sex partners or to provide reimbursement for procedures of particular relevance to lesbian populations. Changes such as these would go a long way toward ameliorating the stressors experienced by lesbians on a daily basis. This, in turn, should help to narrow the gap between lesbians' and heterosexual women's risk for alcohol abuse and other mental health problems.

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REFERENCES

Ayala, J., Coleman, H. (2000). Predictors of depression among lesbian women. *Journal of Lesbian Studies* 4(3):71–86.

Bergmark, K. H. (1999). Drinking in the Swedish gay and lesbian community. *Drug and Alcohol Dependence* 56:133–143.

Bradford, J., Ryan, C. (1987). The national health care survey: final report. Washington, DC: National Lesbian and Gay Health Foundation.

Bloomfield, K. A. (1993). A comparison of alcohol consumption between lesbians and heterosexual women in an urban population. *Drug and Alcohol Dependence* 33:257–269.

Chng, C. L., Geliga-Vargas, J. (2000). Ethnic identity, gay identity, sexual sensation seeking and HIV risk taking among multiethnic men who have sex with men. *AIDS Education & Prevention* 12(4):326–339.

Clark, W. B., Midanik, L. (1982). Alcohol use and alcohol problems among U.S. adults: results of the 1979 national survey In Alcohol and health: Alcohol consumption and related problems (pp. 3–52). National Institute on Alcohol Abuse and Alcoholism Alcohol. Monograph No. 1. (DHHS Pub. No. ADM 82-1190). Washington, DC: U.S. Government Printing Office.

Cochran, S., Mays, V. (2000). Relation between psychiatric syndromes and behaviorally defined sexual orientation in a sample of the US population. *American Journal of Epidemiology* 151(5):1–8.

Fifield, L. H., Latham, J. D., Phillips, C. (1977). *Alcoholism in the Gay Community*: *The Price of Alienation, Isolation, and Oppression*. Los Angeles, CA: Gay Community Services Center.

Gilman, S. E., Cochran, S. D., Mays, V. M., Hughes, M., Ostrow, D., Kessler, R. (2001). Risk of psychiatric disorders among

individuals reporting same-sex sexual partners in the National Comorbidity Survey. *American Journal of Public Health* 91(6):933–939.

Gomez, C. A., Garcia, D. R., Kegebein, V. J., Shade, S. B., Hernandez, S. R. (1996). Sexual identity versus sexual behavior: implications for HIV prevention strategies for women who have sex with women. *Women's Health: Research on Gender, Behavior, and Policy* 2(1&2):91–109.

Heffernan, K. (1998). Nature and predictors of substance use among lesbians. *Addictive Behaviors: An International Journal* 23(4):517–528.

Hughes, T. L., Haas, A., Razzano, L., Matthews, A. K., Cassidy, R. (2000). Comparing lesbians and heterosexual women's mental health: Findings from a multi-site study. *Journal of Gay and Lesbian Social Services* 11(1):57–76.

Hughes, T. L., Johnson, T., Wilsnack, S. C. (2001). Sexual assault and alcohol abuse: a comparison of lesbian and heterosexual women. *Journal of Substance Abuse* 13:515–532.

Hughes, T. L., Wilsnack, S. C., Johnson, T. (accepted). Lesbians' mental health and alcohol use: research challenges and findings. In: Omoto, A., Kurtzman, H., eds. *Recent Research on Sexual Orientation*, *Mental Health*, *and Substance Abuse*. Washington, D.C: APA Books.

Hughes, T.L., Wilsnack, S. C. (1997). Use of alcohol among lesbians: research and clinical implications. *American Journal of Orthopsychiatry* 66(1):20–36.

Lewis, C. E., Saghir, M. T., Robins, E. (1982). Drinking patterns in homosexual and heterosexual women. *Journal of Clinical Psychiatry* 43(7):277–279.

Lohrenz, L., Connely, J., Coyne, L., Spare, L. (1978). Alcohol problems in several Midwest homosexual populations. *Journal of Studies on Alcohol* 39:1959–1963.

Mayfield, D., McLeod, G., Hall, P. (1974). The CAGE questionnaire: validation of a new alcoholism screening instrument. *American Journal of Psychiatry* 131:1121–1123.

Markovic, N., Aaron, D. J., Danielson, M. E. (2001, June). Using sexual identity vs. behavior among lesbian and bisexual women to assess health status. Presented at the National Lesbian Health Conference, San Francisco, CA.

McKirnan, D. J., Peterson, P. L. (1989). Alcohol and drug use among homosexual men and women: epidemiology and population characteristics. *Addictive Behaviors* 14:545–553.

Morales, E. S., Graves, M. A. (1983). Substance abuse: Patterns and barriers to treatment for gay men and lesbians in San Francisco. San Francisco: Department of Public Health.

Oetjen, H., Rothblum, E. (2000). When lesbians aren't gay: factors affecting depression among lesbians. *Journal of Homosexuality* 39:49–73.

Robins, L. N., Helzer, J. H., Croughan, J., Ratcliff, K. S. (1981). The NIMH diagnostic interview schedule: its history, characteristics, and validity. *Archives of General Psychiatry* 38:381–389.

Russell, D. E. H. (1983). The incidence and prevalence of intrafamilial and extrafamilial sexual abuse of female children. *Child Abuse and Neglect* 7:133–146.

Saghir, M. T., Robins, E., Walbran, B., Gentry, K. (1970). Homosexuality: IV. Psychiatric disorders and disability in the female homosexual. *American Journal of Psychiatry* 127:147–154.

Skinner, W. F. (1994). The prevalence and demographic predictors of illicit and licit drug use among lesbians and gay men. *American Journal of Public Health* 84(8):1307–1310.

Skinner, W. F., Otis, M. D. (1992, October). Drug and alcohol use among lesbian and gay people: Findings, research, design, insights, and policy issues from the Trilogy Project. In Proceedings of the Research Symposium on Alcohol and other Drug Problem Prevention among Lesbians and Gay Men Sacramento, CA: Evaluation, Management, and Training Group, pp. 34–60.

Skinner, W. F., Otis, M. D. (1996). Drug and alcohol use among lesbian and gay people in a Southern US sample: epidemiolgical, comparative, and methodological findings from the trilogy project. *Journal of Homosexuality* 30(3):59–91.

Sandfort, T. G. M., de Graaf, R., Bijl, R. V., Schnabel, P. (2001). Same-sex sexual behavior and psychiatric disorders: Findings from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). *Archives of General Psychiatry* 58(1):85–91.

Welch, S., Howden-Chapman, P., Collings, S. (1998). Survey of drug and alcohol use by lesbian women in New Zealand. *Addictive Behavior* 23(4):543–548.

Wilsnack, S. C., Klassen, A. D., Shur, B. E., Wilsnack, R. W. (1991). Predicting onset and chronicity of women's problem drinking: a five-year longitudinal analysis. *American Journal of Public Health* 81:305–318.

Wilsnack, R. W., Wilsnack, S. C., Klassen, A. D. (1984). Women's drinking and drinking problems: patterns from a 1981 national survey. *American Journal of Public Health* 74(11):1231–1237.

Wilsnack, S. C., Wilsnack, R. W., Kristjanson, A. F., Vogeltanz, N. D., Harris, T. R., Crosby, R. D. (1997). Childhood and parental predictors of women's drinking. *Alcoholism*: *Clinical and Experimental Research* 21(3):62A.

Wyatt, G. E. (1985). The sexual abuse of Afro-American and white-American women in childhood. *Child Abuse & Neglect* 9:507–519.

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