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## ESTIMATING PREVALENCE OF MENTAL AND SUBSTANCE-USING DISORDERS AMONG LESBIANS AND GAY MEN FROM EXISTING NATIONAL HEALTH DATA

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Over the past half century, perspectives on the relationship between homosexuality and mental health disorders have undergone at least three major transformations (Cochran, 2001). These transformations have both influenced and been influenced by the normative research methodologies used by scholars in the field. For example, if one goes back to the early 1970s, social and medical scientists presumed, like most of America, that homosexuality was psychopathology (Stein, 1993). Thus, it was reasonable, and not especially biasing, to look for lesbians and gay men in psychiatric settings. It is not surprising that these researchers found high levels of psychiatric difficulties in their lesbian and gay male participants. It took

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pioneering work by Evelyn Hooker, a psychologist from the University of California, Los Angeles (UCLA), in the late 1950s (Hooker, 1993), and others who recruited nonpsychiatric samples to demonstrate empirically that homosexuality was not ipso facto psychopathology.

In a second wave of social science research beginning with some enthusiasm in the 1970s (Bell & Weinberg, 1978; Nurius, 1983; Saghir, Robins, Walbran, & Gentry, 1970; Siegelman, 1972; Thompson, McCandless, & Strickland, 1971), social scientists now presumed that lesbians and gay men were not necessarily sick. However, they still needed to recruit participants from a small, hidden population. At the time, lesbians and gay men lacked widely visible social institutions or presence in the American consciousness, so social scientists looked for sites in which lesbians and gay men were thought most likely to congregate, such as gay bars, bath houses, and occasional feminist and gay political or social meetings. The research repeatedly found no elevation in rates of general psychiatric morbidity, for the most part, among gay men and lesbians when compared with heterosexual men and women. But as might be expected, these scientists also found that lesbians and gay men drank alcohol and used drugs more than other women and men (Fiefield, 1975; Lohrenz, Connely, Coyne, & Spare, 1978) and, parenthetically, were predominantly feminists or gay activists (Peplau, Cochran, Rook, & Padesky, 1978). Often these studies included no comparison groups of heterosexuals, making it difficult to interpret the observed prevalences of disorders. The characteristics of these samples reflected the characteristics of the populations from which they were drawn. Confounding of outcome variables with selection strategies continued to be an important methodological weakness of this early work.

In a third wave of research evolving over the past 15 years, scientists began to revisit the question of possible excess psychiatric morbidity among lesbians and gay men, influenced by the HIV epidemic and by increasing interest in the social sciences, in general, in the possible harmful effects of social inequality due to social status, including ethnicity, race, gender, and social class (Fife & Wright, 2000; Kessler, Mickelson, & Williams, 1999; Markowitz, 1998; Mays & Cochran, 1995, 1998, 2001; Mays, Cochran, & Roeder, 2004; Meyer, 1995; Otis & Skinner, 1996; Wright, Gronfein, & Owens, 2000). Many in the field of lesbian and gay psychology (Haldeman, 1991; Herek, Gillis, Cogan, & Glunt, 1997; Rothblum, 1990) noted that lesbians and gay men face particular social stressors over the course of their lives, especially in adolescence and young adulthood, including harassment and maltreatment (Bradford, Ryan, & Rothblum, 1994; Corliss, Cochran, & Mays, 2002), discrimination (Cochran & Mays, 1994; Mays, Cochran, & Rhue, 1993), and victimization (D'Augelli, Hershberger, & Pilkington, 1998; Herek & Berrill, 1992). Psychosocial models of stress-induced distress



predict that these experiences, if common and severe enough, should lead to higher rates of distress and some stress-sensitive mental disorders (Dohrenwend, 2000; Kendler et al., 1995; Lin & Ensel, 1989; Mazure, 1995; Meyer, 1995).

The methodology of this third wave of research was shaped by a growing sophistication in research on gay life, generated in part by the influx of funding attached to HIV-related studies, which enabled researchers interested in gay topics to pursue them in a much more rigorous and comprehensive manner. This work for the first time put scientific articles addressing gay life somewhat routinely into top medical and behavioral science journals. To do this, researchers (Bradford et al., 1994; Cochran, Bybee, Gage, & Mays, 1996; Cochran et al., 2001; Mays & Cochran, 1988; McKirnan & Peterson, 1989; Otis & Skinner, 1996; Skinner, 1994; Skinner & Otis, 1996; Sorensen & Roberts, 1997) had to overcome the methodological limitations of earlier studies, such as small sample sizes and restricted sampling frames of dubious generalizability. This was accomplished by several changes in common research methodologies then used. These changes included using multiple recruitment strategies to reduce sampling bias, increasing the numbers of respondents in studies to enhance power, and seeking out reference estimates for the prevalences of psychiatric morbidity that were observed. Scientists became increasingly sophisticated in the use of snowball strategies, membership lists, and street recruitment to develop more diverse samples consistent with the diversity of the lesbian and gay male population. Surveys were conducted at women's music festivals, the marches on Washington, and the gay pride festivals. Also sample sizes ballooned from rather small numbers to fairly large ones including several thousand participants or more (Cochran et al., 2001; Gage, 1994; McKirnan & Peterson, 1989), though comparably sampled groups of heterosexuals remained rare. Finally, researchers began to attempt comparisons to population-based estimates of mental health morbidity. For example, in our own research (Cochran & Mays, 1994) in a study published in the early 1990s, we compared depressive distress measured in large samples of African American lesbians and gay men with published population-based estimates for African American women and men, finding much higher rates of depression in the lesbian and gay male samples. In a second study (Cochran et al., 1996), we contrasted prevalence of crack and cocaine use among nearly 8,000 lesbians from two independently conducted surveys with estimates for U.S. women generated separately from national health data. We found much higher rates of crack or cocaine use among lesbians than would be expected among women in general.

This strategy of comparing estimates from convenience-based samples with population-based estimates has many obvious limitations. As an



example, Bell and Weinberg (1978), in a classic study of gay men and lesbians from the late 1970s, the results of which are still widely cited today, recruited heterosexual women by population-based household sampling, but the sampling frame for lesbians was developed by using public advertising (18%), bar attendance (30%), mailing lists (9%), and personal social networks (42%). It is not surprising that this methodology found that lesbians as compared with heterosexual women were more likely to report such behaviors as being arrested. But one wonders if arrest rates among heterosexual women would have differed much from those of lesbians if 30% of these women, too, had been recruited from local bars that at the time put women at risk for arrest.

Sampling bias and the absence of heterosexual control groups stand as two of the major difficulties today in interpreting the body of empirical evidence that has accumulated suggesting that lesbians and gay men experience greater than expected rates of depression, alcohol and drug use, and psychiatric help-seeking (Alcohol, Drug Abuse, and Mental Health Administration [ADAMHA], 1989; Atkinson et al., 1988; Bux, 1996; Cochran, 2001; Cochran et al., 1996; Cochran & Mays, 1994; Cochran & Mays, 2000a; D'Augelli & Hershberger, 1993; D'Augelli et al., 1998; Faulkner & Cranston, 1998; Hershberger & D'Augelli, 1995; Hershberger, Pilkington, & D'Augelli, 1997; Hunter, 1990; McKirnan & Peterson, 1989; Remafedi, Farrow, & Deisher, 1993; Remafedi, French, Story, Resnick, & Blum, 1998).

Population-based psychiatric surveys that measure sexual orientation could go far in clarifying the nature of possible excess risk, but these have been extremely rare until quite recently. Two early studies, one using commercial lists to draw a random neighborhood sample (Bloomfield, 1993) and the other using neighborhood household sampling (Stall & Wiley, 1988), examined alcohol use patterns in gay men and lesbians recruited from high-density gay neighborhoods in San Francisco. Both found no strong evidence of excess risk of alcoholism in lesbians or gay men as compared with heterosexual women and men recruited in the same surveys. More recently, several studies (Faulkner & Cranston, 1998; Garofalo, Wolf, Wisow, Woods, & Goodman, 1999; Remafedi et al., 1998) have looked at the possibility of excess risk of suicide attempts among high school students in samples drawn by general population-based methods. These studies found that gay men, and perhaps lesbians, are, in fact, at higher risk than heterosexually classified individuals. In addition, there are two large, university-based women's health cohort studies under way, the Nurses' Health Study (Case, 1997) and the Women's Health Initiative (Valanis et al., 2000), that have measured sexual orientation, but neither represents population-based sampling.



## USING NATIONAL POPULATION-BASED DATA SETS

Since the late 1990s our research team at UCLA has increasingly turned to existing national health data sets to study issues related to psychiatric morbidity among lesbians and gay men (Cochran, 2001). The advantages to this pioneering technique are many. These data sets, often routinely collected by federal agencies to track the health of all Americans, offer a level of methodologic sophistication in sampling, survey development, quality control, and data collection procedures that is generally unavailable to most researchers. Second, they offer a population-based approach to estimating psychiatric burden in the lesbian and gay male population. This avoids common sources of sampling bias that plague volunteer-based surveys of individuals when respondents are recruited using sampling frames dependent on participation in the visible lesbian and gay male community. Convenience-based samples tend to draw heavily from specific demographic groups (e.g., young, White, male, highly educated), confounding the observed prevalences with other known correlates of mental health outcomes (Cochran, Keenan, Schober, & Mays, 2000). Third, both heterosexuals and lesbians and gay men, often from similar demographic settings, are recruited in these studies, offering opportunity to compare rates of morbidity across individuals. However, very few of these data sets actually include direct measures of sexual orientation or sexual behavior assessments that can be used as a proxy for sexual orientation.

### National Health and Nutrition Examination Survey III

In one of our early efforts (Cochran & Mays, 2000a), we capitalized on information that lay untouched in the Third National Health and Nutrition Examination Survey (NHANES III; Centers for Disease Control, 1996). The NHANES III is based on a complex, multistage sample of the civilian noninstitutionalized U.S. population. In the course of data collection from these participants in the years 1988 to 1994, those respondents who were between the ages of 15 and 39 years ( $N = 8,786$ ) were interviewed for presence of lifetime affective disorders and related symptoms, including suicidal behaviors. In addition, only men who were age 17 to 59 years ( $N = 5,731$ ) were asked the gender of their lifetime sexual partners. From these two questions we were able to select a final total sample of 3,503 men on whom we had information about both their sexual and psychiatric histories. These men were all between the ages of 17 and 39 years of age. Approximately 3% reported a history of sex with men. For the most part, these men did not differ demographically from other men who reported exclusively female sex partners. The one exception was a lower family income.



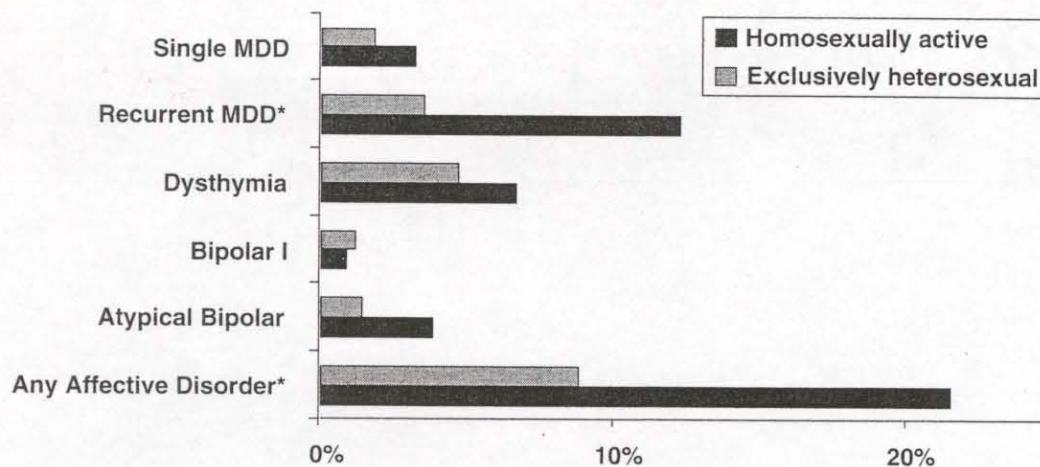


Figure 7.1. Lifetime prevalence of affective disorders among sexually active men, age 17–19, in the Third National Health and Nutrition Examination Survey. Data from Cochran and Mays (2000a). MDD = Major Depressive Disorder.

\* $p < .05$ .

When we examined prevalence of affective disorders in this same sample, comparisons of sexually active men revealed that those who reported any male sex partners during their lifetime were significantly more likely than exclusively heterosexually experienced men to meet diagnostic criteria for lifetime prevalence of recurrent depression (see Figure 7.1). These depressions also started early in life. Homosexually experienced men were 5 years younger ( $M$  age = 14.8 years,  $SE = 1.7$ ) than exclusively heterosexually experienced men ( $M$  age = 20.3 years,  $SE = 1.7$ ) when they first experienced depressive symptoms  $t(3501) = 2.48$ ,  $p < .05$ . In all, approximately 15% (confidence interval: 2.6%–28.0%) of men reporting any male sex partners met criteria in the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev., *DSM-III-R*; American Psychiatric Association, 1987). Overall they were also more likely to meet criteria for at least one of the affective disorders measured in the study (e.g., major depression, dysthymia, bipolar I disorder, or atypical bipolar disorder).

The other major finding from this study pertained to histories of suicidal symptoms. Like others (Faulkner & Cranston, 1998; Fergusson, Horwood, & Beautrais, 1999; Herrell et al., 1999; Remafedi et al., 1998), we found greater prevalence of prior suicide attempts among homosexually experienced men (see Figure 7.2). But this risk appeared concentrated in younger age groups. All but one of the homosexually experienced men interviewed who reported a prior suicide attempt were under age 30 at the time of the interview,  $\chi^2(1, N = 3,503) = 9.21$ ,  $p < .01$ . In contrast, among heterosexually experienced men, age at the time of interview was unrelated to positive reports of suicide attempts.



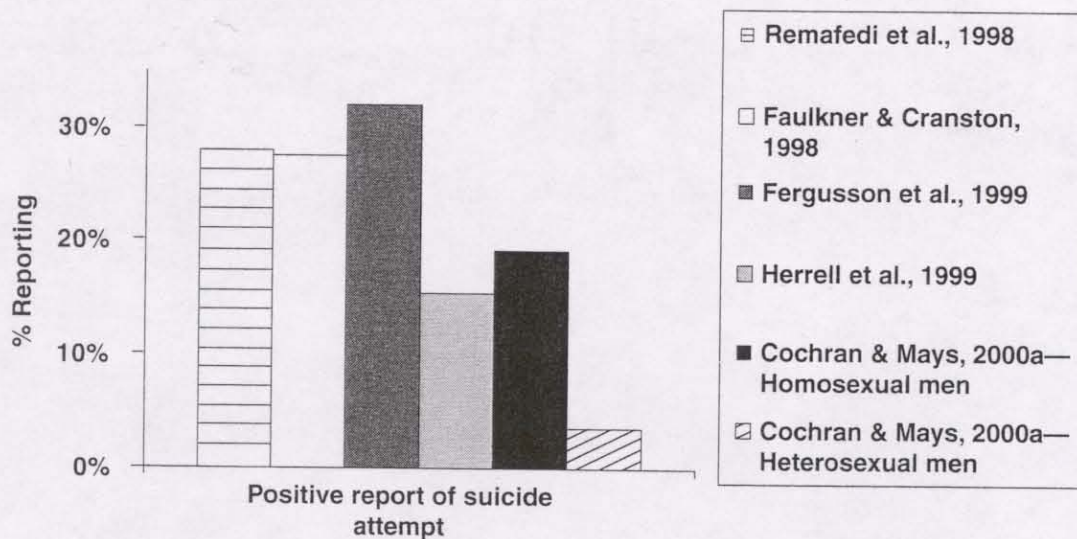


Figure 7.2. Lifetime prevalence of suicide attempts among homosexually active males (vs. exclusively heterosexual males in the Third National Health and Nutrition Examination Survey).

From this study, we drew three major conclusions. First, despite whatever increased risk we observed, most homosexually experienced men did not evidence positive lifetime histories of affective disorders. Second, men with homosexual histories may be at somewhat increased risk for recurrent major depressions. Because of the difficulties associated with the small numbers of possibly gay men in NHANES III and the ways in which controlling demographic confounding seemed to attenuate differences to close to chance levels, we were a bit tentative in this second conclusion. The third finding of importance was, again, the documenting of greater risk for prior suicide attempts among probable gay men. We observed that these men were five times as likely to report having attempted suicide than those classified as heterosexual. Nevertheless, the prevalence we observed was somewhat lower than that found in three surveys involving youths (Faulkner & Cranston, 1998; Fergusson et al., 1999; Remafedi et al., 1998) but similar to another survey involving adult men (Herrell et al., 1999). In the NHANES III, reports of prior suicide attempts among homosexually experienced men were clustered among those under 30 years of age. This supports other work (ADAMHA, 1989; D'Augelli & Hershberger, 1993; D'Augelli et al., 1998; Faulkner & Cranston, 1998; Hershberger & D'Augelli, 1995; Hershberger et al., 1997; Hunter, 1990; Remafedi et al., 1993, 1998) that emphasizes the risk of suicide attempts among gay youths. At the same time, our findings, as well as those of Herrell et al. (1999), suggest that this elevated risk might not continue through later adulthood.



## National Household Survey on Drug Abuse

In a second study (Cochran & Mays, 2000b), we used data from the 1996 National Household Survey on Drug Abuse (NHSDA) produced by the Substance Abuse and Mental Health Services Administration (SAMHSA; 1996b). Like the NHANES III, the NHSDA is a national household probability sample of the noninstitutionalized civilian U.S. population. In that year, serendipitously, the interview indirectly measured homosexuality in adults by asking a single question concerning the genders of sex partners in the year prior to interview. Also, the survey collected information on both alcohol and drug use and the presence of six psychiatric syndromes (SAMHSA, 1996a). Four were measured because of a general interest by SAMHSA in studying comorbidity between drug and alcohol use and psychiatric disorders. The other two were alcohol and drug dependency syndromes. Diagnoses were made on the basis of what is coming to be called syndromal diagnosis, that is, there is no attempt to establish that the participants meet all diagnostic criteria by some gold standard such as *DSM-III-R*. Instead, a positive diagnosis represents probable caseness for the disorder in question. It is best to think of it as a positive screening decision (Epstein & Gfroerer, 1995). Syndromal, as opposed to diagnostic, methods are typically used in survey research to limit respondent burden.

In all, the 1996 NHSDA interviewed over 12,000 ( $N = 12,387$ ) adults. Of these, 79% of women and 78% of men reported only opposite-gender sex partners. But 1% of women and 2% of men indicated that they had had sex with at least one same-gender sex partner in the past year. These individuals were classified as probable lesbians or gay men.<sup>1</sup> An additional 20% of women and men reported no sex partners and were dropped from the study.

As in the NHANES III, there were few demographic differences between those of differing sexual orientation. Probable lesbians were somewhat younger than the women we classified as heterosexual. And probable gay men were significantly more educated than probable heterosexual men. Otherwise, there were no statistically significant differences in demographic backgrounds. The typical demographic skewing frequently observed in

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<sup>1</sup>The association between lesbian or gay male sexual orientation as an identity and homosexual sexual behavior is not invariant. In a population-based sample of Americans, we estimated (Cochran et al., 2000), using data from Laumann et al.'s (1994) survey of Americans and sexuality, that perhaps half of individuals who report same-gender sexual behavior in adulthood will identify as lesbian, gay, or bisexual if asked, but fewer than 2% of heterosexuals will report adult same-gender sexual contact. Thus, sexual behavior as a proxy accurately classifies heterosexuals, but many with same-gender sexual contact are in fact misclassified heterosexuals. Bailey (1999) noted that this may result in overestimation of psychiatric risk among sexual minorities because heterosexuals with psychiatric disorders may be more likely to have positive histories of homosexual sexual behavior than heterosexuals without such histories.



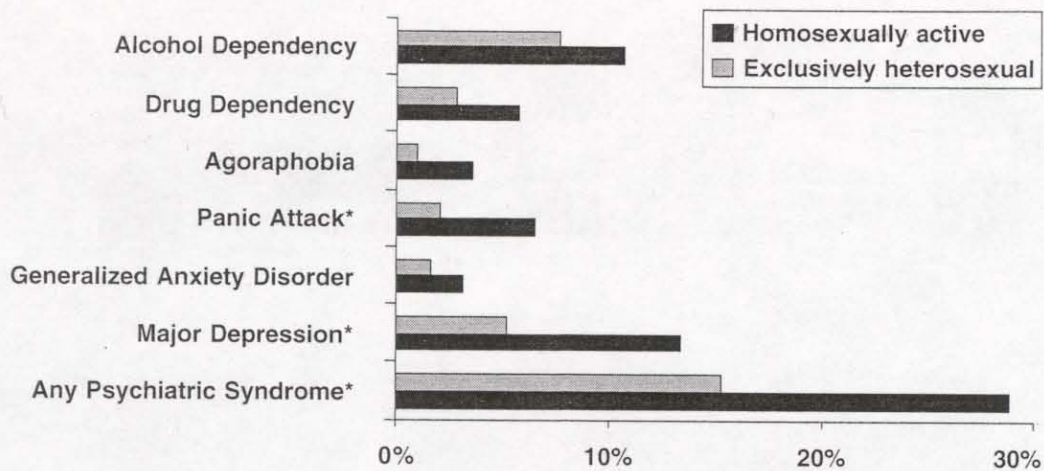


Figure 7.3. One-year prevalence of psychiatric syndromes among sexually active men in the 1996 National Household Survey on Drug Abuse. Data from Cochran and Mays (2000b).

\* $p < .05$ .

convenience-based surveys of lesbians and gay men to profiles that are overwhelmingly younger, more male, more educated, and more White than the U.S. population was relatively absent in both of the two national data sets.

The 1996 NHSDA, as noted previously, measured six psychiatric syndromes. Because men and women vary substantially in the prevalence of these disorders, we examined differences separately by gender. Among men, probable gay men were significantly more likely than probable heterosexual men to meet syndromal criteria for 1-year prevalence of major depression and panic attack (see Figure 7.3). But they did not differ from other men in their prevalence of generalized anxiety disorder, agoraphobia, drug dependency, or alcohol dependency. These findings related to depression are consistent with our earlier study using the NHANES III and provide further support for concerns that gay men may in fact experience somewhat greater risk for major depression than heterosexual men. In addition, to our knowledge, there has been only one prior study of the prevalence of anxiety disorders among gay men, and in that study all of the participants were ill with HIV disease (Atkinson et al., 1988). To what extent the excess risk for panic attacks in probable gay men that we observed in our study is or is not related to coping with the HIV epidemic is simply unknown.

When analyses were conducted examining possible differences between probable lesbians and probable heterosexual women, we observed a different pattern of excess risk (see Figure 7.4). Although probable lesbians were no more likely to meet criteria for depression or the anxiety syndromes assessed, they were significantly more likely to evidence drug and alcohol dependency syndromes. Questions about excess morbidity for drug and



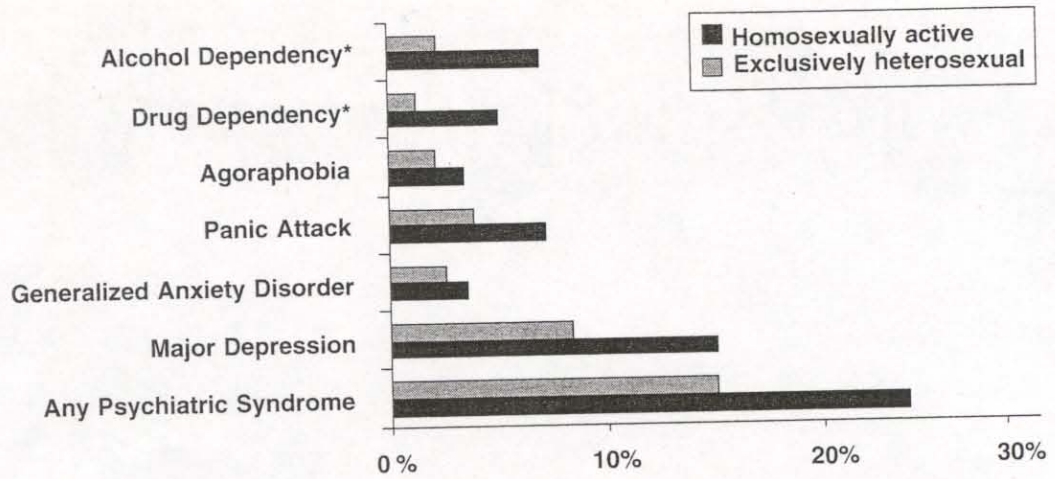


Figure 7.4. One-year prevalence of psychiatric syndromes among sexually active women in the 1996 National Household Survey on Drug Abuse. Data from Cochran and Mays (2000b).

\* $p < .05$ .

alcohol use in the lesbian and gay community are a long-standing concern of researchers (Burgard, Cochran, & Mays, 2005; Bux, 1996; Cochran, Ackerman, Mays, & Ross, 2004; Cochran et al., 1996; Cochran, Keenan, Schober, & Mays, 2000; Cochran & Mays, 1999; Cochran, Sullivan, & Mays, 2003; McKirnan & Peterson, 1989; Paul, Stall, & Bloomfield, 1991). Our findings concerning drug and alcohol dependency were consistent, in part, with prevailing views that social factors and discrimination greatly encourage dysfunctional alcohol and drug consumption in the gay community, at least for women (Bux, 1996; Hughes & Wilsnack, 1994; McKirnan & Peterson, 1989; Paul et al., 1991). But there is another viable possibility. Perhaps the greater prevalence is simply a consequence of the greater prevalence of functional alcohol and drug use in the community. How is this possible? Continuity models of risk factors for morbidity assume that risk accrued to individuals is dependent to some extent on the extent to which behaviors that create the risk are prevalent in the population (Cochran et al., 2000; Rose, 1989). So those populations with higher mean intake of alcohol will experience greater prevalence of alcohol-related morbidity simply because more individuals are placed at risk for developing disorders. If one takes two hypothetical populations with nearly the same distribution but in one most people do not drink and in the other most people drink some, then even if the right-handed tail (of higher alcohol consumption) has the same shape, in the population in which most people drink some there will be greater density in the heavy drinking category. From this perspective, it may be that lesbians are at greater risk for drug- or alcohol-related disorders simply because, on the whole, they are more



likely than other women to consume drugs and alcohol routinely and in moderation (Cochran et al., 2000).

There is certainly support for this perspective in the 1996 NHSDA (Cochran et al., 2000). For example, probable lesbians were more likely than other sexually active women to indicate that they had consumed alcohol (no matter what the time frame of interest in the question asked) and did so more frequently and in larger amounts. These women also began drinking at a younger age than women who had only male sex partners.

Finally, we also estimated in this study that both men and women who reported same-gender sex partners were significantly more likely than others to indicate that they had received mental health or substance use services in the year prior to interview. This suggests lesbians and gay men may be overrepresented among those seeking and receiving psychological treatment. This should concern us because other studies have demonstrated that lesbians and gay men face particular difficulties in receiving adequate and appropriate mental health care (Cochran, 2001; Garnets, Hancock, Cochran, Goodchilds, & Peplau, 1991; Mays, Beckman, Oranchak, & Harper, 1994).

From this survey we drew four major conclusions. As with the earlier study, we found further evidence that probably around three fourths of lesbians and gay men did not meet criteria for recent psychiatric disorders. The fact that both the NHANES III and the 1996 NHSDA are population-based samples drawn without reference to either sexual orientation or levels of psychopathology supports the view that homosexuality is not usually accompanied by psychiatric disturbance. Despite this, we again found some increased risk for some psychiatric disorders, though differentially for men and women. For men, the risk appears to lie in major depressions and perhaps panic attacks. For women, the greater risk is from alcohol and drug dependency. We could not examine prevalence of suicidal symptoms because the NHSDA does not directly measure these.

### National Comorbidity Survey

In an effort to further explore these ideas, we collaborated with researchers from the National Comorbidity Survey in a third study (Gilman et al., 2001) using data from this national household survey of more than 8,000 respondents representative of the U.S. population, age 15 to 54 years. Ronald Kessler at Harvard University is the principal investigator for this study, partially funded by both the National Institute on Drug Abuse and the National Institute of Mental Health. From reports of the genders of sexual partners in the subset of the sample who were questioned ( $n = 5,877$ ) about their sexual histories, we divided the sample into those who reported



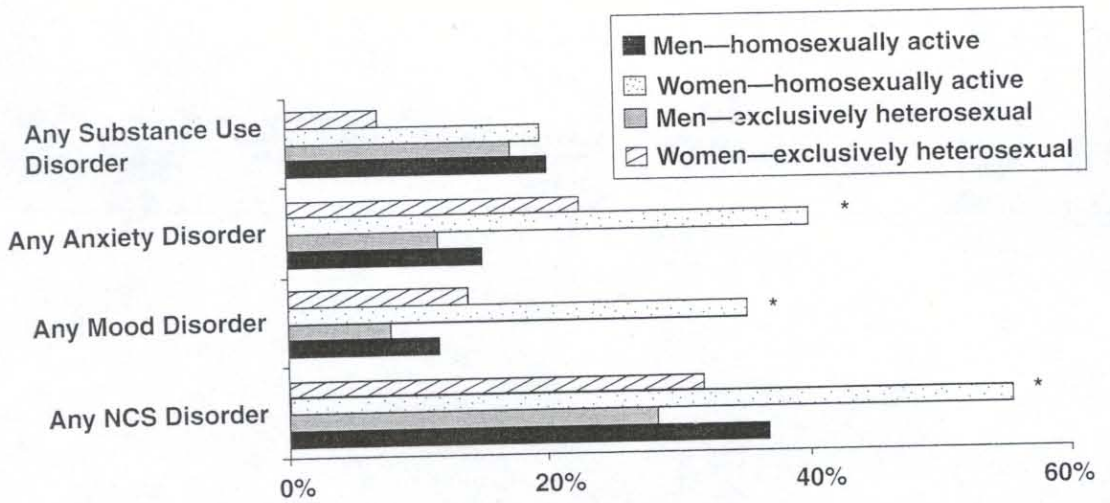


Figure 7.5. One-year prevalence of psychiatric syndromes among sexually active women and men in the National Comorbidity Survey (NCS). Data from Gilman et al. (2001).

\* $p < .05$ ., comparisons within gender.

only opposite-gender sexual partners in the 5-year period prior to interview (97% of sexually active individuals) and those (3% of sexually active men and 2% of women) who reported at least one same-gender sexual partner, to compare prevalence of lifetime and 1-year psychiatric disorders using DSM-III-R criteria. Like the other two studies, there were few demographic differences between those individuals we classified as probably heterosexual or lesbian, gay, or bisexual. As with the previous two studies, there was some elevation of risk for 1-year prevalence of anxiety, mood, and substance use disorders among homosexually active persons, but it achieved statistical significance only among women and only for depression, posttraumatic stress disorder, and simple phobia (see Figure 7.5). No statistically significant differences were observed between homosexually and exclusively heterosexually active men, though in part that appeared due to the limited power we had. Further analyses showed that the elevated 1-year risk we found for women was largely due to higher lifetime prevalences rather than to earlier ages of onset or greater persistence of disorders.

This third study again demonstrated the existence of excess risk for psychiatric morbidity among a small subset of individuals reporting same-gender sexual behavior. But it is important to underscore that all three of these studies did not measure sexual orientation directly. As has been noted (Bailey, 1999), there may be substantial bias introjected by use of a sexual behavior proxy for sexual orientation because, for example, heterosexuals experimenting with same-gender sexual behavior will be included in the



homosexually classified sample and, because of the rarity of homosexuality in the population, these misclassified heterosexuals may even outnumber the correctly classified lesbians and gay men (Cochran, 2001).

### **National Survey of Midlife Development in the United States**

To overcome this limitation, we recently completed another study (Cochran et al., 2003) examining risk for psychiatric disorders using data from the National Survey of Midlife Development in the United States, a nationally representative survey of adults age 25 to 74 years (Brim et al., 1996) funded by the MacArthur Foundation. This household telephone and questionnaire-based survey assessed 1-year prevalence of depressive, anxiety, and substance dependency disorders and mental health treatment utilization among 2,917 respondents self-identified as homosexual, bisexual, or heterosexual. As with the previous studies, demographic differences among individuals of different sexual orientation were few, providing further evidence that convenience-based sampling has probably injected predictable volunteer-biasing effects (Rothman & Greenland, 1998) into many studies that have been reported over the years. Results from these four population-based studies, as well as work done elsewhere (Alm, Badgett, & Whittington, 2000) hint that the demographic distribution of lesbians and gay men may be fairly similar to that of other Americans in racial and ethnic background, for example. In gender-specific analyses, we found evidence of higher rates of depression and panic attacks in gay and bisexual men as compared with heterosexual men (see Figure 7.6). In contrast, we observed only higher rates of generalized anxiety disorder in lesbian and bisexual women as compared with heterosexual women. Respondents were also asked to rate their mental health at two ages: currently and at age 16 years. Among men, gay and bisexual men rated both their current and their retrospective mental health as significantly worse than did heterosexual men. Among women, this sexual-orientation-related difference was observed only for ratings of mental health at age 16. At the time of being surveyed, lesbian and bisexual women did not report higher rates of psychological distress than did heterosexual women. An important observation in this study was greater prevalence of psychiatric comorbidity in both lesbian or bisexual women and gay or bisexual men as compared with their same-gender counterparts. In addition, rates of mental health treatment utilization were higher among lesbian, gay, and bisexual (LGB) individuals when compared with heterosexual women and men.

Taken as a whole, results of these studies support concerns that some lesbians and gay men experience somewhat higher rates of stress-sensitive psychiatric disorders than other Americans and may be more likely to use



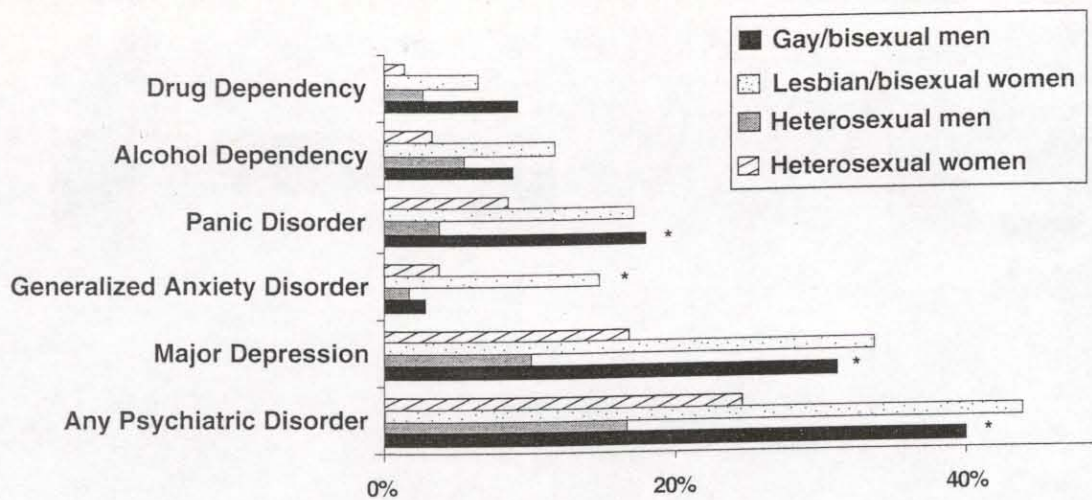


Figure 7.6. One-year prevalence of psychiatric syndromes among sexually active women and men in the National Survey of Midlife Development in the United States. Data from Cochran et al. (2003).

\* $p < .05$ ., comparisons within gender.

mental health services in the United States. At the same time, the excess risk does not mean that lesbians and gay men universally experience mental health problems. In each of these studies somewhere between half and three quarters of sexual minority respondents did not meet criteria for any measured disorder. Given the very small numbers of possibly LGB individuals surveyed in each of these studies and our limited understanding of the potential effects of nonresponse and response bias in the results we observed (Cochran, 2001; Cochran et al., 2000), the results should be viewed as still tentative at this time.

## FUTURE DIRECTIONS

Clearly there are many, many questions remaining. For example, we do not know or understand the causes of these observed differences. And these four studies are only initial, and imprecise, estimates of the broad range of differences in the burden of mental health disorders that might exist. Future work, including ongoing studies from our research group, can profitably explore linkages between social factors, such as discrimination, and mental health outcomes in LGB populations. Further, given the small numbers of individuals identified as lesbian, gay, or bisexual in each of these studies, specification of how other demographic factors such as age, race, or ethnicity interact with sexual orientation is currently beyond the reach of this methodology, though future work may remedy this limitation.



In conclusion, national health surveys offer a rarely tapped means of estimating mental health risks and morbidity among lesbians and gay men and may represent an important methodologic improvement in the next wave of research on mental health issues in this population. As the Women's Health Initiative (Valanis et al., 2000) and the Nurses' Health Study (P. Case testimony, cited in Solarz, 1999), have discovered, asking women directly about their sexual orientation does not affect rates of participation or responses. In addition, the NHANES 2000 is currently experimenting with a sexual orientation question, which, if all goes well, means that within a decade there will be a rich data set available to ask and answer the many questions related to lesbian and gay health that remain unexplored.

Other federally collected health data sets, such as the annual National Survey on Drug Use and Health (NSDUH, formerly the National Household Survey on Drug Abuse) and the annual National Health Interview Survey, could provide additional leadership in establishing the nature and extent of mental health risk among lesbians and gay men if questions related to sexual orientation or same-gender sexual behavior were included or, in the case of the NSDUH, reinserted. Although some may wish to view the asking of sexual orientation questions in health surveys as a political play, we as researchers are very clear that it is not. To meet the federal mandate of disease surveillance for all in the U.S. population, federal agencies need to collect information on respondents' sexual orientation in those surveys where we have suspicions that sexual orientation is associated with differential rates of morbidity or mortality. This information, in some instances, may be as important as our need to collect data on other demographic characteristics such as gender, age, and ethnic or racial background. The importance of including sexual orientation concerns became evident in the recent construction of health promotion and disease prevention targets for *Healthy People 2010* (Mays & Cochran, 1999). Targets for preventive health efforts are decided on the basis of information obtained from national data, typically derived from data sets under the sponsorship of the National Center for Health Statistics and other federal agencies. When providers and policymakers concerned about lesbian and gay men's health began requesting that disease prevention targets be more inclusive of this population's health concerns beyond sexually transmitted disease control in gay men, the lack of existing data worked to prevent the inclusion of other disease targets in the official report. Some references to sexual orientation were eventually added to *Healthy People 2010* after extensive advocacy by organizations and individuals concerned about lesbian and gay health (Gay and Lesbian Medical Association, 2001).

But at the same time, one should not underestimate the hidden nature of lesbian and gay life, its nuances and values, or the extent of prejudice against this population, expressed, in part, in negative stereotypes



(Herek, 2000; LaMar & Kite, 1998; Mays & Cochran, 2001). Although it is extremely simple to include assessment of sexual orientation in a survey, that alone does not make the research team competent to conduct this work. Knowing how to make sense of the data in a manner that results in better health outcomes for the population is just as important as being able to collect it. For example, is the higher risk of alcohol dependency among lesbians seen in the 1996 NHSDA due to stress or really due simply to higher rates of functional drinking? The former interpretation is consistent with stereotypes, and some who are not knowledgeable about the lives of these women may think no further about the problem. But the latter, and far less pejorative, interpretation about this population is also consistent with the data. Both of these hypotheses have radically different implications for prevention of dysfunctional alcohol use. Over the last decade and a half, we have seen repeatedly in HIV-related research the ways in which researchers who were unfamiliar with the gay community have had difficulties making useful interpretations about relationships between behavior and outcomes.

We hope that the federal government, as well as individual researchers, will not repeat many of the techniques used in efforts elsewhere to access and gather data from this population. These approaches, particularly in ethnic minority populations, have generated community conflict and wasted precious resources (Mays & Cochran, 1990, 1995; Mays, Cochran, & Zamudio, 2004). They include forced collaborations and partnerships, often limited funding, a devaluing of the community's own knowledge about itself, and underestimating the value and skills of researchers who are already a part of the community under study. Individuals involved in research, policy, and health care planning continue to struggle with how to include as equal partners those not a part of their formal structure. The public health response to the HIV epidemic was several years into its efforts before it developed the community health planning process we have today that includes the input of community-based organizations.

Finally, it is critical that as we develop an agenda on mental health issues among lesbians and gay men, we not include simply a call for research on pathology. Given the long history of stereotyping gay men and lesbians as mentally defective, it is also important that we explore those things that keep people safe and highly functional despite negative views of homosexuality. What is it that allows this small group of Americans to develop healthy, happy, and fulfilling lives in the context of pervasive and unrelenting discrimination? There is much that we can learn from this population about how people cope well with social inequality. In the long run, this will benefit not only lesbians and gay men but also the broader society through identifying mechanisms for the achievement and maintenance of psychological well-being in the face of social stress.



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