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# Methodological Issues in the Assessment and Prediction of AIDS Risk-Related Sexual Behaviors Among Black Americans

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AIDS poses a grave threat to Americans, particularly for blacks. Blacks, depending upon their gender, region of residence, and history of drug use, may be from 3 to 21 times more likely than whites to be infected with human immunodeficiency virus (HIV), the infectious agent responsible for AIDS (Selik, Castro, & Pappaioanou, 1988). Within the black community, both sexual behavior (heterosexual and male homosexual) and the sharing of drug paraphernalia associated with intravenous (IV) drug use are the primary infection vectors.

To date, research on AIDS-related sexual behaviors among blacks is quite limited. Direct generalizations from studies of nonblack samples to understanding the behaviors of black Americans need to be greatly tempered by an understanding of the influence of cultural differences on the choices, risk assessments, and behaviors of this community. This chapter will focus on methodological issues associated with studying AIDS-related sexual behavior among blacks. These issues involve understanding cultural context as a determinant of behavior; cultural biases inherent in standard methodological, sampling, and measurement procedures; and cultural biases in our attempts as social scientists to model and predict individual risk reduction behaviors within the various subpopulations of the black community.

### **Understanding Cultural Influences on Behavior Related to AIDS Risk**

In general, there is little scientific literature available to provide us with well-grounded information about the sexual lives of black Americans. Clearly, however, cultural differences between blacks and other ethnic

groups, including whites, do exist for both heterosexuals (Wyatt, Peters, & Guthrie, 1988) and homosexual men (Bell & Weinberg, 1978; Wyatt et al., 1988).

In assessing sexual behavior, cultural and sex role norms as well as the interpersonal context of behavior are important mediating factors in interpreting the data we collect. That is, we must not forget that in measuring behavior our interests go far beyond the counting of discrete behavioral units, even assuming that the definition of these units is not subtly culture bound. A particular sexual practice, such as anal intercourse, performed by two Euro-American men could have very different social meanings than the same behavior performed by two Mexican-American males (Carrier, 1988). The same sexual practice performed by a heterosexual or a homosexual couple may lead to differing interpretations about the nature of each relationship and the probability of the occurrence of the behavior again. Equally true, among heterosexuals, women's perceptions of a sexual act and its meaning may differ dramatically from those of men. Thus, although behaviors may be equivalent, the psychological precursors of those behaviors may differ, affecting our ability as researchers to predict or modify the risk-related activities of individuals or to generalize findings beyond the specific group of study. This underscores the fact that in examining cultural influences on sexual behavior, we need to understand not only the proximal sexual behaviors themselves, but the behaviors in their cultural and interpersonal contexts.

### **Cultural Influences on Sexual Behavior**

Weinstein (1987) delineated three possible functions of sexual behavior: procreation, recreation, and an expression of emotional connectedness. Clearly these functions are not immune to cultural influences (Cochran, 1989). The relative importance of the procreative aspects of sexual behavior can vary significantly depending upon one's religion (Furstenberg, 1972; Gregersen, 1986; Spilka, Hood, & Gorusch, 1985); sexual orientation (Blumstein & Schwartz, 1983); age as related to cohort differences in fertility (Byrne & Fisher, 1986); or the value that an ethnic group, family, or society places on children (Day & Mackey, 1988; Mays & Cochran, 1988b). Sex, both as a recreational activity and as an expression of emotional connection, can also be influenced in similar ways.

There is yet a fourth component to sexuality: sex as power, or sex as an expression of one's self in the world, an assertion of self, or self-procreation (Cochran, 1989; Mays & Cochran, 1988b). This notion may be particularly salient in the context of being relatively powerless. In the black community, sex sometimes has less of the private meanings implied in the three definitions offered by Weinstein and can take on

this fourth, more political, meaning. For example, in the early 1970s, blacks viewed the use of contraceptives as a form of genocide promulgated by white Americans. The ability to reproduce was seen as a powerful tool in the struggle for liberation.

Sexuality, historically, has been regarded quite seriously in the black community. The term "swinging singles" is foreign to the black experience, although black adults are more likely to be unmarried than white adults (Mays & Cochran, 1988b). Swinging has for the most part been viewed by black Americans as a phenomenon characteristic of the loose sexual morals of whites. Yet, blacks are as likely as whites to be sexually active. While there is little recognition by black Americans of the terms "swinging singles" or "wife-swapping" in reference to sexual experiences (Staples, 1973), there are contexts in which similar behaviors occur. Black adults are more likely to be unmarried and experience greater instability in their love and sexual relationships than white adults (Mays & Cochran, 1988b). Black adolescents are more likely to begin sexual intercourse at an earlier age than whites (Brooks-Gunn, Boyer, & Hein, 1988). Overall, in the black community there is a greater likelihood of sexual activities for survival or in exchange/barter for needed resources (Mays & Cochran, 1988b, 1990a).

Sociocultural factors have a definite influence on sexual behaviors and activities (Gibbs, 1986). Underemployed or unemployed teenagers and adults who are coping with the inequalities of society while seeking a sense of belonging, creativity, or achievement may find sexuality a ready means to demonstrate manhood or womanhood through having children and being sexually active (Wilson, 1986).

AIDS researchers are not ignorant of this notion of sexual behavior as a statement of self-identity. Many AIDS-related risk reduction interventions directed at the gay white male community seek to meld individuals' needs for self-expression with the practice of safer sex. This has not always been so. Early in AIDS work, monogamy was advocated for gay men, of course, without any effort aimed at legislative changes in the marriage laws that would encourage this behavior further. This advice ignored the political reality of gay male life and the cultural differences between homosexual and heterosexual sexual behavior and relational attachments. The valuing of nonmonogamy and the acceptance of a different life-style for sexual relating was a key fight in the gay liberation movement (Shilts, 1987). Current risk reduction efforts have tempered early advice out of sensitivity to these realities.

There are similar issues for black Americans. Sexual behavior can sometimes be seen as making a statement in response to the larger political reality of society. This may be forgotten when we experience confusion, rather than understanding, if a poor black woman continues to have children in the face of economic poverty, endangering her health

and the health of the child (Mays & Cochran, 1988b). Yet it is fully understood when a white family shows great pride in the birth of a child who is destined to inherit a family fortune or a family tradition. Researchers understand desires for immortality among themselves as they write papers and conduct research on what they might hope will become an oft-cited theory. However, we may fail to understand this same hunger for immortality in others if we lose sight of the fact that, for many people, having a child is the most creative thing they will ever do. This is especially so for poor women, whose only hope for a change in a family's social or economic status may be to bring a child in the world who will achieve in ways she and her family of origin never had the opportunity of doing (Mays & Cochran, 1988b). The dream is that this child, in contrast to any previous offspring, will be the one to begin a family legacy, a legacy in which she, the mother, will be remembered as having equipped that child to overcome all the odds stacked against herself, her family, and her community.

Sex is a serious endeavor in the black community, but a lack of cultural sensitivity to this may be translated into inappropriate AIDS risk reduction methods. Many of our risk reduction messages for the practice of safer sex market these activities within a context of fun. Some of our risk reduction materials suggest safer sexual substitutes such as massage, hugging, holding, cuddling, or showers together. The most obvious examples of this theme of fun come in the large printed message of "PLAY IT SAFE" or "PLAY SAFE." The thrust of these messages is sex as a leisure activity or sex as play (Mays & Cochran, 1988b).

The marketing of this message has many embedded assumptions, some of which clash with cultural, religious, and class-related behaviors of black Americans. First, "sex as fun" and "sex as play" stand in direct conflict with many fundamental religious teachings about sex. In both the black and Hispanic communities, traditional religion serves as a cornerstone, organizing not only personal values, but community life (Mays, 1989). Promoting risk reduction within the context of "sex as fun" may lose the attention of many individuals for whom religion is a guiding force and the mainstay of their support system. A message of "sex as play" also creates a barrier to the utilization of churches as a network for the delivery of AIDS education.

Second, sex as fun and leisure paints a vacation-like framework for viewing sexual activity. It presumes that individuals have the time and privacy to fully enjoy their sexuality. Parents with children at home or individuals with demanding work or travel schedules can clearly understand that "sex as play" is a pleasant diversion experienced occasionally, but not necessarily routinely. Yet routine sex must also be safer sex. A poor, single woman, responsible for child care of her young children, having worked either inside or outside of the home full-time,

and currently involved with a man who lives elsewhere with perhaps his own commitments, may have a different context for viewing sexual behavior. It may not necessarily be one of play. She may need whatever support he can give her, whether economic or emotional. Her choices of sexual behaviors are complex, determined not only by her fear of AIDS, but the other more pressing realities of her life.

### **Sexual Attractiveness/Activity as a Resource or Commodity**

In an economically impoverished community, sexual attractiveness is an important resource for black women, 65% of whom over the age of 15 years are not married (compared to 43% of white women) (Bureau of the Census, 1983). Sexual involvement may significantly improve a woman's economic position (Mays & Cochran, 1988b). For a woman to insist that her sexual partner use condoms when other readily available partners may not could destroy her tenuous hold on a developing relationship. Indeed, an insistence on premarital celibacy may seriously undermine a poor woman's ability to enter into a serious, committed relationship in the first place, when sexuality is a prime means of generating attachment to her partner.

### **Sexual Orientation from a Black Perspective**

Typical views of sexual orientation postulate that individuals' sexual feelings and behaviors lie somewhere on a bipolar dimension where one extreme is heterosexuality, the other homosexuality, and in between is bisexuality (Bell & Weinberg, 1978). However, ethnicity or culture can function as an interactive factor influencing the expression of sexual object choice and sexual orientation identity (Cochran & Mays, 1988b).

Homosexuality within the black community is not necessarily consistent with the white gay life-style. Many blacks believe that homosexuality is a white phenomenon (Mays & Cochran, 1987). Among black gay and bisexual men, the issue of primary identification along ethnic lines or the dimension of sexual orientation is quite salient, reflecting the multiple social identities that accrue to individuals who are minorities within minorities. Recent research on black lesbians suggests that for these women ethnic identification is primary, while gay identification is secondary (Cochran & Mays, 1986; Mays & Cochran, 1986). This hints that within the black community, there may be greater separation of sexual behavior from labeling of sexual orientation. That is, individuals may engage in homosexual behavior, but not perceive themselves as homosexual. Community ties may also encourage greater levels of het-

erosexual behavior in those who do label themselves as homosexual (Bell & Weinberg, 1978; Cochran & Mays, 1988a, 1988b).

Researchers not familiar with this issue of multiple identities for black gay men may misunderstand this separation that can occur between sex as a behavior and sex as a statement of sexual orientation. For whites, the hidden assumption is that the act of sexuality has certain predetermined meanings—for example, "I am gay," "I am in love," or "We are getting married." All of these are individual reactions dependent upon one's ability to translate a behavior into a social reality or life direction. For black gay men, economic and emotional commitments to the black community, which, because of its fundamentalist religious ties, may be particularly homophobic, may result in extensive integration into heterosexual life-styles. This, of course, does not preclude homosexual sexual behavior, but may affect one's self-identification as being a gay man.

Therefore, it is important when asking about sexual behaviors that preconceived judgments about the meanings of those behaviors not be made. Determination of meaning is highly dependent on cultural influences. However, we cannot ignore meanings. Comprehensive understanding of sexual behavior within its psychological context is important because that is the way in which behavior can be altered. Risk reduction interventions can be developed that produce change by allowing the core motivations to have other expression while reducing the behavior that is risky.

## Differences in Intimate Relationships

### Male-Female Relationships

Although it appears that blacks hold the same ideals for marriage and family relationships as whites, Tucker, and Mitchell-Kernan (in press) reported that in practice the sex ratio imbalance among black heterosexuals has influenced the development of alternative forms of male-female relationships. Sex ratio imbalance refers to differences between the genders in number of eligible partners with whom to establish a relationship. Among blacks, there are far fewer eligible males than available females. The researchers observe that the effect of this is greater instability of relationships and higher rates of sexual activity outside of marriage. At a psychological level, the overrepresented gender, in this case women, experience their options in choosing mates as limited and may be more likely to tolerate objectionable behavior. The underrepresented gender, men, may view their options as limitless, resulting in less pressure to develop commitments, greater power within relationships, and fewer behavioral controls. The effects of sex ratio imbalance, coupled with the economic realities of poverty that encourage individ-

uals to seek relationship partners who can provide financial support (Scott, 1980), create an environment in which friendship-based models of close relationships are inappropriate (Mays & Cochran, 1988b).

This has important implications for development of preventive intervention models in the black community. Interventions that emphasize egalitarian negotiation, as among best friends, will fail to address the oftentimes divergent goals of relationship partners.

### Male-Male Relationships

The specific experiences of black gay men have not received much attention from researchers (Bell, Weinberg, & Hammersmith, 1981; Cochran & Mays, 1988b). With the appearance of AIDS and the higher than expected infection rates among black gay men, researchers have begun to seek reasons for these differences through comparing data gathered from black and white gay men. However, questionnaires, sampling procedures, and topics of focus usually do not emerge from the concerns of the black gay community (Mays & Jackson, in press). Instead, there has been a tendency to use white gay male patterns of behavior as a template for comparing black and white gay men.

Given the black-white differences in family structure and sexual patterns between black and white heterosexuals (Guttentag & Secord, 1983; Spanier & Glick, 1980; Staples, 1981a, 1981b), there does not appear to be a good empirical basis upon which to assume that black gay men's experiences of homosexuality perfectly conform to those of whites (Bell et al., 1981). Instead, one might predict that many of the same sociological factors that influence black heterosexual relationships would also have an impact on black gay men. Thus, racial discrimination, less availability of same ethnic group partners, fewer social and financial resources, residential immobility, and hampered employment opportunities might result in differential patterns of socializing, stability of relationships, and choices of relationship partners (Beame, 1983; Cochran & Mays, 1988b; Soares, 1979).

### Female-Female Relationships

We have not discussed same-sex female relationships because of the extremely low incidence of female homosexual sexually transmitted HIV infection (Marmor et al., 1986). Of the first 2,200 U.S. AIDS cases in women diagnosed since 1981, 46 had reported sexual contact with women (Kahn, 1987). Thirty-six of these women were IV drug users, four had had sexual contact with men in high-risk groups, two had received contaminated blood transfusions, and two came from countries where heterosexual transmission is more common (i.e., Central Africa or Haiti). The remaining two women had unknown risk factors. Thus, as a group, lesbians are not at significant risk for HIV infection. Never-

theless, there are some individuals within this population who, through their behaviors, are at higher risk (Mays & Cochran, 1988a).

Although very little is known about the relationship experiences of black lesbians (Bell & Weinberg, 1978; Mays & Cochran, 1988a; Peplau, Cochran, & Mays, 1986), there is reason to be concerned about the risk to black lesbians of HIV infection relative to white lesbians (Cochran & Mays, 1988a). It is not being a lesbian that inherently removes risk; rather it is the behaviors that are most typical of lesbians that result in the low incidence of HIV infection. Lesbians tend to have far fewer sexual partners than gay men (Blumstein & Schwartz, 1983) and it is not clear how efficient viral transmission is with normative manual-genital or oral-genital sexual behaviors in lesbians (Friedland & Klein, 1987). Yet black lesbians, as a result of activities that occur in higher incidence in the black population (drug use, less separation between black gays and lesbians, poverty, poor health care), may be more at risk for HIV infection not from lesbian-related behaviors but from their drug and sexual involvement in the broader black community (Cochran & Mays, 1988a).

### Issues in the Perception of AIDS Risk

In assessing AIDS-related risk reduction behaviors, it is important that we examine perceived risk as a context for understanding behavior change (Mays & Cochran, 1988b). For blacks, this is a particularly important issue. Without the perception of risk the individual may not be motivated to alter sexual practices, and even with the perception of risk, should this risk perception be inaccurate, the individual may change his or her behavior, but not effectively. Unsafe sexual behavior will not be perceived as risky if: (a) the individual is unaware of the relation between behavior and level of risk; (b) the individual is aware but devalues the risk to the group (e.g., the black community); or (c) the individual is aware of risk to the group but devalues the extent of personal risk (Weinstein, 1987).

Most blacks, particularly when their lives have involved poverty, drug abuse, or street prostitution, have lived with risks of some kind (Mays & Cochran, 1988b). AIDS simply joins the list of threats with which one needs to be concerned. These individuals have long coped with both higher levels of omnipresent danger and lower levels of resources with which to combat them (Mason, Ogden, Berrett, & Martin, 1986). Understanding poor ethnic individuals' response to AIDS involves knowledge of both their perception of its relative riskiness in comparison to more proximal threats and the existence of resources available to behave differently.

There are other reasons why blacks who are most at risk for acquiring an HIV infection may be less than optimally concerned. Some blacks

even today still consider AIDS to be a white gay disease (Mays & Cochran, 1987). In a sample of black college students surveyed in 1986, we found that almost 50% worried very little or not at all about getting AIDS (Mays & Cochran, 1990c). Approximately 30% had done nothing to reduce their chances of getting a sexually transmitted disease. Also, contrary to the truth, they viewed blacks as significantly less likely than whites to get AIDS.

### Cultural Factors Affecting HIV Transmission

As shown in Tables 5-1 through 5-3, blacks are more affected by AIDS and have a greater likelihood of becoming infected. Table 5-1 presents the cumulative incidence rate by ethnic group; Table 5-2 the relative risk, as compared to whites, for each minority group by risk categories as of 1987; and Table 5-3 the number of reported cases through July,

**Table 5-1**  
Number of AIDS Cases and Cumulative Incidence Rates by Ethnic/Race Group, United States as of March 1, 1990<sup>a</sup>

	<i>White</i>	<i>Black</i>	<i>Hispanic</i>	<i>Asian</i>	<i>Native American</i>
Total cases	69,743	34,431	19,565	772	163
Cumulative incidence <sup>b</sup>	37.2	114.0	98.6	11.8	9.6

<sup>a</sup> AIDS cases from the Centers for Disease Control (1990).

<sup>b</sup> Per 100,000 using July 1, 1988 government estimates of resident U.S. population, except for Asian and Native American ethnic groups, for which total U.S. population, including overseas, is utilized (U.S. Bureau of the Census, 1990).

**Table 5-2**  
Relative Risk of AIDS in Minority Risk Groups Versus White Risk Groups, United States, 1981-1987<sup>a</sup>

<i>Risk Group</i>	<i>Black</i>	<i>Hispanic</i>	<i>Other</i>
Adults	3.1	3.0	0.4
Adult males	2.8	2.7	0.4
Adult females	13.2	8.6	0.9
Homosexual males	1.4	1.7	0.3
Bisexual males	3.8	2.7	0.5
Heterosexual IV drug abusers	19.9	19.3	0.3
Children	12.1	6.8	0.8

<sup>a</sup> Adapted from Curran et al. (1988).

**Table 5-3**  
**Total Number of Reported AIDS Cases by Risk Group for Each Ethnic/Race Group, United States, through July, 1990<sup>a</sup>**

	<i>White</i>	<i>Black</i>	<i>Hispanic</i>	<i>Asian/ Pacific Islander</i>	<i>Native American</i>	<i>Total<sup>b</sup></i>
<i>Males</i>						
Homosexual/bisexual	60,322 (80%)	14,107 (44%)	8,873 (46%)	643 (80%)	109 (63%)	84,241 (65%)
Intravenous drug user	4,687 (6%)	11,163 (34%)	7,416 (38%)	23 (3%)	18 (10%)	23,379 (18%)
Homosexual/bisexual IV drug user	5,618 (7%)	2,560 (8%)	1,375 (7%)	16 (2%)	26 (15%)	9,609 (7%)
Heterosexual contact	474 (<1%)	2,164 (7%)	253 (1%)	6 (<1%)	2 (1%)	2,904 (2%)
Hemophilia/coagulation disorder	1,027 (1%)	78 (<1%)	96 (<1%)	14 (2%)	8 (4%)	1,227 (<1%)
Receipt of blood products/tissue	1,537 (2%)	299 (<1%)	169 (<1%)	43 (5%)	1 (<1%)	2,055 (2%)
Other/unknown	1,615 (2%)	1,396 (4%)	911 (5%)	46 (6%)	8 (4%)	4,012 (3%)
Children (under age 13)	329 (<1%)	649 (2%)	333 (2%)	8 (1%)	2 (1%)	1,326 (1%)
<b>Total male cases</b>	<b>75,609 (100%)</b>	<b>32,416 (100%)</b>	<b>19,426 (100%)</b>	<b>799 (100%)</b>	<b>174 (100%)</b>	<b>128,753 (100%)</b>
<i>Females</i>						
Intravenous (IV) drug user	1,452 (38%)	3,999 (52%)	1,386 (47%)	12 (16%)	15 (50%)	6,877 (47%)
Heterosexual contact	1,026 (27%)	2,234 (29%)	966 (33%)	24 (32%)	7 (23%)	4,271 (29%)
Hemophilia/coagulation disorder	24 (<1%)	6 (<1%)	1 (<1%)	0 (0%)	0 (0%)	31 (<1%)
Receipt of blood products/tissue	851 (22%)	262 (3%)	155 (5%)	25 (34%)	2 (7%)	1,296 (9%)
Other/Unknown	245 (6%)	505 (7%)	151 (5%)	9 (12%)	3 (10%)	920 (6%)
Children (under age 13)	206 (5%)	623 (8%)	301 (10%)	4 (5%)	3 (10%)	1,138 (8%)
<b>Total female cases</b>	<b>3,804 (100%)</b>	<b>7,629 (100%)</b>	<b>2,960 (100%)</b>	<b>74 (100%)</b>	<b>30 (100%)</b>	<b>14,533 (100%)</b>
<b>Total cases</b>	<b>79,413</b>	<b>40,045</b>	<b>22,386</b>	<b>873</b>	<b>204</b>	<b>143,286</b>

<sup>a</sup> Data from the Centers for Disease Control (1990). Percentages are for each risk group calculated within gender and ethnic group.

<sup>b</sup> Total includes individuals for whom ethnic background is unknown.

1990 by risk factor and ethnic group (Centers for Disease Control, 1990). In total, whites account for 55% of cases, blacks for 28%, and Hispanics for 16%. In the U.S. population, however, whites represent 76% of all Americans, blacks 12%, and Hispanics 8% (U.S. Bureau of the Census, 1990).

The data in the tables indicate that both blacks and Hispanics are at higher risk of HIV infection than whites. Similarities between blacks and Hispanics in patterns of drug use, poverty, and other cultural factors may account for the higher than expected rate for ethnic groups. However, the implication also is that cultural factors specific to blacks may place them at a higher risk for HIV infection than whites and other ethnic groups.

Friedland and Klein (1987) have made the point that HIV is not an efficient virus. In most instances, it takes frequent and sufficient contact with the virus in order for infection to occur. In certain subpopulations, such as hemophiliacs, the virus was transmitted quickly and efficiently because of repeated and/or substantial contact with the virus through receipt of contaminated blood products.

In the black community, there are behaviors that also facilitate a relatively more efficient transmission of the virus. Some of these are quite proximal to transmission (e.g., high levels of IV drug use with sharing of drug paraphernalia). Some are more distal and socioculturally based. These include instability of relationships, little or no prenatal care, and conditions of poverty. Given the inefficient nature of the virus, it is important to examine these sociocultural factors because they mediate the efficiency of the transmission, much more so than if the virus did not depend on intimate behavioral choices of individuals in order to infect.

### Intravenous Drug Use

Over 50% of AIDS cases in blacks are either primarily or secondarily related to IV drug use (Centers for Disease Control, August, 1990). For whites, this applies to 16% of cases. The reason for this difference stems from the fact that IV drug use is more common in the black community (Gary & Berry, 1985). In the urbanized Northeast, HIV infection is endemic among IV drug users, who are most likely to be black (Ginzburg, MacDonald, & Glass, 1987). Questions concerning IV drug use, and social and intimate contact with IV drug users, are therefore more critical when researching AIDS issues in black populations.

Yet, there are few large-scale investigations involving IV drug users, particularly female IV drug users. Gay men have been viewed as ideal subjects for participation in biomedical and psychosocial studies. Their language skills, access to health care, and willingness to participate have resulted in several very large studies, such as the Multicenter AIDS

cohort studies described by Detels (Chapter 1) and Stevens et al. (Chapter 2). The result is large bodies of data on white gay men's immunological, serological, and psychosocial profiles. The mode for much of this collection of data has been university based, in which subjects come directly to the university hospital or a satellite clinic. Many universities do not have good access to IV drug users or drug abuse treatment centers. In university-based models of research, IV drug users are often perceived as poor subjects because of their higher risk for attrition, other drug-related infections, and unwillingness to volunteer. Many of these are accurate and valid concerns. Nonetheless, the research designs are frequently experienced as culturally insensitive and are not based on cultivated relationships benefiting *both* the university researcher and the population of IV drug users he or she seeks to study.

This does not have to be so. An alternate research model involves equal collaborations between university researchers and those in community-based substance abuse and health care organizations that traditionally service IV drug users. Investigators worried about attrition will find that in methadone maintenance clinics many participants come to the clinic as often as 4 days a week. Collection of both biomedical and psychosocial data from these individuals is quite feasible.

### Heterosexual Behavior

Community activities and norms regarding premarital and extramarital sexuality and condom use play a role in the transmission of HIV infection. Structural demographics such as the ratio of available black men to women and sex as a survival strategy and/or an economic resource affect sexual activities outside of marriage and committed relationships. This complexity of sexual activities in the black community can neither be solved nor researched through mere frequency counts of behavior occurrences. Rather, exploration of the context or behavioral ecology of sexual activities is key (Barker, 1968; Flora & Thorensen, 1988). To best determine influencing factors in perception of risk, negotiation of safer sex, use of condoms, or other AIDS prevention behaviors of black heterosexuals, the questions must incorporate the psychosocial forces that influence sexual and drug use behavior. Instead of focusing exclusively on the use of condoms, additional research questions might address the motivations for sexual activities. Do these activities occur out of a context of psychological needs, economic factors, or gender or cultural roles?

### Male Homosexual Behavior

Because of somewhat negative attitudes within the black heterosexual community surrounding homosexuality, the extent to which anal intercourse between men is the actual infection vector of HIV transmission may be difficult to determine accurately (Cochran & Mays, 1988b). Apart

from the reports of black gay men, consensual or nonconsensual sexual activities between men in such environments as prison or the armed services, where there are extended periods of male-only isolation, may easily be forgotten when recounting sexual histories. While little empirical information on the frequency and type of same-sex behaviors in prison is available, accounts by prisoners indicate anal intercourse and oral-genital sex occur even between men who view themselves as heterosexual (Harding, 1987). The occurrence of such incidents is likely to be higher in blacks than whites since black men as a group are more likely to be incarcerated or to serve in the armed forces. Some have questioned the veracity of the military recruit study results in which sex with prostitutes was identified as the primary risk in contracting an HIV infection (Potterat, Phillips, & Muth, 1987; Voeller, Chapter 19).

Homophobia may also be one factor that accounts for the bisexual behavior in the black community at large. Some black males attracted to other males find it difficult to maintain a primary gay life-style and still stay a part of the black community (Cochran & Mays, 1988b). For some the answer is maintenance of a heterosexual life-style with homosexual behavior in the background.

An early study of homosexual sexual behavior in San Francisco suggested that the practice of anal intercourse was higher in black gay/bisexual men than in white gay men (Bell & Weinberg, 1978). In a more recent study of a cohort of HIV-infected black gay and bisexual men, the proportion of receptive anal-genital contact with ejaculation was not significantly different from a comparative group of white gay and bisexual men (Samuel & Winkelstein, 1987). This latter study suggests that sexual risk factors as currently established may not explain well the differential rates of seropositivity or seroconversion between blacks and whites (see also Voeller, Chapter 19).

### Poverty

Economics constitute an important backdrop for the day-to-day behavioral choices of many inner-city black Americans. In poor, urban black communities, selling of drugs can be a vital economic base, thus encouraging IV drug use. Poverty undermines stability of heterosexual relationships by making stable, economically successful individuals more attractive to others and by discouraging commitments, such as by a young female to a young, unemployable male, that can cause potential financial hardship (Tucker & Mitchell-Kernan, in press). Poverty also results in poorer health care, lower levels of education, and higher rates of morbidity and mortality from diseases (U.S. Department of Health and Human Services, 1986).

## Summary

When all of these factors are taken into account it may explain the higher numbers of blacks at risk for AIDS. As discussed below, current data used to project future cases are based on models that do not necessarily figure these sociocultural elements into their predictions.

## Research Issues in Sampling and Measurement

### Recruitment

The difficulty of maintaining a desired response rate by black Americans is a major problem for large-scale survey researchers. Nonresponse is affected by a variety of factors, some more obvious than others, including concerns about confidentiality, lack of interest, time factors, or distrust of researchers (Berk, Wilensky, & Cohen, 1984; Mays & Jackson, in press).

Often overlooked, but critical, is the political context of AIDS-related data collection. Perceptions that the federal government might blame blacks for AIDS and its spread influence participant cooperation. Stories in community newspapers or community forums suggesting that AIDS results from government germ warfare only serve to raise the refusal rate for those AIDS-related studies requiring blood drawing. Fears or beliefs that blacks are perceived as expendable by the federal government and will be injected with an experimental virus influence choices to participate in research studies. Poor response rates are then attributed to a lack of concern on the part of the black community.

Researchers may find it necessary to adapt the introduction of their study to the community's perceptions of AIDS. Given the ongoing nature of the politicalization of AIDS, vigilance to these perceptions is necessary.

### Sampling

Traditional sampling procedures that rely on Census data or exclude institutionalized populations result in sampling frames that undercount black Americans, particularly black males (Mays & Jackson, in press). Sampling frames employed to simultaneously recruit both blacks and whites from the same geographic area often result in small numbers of blacks who are nonrepresentative of the black population. This often occurs as a function of segregated housing practices and household income differences. Sampling procedures must be employed that take into account structural and demographic differences present in the black population (Jackson & Hatchett, 1985).

For example, in attempting to recruit a diverse sample of black gay men, the use of outreach efforts channeled through gay community

networks will reach a very specific subpopulation of black gay men. Those men not integrated as a function of social networks or residential housing/socialization patterns seldom become respondents in most AIDS studies. Men who do not identify themselves as gay or who wish not to be identified as having associations with the gay community often are not represented, in either the black or white community (Voeller, Chapter 19). What emerges is the importance of a working knowledge of various ethnic subgroups in order to design a study that reaches the greatest number of subpopulations.

Of particular concern are those studies that gather data using telephone methodology that does not take into account the characteristics of those individuals who are less likely to have a telephone or who share a phone, making it difficult to get accurate answers to sensitive questions about sexual behaviors. The greater tendency of blacks to be in institutional settings such as prison, the military, or board-and-care facilities, or to be homeless, influences the segment of the population reached by telephones. If the study were one of attitudes about AIDS, results are clearly confounded. On the other hand, attitudes of individuals in institutional settings may not be relevant because their behavior is frequently moderated by rules of the institution rather than their personal attitudes. For the prisoner who both desires to be sexually active and believes that condoms should be used, if prophylactics are unavailable his beliefs may have only limited translation into behavior (e.g., abstinence).

## Measurement

### READING ABILITY

Literacy levels are of particular concern with studies that employ paper-pencil measures (Mays & Jackson, in press). Many AIDS-related materials are beyond the average comprehension levels of individuals (Hochhauser, 1987). Equally important are those studies that seek to evaluate awareness, knowledge, or attitudes purely through exposure to written media. Communication researchers have devoted considerable resources to examination of how people use the media (Salomon & Cohen, 1978). One source of measurement error in some AIDS assessments is the measurement of factors dependent upon exposure to mainstream written sources (Allen, 1981; Allen & Bielby, 1979a, 1979b). In general, the media have been viewed as having played a tremendous role in making individuals aware of the AIDS epidemic without any consideration of differences in skills, access to, or abilities in relation to different types of media. Individuals with lower reading levels or less interest in mainstream white society are less likely to read mainstream

daily newspapers or magazines such as *Time*, *Newsweek*, or the *Atlantic Monthly* (Mays, 1989).

Preliminary results of a study of young ethnic minority adults indicate that television is the source from which they get most of their information (Mays & Cochran, 1990b). However, special programs aside, most television coverage of AIDS involves short segments on the news or 30- to 60-second public service announcements. These sources can hardly impart the same amount of information as written material.

#### LANGUAGE DIFFERENCES

In measuring sexual behavior, it is important for researchers to be sensitive to the cultural nuances of black American life. These range from differences in expectations about sexuality to the particular language individuals use to refer to specific sexual behaviors (Mays & Jackson, in press). Clearly, to the extent that differences are understood, there will be better guidance in the choice of questions, the language used in assessing behavior, and strategies for subject recruitment.

Language differences are an important methodological concern. For example, among white gay men, oral-anal sex is referred to as rimming. Some black gay men have different terms (e.g., "tossing salad," "eating chocolate chip cookies"), but associate the term "rimming" with whites, even though they may also engage in exactly the same behavior. Therefore, if they are advised to avoid rimming, they may forego oral-anal sex with white men, but not black men. In many instances, body parts are referred to in terms associated with cultural folklore. "Boning," a term that has characteristically referred to a specific type of heterosexual vaginal intercourse, has become more popular in its use as a result of Spike Lee's recent movie "School Daze." Researchers attempting to assess the practice of vaginal intercourse may find they get a more accurate response from subjects using this term rather than more clinical descriptions (e.g., vaginal penetration with the penis).

#### RELEVANCE OF QUESTIONS

Questionnaires, surveys, and interviews are not without their intended outcomes. Participants in studies know this and will sometimes track the bias of researchers even while participating in the study (Mays & Jackson, in press). For gay men who are sensitive to possible homophobia in researchers, this can dramatically influence their willingness to respond accurately to questions. Similar issues exist for black Americans, who may distrust the motives of white researchers.

#### AVAILABILITY OF APPROPRIATE NORMS

Many standard measures have not been normed on black populations. Difficulties can arise when norms developed for white populations are applied inappropriately. For example, this controversy surrounds the

use of intelligence and personality tests (Mackenzie, 1980, 1984). Researchers need to be sensitive to utilizing measures with appropriate norms when possible and, when this is not possible, to modifying their piloting procedures and data interpretations as needed.

### Problems in Predicting the AIDS Epidemic Among Blacks

Efforts to predict both individuals' behaviors and the path of the HIV epidemic within the black community introduce additional issues related to cultural sensitivity.

#### Theoretical Models of Behavior

Many of the attitude-behavior models currently being used to predict AIDS-related behavior, such as the Health Belief Model (Becker & Maiman, 1975), include assumptions that are often rooted in Euro-American world views or social class values, which are inconsistent with the views and values of many of black Americans at risk. Most attitude-behavior models assume that people are *motivated* to pursue rational courses of action. They further assume that people have the *resources* necessary to proceed directly with these rational decisions. Barriers to a rational course of action are trivialized as "moderators" rather than viewed as the structure within which people may function. In addition, the influential effects of ubiquitous contradictory values experienced by individuals who are not from the dominant culture are ignored. For example, most individuals, no matter how poor, have access to television and thus are exposed to cultural values consistent with the majority culture. However, minority cultural values are also present, placing before the individual, perhaps, a more complex array of values from which to draw. The synergistic effects of this are unknown.

For inner-city poor black Americans confronting an environment in which much of their surrounding milieu is beyond their personal control, models of human behavior that emphasize individualistic, direct, and rational behavioral decisions overlook the fact that many blacks do not have personal control over traditional categories of resources—for example, money, education, and mobility. In this context, intention may not always lead to the desired behavior, as suggested by Ajzen and Fishbein's (1980) Theory of Reasoned Action. Instead, intention may lead one down an indirect path in which the behavioral outcome is jury-rigged from whatever resources are available.

For black Americans, social norms and extent of commitment to social responsibilities may be better predictors of future behavior than intentions lacking in resources for translation into effective action. Black Americans are less likely than whites to value the individualistic focus of white culture. It may be helpful to remember that Kwanzaa, an in-

digenous Afro-American holiday, celebrates the community's core values of unity, black community self-determination, collective work and responsibility, cooperative economics, purpose, creativity, and faith (Mays & Cochran, 1988b). For blacks, individualistically oriented behavior is frequently tempered by social responsibilities.

### Statistical Models of Infection Rates

While much is known about the prevalence of HIV infection, projected trends of disease incidence are less reliable. Many of the surveys and studies used to estimate incidence are based on samples not representative of the general population (Centers for Disease Control, 1987). Currently the best incidence estimates of AIDS exist for white gay men. This subgroup has assisted in a relatively more accurate determination of the rate of seropositivity through their tireless participation in numerous studies of behavioral and biological status. Coupled with previously stockpiled frozen serum donated by gay men participating in earlier infectious disease studies, this has greatly advanced knowledge of HIV infection determinants in white gay men. Unfortunately data of this nature have not been available on black Americans.

The two highest risk categories for blacks are IV drug users and homosexual/bisexual men. Historically, neither of these groups have constituted the subject of focus to any great extent in biomedical research. Few research data exist from these groups for a variety of reasons, ranging from investigators' perceptions of them as a "hard-to-reach" population to fear of exposure of homosexual behavior to a lack of cultural relevance of the research conducted in the past.

Several techniques have been employed to estimate the prevalence and incidence of AIDS. Each has assumptions that may or may not be useful in the determination of AIDS in the U.S. black population.

### ISSUES OF RELATIVE RISK

Relative risk refers to the comparison between two groups of disease incidence rates in the total at-risk population. Variations within each of the two populations separately as to level of risk for any individual are ignored. Since cultural factors mediate levels of risk, their inclusion in forecasting the infectious disease path may prove helpful, particularly in understanding what the future holds for black Americans. One important point to remember is that, unfortunately, traditional surveillance techniques report by groups and not by risk behavior. Thus, blacks are, in part, more at risk than other groups because of the higher incidence of IV drug use in the black community. Intravenous drug abuse and its related heterosexual spread contribute to a markedly higher risk rate for blacks and Hispanics. In fact, blacks account for 51% of heterosexual transmission cases associated with IV drug use, while Hispanics com-

prise another 27% (Centers for Disease Control, 1990). So it is not genetics, but patterns of behavior in environments in which HIV is likely to be present that result in the higher than expected infection rates in blacks and Hispanics.

In calculating the risk merely by ethnic group, it is important to determine whether this is truly a useful procedure for assessing risk. For example, when the risk of AIDS for adult black Americans as a population is calculated, the relative risk as compared to whites is 3.1 (Curran et al., 1988). Conversely, if one is interested in a specific group of blacks, such as women IV drug users, the relative risk is 13.2 compared to whites (Selik et al., 1988). Although the general population of heterosexuals may be at low risk for AIDs, the odds of HIV infection by ethnic group indicate a very higher probability for women in the black population.

Similar differences would be seen if we calculated the relative risk for blacks when compared to whites by geographic region (Selik et al., 1988). Black heterosexuals living in Ames, Iowa, are not at as high a risk for contracting HIV as blacks living in New Jersey or Miami. These differences in the transmission pattern by ethnic group and geography call into question the wisdom of modeling the disease for all cases rather than by risk factor and ethnic group.

#### EXTRAPOLATION OF PREVALENCE FROM OBSERVED RATES

As indicated in the discussion of relative risk, in a general population individuals vary in their level of risk for HIV infection. The bias in models extrapolated from observed rates to predict the incidence of AIDS in the black population is a function of the extent to which persons at high or low risk were included or excluded, the geographic region from which the sample was drawn, and the demographic composition of the sample surveyed. Few of the past studies used to determine seropositivity or seroconversion rates have had adequate numbers of black gay or bisexual men in their samples. The heterosexual seropositive samples have relied heavily on the military screening program or adults attending sexually transmitted disease clinics (Centers for Disease Control, 1987), which, while providing a large pool of ethnic minority subjects, are skewed samples of the black population.

Recent research suggests that seroconversion rates are slowing among gay men as a result of changes in behavior (Centers for Disease Control, 1987), although there are indications that black gay men may not be changing their behavior as rapidly as white gay men (Landrum, Beck-Sague, & Kraus, 1988; Samuel & Winkelstein, 1987). Conversely, cases due to IV drug use and heterosexual transmission, categories in which blacks are dramatically overrepresented, are increasing (Centers for Disease Control, 1987). Thus, our estimates of the future of this epidemic for black Americans may be least accurate.

## Summary

We attempted here to raise some of the subtle and not so subtle issues that are involved in the study of AIDS risk-related sexual behavior in black Americans. There are several other issues equally important and compelling. For example, much of the public policy and funding allocation flows from our epidemiological data. Yet our lack of certainty about something as simple as the number of people in the true population of IV drug users hampers the accuracy of our predictions. Our ethnic category of "blacks" ignores the diversity of the black population at risk (Afro-Americans, black Cubans, black Caribbeans, and Africans residing in the United States), since each may be located sociobehaviorally within a different risk category (Mays & Jackson, in press). We use epidemiological models that assume exchangeability within and across ethnic groups. These models are flawed with confounders given that there are many indications that AIDS among black Americans is epidemiologically different.

In an epidemic, these issues can translate into the unnecessary loss of lives. It is essential that in our assessment and prediction of AIDS risk-related sexual behaviors among black Americans, we proceed with sensitivity to the obvious, as well as subtle, effects of ethnicity and culture. It is important that the attempt be made not to do this in a monolithic manner, ignoring the rich diversity of the black population. Methodological approaches must emerge out of the diversity of the population and not be determined by the structure imposed by funding. Assessment of AIDS and HIV infection must not flow from a position of cultural ignorance nor be designed in haste. To the extent that HIV infection is facilitated by our cultural discriminations, we as scientists cannot afford discriminatory approaches in looking for solutions to stopping the spread of HIV infection.

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## References

- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Allen, R. L., & Bielby, W. T. (1979a). Blacks' attitudes and behaviors toward television. *Communication Research*, 56, 488-496.
- Allen, R. L., & Bielby, W. T. (1979b). Blacks' relationship with the print media. *Journalism Quarterly*, 6, 437-462.
- Allen, R. L. (1981). The reliability and stability of television exposure. *Communication Research*, 8, 233-256.
- Barker, R. (1968). *Ecological psychology*. Stanford, CA: University Press.
- Becker, M. H., & Maiman, L. A. (1975). Sociobehavioral determinants of compliance with health and medical care recommendations. *Medical Care*, 13, 10-24.
- Beame, T. (1983). Racism from a Black perspective. In M. J. Smith (Ed.), *Black men/white men: A gay anthology*. San Francisco: Gay Sunshine Press.
- Bell, A., & Weinberg, M. (1978). *Homosexualities: A study of diversity among men and women*. New York: Simon and Schuster.
- Bell, A. P., Weinberg, M. S., & Hammersmith, S. K. (1981). *Sexual preference: Its development in men and women*. Bloomington: Indiana University Press.
- Berk, M. C., Wilensky, G. R., & Cohen, S. B. (1984). Methodological issues in health surveys. *Evaluation Review*, 8, 307-326.
- Blumstein, P., & Schwartz, P. (1983). *American couples*. New York: William Morrow and Company.
- Brooks-Gunn, J., Boyer, C. B., & Hein, K. (1988). Preventing HIV infection and AIDS in children and adolescents: Behavioral research and intervention strategies. *American Psychologist*, 43, 958-964.
- Byrne, D., & Fisher, W. A. (1986). In D. Byrne & K. Kelley (Eds.), *Alternative approaches to the study of sexual behaviors*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Carrier, J. M. (1985). Mexican male bisexuality. In F. Klein & T. Wolf (Eds.), *Bisexualities: Theory and research*. New York: Haworth Press.
- Centers for Disease Control. (1990). HIV/AIDS surveillance report. Atlanta, Georgia.
- Centers for Disease Control. (1987). Human immunodeficiency virus infection in the United States: A review of current knowledge. *Morbidity and Mortality Weekly Report*, 36 (suppl. no. S-6), 1-48.
- Cochran, S. D. (1989). Women and HIV infection: Issues in prevention and behavior change. In V. M. Mays, G. W. Albee, & S. F. Schneider (Eds.), *Primary prevention of AIDS: Psychological approaches*. Beverly Hills, CA: Sage Publications.
- Cochran, S. D., & Mays, V. M. (1986, August). *Sources of support in the Black lesbian community*. Paper presented at the meetings of the American Psychological Association, Washington, DC.
- Cochran, S. D., & Mays, V. M. (1988a). Disclosure of sexual preference to physicians by Black lesbian and bisexual women. *Western Journal of Medicine*, 149, 616-619.
- Cochran, S. D., & Mays, V. M. (1988b). Epidemiologic and sociocultural factors in the transmission of HIV infection in Black gay and bisexual men. In M. Shernoff & W. A. Scott (Eds.), *A sourcebook of gay/lesbian health care* (2nd ed.). Washington, DC: National Gay and Lesbian Health Foundation.
- Curran, J. W., Jaffe, H. W., Hardy, A. M., Morgan, W. M., Selik, R. M., &

- Dondero, T. J. (1988). Epidemiology of HIV infection and AIDS in the United States. *Science*, 239, 610-616.
- Day, R. D., & Mackey, W. C. (1988). Children as resources: A cultural analysis. *Family Perspective*, 20(4), 251-264.
- Flora, J. A., & Thorensen, C. E. (1988). Reducing the risk of AIDS in adolescents. *American Psychologist*, 43, 965-970.
- Friedland, G. H., & Klein, R. S. (1987). Transmission of the human immunodeficiency virus. *New England Journal of Medicine*, 317, 1125-1135.
- Furstenberg, F. (1972). Attitudes toward abortion among young Blacks. *Studies in Family Planning*, 3, 66-69.
- Gary, L. E., & Berry, G. L. (1985). Predicting attitudes toward substance use in a Black community: Implications for prevention. *Community Mental Health Journal*, 21, 112-118.
- Gibbs, J. T. (1986). Psychosocial correlates of sexual attitudes and behaviors in urban early adolescent females: Implications for intervention. *Journal of Social Work and Human Sexuality*, 5, 81-97.
- Ginzburg, H. M., MacDonald, M. G., & Glass, J. W. (1987). AIDS, HTLV-III diseases, minorities and intravenous drug abuse. *Advances in Alcohol and Substance Abuse*, 6, 7-21.
- Gregersen, E. (1986). Human sexuality in cross-cultural perspective. In D. Byrne & K. Kelley (Eds.), *Alternative approaches to the study of sexual behavior*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Guttentag, M., & Secord, P. F. (1983). *Too many women: The sex ratio question*. Beverly Hills, CA: Sage Publications.
- Harding, T. (1987). AIDS in prison. *Lancet*, ii, 1260-1264.
- Hochhauser, M. (1987, August). *Readability of AIDS educational materials*. Paper presented at the meetings of the American Psychological Association, New York.
- Jackson, J. S., & Hatchett, S. J. (1985). Intergenerational research: Methodological considerations. In N. Datan, A. L. Green, & H. W. Reese (Eds.), *Intergenerational networks: Families in context*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Kahn, E. (1987). Lesbians and AIDS: Everything you need to know about AIDS prevention. *On Our Backs*, 13-15.
- Landrum, S., Beck-Sague, C., & Kraus, S. (1988). Racial trends in syphilis among men with same-sex partners in Atlanta, Georgia. *American Journal of Public Health*, 78, 66-67.
- Mackenzie, B. (1980). Hypothesized genetic differences in IQ: A criticism of three proposed lines of evidence. *Behavior Genetics*, 10, 225-234.
- Mackenzie, B. (1984). Explaining race differences in IQ: The logic, the methodology, and the evidence. *American Psychologist*, 39, 1214-1233.
- Marmor, M. J., Weiss, L. R., Lyden, M., Weiss, S. H., Saxinger, W. C., Spira, T. J., & Feorino, P. M. (1986). Possible female to female transmission of human immunodeficiency virus. *Annals of Internal Medicine*, 105, 969.
- Mason, J. O., Ogden, H. G., Berrett, D. A., & Martin, L. Y. (1986). Interpreting risks to the public. *American Journal of Preventive Medicine*, 2, 133-139.
- Mays, V. M. (1989). AIDS prevention in Black populations: Methods of a safer kind. In V. M. Mays, G. W. Albee & S. F. Schneider (Eds.), *Primary prevention of AIDS: Psychological approaches*. Beverly Hills, CA: Sage Publications.
- Mays, V. M., & Cochran, S. D. (1986, August). *Relationship experiences and the perception of discrimination*. Paper presented at the meetings of the American Psychological Association, Washington, DC.

- Mays, V. M., & Cochran, S. D. (1987). Acquired immunodeficiency syndrome and Black Americans: Special psychosocial issues. *Public Health Reports*, 102, 224-231.
- Mays, V. M., & Cochran, S. D. (1988a). The Black Women's Relationship Project: Surveying the lives of Black lesbians. In M. Shernoff & W. A. Scott (Eds.), *A sourcebook of gay/lesbian health care* (2nd ed.). Washington, DC: National Gay and Lesbian Health Foundation.
- Mays, V. M., & Cochran, S. D. (1988b). Interpretation of AIDS risk and risk reduction activities by Black and Hispanic women. *American Psychologist*, 43, 949-957.
- Mays, V. M., & Cochran, S. D. (1990a). *Acquired immunodeficiency syndrome and women*. Manuscript submitted for publication.
- Mays, V. M., & Cochran, S. D. (1990b). *AIDS-related attitudes in a cohort of young, ethnic/minority heterosexuals*. Manuscript in preparation.
- Mays, V. M., & Cochran, S. D. (1990c). *A survey of knowledge, attitudes and beliefs about AIDS by young black adults*. Manuscript in preparation.
- Mays, V. M., & Jackson, J. S. (in press). AIDS survey methodology with Black Americans. *Social Science and Medicine*.
- Peplau, L. A., Cochran, S. D., & Mays, V. M. (1986, August). *Satisfaction in the intimate relationships of Black lesbians*. Paper presented at the annual meeting of the American Psychological Association, Washington, DC.
- Potterat, J. J., Phillips, L., & Muth, J. B. (1987). Lying to military physicians about risk factors for HIV infections. *Journal of the American Medical Association*, 257, 1727.
- Salomon, G., & Cohen, A. A. (1978). On the meaning and validity of television viewing. *Human Communications Research*, 4, 265-270.
- Samuel, M., & Winkelstein, W. (1987). Prevalence of human immunodeficiency virus in ethnic minority homosexual/bisexual men. *Journal of the American Medical Association*, 257, 1901-1902.
- Scott, J. W. (1980). Black polygamous family formation: Case studies of legal wives and consensual "wives." *Alternative Lifestyles*, 3, 41-64.
- Selik, R. M., Castro, K. G., & Pappaioanou, M. (1988). Racial/ethnic differences in the risk of AIDS in the United States. *American Journal of Public Health*, 78, 1539-1545.
- Shilts, R. (1987). *And the band played on: Politics, people and the AIDS epidemic*. New York: St. Martin's Press.
- Soares, J. V. (1979). Black and gay. In M. P. Levine (Ed.), *Gay men: The sociology of male homosexuality*. New York: Harper & Row Publishers.
- Spanier, G. B., & Glick, P. C. (1980). Mate selection differentials between whites and blacks in the United States. *Social Forces*, 58, 707-725.
- Spilka, B., Hood, R. W., & Gorusch, R. (1985). Religion and morality. In B. Spilka, R. Hood, & R. Gorusch, (Eds.), *The psychology of religion*. Englewood Cliffs, NJ: Prentice Hall.
- Staples, R. (1973). *The Black woman in America*. Chicago: Nelson Hall.
- Staples, R. (1981a). Race and marital status: An overview. In H. P. MacAdoo (Ed.), *Black families* (pp. 173-175). Beverly Hills, CA: Sage Publications.
- Staples, R. (1981b). *The world of black singles*. Westport, CT: Greenwood Press.
- Tucker, M. B., & Mitchell-Kernan, C. (1990). Sex ratio imbalance among Afro-Americans: Conceptual and methodological issues. In R. Jones (Ed.), *Black adult development and aging* (pp. 179-189). Berkeley, CA: Cobb & Henry.
- U.S. Bureau of the Census. (1983). *General population characteristics, 1980*. Washington, DC: U.S. Government Printing Office.

- U.S. Bureau of the Census. (1990). *United States population estimates, by age, sex, race, and Hispanic origin: 1980 to 1988*. Current Population Reports, Series P-25, No. 1045. Washington, DC: U.S. Government Printing Office.
- U.S. Department of Health and Human Services. (1986). *Health status of the disadvantaged: Chartbook 1986*. DHHS Publ. No. (HRSA) HRS-P-DV86-2. Washington, DC: U.S. Government Printing Office.
- Weinstein, N. (1987, October). *Perceptions of risk*. Paper presented at the Centers for Disease Control Conference on Behavioral Aspects of High Risk Sexual Behavior, Atlanta.
- Wilson, P. (1986). Black culture and sexuality. *Journal of Social Work and Human Sexuality*, 4, 29-46.
- Wyatt, G. E., Peters, S. D., & Guthrie, D. (1988). Kinsey revisited part II: Comparisons of the sexual socializations and sexual behavior of Black women over 33 years. *Archives of Sexual Behavior*, 17, 289-332.