A Comparison of AIDS-Related Sexual Risk Behaviors Among African-American College Students

Sandra E. Taylor, PhD, Colleen Dilorio, PhD, Torrance T. Stephens, PhD, and Johanna E. Soet, MA, CHES
Atlanta, Georgia

This article compares the sexual practices and risk-taking behaviors of African-American male and female college students (n=649) attending 4-year institutions in a major southeastern metropolitan area. It is a descriptive study of the kinds of practices that put African-American college students at a high risk of contracting the human immunodeficiency virus (HIV). Overall, the reported practices indicate that the college students studied are exposed to risk by certain sexual behaviors, with males reporting significantly higher frequency of risk behaviors than females. The percentages of male students reporting they engage in an array of risky sexual practices (including sex without condoms and anal intercourse) suggest the invulnerability to HIV apparently perceived by this group. Although the students overall adhere to some HIV-preventive behaviors, they also violate important HIV prevention practices. The findings illuminate the need for designing and conveying messages for African-American college students, and particularly for males, that impress the realities of acquired immunodeficiency syndrome (AIDS) as an indiscriminant disease on this group. (*J Natl Med Assoc.* 1997;89:397-403.)

Key words: African American ◆ college students ◆ HIV ◆ AIDS ◆ risk behaviors ◆ sexual practices

Findings from a number of studies confirm that the African-American population compared with other racial groups is at high risk for infection with the human immunodeficiency virus (HIV). Although African Americans constitute only 12% of the US population, they represent one third of all known acquired immunodeficiency syndrome (AIDS) cases.[1] Currently, AIDS is the leading cause of death for African-American males aged 25 to 40 years and is increasing dramatically among women within this same age group. In 1994, 57% of AIDS cases among women were among African Americans.[1] Some behaviors engaged in by African Americans tend to put them at high risk for HIV infection. Although few studies have been done on risk factors specific to African Americans, some data suggest that certain sexual practices (including sex with more than one partner and not using condoms) foster the vulnerability of this group.[2,3]

Investigations of HIV including HIV risk-reduction practices among African Americans have concentrated on low-income, urban residents, a group of individuals most likely to be affected by HIV.[4] However, other groups of individuals including African-American college students have received little systematic attention in regard to HIV. Although the risk of contracting HIV among college students is currently lower than the risk among low-income

From the Department of Sociology, Clark Atlanta University and Rollins School of Public Health of Emory University, Atlanta, Georgia. This study was supported in part by research grant number R01 NR03124-02 from the National Institutes of Health, Bethesda, Maryland. Requests for reprints should be addressed to Dr Sandra E. Taylor, Dept of Sociology, Clark Atlanta University, James P. Brawley Dr at Fair St, SW, Atlanta, GA, 30314.

urban residents who participate in drug and high-risk sexual activities, their risk is likely to increase as the AIDS epidemic spreads beyond the well-defined high-risk groups. Yet, interventions developed from the study of HIV risk practices among urban African Americans may not be appropriate for college students, who are likely to differ in risk behaviors. Likewise, studies assessing risk practices of college students often include too few African-American participants to make meaningful statements about their risk behaviors and to develop effective prevention strategies.

This study, part of a larger study on HIV risk-reduction practices of college students, was undertaken to increase our understanding of sexual practices that may place African-American students at risk for contracting HIV. The study sought to identify how often recommended practices are used to reduce the chance of contracting HIV and to determine if males and females differed in their use of these recommended practices.

METHODS

This research represents part of a larger study on HIV risk-reduction practices among college students. These students attended six institutions of higher education in a major metropolitan southeastern city. Of these six institutions, three are predominantly white, and three are classified as "historically black colleges and universities." All six institutions offer 4-year baccalaureate degrees and maintain undergraduate enrollments of at least 1000 students. Based on fall 1993 enrollment figures, participating schools' undergraduate populations ranged from 1841 to 14,789. Of a total of 2044 students in the overall sample, this study includes the African-American population or a subsample of 649.

Sample

The study sample was comprised of 649 heterosexual African-American students, aged 18 to 25 years, who were unmarried and sexually active. Approximately 29% of the sample was male, and almost 71%, female. Students' academic status included roughly equal numbers in each of the four classifications: freshmen (26.2%), sophomores (20.6%), juniors (26.7%), and seniors (26.5%).

Measures and Procedures

The survey instrument was designed to measure environmental, internal-personal, and behavioral factors thought to influence use of HIV prevention strategies. For the purposes of this study, only items measuring behavioral factors were examined. The construct of behavior is defined as practices associated with AIDS risk-reduction practices. These practices include condom use, partner communication, and risky behaviors.

Sexual practices were measured by a safe sex behavior questionnaire. The questionnaire is composed of 29 items each rated on a 4-point scale from never to always.

Data collection procedures involved the survey technique wherein students were asked to return completed questionnaires to a designated site on their respective campus. There was a 25.2% response rate for the overall sample. (A more detailed description of the complete instrumentation and data collection process is available from the authors.)

Data Analysis

Data for this study were analyzed using frequencies and percentages. Chi-squared tests were computed to compare responses by gender. To test for statistical significance of the multiple comparisons, the Bonferroni method was used to correct the *P* value. Only statements resulting in a statistically significant difference are presented in tabular form. For this analysis, responses were grouped so that never and sometimes responses were named "unsafe" and most of the time or always responses were named "safe sex". All negatively worded items were recorded so that higher scores corresponded to a greater frequency of use of safer sex practices.

RESULTS

The data for this study were compiled to depict the demographic breakdown of the African-American students studied, to present this population's responses to statements about AIDS-related sexual behaviors, and to show differences between male and female students with respect to certain sexual behaviors. Significant differences were found between college men and women, with women being more likely to practice "safer sex" behaviors.

Table 1 shows selected demographic characteristics of the student population. Students ranged in age from 18 to 25 years with a mean age of 20.4 (standard deviation, 1.8). Most (almost 71%) were female. An overwhelming number of students indicated that they were "moderately religious" (77.6%) compared with 12.7% who perceived themselves to

be "very religious" and 9.6% who perceived themselves "not at all religious." With respect to community size, most (39.8%) of the students surveyed were from large urban cities, and 23.8% were from moderate sized cities. According to the data, a majority (42.6%) of students indicated their socioeconomic background (defined in terms of family income) as being in the range of $20,000 to $49,999.

Table 2 shows statistically significant differences by gender on AIDS-related sexual practices statements. Of the 29 statements to which the students responded, 14 showed statistical significance. According to the data, the college women surveyed were more likely than their male counterparts to use measures that help prevent HIV transmission. Women clearly indicated the use of "safer sex" behaviors on 13 of the 29 items comprising the scale. The only item wherein men were more likely than women to practice preventive measures was the statement, "If I know a situation may lead to sex, I carry a condom with me" ($P<.0001$).

The consistency in female students' responses in the "safer sex" direction compared with males is evident according to the data. Concerning both statements that reflect communication with one's partner about safe sex (eg, "I ask potential sexual partners about their sexual histories") and statements that reflect specific sex acts (eg, "I try risky sexual practices such as anal intercourse"), the college women surveyed were much more likely than the men to use preventive measures.

Table 1. Demographics of the Sexually Active Student Population

Demographic	No. (%)
Gender*	
Male	188 (29.1)
Female	459 (70.9)
Age (years)†	
18	109 (16.8)
19	127 (19.6)
20	110 (16.9)
21	119 (18.3)
22	96 (14.8)
23	45 (6.9)
24	35 (5.4)
25	8 (1.2)
Socioeconomic background‡	
<$20,000	115 (17.9)
$20,000 to $49,999	274 (42.6)
$50,000 to $79,999	160 (24.9)
$80,000 to $110,000	56 (8.7)
>$110,000	38 (5.9)
Community size§	
Rural	30 (4.7)
Small town	62 (9.6)
Moderate sized city	153 (23.8)
Suburb of large town	132 (20.5)
Large urban city	256 (39.8)
Other	11 (1.7)
Religiosity§	
Very religious	82 (12.7)
Moderately religious	500 (77.6)
Not at all religious	62 (9.6)

*N=647.
†N=649.
‡N=643.
§N=644.

DISCUSSION

The primary route of HIV transmission among college students is through sexual intercourse. Although the prevalence of HIV among the college population is undetermined, monitoring trends in sexually transmitted diseases rates is thought to be useful in predicting the potential impact of the HIV infection among adolescents.[5] Here, there is cause for concern because approximately 8 million people younger than 25 acquire a sexually transmitted disease each year, accounting for approximately 12% of syphilis cases and 30% of gonorrhea cases.[1] Gonorrhea and syphilis rates have increased for adolescents during the late 1980s and early 1990s, with the highest increase among African-American females.[1] In 1990, Gayle and colleagues[6] reported HIV seroprevalence rates of 0.2% or one positive result per 500 students. More recently, Johnson et al[7] reported 3.2% of the 408 African-American students completing their survey questionnaire admitted to being HIV positive.

Longitudinal findings from Fisher and Misovich[8] show that despite the progression of the AIDS epidemic, college students have not changed their patterns of sexual relationships. On the contrary, they have increased their sexual activity and have even begun to engage in other HIV risk behaviors such as experimentation with anal sex. An alarming finding from a similar study[9] corroborates the finding that while the risk of becoming infected with HIV increases among college students, they are taking fewer precautions.

Although African-American college students' knowledge of HIV and its transmission is general-

Table 2. Significant Chi-Square Differences on AIDS-Related Sexual Practices Statements by Gender

Item No. & Statement	No.(%) Males		No. (%) Females		χ^2
	Unsafe	Safe	Unsafe	Safe	
4 I ask potential sexual partners about their sexual histories	83 (45.1)	101 (54.9)	113 (24.8)	342 (75.2)	25.32*
5 I avoid direct contact with my sexual partner's semen or vaginal secretions	111 (60.3)	73 (39.7)	154 (33.8)	301 (66.2)	37.85*
6 I try risky sexual practices such as anal intercourse	15 (8.1)	171 (91.9)	8 (1.8)	449 (98.2)	15.28*
8 I ask my potential sexual partners about a history of bisexual/homosexual practices	127 (69.0)	57 (31.0)	235 (51.8)	219 (48.2)	15.89*
10 I don't have sex when I do not know my partner's sexual history	126 (68.5)	58 (31.5)	209 (46.2)	243(53.8)	25.94*
12 I am willing to consider having anal intercourse with a partner	20 (10.8)	165 (89.2)	7 (1.5)	446 (98.5)	27.82*
13 If I know a situation may lead to sex, I carry a condom with me	32 (17.3)	153 (82.7)	190 (41.7)	266 (58.3)	35.53*
15 If I disagree with what my partner tells me about safe sex practices, I state my point of view	31 (16.8)	154 (83.2)	32 (7.0)	424 (93.0)	14.09†
16 I have oral sex without using protective barriers such as a condom	95 (51.9)	88 (48.1)	148 (33.3)	296 (66.7)	18.85*
18 I have anal intercourse	11 (6.0)	173 (94.0)	3 (0.7)	448 (99.3)	17.10*
19 I ask potential sexual partners about a history of IV drug use	119 (65.0)	64 (35.0)	197 (44.0)	251 (56.0)	23.04*
21 If my partner insists on sex without a condom, I refuse to have sex	97 (53.0)	86 (47.0)	154 (34.3)	295 (65.7)	19.00*
24 I initiate discussion of safe sex with my potential sex partner	103 (56.0)	81 (44.0)	180 (40.4)	266 (59.6)	12.84†
28 I will have anal intercourse if my partner suggests it	27 (14.7)	157 (85.3)	13 (2.9)	438 (97.1)	30.78*

*$P<.0001$.
†$P<.001$.

ly high, they still hold some misconceptions about HIV. DiIorio et al[10] found that some of these misconceptions were related to mode of transmission. Students also held misconceptions about a cure for AIDS and opportunistic infections as a result of AIDS among others. Additionally, Johnson et al[11] found that even though African Americans are generally knowledgeable about AIDS, some misconceptions abound relative to etiology among those with multiple partners.

Most investigations of college students show no significant correlation between knowledge and HIV risk-reduction practices. That is, students who answer more items about HIV correctly are not always the ones most likely to use recommended safer sex practices.

In contrast to findings among predominantly white college student participants, Thomas et al[12] found that African-American students who scored higher on an AIDS knowledge test were less likely to report engaging in high-risk sexual behaviors. Johnson et al[2] note that while 52% of the students in their study admitted to casual sex with an average of two partners, only 40% reported consistent condom use. In another study of African-American male college students, only 26% of respondents were steady condom users.[13]

A Double Dilemma

The combination of the AIDS threat surrounding college campuses and that facing the African-

American population is especially consequential for African-American students. Findings from a number of studies confirm that the African-American population is at high risk for HIV. African Americans have been described as the "second wave" of the AIDS epidemic.[14] The disproportionate impact of AIDS on minority populations, particularly among African Americans and Hispanics/Latinos, is clearly documented.[1,4] Of all the persons who died of AIDS from 1981 through 1990 (a total of 100,777 people), 28% were African American and 15.7% were Hispanic.[4] By 1990, AIDS had become the leading cause of death nationwide for African-American men between the ages of 35 and 44, and the second leading cause of death for African-American men and women between the ages of 25 and 36.[4] African-American females and males accounted for 36% and 8%, respectively, of all reported AIDS cases documented for these two groups.[1]

Although understudied in regard to HIV/AIDS, African-American college students face a double dilemma. Not only is AIDS more prevalent in the African-American community, but the rate of HIV infection for college students is increasing as well. Among African-American college students, it has been found that students who reported having engaged in high-risk behaviors had lower mean knowledge scores than those who reported not engaging in those same high-risk behaviors.[12]

When viewing between-group data, various studies show the disparity between white and minority students on indicators of HIV/AIDS knowledge. For example, DiClemente et al[15] found that African-American and Latino adolescents were roughly twice as likely as white adolescents to have misconceptions about the transmission of HIV infection. Similarly, DiIorio et al[10] found that African-American college freshmen were less likely than their white counterparts to answer knowledge and misconception questions correctly. Other studies corroborate this difference in knowledge level, including St Lawrence et al[16] who found that white students were better informed about practical aspects of AIDS risk. Given this disparity, the double dilemma of AIDS and African-American students assumes an even greater magnitude.

Some of the literature on HIV/AIDS and women in the general population supports the contention that women are more receptive toward taking precautions to avoid HIV infection.[17] Overall, this study shows that college women were generally more likely than their male counterparts to engage in safer sex behaviors (consistent with the literature on the general population). Still, African-American college women are not maximizing efforts toward practicing safer sex. Here, it may be useful to note the importance of examining the practices of African-American students within the distinct cultural and ethnic context in which they occur. A lot is lost in understanding risk behaviors of young African-American men and women when the behaviors of this population are juxtaposed against those of white subjects. Still, comparisons between blacks and whites can be useful toward a fuller picture of risk behavior. Thus, although explanations for risky sexual behaviors tend to be sounder provided they are couched in terms of appropriate referent groups, valid explanations are not necessarily precluded by an additional focus on comparisons.

In the general population, Potter et al[18] contend that a small percentage of sexually active, never-married women use condoms consistently. In contrast, college-aged men are more likely to use condoms sporadically. A troubling finding is that among men, the use of condoms is greater for those less likely to engage in impulsive or risky activity.[19]

The findings in this research, although more encouraging than some similar studies, suggest the need for AIDS education that is consistent with the everyday lives and experiences of college students. This is especially important given the context of African-American students. Much can be learned from building on the successes of educational programs that apparently have led to improved percentages of students exercising precautions. Results of this study (35.1% indicated that they always use condoms and 4.2% indicated that they never do) are encouraging when considering past studies. For example, findings by Baldwin and Baldwin[20] show that 66% of undergraduates indicated that they never used condoms during vaginal intercourse, in contrast to only 13% who indicated that they always did. Still, there is a strong need to impress on this population the fact that not practicing safer sex can be deadly.

To better understand how and why African-American college students and other similar populations engage in risky sexual practices, it is important to recognize the feelings of invulnerability harbored by these groups. Acquired immunodeficiency syndrome is too often perceived by this population as a disease that happens to someone else. Just as the African-American community as a whole has tended to view AIDS as extraneous to its agenda,

African-American college students also see the disease as remote. Moreover, while college students overall are cognitively aware of AIDS and its modes of transmission, they tend to view themselves as immune to the disease. Particularly for African-American students, there is a tendency to underestimate the seriousness of the problem and to disingenuously evaluate the riskiness of their sexual behaviors.[11] In a recent study by Johnson et al,[11] a relatively large group of African-American men (N=149) and women (N=165) indicated that they do not worry about being exposed to AIDS despite having multiple sexual partners. Although it has been suggested that knowledge about AIDS will lower the extent to which risky sexual behaviors are practiced, a direct relationship between knowledge and safer sex practices is not always found. Many studies have found that the expected relationship does not necessarily occur.[8,21-24]

Aronson et al[25] point out that learning about AIDS does not appear to motivate people to accept personal risk of HIV infection. This finding is consistent with studies that indicate risky sexual behaviors,[20,26] frequency of unplanned sexual encounters,[27] and perceptions of invulnerability [28,29] as contributing to the increase of HIV transmission in college-aged adolescents.

CONCLUSIONS

Among African-American college students, there continues to be a pressing need to convey the message that safe sex should be practiced in each and every sexual encounter. Inconsistency in condom use, for example, needs to be addressed, particularly for young men. For African-American men, the need becomes even greater given statistics showing this population to be at high risk for AIDS. For African-American college students generally, culturally sensitive educational programs are especially important given data that show black youth to be less knowledgeable and less likely than their white counterparts to understand the efficacy of safe sex.[15] A key challenge is to bridge the gap between apparent knowledge and actual behaviors.

The reasons for the often lax practices of African-American students are not clearly understood. Somewhat clearer, however, are findings that show men to be less diligent in the practice of safer sex behaviors than women.[11,17] Johnson et al[11] found that 6.5% of the men in their sample compared with 1.5% of women had been exposed to the HIV virus. Still, the men were found to report less worry about contracting HIV in comparison to the women studied.

Although African-American women tend to show greater consistency in the practice of safer sex, some of their behaviors have been found to be just as astonishing. For example, Mays et al[30] found that an alarming 65% of the African-American women studied in their sample reported no use or rare use of condoms. Such findings are particularly disturbing in light of the death rate for African-American women being 10 times that of white women.[1] These and other findings point to the glaring need for AIDS education programs that are meaningful to the particular population targeted.

Findings of this study also illuminate the apparent need to broaden the context of AIDS education messages in enhanced tailoring of prevention information. Addressing these needs could well make a difference in reaching African-American college students more effectively.

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