



HIV/STI Risk Factors Among African-American Students Attending Predominantly White Universities

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Abstract

Introduction: The majority of African American college students in the U.S. attend predominantly white institutions (PWIs). However, there is minimal research examining this population's HIV/STI risk behaviors. The purpose of this investigation was to assess HIV/STI behavioral risk factors among African American college students (aged 18 – 24years) attending PWIs. (n = 2,568)

Methods: Backwards step-wise logistic regression analyses were conducted to determine factors associated with a positive HIV/STI diagnosis (past year) among sexually active African American college students who participated in the Spring, 2006 National College Health Assessment.

Findings: Nine factors were significantly associated with an HIV/STI diagnosis among African American college students attending PWIs. Different risk factors were associated with having a HIV/STI diagnosis among African American male and female college students. These results may be useful to HIV/STIs prevention programs targeting African American college students attending PWIs.

Keywords

African American college students; HIV infections; HIV infections – Risk factors; HIV risk factors; Sexually transmitted diseases – Risk factors; Sexually transmitted infections

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ABSTRACT

Introduction: The majority of African American college students in the U.S. attend predominantly white institutions (PWIs). However, there is minimal research examining this population's HIV/STI risk behaviors. The purpose of this investigation was to assess HIV/STI behavioral risk factors among African American college students (aged 18 – 24 years) attending PWIs. (n = 2,568)

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Key Words: HIV, Sexually Transmitted Infections, College Students, African American, HIV Risk Factors

INTRODUCTION

African American college students face HIV/STI risk from within the communities in which they reside, as well as on college campuses. While enrolled at predominantly white institutions (PWIs), African American college students are faced with many of the same challenges as their Caucasian counterparts such as drug and alcohol use, poor body image, intimate partner violence and the lack of desire to use a condom. African American college students' experiences and behaviors while attending PWIs are further shaped by perceptions of racism, alienation and poor social networks. HIV/STI prevention programs therefore targeting the general college student population may not adequately address the specific needs of the African American college student population attending predominantly white institutions (Kim, 2002; Outcalt & Skewes-Cox, 2002).

In 2004, 14.8 million students were enrolled in undergraduate institutions in the United States, with

11.5 million between the ages of 18 and 25 years (National Center for Education Statistics, 2006). The American Council on Education reports that there was nearly a 51% increase in minority enrollment between 1993 and 2003 and approximately two-thirds of these students were younger than 30 years of age (Cook & Cordova, 2006). In the U.S., African American college students comprised 12.5% of all college enrollment nationwide, with 83% of the African American students attending PWIs and comprising 5% of the students attending PWIs in the U.S. (Knapp, Kelly-Reid, & Whitmore, 2006; National Center for Education Statistics, 2006; Provasnik & Shafer, 2004).

Although the majority of African American college students are enrolled in PWIs, most of the research exploring African American college students' behaviors and risk for HIV/AIDS and sexually transmitted infections (STI) has been conducted with students attending Historically Black Colleges and Universities (HBCUs) (Bazargan, Kelly, Stein, Husaini, & Bazargan, 2000; Berkel, N.Furlong, Hickman, & Blue, 2005; Burns & Dillon, 2005; Chng, Carlon, & Toyne, 2006; Meilman, Presley, & Cashin, 1995; Sandelowski, 2006). However, research conducted at HBCUs may not accurately capture the challenges, risks, and behaviors of all African American college students across the country. Investigating the risk behaviors of African American college students enrolled at PWIs can provide insight useful for the development and/or tailoring of HIV/STI prevention interventions targeting this population.

Sexually Transmitted Infections Among African American College Students

Sexually transmitted infections (STI) simultaneously serve as an indicator of sexual risk and a biologically compromised immune system that may increase the likelihood of HIV transmission (Duncan, Miller, Borskey, Fomby, Dawson, & Davis, D. 2002). Within the United States, chlamydia and gonorrhea respectively, are the most commonly reported STIs (CDC, 2005c). African Americans and young adults have the highest incidence of chlamydia and gonorrhea (CDC, 2006b). Additionally, the human papillomavirus (HPV/genital warts) and genital herpes, which are not reportable infections to the Centers of Disease Control and Prevention (CDC), are estimated to infect more than 65 million Americans each year (CDC, 2005a, 2005b).

Overall, STI occur at higher rates among young adults between the ages of 15 and 24 years (CDC, 2005c). Half of the nineteen (19) million STI occurring annually in the United States occur among young adults aged 15 – 24 years, inclusive of the traditional college aged students (Patrick, Maggs, & Abar, 2007). The number of women diagnosed with STI has steadily increased for the last 10 years, in part due to increased screening efforts, a national policy of care and treatment, and improved screening sensitivities (CDC, 2005c).

Chlamydia infections are the most prevalent of all bacterial STI in the United States (CDC, 2005c). In 2005, the rate of infection was 319.6 per 100,000, which was an increase of 5.9% from 2004 (CDC, 2005c). At the same time, the rate of chlamydia infections among African American women was 1,722.3 per 100,000; seven times higher than the rate among Caucasian females of 226.6 per 100,000 (CDC, 2005c). The rate of chlamydia infection among African American men was 11 times higher than that among Caucasian males (CDC, 2005c). Young women and men between the ages of 15 and 24 years had the highest reported chlamydia rates in 2005.

A 19.1% decrease in Gonorrhea infections occurred among African Americans between 2000 to 2004, from 778.1 to 629.6 cases per 100,000 (CDC, 2005c). Similar to that of chlamydia, the infection rates were highest among young adults, with the highest rate of infection occurring among African American women between the ages of 20 and 24 years (2,790.5 per 100,000) (CDC, 2005c). Among African American males, the rate of infection decreased by 22% between 2000 and 2004, from 862.0 to 670.3 per 100,000, respectively (CDC, 2005c).

The Human Papillomavirus (HPV) is considered a STI because the major route of infection is through genital contact; however, it is not a reportable infection and is not under CDC surveillance like syphilis, gonorrhea and chlamydia. The CDC estimates approximately 20 million people are currently infected

with HPV, with approximately 6.2 million Americans acquiring new HPV infections each year (CDC, 2005b). The CDC further estimates that 50% of sexually active men and women will acquire HPV at some point in their lives (CDC, 2005b).

Genital Herpes is another STI not under surveillance by the CDC. Nearly 45 million people in the U.S., or one out of five adolescents and adults, are estimated to have Herpes Simplex Virus or HSV (CDC, 2005a). The majority of sexually transmitted cases are caused by HSV-2, also known as Genital Herpes (CDC, 2005a). The majority of people with HSV-2 are unaware of their infection and that they can spread the virus through unprotected sexual contact. Due to the lack of surveillance of HSV, there is not an accurate estimate of the impact upon young adults. However, minority young adults remain at higher risk for STI and arguably have a higher risk for HSV (CDC, 2005a).

Condom Use among African American College Students

Barrier methods such as condoms have been identified as the most effective way to prevent the spread of HIV/STI (CDC, 2006a). Consequently, a great deal of research into condom use, condom availability, sexual risk knowledge and self efficacy for using condoms among college students has been conducted (Afifi, 1999; Beckman & Harvey, 1996; Ferguson, Quinn, Eng, & Sandelowski, 2006; Maxwell, Bastani, & Warda, 1999; Roberts & Kennedy, 2006; Seigel, Klein, & Roghmann, 1999; Shrier, Goodman, & Emans, 1999; Smith, 2003; Thompson, Anderson, Freedman, & Swan, 1996). Conflicting findings concerning African American college students' condom use exist. African American college students perceive themselves to be at greater risk of contracting HIV than other students, due to the high prevalence of HIV/AIDS in the African American community and increasing incidence among college students (Taylor, Dilorio, Stephens, & Soet, 1997). Likewise, African American college students maintain a distorted perception of their own HIV risk, in that they estimate their risk to be higher than it may actually be. This distorted perception has resulted in an increase in students' self efficacy to communicate and employ condoms as a way of preventing HIV, however their lack of desire to utilize condoms, for fear of losing pleasure and intimacy, has remained (Bazargan et al., 2000; Beckman & Harvey, 1996; Ferguson et al., 2006; Roberts & Kennedy, 2006; Taylor et al., 1997).

Alcohol and Drug Use among African American Students

The use of alcohol and drugs has been shown to lower inhibitions, increase sexual desires and impede manual dexterity, factors which have been associated with HIV/STI risk. Under the influence of drugs or alcohol, both casual and chronic substance users are more likely to engage in high-risk HIV/STI behaviors (Perkins, Haines, & Rice, 2005). Research has consistently demonstrated that substance use reduces the likelihood of students utilizing condoms during a sex act (Chernoff & Davison, 2005; Maxwell et al., 1999; Roberts & Kennedy, 2006).

High rates of alcohol and drug use have been reported among college students in the United States (SAMHSA, 2003). Numerous longitudinal studies have reported that a majority of college students consume alcohol (Johnston, Malley, & Bachman, 2002). The College Alcohol Survey (CAS), conducted in more than 140 institutions of higher learning across the U.S. between 1993 and 2001, found that approximately 44% of students surveyed had engaged in heavy episodic drinking (5+ drinks for men and 4+ drinks for women during a single drinking occasion) during the two weeks before the survey (Wechler, Dowdall, Davenport, & Rimm, 1995).

Across the U.S., college students have increased their alcohol consumption by 10% (O'Malley & Johnston, 2002). However, African American students attending PWIs consume alcohol, binge drink and suffer negative repercussions of drinking less often than their Caucasian counterparts, but drink more alcohol than their counterparts attending HBCUs (Meilman et al., 1995). It has been found that within the African American community and at HBCUs there are negative social connotations associated with copious alcohol consumption and these perceptions serve to limit binge drinking

among African American college students (Wechler et al., 1995).

Marijuana use has been reported to affect sexual behavior, by enhancing sexual pleasure and increasing sexual desire (Weller & Halikas, 1984). In addition, marijuana has been associated with an increased frequency of sexual activity and an increased number of sex partners (Weller & Halikas, 1984). Nearly one third of college student in a study by Weller and colleagues (1997) reported using alcohol to prepare for sexual intercourse, but utilized marijuana to heighten the sexual experience.

The Harvard School of Public Health has researched alcohol and illicit drug use among college students over the past decade, and has found that marijuana use has continued to increase on college campuses in the United States, from a rate of 41.3 in 1993 and a rate of 47.2 per 100,000 college students in 2001 (Bell, Wechsler, & Johnston, 1997). African American college students' past 30 day use of marijuana was reported to have increased from 5% in 1993 to 12% in 1997, and then declined to 10% in 2001 (Mohler-Kuo, Lee, & Wechsler, 2003). African American college students' marijuana prevalence lags (10.3) behind that of Caucasian students (18.5) (Bell et al., 1997). Particularly alarming is that one in five college students who reported using marijuana also identified as a binge drinker (Bell et al., 1997, Weller & Halikas, 1984). In this way, binge drinking may further contribute to the utilization of illicit drugs and increased HIV risk among African American college students (Bell et al., 1997; Mohler-Kuo et al., 2003).

Body Image among African American College Students

Poor body image and obesity, especially among women can lead to low self-esteem and result in high risk behaviors in order to garner attention from the opposite sex (Wiederman & Hurst, 1998). Among African American women, body dissatisfaction or poor body image has been found to be related to low self-esteem, anxiety and vulnerability to depression (Falconer & Neville, 2000). Studies indicate that African American female college students have a more positive body image and desire a larger body size than Caucasian college women (Aruguete, Nickleberry, & Yates, 2004). Both African American men and women find overweight female figures desirable and attractive (Singh, 1993). However, African Americans are exposed to the same media and cultural ideas about beauty as Caucasian Americans. Therefore, the association of acculturation can play a key role in developing poor body image and negative health behaviors (Aruguete et al., 2004; Edwards-Hewitt & Gray, 1993; Falconer & Neville, 2000).

Sexual Violence

The CDC has identified sexual abuse as one of the key risk factors for HIV among women (CDC, 2007). Sexual victimization is a serious issue for college students in the United States. African American women have been found to be at a slightly greater risk for certain types of sexual abuse, including being called derogatory names, threats to leave a relationship if the woman does not agree to have sex, or forced sex without protection (Belknap, 1989; Levy, 1993). Furthermore, women who had been abused had low self esteem, were insecure, and lacked the skills to leave such a relationship (Berkel et al., 2005).

African American college students are at risk for HIV/STI. The literature renders a partial picture of the risk behaviors associated with African American college students enrolled in PWIs. As the incidence of HIV/STI increases among African Americans and persons aged 15 – 25 years, it is necessary to better characterize and address HIV/STI risk behaviors specific to African American college students enrolled in PWIs.

The purpose of this investigation was to assess HIV/STI risk behaviors among African American college students attending PWIs using data from the Spring 2006, American College Health Association National College Health Assessment (ACHA-NCHA) and to determine which behaviors were significantly associated with a positive HIV/STI diagnosis (during the last school year) among

males, females and all African American college students.

METHODS

This study explored HIV/STI risk among sexually active African American college students' (aged 18 - 24 years) (n= 2,568) who participated in the Spring 2006 ACHA-NCHA. Sexually active participants were classified as having one or more sex partners within the last school year. This was a secondary analysis of the ACHA - NCHA Spring 2006 data which included questions regarding sexual abuse, alcohol and drug use, sexual behaviors, condom use and the occurrence of sexually transmitted infections within the past year. Twenty-six items from the ACHA-NCHA were entered in to the logistic regression model to determine which were significantly associated with having a STI (in the past school year) among all African American college students, males and females, respectively (See Table 1). Variables with multiple responses and continuous variables were transformed into dichotomous response based on risk. Backwards, stepwise logistic regression analyses were conducted utilizing SAS version 9.1.3. Results were considered statistically significant if the p-value was less than .05.

RESULTS

A total of 123 American post-secondary institutions self-selected to participate in the Spring 2006, ACHA- NCHA (American College Health Association, 2007). In total, there were 94,806 participants in the Spring, 2006 ACHA - NCHA survey, of which 63.4% were female and 36.6% were male (American College Health Association, 2007). The age of participants ranged from 18 – 87 years, with 90.9% reporting they were aged 29 years or less (American College Health Association, 2007).

This study limited the participant pool to those who identified as Black/African American, aged 18 – 24 years, and who reported having at least one sex partner within the last school year (See Table 1). In total, 2.7% (N = 2,568) of Spring 2006 ACHA-NCHA participants. Over half (69.0%) of the sexually active African American student population (aged 18 – 24 years) were females and 32.1% were males. Nearly ninety-three percent (92.5%) identified as heterosexual, with the remaining 7.5% identifying as homosexual, bisexual, transgender or undecided. Ninety-four percent (94%) were undergraduate students.

Fifty-seven percent of participants identified as single, while 40.9% were engaged or in a committed dating relationship. Sexually active African American female students had a mean of 2.0 (SD=2.3) sex partners within the last school year, while sexually active African American male students had a mean of 3.8 (SD=6.1) sex partners within the last school year (See Table 2). Seventeen and a half percent (17.5%) reported having more than 3 sex partners within the last school year (See Table 2).

Overall, nine percent of African American college students reported having an STI, including chlamydia, genital herpes, gonorrhea, HIV and/or HPV/genital warts, during the past school year. As shown in Table 2, sexually active African American female college students were significantly ($p < .001$) more likely than male students to have chlamydia, HPV and one or more STI during the past school year. However, African American male students were significantly more likely than females to have had HIV in the past school year.

Table 1. Spring 2006 ACHA- NCHA Sexually Active African American College Student Selected Demographic Characteristics

Characteristic	n	%
Sex	n = 2,568	
Female	1,745	69.0%
Male	823	32.1%
Year in School	N = 2,474	
1 st Year UG	749	30.3%
2 nd Year UG	543	22.0%
3 rd Year UG	530	21.4%
4 th Year UG	395	16.0%
5 th Year UG	126	5.1%
Graduate	118	4.8%
Adult Special / Other	13	1.2%
Student Status	2,460 97.3%	
Full Time Students	2,460	97.3%
International student	111	4.4%
Member in a fraternity or sorority	174	6.8%
Current Relationship Status	n = 2,558	
Single	1,446	56.5%
Married/domestic partner	47	1.8%
Engaged/ committed dating	1,046	40.9%
Separated	10	40.0%
Divorced	6	0.2%
Widowed	3	0.1%
Sexual orientation and gender identity	n = 2,537	
Heterosexual	2,347	92.5%
Homosexual	64	2.5%
Bisexual	85	3.4%
Transgender	5	0.2%
Unsure	36	1.4%
Cumulative GPA	n = 2,467	
A	356	14.1%
B	1,306	51.8%
C	746	29.6%
D/F	59	2.3%

Note UG = undergraduate

Table 2. Number of Sex Partners and STI among African American college Student aged 18 – 24 years Spring 2006 ACHA - NCHA

	Total		Female		Male	
	n	%	n	%	n	%
Sexually Active (had one or more sex partners within the last school year)	2,568	69.0%	1,745	68.0%	823	70.6%
Had one sex partner within the last school year	1,268	49.4%	942	54.0%	326	39.6%
Had more than three sex partners within the last school year	448	17.4%	206	11.8%	242	29.4
Had 1+ STI during the last school year*	232	9.2%	191	11.1%	41	5.1%
Chlamydia*	117	4.7%	94	5.5%	23	2.9%
Genital Herpes	30	1.2%	22	1.3%	8	1%
Gonorrhea	31	1.2%	20	1.2%	11	1.4%
HIV*	11	0.5%	2	0.1%	9	0.4%
HPV - HPV / Genital Warts*	93	3.7%	81	4.7%	12	1.5%

*Indicates statistically significant $p \leq .05$

1+ STI = Having genital herpes, genital warts/HPV, chlamydia, gonorrhea and/or HIV during the past school year.

Results from the logistic regression analysis found that nine variables were significantly associated with having an STI during the past school year among sexually active African American college students (See Table 3). African American students who reported being in a sexually abusive relationship within the past school year and had a D/F cumulative grade point average were more than twice as likely to have an STI than sexually active African American students who did not report a sexually abusive relationship or had an A/B/C grade point average. Sexually active African American college students who had three or more sex partners within the past school year were 10% more likely to have an STI than students who had fewer sex partners. Students who binge drank alcohol within the last two weeks were 50% more likely to have an STI than students who did not binge drink within the last two weeks. Sexually active African American college students who used a condom the last time they had sex, did not use marijuana during the last thirty days and did not have unprotected sex as a consequence of alcohol consumption were 50%, 40% and 50%, respectively, less likely to have an STI than students who did not use a condom the last time they had sex, used marijuana during the last thirty days, and had unprotected sex as a consequence of alcohol consumption. Sexually active African American male college students were 70% less likely to have had an STI during the past school year than female students. Lastly, sexually active African American college students who had never been tested for HIV were nearly four times more likely to have an STI than students who had been tested.

Among sexually active African American female college students, four variables were significantly associated with having an STI during the past school year. Female students who had been in a sexually abusive relationship during the last school year and had who had never been tested for HIV were each 2.8 times more likely to have an STI during the last school year than female students who were not in a sexually abusive relationship or who had been tested for HIV. Moreover, African American female students who had three or more sex partners during the last school year were 20% more likely to have an STI than female students who had fewer sex partners. Lastly, sexually active African American female students who used a condom the last time they had sex were 60% less likely to have an STI than females who did not use a condom the last time they had sex.

Table 3. Odds ratios (and 95% confidence intervals) from logistic regression analysis assessing the likelihood that sexually active African American college students had 1+ STI during the last school year by selected risk-related behaviors

Behavior	Odds ratio	95% CI
In a sexually abusive relationship (last school year)**	2.7	(1.3 - 5.2)
Used a condom (last time had sex)**	0.5	(0.3 - 0.8)
Did not use marijuana (last 30 days)**	0.6	(0.5 - 0.9)
Consumed 5 or more alcoholic drinks in a sitting (last two weeks)*	1.5	(1.0 - 2.2)
Did not have unprotected sex as a consequence of alcohol consumption (within the last school year)**	0.5	(0.4 - 0.8)
Had 3+ sex partners (within the last school year)**	1.1	(1.0 - 1.1)
Never tested for HIV infection***	3.9	(2.3 - 4.5)
Gender (African American male college students)***	0.3	(0.2 - 0.5)
Had a D/F cumulative grade point average*	2.3	(1.1 - 4.9)

* $p < .05$, ** $p < .01$, *** $p < .0001$

Notes: 1+ STI = Having genital herpes, genital warts/HPV, chlamydia, gonorrhea and/or HIV in past school year

95% CI = 95% Confidence Intervals

Table 4. Odds ratios (and 95% confidence intervals) from logistic regression analysis assessing the likelihood that sexually active African American female college students had 1+ STI during the last school year by selected risk-related behaviors

Behavior	Odds ratio	95% CI
In a sexually abusive relationship (last school year)*	2.8	(1.3 - 5.7)
Used a condom (last time had sex)**	0.4	(0.2 - .08)
Had 3+ sex partners (within the last school year)***	1.2	(1.1 - 1.3)
Never tested for HIV infection***	2.8	(1.9 - 4.0)

* $p < .05$, ** $p < .01$, *** $p < .001$

Notes: 1+ STI = Having genital herpes, genital warts/HPV, chlamydia, gonorrhea and/or HIV during the past school year.

95% CI = 95% Confidence Interval

Among sexually active, African American male college students, three variables were significantly associated with having an STI during the past school year. Male students who had D/F cumulative GPA were 10 times more likely to have an STI during the last school year than male students who had an A/B/C cumulative grade point average. Male students who had never been tested for HIV were 5.8 times more likely to have an STI than male students who had been tested for HIV. Male students who did not have unprotected sex as a consequence of alcohol consumption were 70% less likely to have an STI than male students who did have unprotected sex as a result of alcohol consumption.

Table 5: Odds ratios (and 95% confidence intervals) from logistic regression analysis assessing the likelihood that sexually active African American male college students had 1+ STI during the last school year by selected risk-related behaviors

Behavior	Odds ratio	95% CI
Did not have unprotected sex as a consequence of alcohol consumption (within the last school year)**	0.3	(0.1 - 0.5)
Never tested for HIV infection***	5.8	(2.5 - 13.5)
Had a D/F cumulative grade point average**	10.0	(3.1 - 33.1)

*p < .05, **p<.01, ***p<.001

Notes: 1+ STI = Having genital herpes, genital warts/HPV, chlamydia, gonorrhea and/or HIV during the past school year.

95% CI = 95% Confidence Interval

DISCUSSION

This study supports the current body of research indicating that students who report condom use, do not participate in heavy episodic drinking or marijuana use, and do not have unprotected sex as a consequence of drinking alcohol are less likely to report having HIV or another STI during the past school year (Bazargan, Kelly, Stein, Husaini, & Bazargan, 2000; Berkel, N.Furlong, Hickman, & Blue, 2005; Burns & Dillon, 2005; Chng, Carlon, & Toynes, 2006; Sandelowski, 2006)Wechler, Dowdall, Davenport, & Rimm, 1995). However, achieving a low cumulative grade point average, in this study, was significantly associated with having an STI among all sexually active African American students and African American male students in the past school year.

This investigation found that being in a sexually abusive relationship within the last year was significantly associated with having an STI during the past school year for all sexually active African American college students and African American female students. This significant association supports the current body of evidence which indicates that African American women who experience higher levels of sexual violence are at a greater risk for HIV/STI contraction (Kalof, 2000; Pirog-Good & Stets, 1989).

Never having been tested for HIV was significantly associated with a positive STI diagnosis across all three prediction models (overall, female and male). The 50% increase in risk for those who fail to use a condom during their last oral, vaginal or anal sex encounter supports the need for targeted HIV/STI programs for African American college students who attend PWIs.

LIMITATIONS

The models identified in this study serve as good baselines from which other investigations may explore HIV/STI risk among African American college students enrolled in PWIs. However, it is important to note that the findings reported here are based on self-reported data, which may be associated with recall bias and social desirability. Several factors, including items that required more long term memory recall of behavior and experiences such as: reported condom use during the past thirty days, experiences of forced sexual penetration within the last school year, and unintentionally becoming or causing a pregnancy within the last school year, were not significantly associated with having an STI during the past school year. It is difficult to discern if these items did not prove to be risk factors because of poor recall or how the question was presented in the assessment. Furthermore, because school years vary among institutions, the period of time referenced in many of the questions varies according to intuitional calendars and may have served to confound the findings. Finally, these

data may not be generalizable to all populations of African American college students attending PWIs because of the institutional self-selection process of the ACHA - NCHA. In addition, the majority of African American students who participated in the Spring 2006 ACHA – NCHA were enrolled in schools in the southeastern region of the U.S. Thus, additional research with African American students attending PWIs in other regions of the country should be conducted. Moreover, with a cross-sectional survey, causality cannot be determined. More research, both quantitative and qualitative, is required to examine the associations between HIV/STI diagnoses and their risk factors. Such research will allow investigators to determine how best to address HIV/STI prevention for this population.

CONCLUSION

The overall model, as well as gender-specific models, indicates that the picture of HIV/STI risk among African American colleges students enrolled in PWIs is complex. Factors such as sexual abuse, alcohol and marijuana use, binge drinking and its consequence, and failure to use condoms have been documented as HIV/STI risk factors for many American college students (Jung, 2003; Mohler-Kuo et al., 2003; O'Malley & Johnston, 2002). However, academic matriculation and attaining a D/F grade point average were significantly associated with having an STI in this study. Therefore, HIV/STI prevention strategies that strictly focus on sexual behavior may not suffice for African American college students. It is imperative that additional challenges faced by African American college student populations be addressed as well. Further, research is needed to decipher how factors from this study, as well as other factors such as acculturation, experiencing depression, perceived racism and lack of social and institutional support, impact HIV/STI risk behaviors among African American college students. In addition, research into condom use is needed to decipher if failure to utilize condoms is due to lack of accessibility or lack of effective negotiation and utilization skills.

Taking a holistic perspective of HIV/STI risk will facilitate the creation of relevant, culturally competent and comprehensive HIV/STIs prevention programs that will serve the needs of African American college students while attending PWIs. This research emphasizes that addressing health disparities is multidimensional. More research is needed to successfully reduce health disparities among ethnic minorities.

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