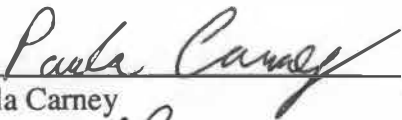


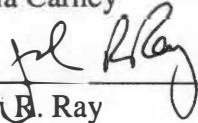
To the Graduate council:

I am submitting herewith a dissertation written by John Franklin Michael entitled "Assessment of HIV/AIDS Knowledge, Attitudes, Beliefs, and Behaviors among Students Attending Historically Black Colleges & Universities: The Basis for Developing a Conceptual Teaching/Learning Framework." I have examined the final paper copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirement for the degree of Doctor of Philosophy, with a major in Human Ecology.

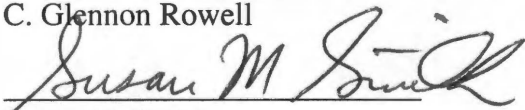

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**ASSESSMENT OF HIV/AIDS KNOWLEDGE, ATTITUDES, BELIEFS,
AND BEHAVIORS AMONG STUDENTS ATTENDING HISTORICALLY BLACK
COLLEGES & UNIVERSITIES: THE BASIS FOR DEVELOPING A CONCEPTUAL
TEACHING/LEARNING FRAMEWORK**

**A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville**

**John Franklin Michael
May, 2007**

DEDICATION

To the African American mothers who – with pride and dignity – continue to struggle with the greatest scourge of our time, and who continue to inspire us with their courage and strength as together we fight this agent of mass destruction, which has come to be known as AIDS.

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The Reverend Thomas P. Grissom, Senior greatly inspired me with his comment, at 90 years of age, "I am just getting my second wind." Attitude is everything!

The author expresses thanks and appreciation to Almighty God for making this accomplishment possible and for allowing these wonderful persons to touch his life in many special ways.

ABSTRACT

HIV/AIDS/STD is brought on by a way of life that includes sexual excess and drug abuse and the risk of contracting AIDS depends exclusively on an individual's behavior choices. Changing one's lifestyle is the most effective way of avoiding these infectious diseases. If, in fact, changing to a healthier lifestyle can help one to avoid AIDS/STD, then it becomes essential that college students develop an understanding of the interrelationship between the quality of a person's knowledge, attitudes, beliefs and behaviors and an awareness of how these qualities are interwoven into human behavior.

The purpose of this study was to assess the self-reported AIDS knowledge, attitudes, beliefs and behaviors of a sample of students attending private and state funded historically black colleges and universities. The secondary purpose of this study was to propose the development of a conceptual teaching/learning framework based on the study findings and conclusions.

The study used a self-report instrument to gather data. The instrument used was the Knowledge, Attitudes, Beliefs, and Behaviors (KABB) Survey. The instrument was used to obtain demographic and well as information regarding (1) HIV risk factors and related behaviors; (2) personal experience with HIV testing ; (3) knowledge, attitudes and beliefs; and (4) opinions regarding public policies. The instrument was selected to collect data based upon the following (1) KABB contains clear and concise questions covering HIV/AIDS risk factors and related attitudes and beliefs among college students in the United States; (2) The instrument had already been utilized with the college population; (3) Based on a validation by field experts, the instrument demonstrated its validity and usefulness in a college setting; and (4) the survey instrument was able to identify

HIV/AIDS knowledge, attitudes and behaviors among students which would enable college health professionals to establish modules that address those behaviors. Moreover, the results may provide a basis to compare findings to earlier studies.

Descriptive statistics of the demographics which included categorical frequency distributions were used to depict salient information on the demographic questionnaire for comparing and contrasting gender, level of education (groups of first year and second year students with groups of third, fourth year and graduate students) and type of institution (private versus public). Relationships among the continuous variables consisting of means, standard deviations, medians, etc. were statistically analyzed. Chi square analysis was used to test whether a significant difference existed between the variables. A T-test was performed to measure HBCU student's HIV/AIDS knowledge compared to level of education, gender and type of institution attended.

Based on the results of the findings a conceptual HIV/AIDS/STD framework was designed. The purpose of the framework is to help HBCU education practitioners and programs design, implement, assess and evaluate instruction.

Limitations of the study were addressed. Implications for the university counseling centers were provided as well as recommendations for future research to determine other variables that have a stronger impact on HIV/AIDS/STD and lifestyle related at-risk behavior of students attending historically black colleges and universities.

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CHAPTER I

INTRODUCTION

The purpose of this chapter was to establish the framework of this study. The framework included the following components: HIV risk factors and related behaviors, 2) personal experience with HIV testing, 3) knowledge, attitudes, and beliefs and, 4) opinions regarding public policies. An introduction to health risk behaviors of college students and their AIDS-related knowledge and lifestyle-related attitudes, a statement of the problem, the purpose of this study and research questions that were answered. In addition, a need for this study was established, and basic assumptions, delimitations, limitations, and definition of terms were discussed. A summary of this chapter and an outline of the organization of this investigation were presented.

Health is a matter of increasing concern for researchers and college health professionals. Although health issues are obviously relevant to individuals of all ages, health among college students is particularly important because the college years represent a period of transition from adolescence to adulthood in which students begin to adopt life-long behaviors that either enhance or debilitate their total wellness (Sax, 1997).

High sensation seekers enter college engaging in a greater variety of sexual behaviors with a greater number of partners than low sensation seekers (Zuckerman, 1994). Variety in partners and non-use of condoms put students at risk for various kinds of sexually transmitted diseases (STDs) as well as pregnancy and various social risks. The current litany of STDs is depressing: crab lice, Chlamydia, genital warts, herpes,

gonorrhea, syphilis, and acquired immune deficiency syndrome (AIDS). The last is the most serious since it is presently incurable and the outcome is eventually fatal.

Recent studies and reports have identified several high-priority health issues for college students. These include substance abuse - alcohol, drugs, tobacco, and food; mental health - stress, anxiety, pressure to achieve, fear of failure, low self-esteem, and lack of social support; and sexual health, (STDs), and AIDS (Patrick et al, 1997). In fact, this generation of teens is the first to live their entire lives with AIDS as a major public health concern.

The disproportionate impact of HIV/AIDS on African American college students warrants urgent and specific attention and calls for prevention programs and strategies that target this population. Some common themes that unite African Americans, increasing their vulnerability to HIV infection, include beliefs about invulnerability that have both cultural and developmental origins, and results from perceived expectations specific to African American relationships between men and women, (Cochran, 1990).

Evidence indicates that students attending historically black colleges and universities are experiencing negative consequences of sexual behavior, such as AIDS and high pregnancy rates. HBCUs are a vital national resource and the backbone of Black American leadership. These institutions have produced nearly 70% of all the Black college graduates in our nation's history. In the future, they are expected to produce more than 300,000 college graduates every 10 years (NAFEO 2000). HBCUs have a vital role in the health of Black college undergraduates and have a major responsibility in educating those students about health promotion, health protection, and preventive health services.

Researchers have noted that although African American college students are more likely than Whites to report condoms not interfering with their sexual pleasure (Johnson, Gilbert and Lollis, 1994), they are more concerned about peer acceptance of condom use (Beckman, Harvey & Tiersky, 1996), have more sexual partners than Whites (Baldwin & Baldwin, 1988), are less likely than Whites to understand the efficacy of condoms in the prevention of AIDS (DiClemente, Boyer, & Morales, 1988), and have indicated that they do not worry about being exposed to AIDS despite having multiple sexual partners (Johnson et al, 1992).

The major problem that needed to be investigated was that of further understanding aids knowledge, attitudes, beliefs, and behaviors among African American college students in order to develop suggested realistic approaches to addressing the aforementioned problems.

PURPOSE OF THE STUDY

The primary purpose of this study was to assess the self-reported AIDS knowledge, attitudes, beliefs and behaviors of a sample of students attending private and state funded historically black colleges and universities. The secondary purpose of this study was to propose the development of a conceptual teaching/learning framework based on study findings and conclusions.

RESEARCH QUESTIONS/HYPOTHESES

In order to address the purposes of this investigation, the following research questions and hypotheses were formulated:

Primary Purpose

Research Question 1: What is the AIDS knowledge, and what are the attitudes, beliefs and behaviors of the HBCU students?

Research Hypothesis 1: HBCU AIDS knowledge, attitudes, beliefs and behaviors are related to level of education.

Research Hypothesis 2: HBCU students' knowledge, attitudes, beliefs and behaviors are related to gender.

Research Hypothesis 3: HBCU students' knowledge, attitudes, beliefs and behaviors are related to type of institution (private versus public).

Secondary Purpose

Research Question 2: What major findings, conclusions and recommendations of this investigation will serve as a basis for the development of a conceptual teaching/learning framework?

NEED FOR THE STUDY

Studies assessing the sexual risk reduction among students attending historically black colleges and universities are sparse. The disproportionate impact of HIV/AIDS on African Americans warrants urgent and specific attention and calls for primary and secondary prevention programs and strategies that target this population. Some common

themes that unite HBCU students, increasing their vulnerability to HIV infection, include beliefs about invulnerability that have both cultural and developmental origins, and behaviors that result from perceived outcomes specific to relationships between men and women.

Little research has been found on knowledge-attitude-behavior relationships in non-clinical populations. Even fewer investigations have evaluated the sexual risk reduction behaviors among students attending historically Black colleges and universities. Because sexual attitudes are such personal matters, accurate knowledge regarding these variables is difficult to ascertain. There is a need for further research to evaluate this relationship especially as these variables affect HBCU students.

Many of the studies that have been conducted failed to follow up with a suggested application of major findings and conclusions. There is without question, a void in the literature of an attempt to apply a solution to the results. The proposed teaching/learning framework is suggested to address this void.

The need for this study was based on a four-fold perspective:

1. the need for comprehensive information and education aimed at risk awareness and risk assessment of HBCU students (regarding routes of transmission);
2. educating for mutual responsibility in sexual relationships;
3. giving non-discriminatory information about HIV infected persons enabling young people to counteract intolerance; promote practical solidarity with young people or adults with AIDS in the community, their partners, families and friends;
4. providing historically black colleges and universities with a research based

teaching/learning framework from which to develop teaching/learning modules.

BASIC ASSUMPTIONS

1. The basic assumptions made regarding this investigation were as follows:
Evaluation instruments were valid and reliable in assessing knowledge, attitudes, and beliefs and behaviors.
2. The subjects utilized for the study were aware of their HIV/AIDS related-knowledge, and lifestyle-related attitudes beliefs and behaviors and objectively evaluated, and reported their AIDS knowledge and their lifestyle-related attitudes, beliefs and behaviors.

DELIMITATIONS

The following delimitation was established to mark the boundaries of the study.

1. The study was delimited to students matriculating at both private and state funded historically black colleges and universities (HBCUs).

LIMITATIONS

The following was a limitation of this study.

1. This study was limited by the use a self-report instrument.

DEFINITION OF TERMS

The following terms were operationally defined as they related to the purpose of this study.

AIDS related knowledge – Claiming to know much about HIV/AIDS transmission; the acquaintance or familiarity with the ways of preventing HIV/STD; the awareness and understanding of the routes of transmission of HIV/STD; the range of information about at-risk populations.

AIDS related attitudes – A general feeling of favorableness or un-favorableness about HIV risk factors, responsibility in sexual relations, tolerance of HIV-infected persons, and of drug use.

HBCU (Historically black college and university) – HBCUs account for 3 percent of all institutions of higher learning in the United States, but they enroll 16 percent of all African American students in higher education and graduate nearly 30 percent of all African Americans earning bachelor's degrees. On the professional level, HBCUs have trained 75 percent of black PhDs, 85 percent of black professionals, 46 percent of black business executives, 50 percent of black engineers, 50 percent of black attorneys, 40 percent of black dentists, 50 percent of black pharmacists, and 75 percent of black veterinarians. In addition, 53.4 percent of African American public-school teachers in 2000 received their undergraduate degrees from HBCUs.

Private HBCU – Historically black college and university offering academic degrees, which is privately funded and independent of institutions, organizations and agencies.

Public HBCU – Historically black college and university offering academic degrees, controlled by entities such as a government agency.

Teaching/Learning Framework – A group of documents created to help HBCU education practitioners and programs design, implement, assess and evaluate instruction. The Framework, based upon findings and conclusions, is not a ready-made HIV/AIDS/STD module rather the Framework provides programs with Strands and Standards that serve as the basis for the module design within each content area. Strands are the themes that run through a Framework; for instance, the strands of HIV/AIDS/STD Framework are HIV/AIDS/STD knowledge, and lifestyle attitudes and behaviors. Standards are the indicators of performance within each strand that help HBCU instructors to determine a student's level of proficiency, target areas for improvement, and design instruction and assessment that will meet students' needs.

CHAPTER SUMMARY

The purpose of Chapter I was accomplished as stated in the introduction by establishing the framework of the study. An introduction to the subject matter, a statement of the problem, and the purpose of this study were described. Research questions and specific reasons that justified the need for this study were presented. Basic assumptions, delimitations, limitations and definition of terms were discussed as well. A summary of this chapter and an outline of the organization of this investigation were also presented.

ORGANIZATION OF THE STUDY

This investigation was organized as follows:

Chapter I included the introduction, purpose of the study, research questions, need for the study, assumptions, delimitations, limitations, definition of terms, and summary.

Chapter II consists of a review of the related literature.

Chapter III presents the research methodology including population, protection of human subjects, pilot study, sample size, protection of human subjects, instrumentation, data tabulation, data analysis, teaching/learning framework, and summary.

Chapter IV discussed and analyzed the findings. The findings were also discussed in terms of the significance of study.

Chapter V presented a summary, findings, conclusions and recommendations.

Chapter VI includes the study in retrospect, including a retrospective comparison of a similar investigation and future directions.

Chapter VII includes a sample teaching/learning framework.

CHAPTER II

REVIEW OF THE RELATED LITERATURE AND RESEARCH

INTRODUCTION

“By nightfall on World AIDS Day, another 12,000 to 14,000 HIV-infected souls will sink lifeless to the ground and swell the earth. As we drop to that same earth in prayer, perhaps we should remember them and recognize that we face another war on terrorism.

These tiny terrorists are deaf to reason, pleas or threats. They feel no pain or retaliation. They have no brain. HIV is another weapon of mass destruction.” (Johnson, 1997)

The literature confirms that African American college students engage in behaviors that place them at risk for HIV and STD infections. The four general topics assessed in this study are discussed at length in this chapter: (1) HIV risk factors and related behaviors; (2) personal experience with HIV testing; (3) knowledge, attitudes, and beliefs; and (4) opinions regarding public policies.

Studies addressing the HIV/AIDS related knowledge, attitudes, beliefs, and behaviors of HBCU students are scarce. Studies that focus on college students often have small clusters of African Americans so that meaningful inferences cannot be made (Taylor et al, 1997). Interventions developed for urban settings may not be appropriate

for college-aged African American youth. Studies are needed to increase the understanding of risk-taking behaviors of this population (Smith et al, 2000).

The literature and research reviewed in this chapter were selected based on the following: literature and research related in content; literature and research related in methodology; and research related in content and methodology.

This related literature of the HIV-AIDS knowledge, attitudes, beliefs, and behaviors of students attending HBCUs has been divided into four sections. Section I contains a brief review of the literature related to the content methodology, section II discusses research methodology, and in section III content and research methodology is the focus. Finally, Section IV provides a summary of the review of related literature.

LITERATURE AND RESEARCH RELATED IN CONTENT

A number of research and literary studies reported on HIV/AIDS related knowledge and college students' attitudes beliefs and behaviors. However, few include a sufficient sample of HBCU students. Furthermore, the literature is even more limited in studies in which these variables are investigated together from samples of students attending historically black colleges and universities. The fact that many studies have samples that are small in the number or proportion of African American students, poses a threat to the validity of findings regarding the African American college populace (Braithwaite, 1998).

Braithwaite (1997) examined the HIV/AIDS knowledge, attitudes, and risk behaviors among a sample of African American (53%) and Caribbean (47%) college

women. Dorman and Rienzo (1988) examined college students' knowledge of AIDS among a sample that was 17% African American. The representation of African American college students in some other samples ranges from 6% to 8.0% (DiClemente, Forest & Mickler, 1990; Joffe & Radius, 1993; Robb, Beltran, Katz & Fozman, 1991; Wenger et al, 1992; Yep, 1993). Taylor et al, (1997) reported African Americans as 31.7% of the overall sample. Still other concerns are evident because some studies do not indicate the proportion of African American college students included in the sample (Williams et al, 1992; Winslow, Franzini & Hwang, 1992).

HIV/AIDS Related Knowledge

Studies have affirmed that knowledge of risks does not deter a person from engaging in high-risk sexual behaviors that facilitate the transmission of HIV and other sexually transmitted diseases (STDs). This phenomenon, which Setumbwe et al (1996) calls the *knowledge-behavior gap*, has been cited as one of the major reasons for increased transmission rates, particularly among heterosexuals. In the earlier stages of the HIV epidemic, many universities and colleges focused on providing students with information to dispel myths about HIV/AIDS transmission. These efforts resulting in 80% to 92 % of college students possessing correct HIV/AIDS knowledge. Fisher et al (1999) has shown that these intervention programs that emphasized knowledge about transmission failed to produce significant changes in HIV risk behavior, however.

Many researchers have found moderate to high levels of knowledge about AIDS across cultures (Al-Owaish et al, 1999; Asuzu, 1994; Buysse, 1996 Carducci et al, 1995; Gray & Saracino, 1989; Katz et al 1995; Lindan et al, 1991; Slonim-Nevo et al, 1991; Swart-Kruger & Richter, 1997; Villarruel et al, 1998). Roscoe and Kruger (1990),

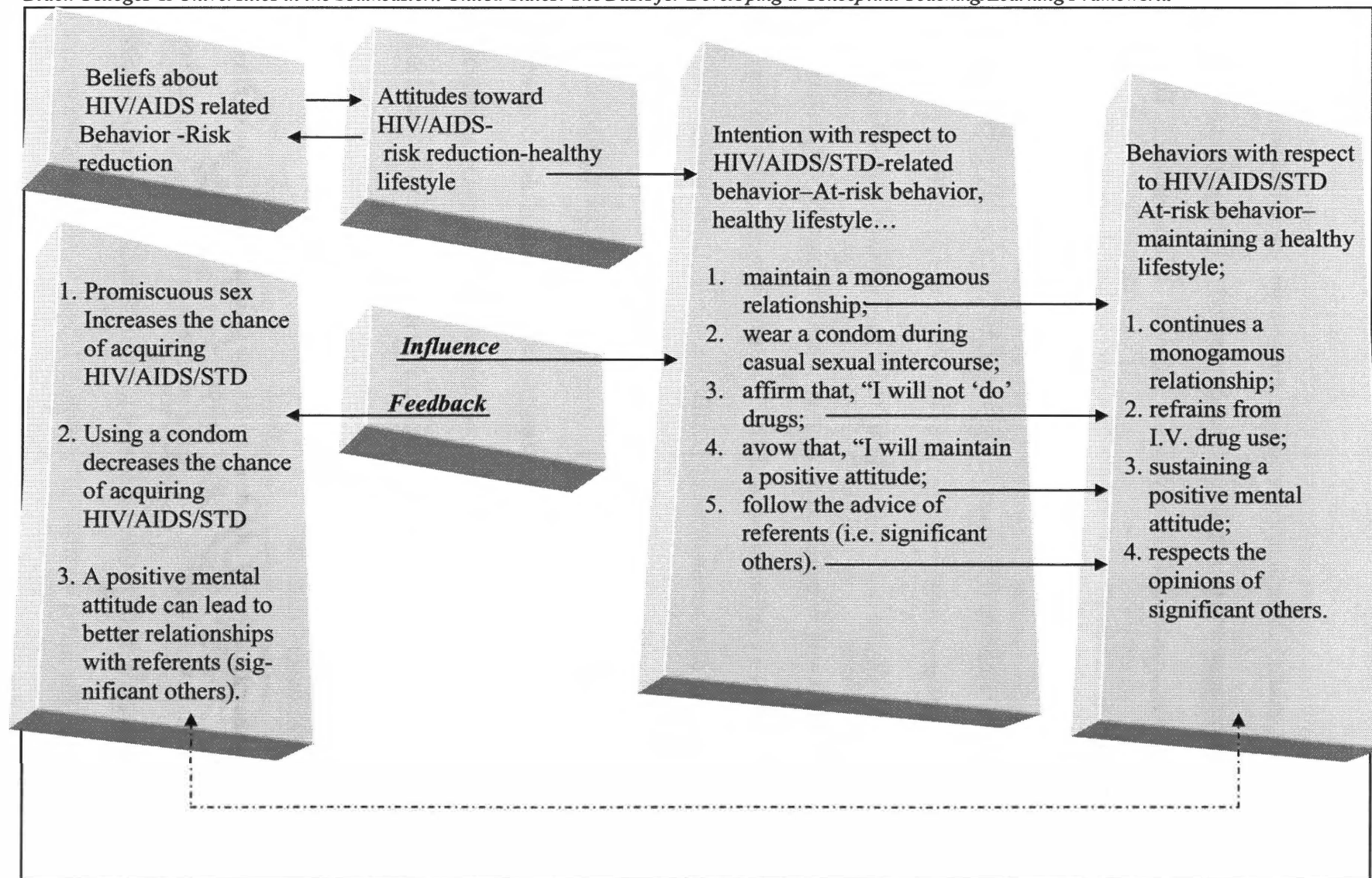
however, studied junior and senior college students and found that while 90% of the participants answered two-thirds of the questions correctly, an item concerning the cause of AIDS was answered incorrectly by less than 50% of the participants. Other studies also show low levels of AIDS knowledge among college students, reporting that a large proportion of participants do not have accurate knowledge of the causes and prevention of AIDS transmission (Fantahum & Chala et al, 1996; Katz et al, 1995; Konde-Lule et al, 1989; Vogels et al, 1999).

Other studies (e.g., Thomas et al, 1989) have shown that poor knowledge scores are associated with an increased perception of personal susceptibility and increased risk behaviors for HIV infection among HBCU students. Whereas, other studies (Johnson et al, 1992) have demonstrated that HIV/AIDS knowledge is not strongly correlated with preventive behaviors. Future studies must examine the elements that contribute to perceptions of personal susceptibility and participation in high-risk behaviors. If HBCU students still consider themselves susceptible to AIDS because they donate blood, use public restrooms, or are bitten by insects, then misinformation may actually impede efforts to change behavior by obscuring the truly risky behaviors that need to be modified in order to prevent the spread of AIDS.

HIV/AIDS Related Attitudes

The quintessential attitude of an attitude is that it is evaluative or affective. Fishbein and Ajzen (1975, p. 216) define attitude as “a person’s general feeling of favorableness or unfavorableness toward a stimulus object.” Two features stem from this definition. The first is the idea that an attitude is a predisposition. In accordance with this view, attitudes are deemed as variables that guide or influence behavior (Fig. 2-1). Since

Fig. 2-1. Schematic representation of conceptual framework relating beliefs, attitudes, intentions, and behaviors with respect to a given object. Fishbein M & AjzenI (1995). Operationlized for *Assessment of HIV/AIDS Knowledge, Attitudes, Beliefs, and Behaviors Among Students Attending Historically Black Colleges & Universities in the Southeastern United States: The Basis for Developing a Conceptual Teaching/Learning Framework.*



attitudes are not subject to empirical observation, they must be inferred from consistency in behavior. The second feature concerns the notion that attitudes are learned. They are generally considered to constitute residues of past experience (Fishbein & Ajzen, 1975). Thus, when these features are combined, attitude can be viewed as a “learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object” (Fishbein & Ajzen, 1975, p. 10).

Research exploring the attitudes and beliefs influencing of condom use among HBCU students is also few in number (Harvey, Beckman & Wright, 1997; Johnson et al, 1992; Johnson et al, 1994; Lewis, Melton, Succop & Rosenthal, 2000). These studies indicate that these students do not use condoms consistently. Beckman, Harvey & Tiersky (1996) note that African American students are more likely than Whites to report condoms not interfering with their sexual pleasure. Whereas, Johnson and Lollis (1994) report the opposite in showing that African American college males considered condoms inconvenient and uncomfortable. Identification of the various attitudinal factors that influence condom use (and other health protective practices) among sexually active African American college students is necessary to design effective interventions to decrease the risk of HIV infection and AIDS, and STDs in this population.

Lifestyle-Related Beliefs and Behaviors

In addition to knowledge and attitudes about AIDS, previous literature on health behaviors has focused on the role of individuals’ perceived susceptibility to AIDS as a motivator of behavioral change (Aiken, Gerund, Jackson, 2001; Fishbein, Triandis, Kanfer, Becker, Middlestadt & Eichler, 2001). The Health Belief Model (HBM) (Becker & Mailman, 1975; Rosenstock, 1994) theorizes that individuals must perceive themselves

to be at risk of the health threat before they will take actions to reduce risky behaviors or to engage in healthy alternative behaviors (Aikens, 2001).

Research focusing on the effects of beliefs or susceptibility to AIDS indicates that college students who report high perceived risk for AIDS practice safer sexual behaviors, whereas those who perceive low risk for contracting AIDS report practicing unsafe sexual behaviors (Villarruel et al, 1998). According to Volk & Koopman (2001) the failure of perceived susceptibility to predict behavior is most likely a result of participants' misconceptions about the origins and transmission of AIDS. For example, some participants reported the belief that anal sex was a safe alternative to vaginal sex (Volk & Koopman, 2001). For these individuals, misconceptions, or lack of accurate knowledge about AIDS, resulted in inaccurate assessments of susceptibility. In this way, it seems that perceived susceptibility must be related to accurate knowledge in order to bring about behavioral change.

In addition to the students' beliefs of susceptibility to AIDS, the Health Belief Model addresses the role of self-efficacy in predicting individuals' implementation of safer sexual practices. According to the HBM, even when individuals perceive themselves to be susceptible to a health threat, such as AIDS, they will not change their behavior unless they feel confident in their ability to change their risky behaviors (Rosenstock, Strecher & Becker, 1994). In this way, an assessment of individuals' confidence in performing safe sexual practices is a critical element in determining whether or not individuals will actually change their behavior.

Among HBCU students, there continues to be a pressing need to convey the message that safe sex should be practiced in each and every sexual encounter. Having

accurate knowledge about safe sex, (HIV/AIDS and STD prevention) is important “to counter myths, and to create a more humane and compassionate response to individuals with AIDS” (Shrum et al 1989). However, assessing lifestyle attitudes and beliefs about susceptibility and concerns will be necessary to provide valuable information for lowering the level of AIDS risk in this population and in targeting particular behaviors for prevention. Successful programs for HBCU students will need to take into consideration the diversity of attitudes, beliefs and behaviors within this group.

SECTION SUMMARY

HIV transmission rates among African Americans are not declining significantly in response to effective interventions compared with whites. Between 2001 and 2004, African-Americans – who among racial groups had 51 percent of all new diagnoses – had a new diagnosis rate 8.4 times higher than that of whites and 2.5 times higher than that among Hispanics (See Fig 2.1, CDC 2005). Overall, new HIV diagnosis continues to disproportionately and severely impact African Americans, both men and women. According to the Centers for Disease Control and Prevention (2005) other research findings – including a report that showed syphilis on the increase for the fourth straight year – suggest that the rate of HIV infection among men who have sex with men may in fact be rising.

The literature confirms that college students engage in behaviors that place them at risk for HIV infection. It is estimated that greater than 80% of all college students are sexually active by their freshmen year, and less than half use condoms consistently

(Fisher et al, 1999; Lewis, 1997). However, Valentine et al, (2003), in their study of the sex practices among allied health students at seven HBCUs, found a higher rate of condom use among African American students compared with other racial and ethnic groups and significant differences for gender, race, and antibody testing. The significant findings reflect that this sample of informed allied health students engaged in safer sex practices, with implications for using allied health students as role models in designing effective prevention programs on HBCU campuses.

The main focus of this section of the chapter is how the HIV/AIDS related knowledge, attitudes, and beliefs, may be related to lifestyle behaviors among students attending historically Black colleges and universities.

LITERATURE AND RESEARCH RELATED IN METHODOLOGY

The standard approach for assessing HIV/AIDS related knowledge, attitudes beliefs, expectancies, and behaviors is via self-report questionnaires (SRQ). The primary national studies that collect information on health and substance use prevalence and trends, including the Monitoring the Future Survey (MTF), the National Household Survey on Drug Abuse (NHSDA), the Youth Risk Behavior Survey (YRBS), and the National Longitudinal Survey of Youth (NLSY), all employ the SRQ format to collect their data.

Monitoring the Future is an ongoing study of the behaviors, attitudes, and values of American secondary school students, college students, and young adults. The project has been conducted under a series of research grants from the National Institute on Drug

Abuse, a part of the National Institutes of Health. Each year, a total of some 50,000 8th, 10th, and 12th grade students are surveyed and presented with the same set of questions over a period of years to see how answers change over time.

The data from students are collected during the spring of each year. Each year's data collection takes place in approximately 420 public and private high schools and middle schools selected to provide an accurate representative cross section of students throughout the contiguous United States at each grade level.

A multi-stage random sampling procedure is used for securing the nationwide sample of students each year at each grade level.

Stage 1:

The selection of particular geographic areas.

Stage 2:

The selection (with probability proportionate to size) of one or more schools in each area.

Stage 3:

The selection of classes within each school

Within each school, up to 350 students may be included. In schools with fewer students, the usual procedure is to include all of them in the data collection. In larger schools, a subset of students is selected either by randomly sampling entire classrooms or by some other random method that is judge to be unbiased. Sampling weights are used when the data are analyzed to correct for unequal probabilities of selection that occurred at any stage of sampling.

About 10 days before the in-school, the students are given flyers explaining the study. Also, advance letters to parents inform them about the study and provide them a handy means for declining their child's participation if they so desire. The actual

questionnaire administrations are conducted by the local Institute for Social Research representatives and their assistants, following standardized procedures detailed in a project instruction manual. The questionnaires are group administered in classrooms during a normal class period whenever possible. The follow-up questionnaires are mailed to respondents with a return, self-addressed, stamped envelope and a small monetary gift of \$20 as a token of appreciation.

Overall teen drug use continues gradual decline; but use of inhalants rises. Cigarette smoking among American teens continues to decline, but more slowly than in the past. (NIDA, 2004).

The 2001 National Household Survey on Drug Abuse provides a more accurate and comprehensive one-year snapshot of the problem of drug abuse in America. The survey includes a series of questions designed to measure more serious problems resulting from use of substances. Overall, an estimated 16.6 million persons age 12 or older (7.3 percent of the population) were classified with dependence on or abuse of either alcohol or illicit drugs in 2001 (HHS, 2004). Of these, 2.4 million were classified with dependence or abuse of both alcohol and illicit drugs, 3.2 million were dependent or abused illicit drugs but not alcohol, and 11.0 million were dependent on or abused alcohol but not illicit drugs. The number of persons with substance dependence or abuse increased from 14.5 million (6.5 percent of the population) in 2000 to 16.6 million (7.3 percent) in 2001 (HHS, 2004).

For the first time in 2001, the Household Survey included questions for adults that measure serious mental illness. Both youths and adults were asked questions about mental health treatment in the past 12 months. The survey found a strong relationship

between substance abuse and mental problems. Among adults with serious mental illness in 2001, 20.3 percent were dependent on or abused alcohol or illicit drugs; the rate among adults without serious mental illness was 6.3 percent. And estimated 3.0 million adults had both serious mental illness and substance abuse or dependence problems during the years (HHS, 2004).

The Centers for Disease Control developed the Youth Risk Behavior Surveillance System (YRBSS) to monitor six categories of priority health-risk behaviors among youth – behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection; unhealthy dietary behaviors; and physical inactivity – plus overweight (CDC, 2004). These risk behaviors contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States. YRBSS includes a national school-based survey conducted by CDC as well as state, territorial, and local school-based surveys conducted by education and health agencies. In these surveys, conducted bi-annually since 1991, representative samples of students in grades 9-12 are drawn. In 2003, a total of 15,214 students completed the national survey, and 32 states and 20 school districts also obtained data representative of their jurisdiction.

In 2003 CDC conducted a review of existing empirical literature to assess cognitive and situational factors that might affect the validity of adolescent self-reporting of behaviors measured by the YRBS questionnaire (Brener, 2003). In this review, CDC determined that, although self-reports of these types of behaviors are affected by both cognitive and situational factors, these factors do not threaten the validity of self-reports

of each type of behavior equally. In addition, each type of behavior differs in the extent to which it can be validated by an objective measure. For example, reports of tobacco use are influenced by both cognitive and situational factors and can be validated by biochemical measures (e.g., Cotinine). Reports of sexual behavior also can be influenced by both cognitive and situational factors, but no universal standard exists to validate the behavior.

The National Longitudinal Survey of Youth (NLSY) is designed to document the transition from school to work and into adulthood. It collects extensive information about youths' labor market behavior and educational experiences over time. Employment data include start and stop dates of jobs, occupation, industry, hours, earnings, job search, and benefits. Measures of work experience, tenure with an employer, and employer transitions can also be obtained. Educational data include youths' schooling history, performance on standardized tests, course of study, the timing and types of degrees, and a detailed account of progression through post-secondary schooling (HHS, 2004).

Aside from educational and labor market experiences, the NLSY contains detailed information on many other topics. Subject areas in the questionnaire include: Youths' relationships with parents, contact with absent parents, marital and fertility histories, dating, sexual activity, onset of puberty, training, participation in government assistance programs, expectations, time use, criminal behavior, and alcohol and drug use. Areas of the survey that are potentially sensitive, such as sexual activity and criminal behavior, comprise the self-administered portion of the interview.

In the late 1980's California conducted two statewide AIDS Knowledge, Attitudes, Beliefs, and Behaviors (KABB) surveys. To provide an updated profile of

California, the 2000 KABB statewide survey of adults was conducted. The University of California, Berkeley, Center for Family and Community Health executed the study on behalf of the California Department of Health Services, Office of AIDS (OA). A total of 1,739 adults were interviewed by telephone between April and June 2000. Participants had a choice to be interviewed in either English or Spanish. Four general areas were included in the study: (1) HIV risk factors and related behaviors; (2) personal experience with HIV testing; (3) knowledge, attitudes, and beliefs; and (4) opinions regarding public policies.

The objective of the survey was to gather information about HIV/AIDS KABB among the general adult population of California. Additionally, the OA was interested in contrasting KABB between urban and rural residents in the state.

The final response rate for the survey was 35.4 percent, and the cooperation rate was 68.5 percent. Approximately 2.4 percent of Californians engaged in at least one HIV-risk behavior during the prior year (injection drug use, sex with someone from a high risk group, e.g., men who have sex with men (MSM), injection drug users, or HIV-infected partners, or sex with six or more partners in the past 12 months)

The University of California, Center for Family Health (CFCH), under the supervision of the Communication Sciences Group/Survey Methods Group (CSG) conducted ten cognitive interviews to evaluate how the proposed survey questions were comprehended and to assess the meanings that individuals attached to them. These interviews were used to refine questions. The interviews were administered in face-to-face mode using a “think aloud” methodology and included interviewer probing after each question about understanding, interpretation, and effective response.

Surveys were subjected to pre-testing and expert review. CSG conducted 70 pretests; 60 in English and ten in Spanish. In addition, input was sought from experts in the area of HIV and behavior regarding the question wording and flow.

In addition to 12-18 hours of general interview training and instruction, interviewers spent three hours studying materials prior to the survey briefing, and the briefing itself lasted two hours. Each interviewer received regular monitoring and feedback. The interviewers were highly experienced. The majority had worked on other surveys about HIV and AIDS. The rest experienced with other sensitive topic interviews. The interviewers were distributed across major racial/ethnic groups with approximately equal numbers of males and females.

The 2000 KABB Survey presents a highly relevant and timely picture of Californians' knowledge, attitudes, beliefs, and behaviors concerning HIV/AIDS. Further analysis and dissemination of the results will provide public health officials, prevention programs and policy makers with the means to more effectively target those populations at greatest risk for HIV infection.

Analysis from the 2000 KABB survey provided public health officials and policy makers with current information on HIV/AIDS-related behavioral, social, and cognitive indicators for the general population. Understanding the sexual behaviors and the status of the population's knowledge and beliefs is critical to assess the success of previous prevention campaigns.

The Centers for Disease Control and Prevention (CDC) provides HIV-related information on general population groups through three major multi-purpose national survey systems with sections dedicated to HIV-AIDS knowledge, attitudes, beliefs, and

behaviors. These three survey systems are the National Health Interview Survey (NHIS), the Behavioral Risk Factor Surveillance System (BRFSS), and the Youth Risk Behavioral Surveillance System (YRBSS).

The National Health Interview Survey (NHIS). The National Health Interview Survey (NHIS) (Adams, 1995; Schoenborn, 1994) is a general purpose health survey with a multistage probability design that permits continuous sampling of persons in the United States. The sample size is about 50,000 households each year. Sampling and field operations are conducted by the U.S. Bureau of the Census under specifications established by CDC's National Center for Health Statistics.

Data are collected from one person in the household regarding illness and injuries, disabilities, and use of health services among all family members. Information on special health topics, including AIDS, is obtained through personal interviews with a randomly selected sub-sample of adults. The response rate for the basic health component of the survey is about 96 percent, and for the supplements, about 85 percent.

The Behavioral Risk Factor Surveillance System (BRFSS). BRFSS is comprised of state- administered telephone surveys that provide data for all 50 states and the District of Columbia (Remington et al, 1988). The surveys are performed by the state health departments or their contractors using random-digit dialing. In each state, the survey uses probability-based sampling methodology, the most common being the Waksberg Cluster design. Households are selected according to each state's sampling design and then an individual is randomly selected from among the eligible persons in the household who are 18 or more years of age. The HIV and AIDS questions are only asked of respondents 18-65 years of age.

The Youth Risk Behavior Surveillance System (YRBSS). This national school-based survey is administered to a national probability sample of approximately 12,000 high school students. YRBSS has four components (Kobe, 1993): (a) national school-based surveys, (b) state and local school-based surveys, (c) national household-based surveys, and (d) the newly established national college-based surveys.

The national school-based survey is administered to a national probability sample of approximately 12,000 high school students. A multistage sample design is used to select schools and students within schools to gain appropriate probability samples.

The state and local school-based surveys use probability samples of varying sizes, with the average size being somewhere around 2,000. A multistage sample design is used to select schools and students within schools to gain appropriate probability samples.

The national household-based survey component of YRBSS, initially conducted in 1992 as a follow-back supplement to the NHIS, was administered to a sample of about 10,000 adolescents and youth ages 12-21 from the households in the 1992 NHIS. Interviews were conducted in person using an audio cassette with head phones and coded answer sheet to ensure privacy. The sexual behavior questions were not asked of 12- and 13-year-olds.

The YRBSS national college-based survey began in 1995. It used a modified YRBSS questionnaire developed specifically for college students.

The adult surveys, NHIS and BRFSS, contain HIV and AIDS questions that focus predominantly on knowledge, attitudes, and beliefs. In contrast to the surveys for adults, which have few or no behavioral questions in their HIV and AIDS sections, YRBSS devotes all of its HIV and AIDS questions to behavior.

The National HIV Prevention Conference (NHIVPC, 2003) employed the KABB model (Knowledge, Attitudes, Beliefs, Behaviors) to collect data regarding HIV prevention needs for Men Who Have Sex with Men (MSM) in a rural Midwestern state. Each survey question was assigned to one of the four domains of KABB. Data collected from 176 men dealt with participants' sexual practices and relationship history, drug and alcohol use, and suggestions for rural HIV prevention. Most surveys were completed anonymously online and the remainder were completed confidentially at two "gay friendly" events.

Pearson correlations (at $p < .05$) supported the following hypotheses: 1) many who are practicing risky behaviors and have not tested for HIV would report believing they are HIV negative. Positive correlations between: 1) Unprotected anal intercourse and amount of substance use (among substance abuse practices, binge drinking showed the strongest association with unsafe sex. 2) Condom use and positive attitudes towards communicating with partners and/or potential partners about HIV. 3) Condom use and knowledge about HIV transmission. Although most participants had some complaint about HIV testing, this was not significantly correlated with unprotected anal intercourse.

In an attempt to describe the "met and unmet HIV prevention needs" in the state of Maine; the Maine HIV Prevention Community Planning Group (CPG) utilized the KABB to conduct a statewide survey of people at risk for HIV. Three subpopulations were included in the study:

- Females who have sex with males (FM)
- Males who have sex with females (MF)
- Males who have sex with males (MSM)

Survey distribution occurred from June to October, 2002. Surveys were distributed by HIV prevention field educators and were directly returned upon completion, or were returned to the Bureau of Health using a postage-paid envelope. A total of 820 surveys were completed for the assessment. Two hundred eighty surveys were completed by individuals who identified themselves as females who have sex with males; 210 by males who have sex with females; and 330 by males who have sex with males. Individuals from tribal communities, college campuses, shelters, selected bars, correction institutions, and jails were among those included in the survey process.

Results revealed that, although most participants did not need basic information regarding HIV risk, a significant number of local MSM engage in multiple high risk behaviors. In addition, major limitations in the quality and quantity of HIV prevention resources targeted across the region for MSM were revealed.

The major advantages of self report measures are that they are relatively easy to administer to large samples, they can be administered simultaneously in several different locations, the responses are easily quantifiable and thus analyzable, and they offer the researcher the ability to question respondents on many different areas of interest. Self-report instruments are also relatively inexpensive to produce and administer and they can be administered in several different ways, including in person or over the telephone by an interviewer, via mail, or via the Internet (Patrick et al., 1994). Furthermore, self-report measures allow the respondent to choose to skip items that he/she does not wish to answer, helping ensure that the data collection is ethical with respect to protecting respondents' choice as to what information they wish to reveal to the researcher.

There are a number of disadvantages to self-report measures, particularly in regards to their validity and reliability. By their nature, self-report measures allow respondents to strategically alter their true responses to suit their particular self-presentation motives. Under most circumstances, respondents wish to present themselves in a socially desirable way and, therefore, might alter their true responses to appear more “normal” or acceptable to the researcher (Patrick et al, 1994). Alternatively, under certain circumstances, the respondent may be motivated to paint a very negative picture of himself or herself, for amusement purposes or perhaps with the goal of becoming classified as someone who deserves a certain desirable treatment or intervention. In general, respondents may alter or modify their true responses to an item because of “demand characteristics,” which include any respect of the research environment or the research instrument that communicates a “demand” for the respondent to behave in a particular way (Patrick et al, 1994).

Other surveys also provide pertinent information about HIV-AIDS knowledge, attitudes, beliefs, and behaviors. The National Survey of Family Growth (Mosher, 1993), for example, provides data particularly relevant to the HIV epidemic, as does the Substance Abuse and Mental Health Services Administration’s annual National Household Survey on Drug Abuse (DHHS, 1994). The University of Chicago’s National Opinion Research Center has included a short self-administered questionnaire on selected HIV-related risk behaviors on its annual omnibus General Social Survey since 1988.

Several large national surveys have focused on sexual behavior, including the National AIDS Behavioral Surveys (Catania et al, 1993), the National Survey of Men and

the University of Chicago's much publicized National Health and Social Life Survey (Laumann et al, 1994; Michael et al, 1994).

SUMMARY OF METHODOLOGY SECTION

In relation to methodology, the same procedures found in the literature were followed by this researcher. The instrument was mailed to HBCU professors with instructions for administering the questionnaire. The researcher analyzed the data.

Based on the findings of the studies reviewed, the Knowledge, Attitudes, Beliefs, and Behaviors (KABB) Survey was the best instrument to assess the variables of this study. The instrument has been validated, assessed for reliability and successfully administered in the state of California.

LITERATURE AND RESEARCH RELATED IN CONTENT AND METHODOLOGY

The following studies are examples of research that used survey methodology to study the variables of HIV/AIDS related knowledge, and lifestyle related behaviors among students attending historically black colleges and universities. These studies helped better understand risky sexual behaviors among a sample of students attending two HBCUs in two large southeastern U.S. cities.

The literature confirms that college students engage in behaviors that place them at risk for HIV infection. It is estimated that 80% of all college students are sexually

active by their freshmen year and less than half use condoms consistently (Fisher et al, 1999; Lewis, 1997). Jemmott and Jemmott (1991) found that only 20% of sexually active, unmarried, African American undergraduates at a commuter university always used condoms. African American college students currently do not manifest risk at the level that exists within the larger racial-ethnic community; however, they are at increased risk of being HIV-infected as compared with their majority-group peers.

The Information-Motivation-Behavioral (IMB) skills model of AIDS-preventive behavior was employed by Bazargan, et al (2000) to delineate the roles of HIV/AIDS knowledge, experiences with attitudes toward condom use, peer influences, perceived vulnerability, monogamy, and behavioral skills among sexually active HBCU students. This contained 35 items that assessed the students' knowledge about HIV/AIDS and included measures of AIDS-related knowledge, risk-reduction motivation, behavioral skills and personal efficacy behavioral skills.

Analysis showed that, when knowledge about HIV transmission was divided into sexual and nonsexual domains, only the knowledge about HIV transmission through sexual activities had a direct effect on condom use. Furthermore, sexual transmission knowledge was also related to both behavioral skills and positive attitudes toward condom use.

Valentine's (2003) study examined sexual behaviors, risk for HIV infection, condom use, and HIV testing practices among 614 allied health students. All the students were enrolled in seven schools of allied health at HBCUs, or in four predominantly African American physician assistant programs in northeastern, southeastern, and western regions of the United States. Survey/question validation was accomplished

through a discussion forum that consisted of five randomly selected Howard University allied health students who provided their understanding of the meaning and intent of all questions on the survey. The National AIDS Minority Information and Education Program located at Howard University in Washington, D.C., generated the final survey instrument for the study.

Data analysis revealed 1) the sample of allied health students practice safer sex compared with similar student populations, 2) the allied health students were likely to use condoms in contrast to the outcomes of similar college students who studied in the United States and abroad and, 3) Most of the study participants had had the HIV antibody test more than once, which reflects national trends found in other research studies.

AIDS is a fatal chronic disease that has stigmatizing effects. Jemmott, Jemmott, and Cruz-Collins (1991) in their study of 153 nursing students predicted AIDS patient care intentions as key determinants of subsequent behaviors. Nursing students knowledgeable about AIDS transmission had lower fear-of-occupational-exposure scores, while nursing students not knowledgeable about AIDS transmission had higher fear-of-occupational-exposure scores. In addition, higher AIDS negativity and lower AIDS knowledge scores correlated with intentions to avoid giving care.

Cornelius (1999) examined the meaning of this experience for African- American nursing students. This research was a phenomenological study exploring the meaning of the experience of providing care to PWAs. The phenomenological method provides the researcher with insight into the lived experience of a particular event. A convenience sample of 12 associate degree nursing students enrolled in a historically black college and

university located in the southeast region of Virginia volunteered to participate in the study.

The “self-report” measuring instrument consisted of a 1-hour interview followed by the handing out of blank pads on which each nursing student was asked to illustrate the perception of this patient care experience for herself/himself and the patient within a drawing using colored pencils and the sketch pad. Validity of the results was obtained by a doctoral prepared nurse researcher experienced in phenomenological methodology. The drawings were analyzed for words and symbols used to illustrate this experience; the goal being the reduction of the stigmatizing effect of treating patients who have a chronic disease.

Five dominant themes emerged from the data analysis using Giorgi’s (1985) technique of reduction. These themes were fear of exposure and transmission; hopelessness about the satiation; self-identification with the individual; empathy about the PWA; and spirituality and belief in an afterlife.

Braithwaite’s (1998) research tested the prediction of intended sexual behavior among a sample of African American college students enrolled in HBCUs in South Carolina. The Minority Health Research Laboratory HIV/AIDS Prevention Survey (Iwrey, 1989; “Thomas, Gilliam, & Iwrey, 1989) was administered to the freshmen enrolled in freshman orientation classes. Sample items included dry kissing, masturbation, oral, anal, and vaginal sex with condoms; the same practices without a condom; and having sex with four or more partners. The results suggest that reported past sexual behavior was the most important variable in the study.

Fennell (1997) utilized the National College Health Risk Behavior Survey (NCHRBS), a modified version of the Youth Risk Behavior Surveillance System to investigate the sexual behaviors that contribute to unintended pregnancy and STDs among students attending HBCUs. The NCHRBS was administered to a sample of 996 students attending eight HBCUs in seven states. Among the students surveyed, the majority of the participants had had sexual intercourse (82.5%). Most of those had had their first intercourse between the ages of 15 and 16 years, 28.2% by the age of 17 or 18. Just over one in five (20.75%) of the respondents indicated that they had first experienced sexual intercourse between the ages of 13 and 14. The percentage of students whose lifetime sexual intercourse was with four or more sex partners was 69.5%, whereas 45.6% indicated they had had four or more male sex partners. Men were more likely than women to have had sexual intercourse with four or more sex partners (men 73.2%) versus women (46.2%).

Sexual intercourse with individuals of the same sex during their lifetimes was reported by 15.5% of the men and 3.8% of the women. Men were significantly more likely than women to have used alcohol or other drugs before engaging in sexual intercourse.

Condoms had been used by 59.6% of the students the last time they had had intercourse; 19.2% said they or their partners had used birth control pills, but 17.1% had used no method to prevent pregnancy. Approximately one quarter (24.9%) indicated they had been pregnant or had impregnated someone. Women were significantly more likely to indicate that a pregnancy had occurred than men were to say that they had impregnated someone.

SUMMARY OF RELATED LITERATURE

From the review of existing literature, this chapter substantiates the fact that sexuality problems among students attending historically black colleges and universities continues to be a topic that deserves serious research effort. The review also revealed the limited amount of research targeting this population. The need to better understand how HIV/AIDS knowledge, attitudes and beliefs affect lifestyle behavior becomes evident as this review of the existing literature confirms that African American college students continue to engage in behaviors that place them at risk for HIV infection.

A review of studies concerned with the measurement of HIV/AIDS related knowledge, attitudes and beliefs and their relationship to lifestyle behavior of African-American college students suggested that those subjects who have more knowledge have more confidence in sexual practice, and have also changed sexual behaviors. The studies also suggested that those who have liberal attitudes toward AIDS patients have higher beliefs that they will not contract AIDS. AIDS related knowledge, attitudes, beliefs of susceptibility, and self-efficacy regarding performance of safe sexual practices of college students can provide valuable information for assessing the level of AIDS risk in HBCU students and targeting particular behaviors for prevention.

The various factors contributing to the practice of high-risk behaviors of college students include cognitive, psychological, and knowledge-based factors (Braithwaite, 1998). Also included are factors related to personal gratification, self-efficacy, and personal behaviors regarding the practice of safe sex (Jessor, 1993). The fact that many studies have samples that are small in number or proportion of African American college

students poses a threat to the validity of findings regarding the African American college populace (Braithwaite, 1998).

Comparative research on variables related to HIV/AIDS knowledge, attitudes, beliefs and behavior of HBCU students is absent from the literature. However, descriptive research methodology using scaled instruments has been used successfully to measure these variables in other college students (Williams et al, 1992; Winslow, Franzini & Hwang, 1992). The next chapter will consider this researcher's methodology for addressing this absence in the literature.

CHAPTER III

METHODS AND PROCEDURES

INTRODUCTION

The purpose of this chapter was to summarize the methods and procedures used to collect, tabulate, and analyze research data. This chapter addressed the methodology employed in conducting the research project. The procedures described in this chapter include: Population, Variables, Pilot Study, Methodology, Sample, Protection of Human Subjects, Instrumentation, Data Tabulation, Data Analysis, Teaching/Learning Framework, and Summary.

STUDY POPULATION

The population utilized for this study consisted of students (18 and older) selected from undergraduate courses at private and public historically black colleges and universities. The courses utilized were Personal Health and Wellness and/or any other general education courses.

A sample of convenience was utilized to select students from undergraduate courses at participating HBCU institutions (private and public). All classifications from freshmen to graduates were represented. Since a sample of convenience was used, no formula was employed and all persons from each participating class who were willing to

participate in the study were sought. The researcher contacted the professors/department heads at each college and university. During the phone contact with the professors, the researcher explained the study's purpose. Data were collected during the fall semester of 2005.

INSTRUMENTATION

The study used a self-report instrument to gather data. The instrument used was the Knowledge, Attitudes, Beliefs, and Behaviors (KABB) Survey (Moskowitz et al, 2002). This instrument was used to obtain demographic as well as information regarding (1) HIV risk factors and related behaviors; (2) personal experience with HIV testing; (3) knowledge, attitudes, and beliefs; and (4) opinions regarding public policies. The primary purpose of the KABB Survey was to assess the current knowledge, attitudes, beliefs and behaviors regarding HIV and AIDS among any population. In the 1980s, California conducted two statewide AIDS knowledge, attitudes, beliefs and behaviors telephone surveys. More recently, the University of California, Berkeley, Center for Family and Community Health executed the study on behalf of the California Department of Health Services, Office of AIDS (Moskowitz et al, 2002). A total of 1,739 adults were interviewed between April and June, 2000. Four general topic areas were included in the study: (1) HIV risk factors and related behaviors; (2) personal experience with HIV testing; (3) knowledge, attitudes, and beliefs; and (4) opinions regarding public policies. Refer to appendix B for identification of instrument items for each area.

The researchers conducted ten cognitive interviews to evaluate how the proposed survey questions were comprehended and to assess the meanings that individuals attached to them. Respondents were individuals recruited from the general public, with no personal experience of the topic or affiliation with health research, and varying in age and gender. The interviews were administered in face-to-face mode using a “think aloud” methodology and included interviewer probing after each question about understanding, interpretation, and affective response.

In preparation for the survey, survey items were subjected to pre-testing and expert review. Seventy pretests were conducted allowing for further refinement of the questionnaire. In addition, input was sought from experts in the area of HIV and behavior regarding the question wording and flow. Both phases of preparation resulted in additional rounds of questionnaire revision.

A random sampling of telephone numbers in California, stratified by region, was performed to ensure that the survey results could be generalized to the greater population. Pearson chi-square tests were performed to determine if there was an association between each listed socio-demographic characteristic and the variable of interest. The socio-demographic variables were found to be significantly associated ($p \leq 0.05$) with the variables of interest. The frequency estimates, their standard errors, and the chi-square statistics were calculated with 95 percent confidence intervals.

The instrument was selected to collect data based upon the following: (1) KABB contains clear and concise questions covering HIV/AIDS risk factors and related attitudes and beliefs among college students in the United States; (2) The instrument had already been utilized with the college population; (3) Based on a validation by field experts, the

instrument demonstrated its viability and usefulness in a college setting; and (4) the survey instrument was able to identify HIV/AIDS knowledge, attitudes and behaviors of student which would enable college health professionals to establish teaching modules that address those behaviors.

VARIABLES

The following dependent variables of knowledge, attitudes, beliefs and behaviors and the independent variables of level of education, gender and type of institution were investigated to assess the relationship among them in students attending historically black colleges and universities (Table 3.1) and to provide a partial basis for what may be included in a framework of HIV/AIDS related teaching modules.

Dependent Variable. The scores, as measured by the HIV/AIDS Knowledge, Attitudes, Beliefs and Behaviors (KABB) Survey, was the dependent variable for testing research questions.

Independent Variable. The levels of education, gender, and type of institution (private versus public) served as the independent variables.

PILOT STUDY

The instrument was pilot tested during the fall semester of 2005. General education classes at Knoxville College, an HBCU in Knoxville, Tennessee were used to pilot test the instrument. The pilot study is a “trial run” or “Beta” in final preparation for

Table 3-1. Summary of Dependent and Independent Variables

Research Hypotheses	Variable	Scale
1. HBCU student's HIV/AIDS knowledge, attitudes, beliefs, and behaviors are related to level of education	Ind. - Level of Education Dep.- HIV/AIDS knowledge attitudes, beliefs and behaviors	Nominal
2. HBCU students' HIV/AIDS knowledge beliefs and behaviors are related to student's gender	Ind. - Gender Dep. - HIV/AIDS knowledge, attitudes, beliefs and behavior	Nominal
3. HBCU students' HIV/AIDS knowledge, attitudes and behaviors are related to the type of HBCU (private versus public)	Ind. - Type of institution attended Dep. - HIV/AIDS knowledge, attitudes, beliefs and behavior	Nominal

the proposed study. The purposes of the pilot test included the following; 1) pre-testing the research instrument, 2) assessing whether the research protocol needs modification, 3) identifying logistical problems which may occur, using proposed methods, and 4) assessing the proposed data tabulation and analyzing techniques to uncover and remedy potential problems.

The researcher contacted the professors at Knoxville College via telephone during the month of September of 2005 to explain the study's purpose and importance, to gain permission to conduct the study, and to arrange a time to arrive on the campus to meet with the professor, to recruit students from the professor's classes, to present the Protocol for Recruitment and Questionnaire Administration (PRQA) (Appendix A), and to administer the instrument. A formal solicitation letter stating the purpose of the study, and a copy of the Human Subjects Research Consent letter (See Appendices C and D)

was emailed to each contact person once she/he granted her/his approval via telephone and email.

Prior to administering the instrument, which was administered by the researcher in a classroom setting, the students were informed during the 10 minute presentation that this is a survey assessing their HIV/AIDS knowledge, attitudes, beliefs and behaviors; that participation is voluntary; that participants may withdraw permission to participate in the study without explanation at any time; that the data will be used solely for the purposes of producing research to serve as a basis for developing HIV/AIDS instructional materials for college and university students. Participants were asked to sign a consent form, which was filed separately from the completed questionnaire. All materials remain confidential. Both completed questionnaires and signed consent forms were kept in locked, separate files. Participants were informed that the data would be used solely for the purposes of producing this research for publication and for discovering new information or adding to the existing body of knowledge concerning the factors that directly influence HIV/AIDS related behaviors among HBCU students. Participants were asked to complete the questions honestly and to the best of their ability. Approximate time to complete the survey in the pilot was 30 minutes. Participants were informed about the possible risk of adverse psychological reactions from exposure to the some of the wording in the questionnaire. They were inform that should this occur, they could terminate the questionnaire entirely and quietly bring the instrument to the front of the classroom and quietly exit the classroom. They were also informed that the PI would have available a number to their counseling service and/or their local HIV/AIDS/STD crisis hotline, should it be necessary.

Of the 28 participants, frequency statistics reported that 24 of the surveys were considered valid. Four were not fully completed on the demographic questions of gender, race, marital status, income and sexual status. There were 14 females and 10 males. Fifteen of the students reported their ages were between 18-24, and 13 reported their ages to be 25 and older. Two students were married, one widowed, two living together, and 18 never been married. Fifteen were African American, 3 were White (Caucasian). Seven of the respondents reported incomes under \$22,850, six over \$22,850, two “didn’t know,” and six refused. Of the 23 students who responded to the sexual preference category, 20 indicated heterosexual/straight, one gay/lesbian, one bisexual, and one refused. Of the 24 students who responded to the classification category, there were six freshmen, one sophomore, six juniors and 10 seniors and one graduate student.

SUMMARY OF PILOT STUDY

The pilot study provided information concerning the estimated time needed to complete the instrument, the difficulty of the items, the administration of the instrument, the necessary directions for complete understanding (clarity and readability), and all other necessary clarifications for proper administration, and data tabulation and analysis. All data collected, tabulated and analyzed were used as a basis for fine-tuning the instrument for the study population.

Analysis showed that 30 minutes was sufficient time to complete the questionnaire. The participants appeared confused by a miss-type in item six, “At what grade do you think children should begin receiving education in school about HIV

infection and AIDS?” (A “zero” was inadvertently used instead of an “underscore”, making this item null and void.) Therefore, this item was eliminated during the data collection phase.

DATA COLLECTION

Prior to data collection, the university representatives were contacted via telephone and email to explain the study’s purpose and importance, to gain permission to conduct the study, and solicit their permission to utilize their intact classrooms to recruit subjects to participate in the study. The returned email served as permission to conduct the study. Once permission was granted via telephone or email, a formal letter soliciting participation was emailed to the university representatives. The students were informed that the purpose of this investigation was to assess the AIDS knowledge, attitudes, beliefs and behaviors of college attending the HBCUs for the purpose of developing a teaching/learning framework for use in the appropriate HBCU courses. Students were informed that confidentiality would be held to the highest standard. No information was to be requested that would lead to their identity and all consent forms and questionnaires were locked in a cabinet in separate files.

There was the risk that participants could suffer adverse psychological reactions from exposure to the research material in this survey. Some participants could possibly consider some of the questions disturbing. They could choose to discontinue the survey, quietly bring the questionnaire to the front of the testing room and place the instrument in a separate box on the table. The PI also made available a telephone number of the

HBCU's counseling service or the local HIV/AIDS/STD crisis hotline for psychological counseling, should this have become necessary.

The data collection process, including contacting the HBCU representatives via telephone and/or email, emailing the formal solicitation letters, scheduling times to arrive on the HBCU campuses and meeting with representatives and students, class presentations, and questionnaire administration to all HBCUs began following IRB approval. The data were collected during the fall term of 2005.

DATA TABULATION

The variables of particular interest to the researcher included the student's current knowledge of AIDS and well as his/her lifestyle attitudes, beliefs and behaviors. Certain characteristics, including respondent's gender, educational level and type of institution attended (public versus private) were described using cross tabulations.

The subjects' responses to the AIDS Knowledge, Attitudes, Beliefs and Behavior (KABB) Survey questions were collected, recorded, and transcribed to an SPSS data table for analysis by the Computer Center at the University of Tennessee, Knoxville.

DATA ANALYSIS

Descriptive statistics of the demographics which included categorical frequency distributions were used to depict salient information on the demographic questionnaire for comparing and contrasting gender, level of education and type of institution (private

versus public) of HBCU students participating in the study. Furthermore, relationships among the continuous variables consisting of means, standard deviations, medians, etc. were statistically analyzed.

SPSS software was used to perform computations of data collected from the KABB Survey instrument. Data analysis was based on alpha of .05 (Table 3.2). Descriptive analysis and mean comparisons were calculated. A chi-square test was used to test whether a significant difference existed between the independent variables (level of education, gender and type of institution attended) and the dependent variable of knowledge, attitudes, beliefs and behavior scores. According to Gay (1996) chi-square is a nonparametric test of significance appropriate when the data are: 1) in the form of frequency counts occurring in two or more mutually exclusive categories and 2) when the data represent a nominal scale and the categories may be true categories (e.g. male vs. female).

The ultimate purpose of this analysis was to determine what factors (findings, conclusions and recommendations) tended to be most valuable in developing a conceptual teaching/learning. Typically, student response counts may have been sufficient, but that possesses certain limitations. Response counts use data that look statistically rigorous, that is data that does not necessarily rise to the level of being for the correlational technique associated with procedures such as meta-analysis, which may have been appropriate here. However, it is not to conclude that non-parameter data used in student response counts cannot have non-parameter statistical analysis applied, such as Chi-square.

It is not implied that this research contains a higher level of analysis and statistical rigor than exists. A chi-square analysis was conducted in order to determine whether the findings of the student response counts may be generalized to a broader population, historically black college and university students in terms of the dependent variables previously described.

Chi-square is a non-parametric indicator of statistical significance. It is a rough estimate of confidence that accepts less accurate and weaker data as input than parametric tests. Notwithstanding this limitation, chi-square has less status than other tests. This limitation, however, is also its strength because it is more forgiving in terms of the data it accepts. Chi-square can appropriately be used as it is used in this research, which addresses student response count analysis of HIV/AIDS knowledge, attitudes, beliefs and behaviors.

When performing tests of mean differences the need often arises to make more assumptions than were made in the chi-square analysis of cross-tabulation tables. Specifically, we assume the dependent measure is interval scale, and that its distribution within each comparison group follows the same normal bell-shaped curve. Also, the distributions used when testing will be the t test, rather than chi-square.

When the t test (a statistical test of mean differences) is applied, at least two assumptions are made. First, that the distribution of the dependent measure within each population follows the normal distribution (normality). Second, that its variation is the same within each population (homogeneity of variance). When these assumptions are met, the t test can be used to draw inferences about population means.

The independent-samples t test applies when there are two separate populations to compare (e.g. males and females). An observation can only fall into one of the two groups.

Before examining the t test results, we can actually test the homogeneity assumption with the Levene test of homogeneity of variance in the two groups. Levene's test has the advantage of being sensitive to lack of homogeneity, but relatively insensitive to non-normality (Wilcoxon F, 1945).

The Multiplicity Problem

Practically every day, we can find in the newspapers or other popular press, some claim of association between a stimulus and outcome, with consequences for health or general wellness in the population at large. Many of these associations are suspect at best, and often do not hold up under scrutiny, e.g.: cellular phones and brain tumors, power lines and leukemia, (more recently overturned by the scientific community), vitamins and IQ, season of the year and mental performance, genetics with homosexuality (the "gay gene"), abortions with breast cancer, etc, etc, etc. Many of these claims have shaky foundations *a priori*, and some have been found not to replicate in further studies. With so much conflicting information in the press, the general public has learned to mistrust the results of statistical studies.

The problem, briefly stated, is that when multiple tests are performed (as in this study of (AIDS knowledge of HBCU students), " $p < 0.05$ " outcomes can often occur even when there are no real effects. Historically, the rule was devised for a single test, with the following logic: if the $p > 0.05$ outcome was observed, then the analyst has two options. He (she) can believe that there is no real affect, and that the data are so

anomalous that they are within the range of values that would be observed only 1 in 20 samples; or she (he) may choose to believe that the observed effect is real. Because the 1 in 20 chance is relatively small, the common decision is to “reject” the hypothesis or no real effect, and “accept” the conclusion that the effect is real (Weinstein, 1999).

The independent variables of level of education, gender and type of institution (private versus public) were each separately correlated with the dependent variable of knowledge, attitudes, beliefs and behavior scores.

The input data consisted of the coded information from the KABB survey questionnaire. Frequency distributions and mean comparisons were computed for the dependent variables of knowledge, attitudes, beliefs and behavior and the independent variables of gender, level of education, and type of institution (private versus public).

CONCLUSIONS ABOUT SURVEY METHODS

The researcher was concerned about the sensitive nature of the survey’s subject matter, and hence tried to conduct the survey in a manner that would minimize the impact of the topic on the HBCU survey participants, while at the same time increasing the response rate. This included developing the introduction to the instrument (See Appendix B, the KABB Survey instrument cover page), and informed consent (See Appendix D, Human Subject Research Consent Letter), and implementing sound procedures for data collection (See Appendix A, Protocol for Recruitment and Questionnaire Administration). Further, steps were taken to provide hesitant respondents with additional information about the study and its legitimacy. An introductory cover letter was provided that described the

importance and authenticity of the study and validated its affiliation with the university (See Appendix C).

Like other survey research, this study was subject to potential non-response biases of unknown magnitude. The 76.9% overall response rate for this survey was less than desired; however, it is more than comparable to other major surveys. For example, the 2001 California Health Interview Survey had a 38% overall response rate (UCLA Center for Health Policy Research, 2002) and the California 2000 HIV/AIDS Knowledge, Attitudes, and Beliefs (KABB) Survey had a response rate of 68.5%. The sensitive nature of some questions in this survey (e.g. number of sexual partners, men who had sex with men, and injecting non-prescription drugs) may have contributed to under-reporting. Although the results may suggest that definitions of safe sex are related to lifestyle at-risk behavior, the goal of this study was not to test such hypotheses. More research is needed to investigate the relationship between safe sex and at-risk behavior among students attending historically black colleges and universities in the Southeastern United States.

The 70% response rate is indeed surprising, given the nature of the sex-related items and the target population. AIDS and HIV related research among African Americans in the shadow of the Tuskegee Study is tenuous at best.

Finally, this researcher acknowledges the possibility that excluding non-respondents might introduce bias into the results – the possibility that a higher proportion of non-respondents were women than men, and that older students were more likely to respond than younger ones. This notwithstanding, the research interests of this investigator was, not non-respondents, but fundamentally the comparing of those who

chose to answer the question, i.e. comparing non-missing categories, acknowledging different groups when examining group-to-group responses to the question.

Also, given the purposeful design of the survey instrument, the researcher was not expecting responses to each and every question, thereby anticipating the different sample sizes. The survey, in fact, directed respondents around certain items, the nature of the skip-pattern format utilized in this study (e.g., If you answer yes to Q34, please skip to Q40, if you answered no to Q40 please skip to Q42 or, if you answered don't know to Q50 please skip to Q52). Consequently, the total frequency would be expected to differ. One could make the case that these were not "non-responses" but specifically directed responses.

Table 3-2 summarizes the statistical procedures utilized in this study.

SECONDARY PURPOSE

DEVELOPMENT OF A CONCEPTUAL TEACHING/LEARNING FRAMEWORK

The secondary purpose of this research project was to develop an HIV/AIDS conceptual teaching/learning framework for HBCU students. The teaching/learning framework has been defined as an AIDS health promotion for students attending historically black colleges and universities providing instruction for the development of an effective AIDS education program. In order to specify appropriate approaches to and strategies for health promotion for the prevention and control of HIV/AIDS, this framework will present the possible target areas for preventive measures: (1) HIV risk

Table 3-2. Statistical Procedures – Primary Purpose

Research Hypotheses	Variables	Measurement	Statistic	α Level
1. HBCU student's HIV/AIDS knowledge attitudes, beliefs and behaviors are related to the level of education	Ind. – Level of education Dep. – knowledge, attitudes, beliefs and behaviors	Nominal	^a Chi Square Analysis	$\alpha = .05$
2. HBCU student's HIV/AIDS, knowledge attitudes, beliefs and behaviors are related to gender.	Ind. – Gender Dep. – knowledge, attitudes, beliefs and behaviors	Nominal	Chi Square Analysis	$\alpha = .05$
3. HBCU student's HIV/AIDS, knowledge attitudes, beliefs and behaviors are related to the type of institution (private/public) attended.	Ind. – Type of institution Dep. – knowledge, attitudes, beliefs and behaviors	Nominal	Chi Square Analysis	$\alpha = .05$
4. HBCU student's HIV/AIDS related Knowledge by level of education	Ind. – Level of education Dep. – HIV/AIDS Knowledge	Scale	^b T-test	$\alpha = .007$
5. HBCU student's HIV/AIDS Related knowledge by gender	Ind. – Gender Dep. – HIV/AIDS Knowledge	Scale	T-test	$\alpha = .007$
6. HBCU students HIV/AIDS Related knowledge by Type of institution (private versus public)	Ind. – Type of Institution Dep. – HIV/AIDS Knowledge	Scale	T-test	$\alpha = .007$

^bBonferonni adjustment was used for multiple comparisons – 7 items on research hypothesis (.05/7 tests).

factors and related behaviors, (2) personal experience with HIV testing, (3) knowledge, attitudes, and beliefs, and (4) opinions regarding public policies. Although various HIV transmission modes are affected by components of lifestyles, this framework will primarily address the lifestyle approach and focus on the primary route of sexual transmission.

Many programs for college and university men and women are directed towards knowledge improvement only. These programs fail to address attitudes, and behavioral and social skills that young people also need to acquire reducing the risk of infection. The

goals and objectives of this framework are directed by the findings and conclusions of this study.

The major study findings, conclusions and some recommendations will be established as a basis to develop the framework.

SUMMARY

This chapter presented the research methodology and procedures, including issues related to the study population, variables, pilot administration, summary of the pilot study, protection of human subjects, instrumentation, data collection, data tabulation, data analysis, development of the teaching/learning framework, and chapter summary.

The sample was taken from students attending classes at both private and public historically black colleges and universities during the fall of 2005. The instrument used to determine the scores for the variables was a version of the California 2000 Knowledge, Attitude, Beliefs and Behavior (KABB) Survey (Moskowitz et al, 2002) and a demographic questionnaire.

Statistical procedures used were descriptive statistics, chi-square, t-test, and frequency distributions. Survey responses were collected then transcribed to an SPSS data table for analysis at the Computer Center of the University of Tennessee, Knoxville.

Chapter IV contains the results and analysis of the data collected using the methodology and procedures described in Chapter III.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

INTRODUCTION

The primary purpose of this study was to assess the AIDS knowledge, attitudes, beliefs and behaviors of a sample of students attending both private and state funded historically black colleges and universities. A second purpose of the study was to propose a conceptual teaching/learning framework for African American colleges and universities based on study findings and conclusions.

The participants for this research project were undergraduate students attending three private and three state funded, four-year historically black colleges and universities. The data were collected during the fall of 2005, utilizing a 52-item paper and pencil self-report instrument, the HBCU 2005 Knowledge, Attitudes, Beliefs and Behaviors (KABB) Survey. The Knowledge, Attitudes, Beliefs and Behaviors Survey was used to obtain demographic as well as information regarding (1) HIV risk factors and related behaviors; (2) personal experiences with HIV testing; (3) knowledge, attitudes and beliefs among college students; and (4) opinions regarding public policies. The instrument was selected to collect data based upon the following; (1) The KABB contained clear and concise questions concerning HIV/AIDS risk factors and related attitudes and beliefs among college students in the United States. The instrument had already been utilized with the college population; (2) Based on validation by field experts, as well as the pilot

application to the Knoxville College population, the instrument demonstrated its validity and usefulness in a college setting; and (4) the survey instrument was able to identify HIV/AIDS knowledge, attitudes and behaviors of college students which would enable college health professionals to establish teaching modules that address those behaviors. Moreover, the results may provide a basis to compare findings to earlier studies.

After the subjects' responses to the KABB were collected, the data were scored and computed using the statistical program SPSS by the Computing Center. The statistical analysis included frequencies and percentages. Chi square analysis was used to test whether a significant difference existed between male and female students, level of education and type of institution (private versus public) attended.

This chapter presents findings based on the analysis of collected data and has been divided into the following sections: Research Questions; Sample Description and Demographics; and Comparison of the Knowledge, Attitudes, Beliefs and Behaviors of students attending HBCUs.

RESEARCH QUESTIONS

The following research questions and hypotheses were investigated:

Research Question 1: What is the AIDS knowledge, and what are the attitudes, beliefs and behaviors of HBCU students?

Research Hypothesis 1: HBCU AIDS knowledge, attitudes, beliefs and behaviors are related to level of education.

Research Hypothesis 2: HBCU students' knowledge, attitudes, beliefs and behaviors are related to gender.

Research Hypothesis 3: HBCU students' knowledge, attitudes, beliefs and behaviors are related to type of institution (private versus public) attended.

Research Question 2: What major findings of this investigation will serve as the basis for the development of a conceptual teaching/learning framework?

SAMPLE DESCRIPTION AND DEMOGRAPHICS

Classification. Student status was based upon the responses to the question, "Are you currently a junior, sophomore, freshman, senior, or graduate

The sample was comprised of freshmen (first year), sophomore (second year), junior (third year), senior (fourth year) and graduate students (post baccalaureate).

Overall, freshmen represented 24 percent (123) of the total sample, while sophomores made up 17 percent (85). One hundred and one (19.8 percent) of the students were juniors and 207 (29 percent) of the students were seniors or graduates.

Gender of Subjects. The population of students consisted of 213 Males or 40 percent of the total number of participants and 301 females or 55 percent of the total number of participants.

Type of Institution. The population consisted of 43 percent (233 students) of participants from private institutions and 57 percent (314 students) percent from public institutions.

Age of Subjects. Age was assessed with the question, “To start, would you please tell me your age?”

Marital Status. The marital status was based upon the statement, “Please indicate your current marital status.”

Race. Race/ethnicity is based upon responses to the question, “Which of the following categories best describes your racial background?” Are you White, African American, Hispanic or Latino, Asian or Pacific Islander, American Indian (Native American), Alaskan Native, or something else (specify)?” For the purpose of this survey Hispanic was treated as a racial category. “Other Races” include responses that could not be classified into the four major categories listed in Appendix F.

Level of Income. Household income was assessed through a question, “In 2005, was your total family income before taxes 1) under \$22,850 or, 2) over \$22,850?”

Sexual Preference. Respondents were asked to report their sexual preference at the end of the survey with the question, “Do you consider yourself heterosexual or straight, gay, lesbian, or bisexual?” Although HIV is spread by specific high-risk behaviors, within the United States certain groups, including homosexual and bisexual males, have been disproportionately affected by this disease. In fact 67% percent of AIDS cases involve males who have sexual intercourse with other males (CDC, 2003). Given the high prevalence of HIV infection in young MSM of minority races and ethnicities, there is a continued need for culturally diverse prevention and education services. Because this was a sample survey and not a census of students attending HBCUs in the Southeastern United States, sampling error must be taken into account when reporting survey statistics.

THE HBCU 2005 HIV/AIDS/STD KABB SURVEY SUMMARY

The HBCU HIV/AIDS/STD Survey was conducted during the fall semester of 2005. The survey of 547 students from seven HBCUs in the Southeastern United States was conducted to assess the knowledge, attitudes, beliefs, and behaviors (KABB) regarding HIV/AIDS and STD. The final response rate for the survey was 68 percent.

HIV RISK FACTORS AND RELATED BEHAVIORS

One way to assess risk is the self-perceived risk. Utilizing this definition, it was found that 13 percent of students perceived their risk of HIV infection to be “moderate,” and 9.3 percent perceived their risk of infection as “high.” Groups most likely to perceive their risk to be “moderate” or “high” include male students (9 percent), upper class students (13 percent), African Americans (13 percent), and students attending public HBCUs (10 percent). Groups least likely to perceive their risk to be “moderate” or “high” include lower class students (4 percent) White (Caucasian) (2 percent), and those attending private HBCUs (5 percent).

The definition of high risk sexual behavior included having sexual intercourse with someone who is HIV-positive or with someone who has injected non-prescription drugs. In addition, for men having sexual intercourse with men (MSM), and for females, sexual intercourse with MSM. For the purpose of this survey, sexual intercourse is defined as “vaginal intercourse, which is when a penis is put into a vagina, or anal intercourse, which is when a penis is inserted into the anus or rectum”. With this

definition of high risk sex, one in twenty student respondents (19 percent) have engaged in high risk sex at least once in their lifetime. Groups most likely to have engaged in high risk sex include 18-24 year olds (6 percent). Groups least likely to have engaged in high risk sex include students 25 years of age and older (2 percent).

A second definition of high risk sex involves having sexual intercourse with two or more partners in the last 12 months. One in six students reported having sexual intercourse with two or more partners in the 12 months prior to the survey. According to this definition, groups most likely to have high risk sex include upper class students (23 percent) and students attending public HBCUs (17 percent). Groups least likely to have high risk sex include lower class students (3 percent) and those attending private HBCUs (3 percent).

HIV RISK BEHAVIOR

What Are Your Chances of Getting Infected with the HIV Virus?

Twenty-five percent of HBCU respondents surveyed perceived themselves to have no risk of HIV infection, 41 percent believed their risk of infection to be “low,” 13 percent perceived their risk as “moderate,” and 9 percent perceived their risk as “high.”

(In the following tables, all bolded Chi Square values were found to be significant).

The following demographic variables were significantly related to perceived risk of HIV infection (Table 4-1).

TABLE 4-1. WHAT ARE YOUR CHANCES OF GETTING INFECTED WITH HIV, THE VIRUS THAT CAUSES AIDS?

		High		Medium		Low		None		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Gender	Male	23	10.8%	40	18.8%	83	39.0%	39	18.3%	28	13.1%
	Female	26	8.6%	25	8.3%	132	43.9%	85	28.2%	33	11.0%
Group Total		49	9.5%	65	12.6%	215	41.8%	124	24.1%	61	11.9%
^b Classification	Lower class	8	9.2%	12	13.8%	25	28.7%	31	35.6%	11	12.6%
	Upper class	15	11.3%	16	12.0%	55	41.4%	35	26.3%	12	9.0%
Group Total		23	10.5%	28	12.7%	80	36.4%	66	30.0%	23	10.5%
^c College Type	Public	29	9.2%	46	14.6%	109	34.7%	90	28.7%	40	12.7%
	Private	22	9.4%	25	10.7%	115	49.4%	48	20.6%	23	9.9%
Group Total		51	9.3%	71	13.0%	224	41.0%	138	25.2%	63	11.5%
^d Which of the following categories best describes your racial background?	White (Caucasian)	5	8.2%	6	9.8%	38	62.3%	11	18.0%	1	1.6%
	African American	42	10.0%	57	13.6%	159	38.0%	105	25.1%	55	13.2%
	Group Total	47	9.8%	63	13.2%	197	41.1%	116	24.2%	56	11.7%

^aChi Square = .938, df = 4, p = .919

^bChi Square = 4.831, df = 4, p = .035

^cChi Square = 12.993, df = 4, p = .001

^dChi Square = 15.531, df = 4, p = .004

Students attending public institutions (15 percent) were more likely to perceive themselves to be at moderate to high risk of HIV infection as compared to students attending private institutions (11 percent).

African Americans were more likely to perceive themselves to have no risk of HIV infection (25 percent), as compared to whites (Caucasian) (18 percent).

Have you ever used needles to Inject Non-prescription Drugs Including Vitamins and Steroids?

Intravenous Drug Use (IDU) is a major risk factor for HIV infection if the user shares the needle with others and does adequately not clean it. One in every 15 respondents (3.5 percent) reported IDU during their lifetime (Table 4-2).

**TABLE 4-2. HAVE YOU EVER USED NEEDLES TO INJECT
NONPRESCRIPTION DRUGS INCLUDING VITAMINS AND STEROIDS**

		Yes		No		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	4	4.6%	45	51.7%	38	43.7%
	Upper class	4	3.0%	57	42.9%	72	54.1%
Group Total		8	3.6%	102	46.4%	110	50.0%
^b Gender	Male	10	4.7%	100	46.9%	103	48.4%
	Female	5	1.7%	167	55.5%	129	42.9%
Group Total		15	2.9%	267	51.9%	232	45.1%
^c College Type	Public	8	2.5%	149	47.5%	157	50.0%
	Private	11	4.7%	131	56.2%	91	39.1%
Group Total		19	3.5%	280	51.2%	248	45.3%
^d Do you consider yourself heterosexual or straight, gay, lesbian, or bisexual?	Heterosexual/Straight	13	2.6%	252	50.8%	231	46.6%
	Gay/Lesbian	1	16.7%	5	83.3%		
Group Total		14	2.8%	257	51.2%	231	46.0%

^aChi Square = 2.408 df = 2, p = .300

^bChi Square = 6.518, df = 2, p = .038

^cChi Square = 7.362, df = 2, p = .025

^dChi Square = 8.213, df = 2, p = .016

An estimated 1 in 5 new HIV diagnoses for women is related to injection drug use (CDC, 2003).

The following demographic variables were significantly associated with lifetime IDU among the sample of HBCU students.

Males (5 percent) were more likely than females (2 percent) to have used needles to inject nonprescription drugs including vitamins and steroids.

Students attending private institutions were more likely to report not using needles to inject nonprescription drugs (56 percent) as compared to students attending public institutions (48 percent).

Students who reported a gay/lesbian (83 percent) were more likely to report not using needles to inject nonprescription drugs, as compared to those who reported they are heterosexual/straight (51 percent).

Have You Had Sex With A Partner Who at the Time Was Any of the Following: Another Man (For Male Respondents), A Man Who Has Had Sex With Other Men, (For Female Respondents), A Person Has Injected Non-prescription Drugs, Or a Person Who Has Tested HIV-positive for HIV/AIDS?

For males the risk of HIV infection is greater for those who have sexual intercourse with other males (MSM), and for females, the risk is greater for those who have sexual intercourse with MSM. The risk is also greater for individuals who have sex with Injection Drug Users, and for those who have sex with partners who are infected with HIV. An individual who reported ever having sex with any of the above individuals was considered to have engaged in high risk sex. By this definition, almost 1 in 82 (4 percent) respondents had engaged in high risk sex at least once in their lifetime. The term “sexual intercourse” was defined as follows in the survey: “By sexual intercourse, I mean vaginal intercourse which is when the penis is put into a vagina, or anal intercourse which is when a penis is inserted into the anus or rectum.”

The following demographic variable was significantly related to having high risk sex at least once in one’s lifetime (Table 4-3).

Males (5 percent) as compared to females (2 percent) were more likely to have had sex with a partner who at the time was another man, a man who has had sex with other men, a person who has injected non-prescription drugs, or a person who has tested HIV-positive for HIV/AIDS.

TABLE 4-3. HAVE YOU HAD SEX WITH A PARTNER WHO AT THE TIME WAS ANOTHER MAN, AN IV DRUG USER, OR A PERSON WHO TESTED POSITIVE FOR HIV OR HAS AIDS?

		Yes		No		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	6	6.9%	47	54.0%	34	39.1%
	Upper class	5	3.8%	74	55.6%	54	40.6%
Group Total		11	5.0%	121	55.0%	88	40.0%
^b Gender	Male	16	7.5%	161	75.6%	36	16.9%
	Female	6	2.0%	129	42.9%	166	55.1%
Group Total		22	4.3%	290	56.4%	202	39.3%
^c College Type	Public	9	2.9%	191	60.8%	114	36.3%
	Private	14	6.0%	114	48.9%	105	45.1%
Group Total		23	4.2%	305	55.8%	219	40.0%

^aChi Square = 3.007, df = 2, p = .222

^bChi Square = 7.779, df = 2, p = .020

^cChi Square = .026, df = 2, p = .987

During the Last 12 Months, With How Many People Have You Had Sexual Intercourse? Again, Sexual Intercourse Means Vaginal or Anal Sex

The risk of HIV infection is greater among those who have multiple sex partners. In the 12 months prior to the survey, 52 percent of respondents had zero to two sex partners, and 18 percent had three or more partners.

The following demographic variables were significantly associated with the number of sexual partners in the last 12 months (Table 4-4).

Males were more likely to have had three or more partners in the last 12 months (23 percent) as compared to females (16 percent).

TABLE 4-4. DURING THE LAST 12 MONTHS, WITH HOW MANY PEOPLE HAVE YOU HAD SEXUAL INTERCOURSE

		Zero to two		Three or more		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	37	42.5%	22	25.3%	28	32.2%
	Upper class	60	45.1%	25	18.8%	48	36.1%
Group Total		97	44.1%	47	21.4%	76	34.5%
^b Gender	Male	63	29.6%	49	23.0%	101	47.4%
	Female	202	67.1%	48	15.9%	51	16.9%
Group Total		265	51.6%	97	18.9%	152	29.6%
^c College Type	Public	140	44.6%	65	20.7%	109	34.7%
	Private	142	60.9%	32	13.7%	59	25.3%
Group Total		282	51.6%	97	17.7%	168	30.7%
^d Which of the following categories best describes your racial background?	White (Caucasian)	44	72.1%	8	13.1%	9	14.8%
	African American	202	48.3%	82	19.6%	134	32.1%
Group Total		246	51.4%	90	18.8%	143	29.9%
^e Please indicate your current marital status.	Married	37	71.2%	4	7.7%	11	21.2%
	Widowed	7	70.0%	0	.0%	3	30.0%
	Divorced	2	33.3%	2	33.3%	2	33.3%
	Separated	2	28.6%	2	28.6%	3	42.9%
	Never been married	196	48.4%	82	20.2%	127	31.4%
	Living together	20	74.1%	2	7.4%	5	18.5%
Group Total		264	52.1%	92	18.1%	151	29.8%

^aChi Square = 1.349, df = 2, p = .509

^bChi Square = 76.545, df = 2, p = .000

^cChi Square = 14.444, df = 2, p = .001

^dChi Square = 12.441, df = 2, p = .002

^eChi Square = 21.006, df = 10, p = .021

Students attending public universities were more likely to have had three or more sex partners in the last 12 months (21 percent), as compared to students attending private universities (14 percent).

African Americans were more likely to have had three or more sex partners in the last 12 months (20 percent), as compared to Whites (Caucasian) (13 percent).

Divorced students were more likely to have had three or more sex partners in the last 12 months (29 percent), as compared to married students (8 percent).

Was a Condom Used the Last Time You Had Sexual Intercourse?

The use of a condom during sexual intercourse can reduce the risk of HIV transmission. Among sexually active respondents (i.e., those who had sexual intercourse in the last 12 months), 26 percent reported that a condom was not used during the last intercourse.

The following demographic variable was significantly related to condom use among sexually active students during their last sexual intercourse. Caution is warranted in interpreting these results due to the small number of participants in each group (Table 4-5).

Among the sexually active students, condom use at last sexual intercourse was less likely for students attending public institutions (45 percent) than for students attending private institutions (49 percent).

TABLE 4-5. WAS A CONDOM USED THE LAST TIME YOU HAD SEXUAL INTERCOURSE?

		Yes		No		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	47	54.0%	18	20.7%	22	25.3%
	Upper class	57	42.9%	35	26.3%	41	30.8%
Group Total		104	47.3%	53	24.1%	63	28.6%
^b Gender	Male	113	53.1%	52	24.4%	48	22.5%
	Female	133	44.2%	98	32.6%	70	23.3%
Group Total		246	47.9%	150	29.2%	118	23.0%
^c College Type	Public	142	45.2%	86	27.4%	86	27.4%
	Private	115	49.4%	72	30.9%	46	19.7%
Group Total		257	47.0%	158	28.9%	132	24.1%
^d Which of the following categories best describes your racial background?	White (Caucasian)	28	45.9%	23	37.7%	10	16.4%
	African American	203	48.6%	116	27.8%	99	23.7%
Group Total		231	48.2%	139	29.0%	109	22.8%
^e Please indicate your current marital status.	Married	12	23.1%	35	67.3%	5	9.6%
	Widowed	2	20.0%	6	60.0%	2	20.0%
	Divorced	4	66.7%	2	33.3%	0	.0%
	Separated	6	85.7%	1	14.3%	0	.0%
	Never been married	207	51.1%	94	23.2%	104	25.7%
	Living together	10	37.0%	12	44.4%	5	18.5%
Group Total		241	47.5%	150	29.6%	116	22.9%

^aChi Square = 2.642, df = 2, p = .267

^bChi Square = 4.912, df = 2, p = .086

^cChi Square = 4.298, df = 2, p = .017

^dChiSquare = 3.139, df = 2, p = .208

^eChiSquare = 57.382, df = 2, p = .000

Among the sexually active students, condom use at last sexual intercourse was less likely for married students (23 percent) than for separated students (38 percent).

PERSONAL EXPERIENCE WITH HIV TESTING

This section examines HBCU students' experiences with HIV testing. As with all of the data in this survey, the HIV testing data are based upon respondents self-reports and have not been validated. The survey found that a little less than a half of students (43 percent) have been tested for HIV in their lifetime. Of those tested for HIV, 30 percent received their last test since 2001. The most commonly cited reasons for testing were routine checkups (90 percent), hospitalization or surgical procedure (36 percent) and curiosity (31 percent).

Those most likely to have been tested for HIV were African Americans (38 percent), those students 18 to 24 years of age (34 percent), upper class students (37 percent), and those with annual household incomes over \$22,850 (27 percent). Those least likely to have been tested for HIV were Hispanic or Latino (2 percent), those with annual household incomes under \$22,850 (19 percent), lower class students (10 percent) and those under 25 years of age and older (13 percent).

Except for Tests You May Have Has As Part of Blood Donations, Have You Ever Been Tested For HIV? This Includes the Saliva Test

Almost one-half (43 percent) had been tested for HIV at least once in their lifetime (Table 4-6).

TABLE 4-6. EXCEPT FOR TESTS YOU MAY HAVE HAD AS PART OF BLOOD DONATIONS, HAVE YOU EVER BEEN TESTED FOR HIV? THIS INCLUDES THE SALIVA TEST.

		Yes		No		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	34	39.1%	44	50.6%	9	10.3%
	Upper class	46	34.6%	72	54.1%	15	11.3%
Group Total		80	36.4%	116	52.7%	24	10.9%
^b Gender	Male	80	37.6%	104	48.8%	29	13.6%
	Female	144	47.8%	142	47.2%	15	5.0%
Group Total		224	43.6%	246	47.9%	44	8.6%
^c College Type	Public	121	38.5%	159	50.6%	34	10.8%
	Private	113	48.5%	104	44.6%	16	6.9%
Group Total		234	42.8%	263	48.1%	50	9.1%

^aChi Square = .461, df = 2, p = .794

^bChi Square = 13.953, df = 2, p = .001

^cChi Square = 6.401, df = 2, p = .041

The following demographic variables were significantly associated with having been tested for HIV.

Females were more likely to have been tested for HIV (48 percent) as compared to males (38 percent).

Students attending private colleges were more likely to have been tested for HIV (49 percent) as compared to students who attended public colleges (39 percent).

When Did You Have Your Last Test for HIV?

Among students who have been tested for HIV, almost half of all students (43 percent) had been tested for HIV at least once in their lifetime.

The following demographic variables were significantly related to the recency of the last HIV test (Table 4-7).

TABLE 4-7. WHEN WERE YOU LAST TESTED?

		2006		2003 to 2005		2001 to 2003		before 2001		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	0	.0%	3	3.4%	30	34.5%	0	.0%	54	62.1%
	Upper class	4	3.0%	4	3.0%	31	23.3%	0	.0%	94	70.7%
^b Gender	Male	5	2.3%	11	5.2%	51	23.9%	1	.5%	145	68.1%
	Female	10	3.3%	18	6.0%	104	34.6%	0	.0%	169	56.1%
^c College Type	Public	5	1.6%	10	3.2%	92	29.3%	0	.0%	207	65.9%
	Private	10	4.3%	20	8.6%	70	30.0%	1	.4%	132	56.7%
^d Please indicate your current marital status.	Married	5	9.6%	8	15.4%	12	23.1%	1	1.9%	26	50.0%
	Widowed	0	.0%	0	.0%	4	40.0%	0	.0%	6	60.0%
	Divorced	0	.0%	0	.0%	4	66.7%	0	.0%	2	33.3%
	Separated	0	.0%	2	28.6%	3	42.9%	0	.0%	2	28.6%
	Never been married	7	1.7%	18	4.4%	118	29.1%	0	.0%	262	64.7%
	Living together	2	7.4%	1	3.7%	11	40.7%	0	.0%	13	48.1%
^e Which of the following categories best describes your racial background?	White (Caucasian)	6	9.8%	8	13.1%	10	16.4%	0	.0%	37	60.7%
	African American										
		7	1.7%	21	5.0%	135	32.3%	0	.0%	255	61.0%
^f Do you consider yourself heterosexual or straight, gay, lesbian, or bisexual?	Heterosexual/Straight	12	2.4%	27	5.4%	147	29.6%	0	.0%	310	62.5%
	Gay/Lesbian										
		2	33.3%	0	.0%	3	50.0%	0	.0%	1	16.7%
^g Age	18-24	5	1.2%	16	3.9%	124	30.0%	1	.2%	267	64.6%
	25 and older	10	7.5%	14	10.4%	38	28.4%	0	.0%	72	53.7%

^aChi Square = 5.597 df = 3, p = .113^bChi Square = 9.526, df = 4, p = .049^cChi Square = 13.891, df = 4, p = .008^dChi Square = 49.023, df = 20, p = .000^eChi Square = 23.269, df = 3, p = .000^fChi Square = 23.474, df = 3, p = .000^gChi Square = 24.758, df = 4, p = .000

Between the years of 2003-2005, African Americans were less likely to be tested for HIV (5 percent) than Whites (13 percent). And in 2006, Whites were more likely to be tested for HIV (10 percent) than African Americans (2 percent).

During 2006, those students who reported a gay/lesbian lifestyle were more likely to be tested for HIV (33 percent as compared to heterosexual/straight students (2 percent).

During 2006, students attending private universities were more likely to be tested for HIV (4 percent) than students attending private colleges (2 percent). However, students attending private colleges were more than three times as likely to be tested for HIV during the years of 2003-2005 (9 percent) as compared to students attending public institutions (3 percent).

Among students tested for HIV, the likelihood of recent testing decreased with age. This is true in two of the three categories. HIV testing for students between the ages of 18-24 was 28 percent between 2001 and 2003 and 30 percent for those 25 and older. However, in the years 2003 to 2005 HIV testing for students increased as the students aged. From 2003 to 2005, 10 percent of students 25 and older were tested compared to 4 percent of students 18-24 years. In 2006, 8 percent of students 25 and older were tested for HIV as compared to only one percent of students 18-24 years of age.

What Was the Main Reason You Had Your Last Test For HIV?

Among students who have been tested for HIV (Tables 4-8 and 4-9) the most common reasons reported for testing include, just to find out if you are infected (55 percent), routine checkup (17 percent), hospitalization or surgical procedure (7 percent), curiosity

TABLE 4-8. WHAT WAS THE MAIN REASON YOU HAD YOUR LAST TEST FOR HIV?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hospitalization or surgical procedure	36	6.6	6.6	6.6
	To apply for health insurance	3	.5	.5	7.1
	To apply for life insurance	3	.5	.5	7.7
	For employment	3	.5	.5	8.2
	To apply for a marriage license	6	1.1	1.1	9.3
	For military induction or military service	6	1.1	1.1	10.4
	For immigration	5	.9	.9	11.3
	Just to find out if you were infected	303	55.4	55.4	66.7
	Because of pregnancy	8	1.5	1.5	68.2
	Because of referral by your sex partner	12	2.2	2.2	70.4
	Because it was part of a blood donation process	10	1.8	1.8	72.2
	For routine checkup	90	16.5	16.5	88.7
	Because of occupational exposure	2	.4	.4	89.0
	Because I am at risk for HIV	3	.5	.5	89.6
	Worried my sex partner had sex with others	14	2.6	2.6	92.1
	Don't Know/Not Sure	43	7.9	7.9	100.0
	Total	547	100.0	100.0	

TABLE 4-9. WHAT WAS THE MAIN REASON YOU HAD YOUR LAST TEST FOR HIV

		Just to find out if you are infected							
		Hospitalization		Routine checkup		Other			
		Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower Level	6	17.1%	6	17.1%	19	54.3%	4	11.4%
	Upper Level	29	21.3%	24	17.6%	71	52.2%	12	8.8%
Group Total		35	20.5%	30	17.5%	90	52.6%	16	9.4%
^b Gender	Male	17	29.3%	10	17.2%	24	41.4%	7	12.1%
	Female	17	15.9%	17	15.9%	64	59.8%	9	8.4%
Group Total		34	20.6%	27	16.4%	88	53.3%	16	9.7%
^c College Type	Public	18	19.1%	18	19.1%	48	51.1%	10	10.6%
	Private	18	22.8%	13	16.5%	42	53.2%	6	7.6%
Group Total		36	20.8%	31	17.9%	90	52.0%	16	9.2%
^d Which of the following categories best describes your racial background?	White (Caucasian)	5	29.4%	4	23.5%	4	23.5%	4	23.5%
	African American	25	18.1%	25	18.1%	76	55.1%	12	8.7%
Group Total		30	19.4%	29	18.7%	80	51.6%	16	10.3%
^e Do you consider yourself heterosexual or straight, gay, lesbian, or bisexual?	Heterosexual/Straight	31	19.7%	26	16.6%	85	54.1%	15	9.6%
	Gay/Lesbian	1	33.3%	1	33.3%	1	33.3%		
Group Total		32	20.0%	27	16.9%	86	53.8%	15	9.4%
^f Age	18-24	27	20.8%	21	16.2%	68	52.3%	14	10.8%
	25 and older	9	20.9%	10	23.3%	22	51.2%	2	4.7%
Group Total		36	20.8%	31	17.9%	90	52.0%	16	9.2%

¹May not equal total sample size because question asked only of respondents who felt the method would be effective in preventing the spread of HIV.

^aChi Square = 14.514, df = 16, p = .206

^bChi Square = 25.088, df = 16, p = .068

^cChi Square = 9.007, df = 16, p = .913

^dChi Square = 24.915, df = 16, p = .071

^eChi Square = 44.587, df = 16, p = .000

^fChi Square = 31.424, df = 16, p = .012

(6 percent), worried that my sex partner had sex with others (3 percent), because of pregnancy (2 percent), and because it was part of a blood donation process (2 percent).

Also because of referral by my sex partner (2 percent), to apply for a marriage license (1 percent), for military induction or military service (1 percent), for immigration (1 percent), to apply for health insurance (.5 percent), to obtain life insurance (.5 percent), for hospitalization or surgery, for employment (.5 percent), because I am at risk for HIV (.5 percent), because of occupational exposure (.4 percent), and because of referral by a doctor (.2 percent)

The following demographic variables were significantly associated with the primary reasons for taking an HIV test.

Students who reported they are heterosexual/straight were more likely to report that a routine check-up (54 percent) was the main reason they had their last HIV test, as compared to those who reported a gay/lesbian lifestyle (33 percent).

COMPARISON OF THE KNOWLEDGE, ATTITUDES AND BELIEFS OF HBCU STUDENTS

This section examines HBCU students' knowledge, attitudes, and beliefs regarding HIV and AIDS. Forty-six percent of students considered themselves well informed about ways to prevent getting HIV, 25 percent believed they were moderately informed, and 13 percent believed they were little informed. Twenty-two percent of students were familiar with the concept of safe sex. When asked to define the term, it was most often defined in terms of condom use (50 percent), celibacy (42 percent),

monogamy (40 percent), and knowing one's partners or being aware of their background (41 percent).

The following knowledge items were significantly related to level of education (Table 4-10).

Upper division students significantly differed from lower division students with the statement, "AIDS is a gay man's disease".

Upper division students significantly differed from lower division students with the statement, "Women are at a very low risk of getting HIV".

The following knowledge items were significantly related to gender (Table 4-11).

Females significantly differed from males in response to the statement, "Infected individuals may look and feel fine and may not know that they are spreading the disease".

Females significantly differed from males in response to the statement, "People who are HIV positive are easy to pick out of a crowd even if they have not developed AIDS."

TABLE 4-10. A COMPARISON OF HBCU STUDENT'S HIV/AIDS RELATED KNOWLEDGE WITH LEVEL OF EDUCATION

	Division	N	Mean	Std. Deviation	Std. Error Mean
^a Q18a. In Africa, most AIDS patients are heterosexual. Do you disagree or agree?	Lower	212	6.4481	2.92110	.20062
	Upper	298	6.4497	3.13434	.18157
^b Q18b. Not everyone infected with the HIV virus will go on to develop AIDS. Do you disagree or agree?	Lower	214	5.8692	3.30765	.22611
	Upper	298	6.1946	3.54514	.20536
^c Q18c. Infected individuals may look and feel fine and may not know that they are spreading the disease. Disagree or agree?	Lower	212	8.8255	2.20570	.15149
	Upper	296	8.5946	2.64341	.15365
^d Q18d. Only homosexuals need to worry about contacting AIDS. Do you disagree or agree?	Lower	212	1.2406	2.62392	.18021
	Upper	299	.7157	2.07319	.11990
^e Q18e. AIDS is a gay man's disease. Do you disagree or agree?	Lower	214	1.5000	2.84456	.19445
	Upper	298	.8322	2.10148	.12174
^f Q18f. People who are HIV positive are easy to pick out of a crowd even if they have not developed AIDS. Disagree or agree?	Lower	211	.8863	2.13282	.14683
	Upper	300	.6367	1.85548	.10713
^g Q18g. Women are at very low risk of getting HIV. Do you disagree or agree?	Lower	186	1.4194	2.57775	.18901
	Upper	276	.7536	2.03894	.12273

^aT = .006, df = 508, p = .995

^bT = 1.323, df = 512, p = .186

^cT = 1.039, df = 506, p = .229

^dT = 2.425, df = 385.633, p = .016

^eT = 2.911, df = 371.731, p = .004

^fT = 1.407, df = 509, p = .160

^gT = 2.954, df = 333.952, p = .003

TABLE 4-11. A COMPARISON OF HBCU STUDENT'S HIV/AIDS RELATED KNOWLEDGE WITH GENDER

	Gender	N	Mean	Std. Deviation	Std. Error Mean
^a Q18a. In Africa, most AIDS patients are heterosexual. Do you disagree or agree?	Male	204	6.0588	3.20198	.22418
	Female	288	6.7257	2.90700	.17130
^b Q18b. Not everyone infected with the HIV virus will go on to develop AIDS. Do you disagree or agree?	Male	204	6.1684	3.62100	.25352
	Female	291	6.2192	3.48289	.20382
^c Q18c. Infected individuals may look and feel fine and may not know that they are spreading the disease. Disagree or agree?	Male	200	8.2600	2.84833	.20141
	Female	290	8.9690	11.0050	.12391
^d Q18d. Only homosexuals need to worry about contacting AIDS. Do you disagree or agree?	Male	201	.8955	2.02090	.14254
	Female	292	.8733	2.35092	.13758
^e Q18e. AIDS is a gay man's disease. Do you disagree or agree?	Male	203	1.3399	2.64720	.18580
	Female	291	.9588	2.30704	.13524
^f Q18f. People who are HIV positive are easy to pick out of a crowd even if they have not developed AIDS. Disagree or agree?	Male	201	.9602	2.16527	.15273
	Female	292	.5651	1.75840	.10290
^g Q18g. Women are at very low risk of getting HIV. Do you disagree or agree?	Male	178	1.1573	2.32111	.13956
	Female	267	.9476	2.28041	

^aT = -2.403, df = 490, p = .017

^bT = -.178, df = 494, p = .859

^cT = -2.998, df = 344.190, p = .003

^dT = .109, df = 491.000, p = .913

^eT = 1.659, df = 395.436, p = .098

^fT = 2.146, df = 370.348, p = .033

^gT = .940, df = 374.814, p = .348

The response to the following knowledge item was significantly associated with type of institution attended (Table 4-12).

Students attending public institutions significantly differed from students attending private institutions in response to the statement, “In Africa, most AIDS patients are heterosexual?”

Students attending public universities significantly differed from students attending private institutions in response to the statement, “Infected individuals may look fine and feel fine and may not know that they are spreading the disease.

Students attending public institutions significantly differed from students attending private institutions in response to the statement, “AIDS is a gay man’s disease”.

Students attending public universities significantly differed from students attending private institutions in response to the statement, “Women are at very low risk of getting HIV”.

Miscellaneous Beliefs about HIV Transmission: sixty-nine percent of respondents favored allowing students with HIV to attend school if health there is no danger. Fifty-three percent of respondents would be concerned about buying produce if a person with HIV worked in the produce department.

Knowledge of People with HIV/AIDS: Forty-two percent of students knew someone who had been diagnosed with HIV or died of AIDS or an AIDS-related condition, and 32 percent knew someone who had died of AIDS or an AIDS-related condition.

TABLE 4-12. A COMPARISON OF HBCU STUDENT'S HIV/AIDS RELATED KNOWLEDGE BY TYPE OF INSTITUTION ATTENDED (PUBLIC VERSUS PRIVATE)

	College Type	N	Mean	Std. Deviation	Std. Error Mean
Q18a. In Africa, most AIDS patients are heterosexual. Do you disagree or agree?	Public	301	6.0930	3.02842	.17456
	Private	221	6.9186	3.02905	.20376
Q18b. Not everyone infected with the HIV virus will go on to develop AIDS. Do you disagree or agree?	Public	300	5.8867	3.37121	.19464
	Private	224	6.3080	3.55340	.23742
Q18c. Infected individuals may look and feel fine and may not know that they are spreading the disease. Disagree or agree?	Public	299	8.4482	2.73306	.15806
	Private	221	8.9502	2.15370	.14487
Q18d. Only homosexuals need to worry about contacting AIDS. Do you disagree or agree?	Public	299	1.0635	2.43561	.14085
	Private	224	.7589	2.14809	.14352
Q18e. AIDS is a gay man's disease. Do you disagree or agree?	Public	300	1.3300	2.65668	.15338
	Private	224	.8795	2.25876	.15092
Q18f. People who are HIV positive are easy to pick out of a crowd even if they have not developed AIDS. Disagree or agree?	Public	301	.8339	2.17386	.12530
	Private	222	.6036	1.63546	.10977
18g. Women are at very low risk of getting HIV. Do you disagree or agree?	Public	269	1.2937	2.59865	.15844
	Private	203	.7143	1.79304	.12585

^aT = -3.077, df = 474.138, p = .002 ^bT = 1.325, df = 521, p = .186

^bT = -1.403, df = 524, p = .161 ^cT = 2.863, df = 466.488, p = .004

^cT = -2.342, df = 515.858, p = .020

^dT = 1.488, df = 521, p = .137

^eT = 2.094, df = 513.220 p, = .037

How Much Do You Feel That You Know About Ways to Prevent Getting HIV, the Virus That Causes AIDS?

Students were asked to rate how informed they are about ways to prevent HIV on a scale of 0-10 which ranged from “not at all informed” (0-5) to “very informed (6-10). Seventy-six percent were “very informed” (i.e., a rating of 6-10), and 24 percent were “not at all informed” (i.e., a rating of 0-5) about HIV/AIDS.

The following demographic variables were significantly associated with the degree to which students believed they were informed about ways to prevent HIV (Table 4-13).

Females were more likely to consider themselves “very informed” about ways to prevent getting HIV (89 percent) as compared to males (85 percent).

Students who reported living with parents were more likely to consider themselves as being “very informed” about ways to prevent getting HIV (92 percent) as compared to those students who reported living alone (86 percent).

How Likely Is It That a Person Can Get HIV Using Public Facilities, Such As Buses and Telephones?

The HIV virus is transmitted through bodily fluids, namely blood and to a lesser extent, saliva. According to most public health authorities, it is not very likely that HIV can be transmitted from public facilities such as buses and telephones. Forty-nine percent of respondents correctly believed that it is “not very likely” or “definitely not possible” to get HIV using public facilities, such as buses and telephones, while 11 and 6 percent incorrectly believed that it is “somewhat likely” or “very likely” to contract HIV in this manner (Table 4-14).

TABLE 4-13. GENERALLY SPEAKING, HOW MUCH DO YOU FEEL YOU KNOW ABOUT WAYS TO PREVENT GETTING HIV, THE VIRUS THAT CAUSES AIDS?

		Not at all informed		Very informed		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	8	9.2%	72	82.8%	7	8.0%
	Upper class	8	6.0%	119	89.5%	6	4.5%
Group Total		16	7.3%	191	86.8%	13	5.9%
^b Gender	Male	14	6.6%	181	85.0%	18	8.5%
	Female	23	7.6%	269	89.4%	9	3.0%
Group Total		37	7.2%	450	87.5%	27	5.3%
^c College Type	Public	26	8.3%	267	85.0%	21	6.7%
	Private	15	6.4%	207	88.8%	11	4.7%
Group Total		41	7.5%	474	86.7%	32	5.9%
^d Please indicate your current living arrangement.	Living alone	9	7.3%	107	86.3%	8	6.5%
	Living with parents	5	4.6%	100	91.7%	4	3.7%
	Living with roommate	15	7.1%	182	85.8%	15	7.1%
	Living with spouse/partner	7	10.0%	62	88.6%	1	1.4%
Group Total		36	7.0%	451	87.6%	28	5.4%

^aChi Square = 1.054, df = 4, p = .902 ^bChi Square = 10.543, df = 4, p = .032 ^cChi Square = 7.497, df = 4, p = .112

^dChi Square = 21.002, df = 12, p = .050

TABLE 4-14. CAN A PERSON GET HIV FROM BUSSES TELEPHONES?

		Very Likely		Somewhat Likely		Not Likely		Definitely Not Likely		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	4	4.6%	10	11.5%	32	36.8%	37	42.5%	4	4.6%
	Upper class	12	9.0%	16	12.0%	42	31.6%	57	42.9%	6	4.5%
Group Total		16	7.3%	26	11.8%	74	33.6%	94	42.7%	10	4.5%
^b Gender	Male	10	4.7%	25	11.7%	69	32.4%	97	45.5%	12	5.6%
	Female	20	6.6%	30	10.0%	86	28.6%	158	52.5%	7	2.3%
Group Total		30	5.8%	55	10.7%	155	30.2%	255	49.6%	19	3.7%
^c College Type	Public	25	8.0%	39	12.4%	93	29.6%	145	46.2%	12	3.8%
	Private	9	3.9%	22	9.4%	69	29.6%	122	52.4%	11	4.7%
Group Total		34	6.2%	61	11.2%	162	29.6%	267	48.8%	23	4.2%

^aChi Square = 1.854, df = 4, p = .763 ^bChi Square = 6.690, df = 4, p = .153 ^cChi square = 5.984, df = .200

There were no demographic variables significantly associated with how likely it is that a person can get HIV from buses and telephones.

How Likely Is It That a Person Can Get HIV by Using Public Toilets?

The HIV virus is transmitted through bodily fluids, namely blood and to a lesser extent, saliva. According to most public health authorities, it is not very likely that using public toilets can transmit HIV. Thirty-five percent of respondents correctly believed that it is “not very likely” or “definitely not possible” to get HIV using public toilets, while 21 percent incorrectly believed that it is “somewhat likely” or “very likely” to contract HIV in this manner.

The following demographic variable was significantly related to how likely respondents believed that using public toilets could transmit HIV (Table 4-15).

Students living alone were more likely to correctly believe that “it is definitely not likely” that using public toilets could transmit HIV as compared to those living with parents (51 percent) and those living alone (30 percent) respectively.

How Likely Is It That a Person Can Get HIV by Going to School With a Child or Teacher With HIV?

Because HIV is transmitted through bodily fluids, public health authorities consider it very unlikely that a person can get HIV by attending school with a child or teacher who is infected with HIV. Thirty-eight percent of respondents correctly believed that it is “definitely not likely” or “definitely not possible” to get HIV by attending school with an HIV-infected person, while 19 percent incorrectly believed that it is “somewhat likely” or “very likely” to contract HIV in this manner.

TABLE 4-15. HOW LIKEY IS IT THAT A PERSON CAN GET HIV FROM PUBLIC TOILETS?

		Very Likely		Somewhat Likely		Not Likely		Definitely Not Likely		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	4	4.6%	18	20.7%	34	39.1%	26	29.9%	5	5.7%
	Upper class	10	7.5%	27	20.3%	49	36.8%	43	32.3%	4	3.0%
	Group Total	14	6.4%	45	20.5%	83	37.7%	69	31.4%	9	4.1%
^b Gender	Male	16	7.5%	49	23.0%	71	33.3%	67	31.5%	10	4.7%
	Female	12	4.0%	58	19.3%	112	37.2%	111	36.9%	8	2.7%
	Group Total	28	5.4%	107	20.8%	183	35.6%	178	34.6%	18	3.5%
^c College Type	Public	21	6.7%	70	22.3%	116	36.9%	94	29.9%	13	4.1%
	Private	11	4.7%	45	19.3%	77	33.0%	90	38.6%	10	4.3%
	Group Total	32	5.9%	115	21.0%	193	35.3%	184	33.6%	23	4.2%
^d Please indicate your current living arrangement.	Living alone	3	2.4%	20	16.1%	33	26.6%	63	50.8%	5	4.0%
	Living with parents	9	8.3%	32	29.4%	35	32.1%	30	27.5%	3	2.8%
	Living with roommate	13	6.1%	48	22.6%	79	37.3%	64	30.2%	8	3.8%
	Living with spouse/partner	5	7.1%	8	11.4%	31	44.3%	23	32.9%	3	4.3%
	Group Total	30	5.8%	108	21.0%	178	34.6%	180	35.0%	19	3.7%

^aChi Square = 1.844, df = 4, p = .764

^bChi Square = 6.744, df = 4, p = .150

^cChi Square = 5.035, df = 4, p = .284

^dChi Square = 29.475, df = 4, p = .003

The following demographic variables were significantly associated with how likely students believed that one could get HIV by attending a school with an HIV-infected person (Table 4-16).

Students 18 to 24 were more likely to incorrectly believe that it is somewhat likely that a person can get HIV from going to school with someone infected with HIV (22 percent) as compared to students 25 and older (10 percent).

How Likely Is It That a Person Can Get HIV By Being Bitten By a Mosquito Or An Animal?

According to most public health authorities, it is not very likely that a person can get HIV by being bitten by a mosquito or an animal. Thirty-two percent of respondents correctly believed that it is “not very likely” or “definitely not possible” to contract HIV from an animal or mosquito bite, while 25 percent incorrectly believed that it is “somewhat likely” or “very likely” to contract HIV in this manner.

The following demographic variables were significantly related to how likely respondents believed that HIV could be contracted from an animal or mosquito bite.

Students attending private universities were more likely to correctly believe “it is definitely not likely” a person can get HIV from being bitten by a mosquito or other animal (41 percent) as compared to students attending public universities (33 percent).

Students 25 and older were more likely to correctly believe “it is definitely not likely” a person can get HIV from being bitten by a mosquito or other animal (34 percent) as compared to students 18-24 (20 percent). (Table 4-17).

TABLE 4-16. HOW LIKELY IS IT THAT A PERSON CAN GET HIV FROM GOING TO SCHOOL WITH SOMEONE INFECTED WITH HIV?

		Very Likely		Somewhat Likely		Not Likely		Definitely Not Likely		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	3	3.4%	18	20.7%	33	37.9%	31	35.6%	2	2.3%
	Upper class	9	6.8%	28	21.1%	44	33.1%	49	36.8%	3	2.3%
Group Total		12	5.5%	46	20.9%	77	35.0%	80	36.4%	5	2.3%
^b Gender	Male	13	6.1%	49	23.0%	72	33.8%	76	35.7%	3	1.4%
	Female	8	2.7%	49	16.3%	114	37.9%	123	40.9%	7	2.3%
Group Total		21	4.1%	98	19.1%	186	36.2%	199	38.7%	10	1.9%
^c College Type	Public	13	4.1%	64	20.4%	104	33.1%	123	39.2%	10	3.2%
	Private	11	4.7%	39	16.7%	95	40.8%	86	36.9%	2	.9%
Group Total		24	4.4%	103	18.8%	199	36.4%	209	38.2%	12	2.2%
^d Age	18-24	18	4.4%	90	21.8%	142	34.4%	154	37.3%	9	2.2%
	25 and older	6	4.5%	13	9.7%	57	42.5%	55	41.0%	3	2.2%
Group Total		24	4.4%	103	18.8%	199	36.4%	209	38.2%	12	2.2%

^aChi Square = 1.440, df = 4, p = .837

^bChi Square = 8.560, df = 4, p = .073

^cChi Square = 6.670, df = 4, p = .154

^dChi Square = 10.082, df = 4, p = .039

TABLE 4-17. HOW LIKELY IS IT THAT A PERSON CAN GET HIV BY BEING BITTEN BY A MOSQUITO OR AN ANIMAL?

		Very Likely		Somewhat Likely		Not Likely		Definitely Not Likely		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	3	3.4%	18	20.7%	33	37.9%	31	35.6%	2	2.3%
	Upper class	9	6.8%	28	21.1%	44	33.1%	49	36.8%	3	2.3%
Group Total		12	5.5%	46	20.9%	77	35.0%	80	36.4%	5	2.3%
^b Gender	Male	13	6.1%	49	23.0%	72	33.8%	76	35.7%	3	1.4%
	Female	8	2.7%	49	16.3%	114	37.9%	123	40.9%	7	2.3%
Group Total		21	4.1%	98	19.1%	186	36.2%	199	38.7%	10	1.9%
^c College Type	Public	13	4.1%	64	20.4%	104	33.1%	123	39.2%	10	3.2%
	Private	11	4.7%	39	16.7%	95	40.8%	86	36.9%	2	.9%
Group Total		24	4.4%	103	18.8%	199	36.4%	209	38.2%	12	2.2%
^d Age	18-24	18	4.4%	90	21.8%	142	34.4%	154	37.3%	9	2.2%
	25 and older	6	4.5%	13	9.7%	57	42.5%	55	41.0%	3	2.2%
Group Total		24	4.4%	103	18.8%	199	36.4%	209	38.2%	12	2.2%
^e Which of the following categories best describes your racial background?	White (Caucasian)	0	.0%	12	19.7%	26	42.6%	22	36.1%	1	1.6%
	African American	21	5.0%	82	19.6%	148	35.4%	159	38.0%	8	1.9%
	Group Total	21	4.4%	94	19.6%	174	36.3%	181	37.8%	9	1.9%

^aChi Square = 1.566, df = 4, p = .815

^bChi Square = 6.801, df = 4, p = .147

^cChi Square = 19.943, df = <.0001

^eChi Square = 26.612, df = 4, <.0001

^dChi Square = 12.986, df = .011

African Americans were less likely to correctly believe that a person cannot get HIV from being bitten by a mosquito or other animal (35 percent) as compared to White (Caucasians) (43 percent).

How Likely Is It That a Person Can Get HIV by Sharing Drug Needles with an HIV-infected Person?

Among the most efficient means of transmitting HIV is via blood. Because blood typically remains in needles after they have been injected, sharing drug needles with a person with HIV is a likely way of spreading the virus. Reports of increased use of the stimulant drug methamphetamine across the country has raised public health concerns because methamphetamine use has been associated both with sexual risk behaviors for HIV and STDs and sharing injection equipment when the drug is injected (CDC, 2001). Methamphetamine and other “party” drugs (such as ecstasy, melamine, and GHP [gamma hydroxybutyrate]) may be used to decrease social inhibitions and enhance sexual experiences (Marsen, 2001). These drugs, along with alcohol and nitrate inhalants (“poppers”), have been associated with risky sexual practices among MSM (Purcell, 2001).

Almost all students (93 percent) correctly believed it is “very likely” one can contract HIV by sharing drug needles with an infected person, while only 3 percent incorrectly believed that it is “definitely not possible” to contract HIV in this manner.

There were no demographic variables significantly associated with how likely respondents believed one could contract HIV by sharing needles with an HIV-infected person (Table 4-18).

TABLE 4-18. HOW LIKELY IS IT THAT A PERSON CAN GET HIV BY SHARING DRUG NEEDLES WITH AN HIV-INFECTED PERSON?

		Very Likely		Somewhat Likely		Not Likely		Definitely Not Likely		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	3	3.4%	18	20.7%	33	37.9%	31	35.6%	2	2.3%
	Upper class	9	6.8%	28	21.1%	44	33.1%	49	36.8%	3	2.3%
Group Total		12	5.5%	46	20.9%	77	35.0%	80	36.4%	5	2.3%
^b Gender	Male	13	6.1%	49	23.0%	72	33.8%	76	35.7%	3	1.4%
	Female	8	2.7%	49	16.3%	114	37.9%	123	40.9%	7	2.3%
Group Total		21	4.1%	98	19.1%	186	36.2%	199	38.7%	10	1.9%
^c College Type	Public	13	4.1%	64	20.4%	104	33.1%	123	39.2%	10	3.2%
	Private	11	4.7%	39	16.7%	95	40.8%	86	36.9%	2	.9%
Group Total		24	4.4%	103	18.8%	199	36.4%	209	38.2%	12	2.2%

^aChi Square = 1.504, df = 4, p = .826

^bChi Square = 4.704, df = 4, p = .319

^cChi Square = 3.062, df = 4, p = .548

How Likely Is It That a Person Can Get HIV Kissing a Person Who Has HIV on the Cheek?

According to health authorities, it is not very likely that a person can get HIV by kissing an HIV-infected person on the cheek. Eighty-eight percent of students (Table 4-19) correctly believe that it is “not very likely” or “definitely not possible” to contract HIV by kissing an HIV-infected person on the cheek while 11 percent incorrectly believe that it is “somewhat likely” or “very likely” to contract HIV in this manner.

There were no demographic variables significantly related to how likely respondents believed that HIV could be contracted by kissing an HIV-infected person on the cheek.

TABLE 4-19. HOW LIKELY IS IT THAT A PERSON CAN GET HIV BY KISSING A PERSON WHO HAS HIV ON THE CHEEK?

		Very Likely		Somewhat Likely		Not Likely		Definitely Not Likely		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	3	3.4%	18	20.7%	33	37.9%	31	35.6%	2	2.3%
	Upper class	9	6.8%	28	21.1%	44	33.1%	49	36.8%	3	2.3%
Group Total		12	5.5%	46	20.9%	77	35.0%	80	36.4%	5	2.3%
^b Gender	Male	13	6.1%	49	23.0%	72	33.8%	76	35.7%	3	1.4%
	Female	8	2.7%	49	16.3%	114	37.9%	123	40.9%	7	2.3%
Group Total		21	4.1%	98	19.1%	186	36.2%	199	38.7%	10	1.9%
^c College Type	Public	13	4.1%	64	20.4%	104	33.1%	123	39.2%	10	3.2%
	Private	11	4.7%	39	16.7%	95	40.8%	86	36.9%	2	.9%
Group Total		24	4.4%	103	18.8%	199	36.4%	209	38.2%	12	2.2%

^aChi Square = 1.965, df = 4, p = .742

^bChi Square = .432, df = 4, p = .980

^cChi Square = 1.546, df = 4, p = .818

risk for HIV infection. Almost all respondents (95 percent) correctly believed that it is “very or somewhat likely” one can contract HIV by having sexual intercourse with an infected person without using a condom while only 4 percent incorrectly believed that it is “not very likely,” or “definitely not possible” to contract HIV in this manner.

There were no demographic variables significantly associated with how likely respondents think one can contract HIV by having unprotected sexual intercourse with an HIV-infected person (Table 4-20).

Can an HIV-infected Pregnant Woman Pass HIV to Her Unborn Child?

Ninety-one percent of respondents were aware that an HIV-infected woman could infect her unborn child.

The following demographic variables were significantly related to the knowledge that an HIV-infected woman could infect her unborn child (Table 4-21).

TABLE 4-20. HOW LIKELY IS IT THAT A PERSON CAN GET HIV BY HAVING SEXUAL INTERCOURSE WITH A PERSON WHO HAS HIV WITHOUT USING A CONDOM?

		Very Likely		Somewhat Likely		Not Likely		Definitely Not Likely		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	3	3.4%	18	20.7%	33	37.9%	31	35.6%	2	2.3%
	Upper class	9	6.8%	28	21.1%	44	33.1%	49	36.8%	3	2.3%
Group Total		12	5.5%	46	20.9%	77	35.0%	80	36.4%	5	2.3%
^b Gender	Male	13	6.1%	49	23.0%	72	33.8%	76	35.7%	3	1.4%
	Female	8	2.7%	49	16.3%	114	37.9%	123	40.9%	7	2.3%
Group Total		21	4.1%	98	19.1%	186	36.2%	199	38.7%	10	1.9%
^c College Type	Public	13	4.1%	64	20.4%	104	33.1%	123	39.2%	10	3.2%
	Private	11	4.7%	39	16.7%	95	40.8%	86	36.9%	2	.9%
Group Total		24	4.4%	103	18.8%	199	36.4%	209	38.2%	12	2.2%

^aChi Square = 4.544, df = 4, p = .337 ^bChi Square = 7.637, df = 4, p = .106 ^cChi Square = .649, df = 4, p = .957

TABLE 4-21. CAN AN HIV-INFECTED PREGNANT WOMAN PASS HIV TO HER UNBORN CHILD?

		Yes		No		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	74	85.1%	4	4.6%	9	10.3%
	Upper class	121	91.0%	1	.8%	11	8.3%
Group Total		195	88.6%	5	2.3%	20	9.1%
^b Gender	Male	184	86.4%	9	4.2%	20	9.4%
	Female	284	94.4%	4	1.3%	13	4.3%
Group Total		468	91.1%	13	2.5%	33	6.4%
^c College Type	Public	285	90.8%	5	1.6%	24	7.6%
	Private	212	91.0%	10	4.3%	11	4.7%
Group Total		497	90.9%	15	2.7%	35	6.4%
^d Age	18-24	372	90.1%	10	2.4%	31	7.5%
	25 and older	125	93.3%	5	3.7%	4	3.0%
Group Total		497	90.9%	15	2.7%	35	6.4%

^aChi Square = .483, df = 2, p = .786 ^bChi Square = 4.302, df = 2, p = .116 ^cChi Square = 17.241, df = 2, p = .000

^dChi Square = 9.256, df = 2, p = .010

Students attending private institutions were more likely to believe that an HIV-infected woman could infect her unborn child (4 percent) as compared to students attending public institutions (2 percent).

Students 25 and older were more likely to believe that an HIV-infected woman could infect her unborn child (4 percent) as compared to 18 to 24 (3 percent).

Do You Know If There Are Any Medicines That an HIV-infected Pregnant Women Could Take to Prevent Her Baby from Getting HIV?

Zidovudine (ZDV) is a medication that has been shown to reduce HIV transmission from mother to child if the mother takes it while she is pregnant. Among respondents who knew that an HIV-infected mother could infect her newborn child, only 35 percent knew of any medicines that would prevent HIV transmission from an HIV-infected mother to her baby.

The following demographic variables were significantly associated with knowledge of any medications available to help prevent HIV transmission between an HIV-infected pregnant woman and her baby (Table 4-22).

Upper class students were more likely to know if there are any medications that an HIV-infected pregnant woman can take to prevent the baby from getting HIV (33 percent) as compared to lower class students (29 percent).

Female students were more likely to know if there are any medications that an HIV-infected pregnant woman can take to prevent the baby from getting HIV (35 percent) as compared to male students (31 percent).

Students attending private institutions were more likely to know if there are any medications that an HIV-infected pregnant woman can take to prevent the baby from

TABLE 4-22. DO YOU KNOW IF THERE ARE ANY MEDICATIONS THAT AN HIV-INFECTED PREGNANT WOMAN CAN TAKE TO PREVENT THE BABY FROM GETTING HIV?

		Yes, I know there are some		No, I don't know if there are any		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	25	28.7%	56	64.4%	6	6.9%
	Upper class	44	33.1%	81	60.9%	8	6.0%
^b Group Total		69	31.4%	137	62.3%	14	6.4%
Gender	Male	65	30.5%	135	63.4%	13	6.1%
	Female	113	37.5%	178	59.1%	10	3.3%
Group Total		178	34.6%	313	60.9%	23	4.5%
^c College Type	Public	90	28.7%	205	65.3%	19	6.1%
	Private	102	43.8%	127	54.5%	4	1.7%
Group Total		192	35.1%	332	60.7%	23	4.2%
^d Age	18-24	132	32.0%	260	63.0%	21	5.1%
	25 and older	60	44.8%	72	53.7%	2	1.5%
Group Total		192	35.1%	332	60.7%	23	4.2%

^aMay not equal total sample size because question asked only of respondents who reported knowing that pregnant women could transmit HIV to their unborn child.

^cChi Square = 3.8333, df = 1, p = .050 ^eChi Square = 2.926, df = 1, p = .087

^bChi Square = 10.936, df = 1, p = .001

According to the Information You Have, How Would You Define Safe Sex?

When students were asked to define the term “safe sex,” condom use was the most common definition provided (50 percent). Other common definitions reported included celibacy (42 percent), know partners/be aware of partners background (41 percent), monogamy (40 percent), and reduce the numbers of sex partners (39 percent) (Table 4-23).

There was no demographic variable was significantly associated with defining the concept of safe sex as, “safe sex-use of condoms?” (Table 4-24).

TABLE 4-23. ACCORDING TO THE INFORMATION YOU HAVE,
HOW WOULD YOU DEFINE SAFE SEX?

	Total	Percent (%)
Use condoms	273	(49.9)
Be celibate	227	(41.5)
Know partners/be aware of partners background	226	(41.3)
Be monogamous	217	(39.7)
Reduce the numbers of sex partners	214	(39.1)
Avoid high-risk partners	190	(34.7)
Have sex with only one person who is not infected	189	(34.6)
Get tested for HIV	189	(34.6)
Take sanitary precautions/be clean	78	(32.5)
Avoid anal intercourse	132	(24.1)
Other	13.0	(2.4)
Don't Know	9.0	(1.6)

TABLE 4-24. SAFE SEX, USE OF CONDOMS?

		Yes, I know there are some		No, I don't know if there are any		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	25	28.7%	56	64.4%	6	6.9%
	Upper class	44	33.1%	81	60.9%	8	6.0%
Group Total		69	31.4%	137	62.3%	14	6.4%
^b Gender	Male	65	30.5%	135	63.4%	13	6.1%
	Female	113	37.5%	178	59.1%	10	3.3%
Group Total		178	34.6%	313	60.9%	23	4.5%
^c College Type	Public	90	28.7%	205	65.3%	19	6.1%
	Private	102	43.8%	127	54.5%	4	1.7%
Group Total		192	35.1%	332	60.7%	23	4.2%

^aChi Square = 2.333 df = 2, p = .311

^bChi Square = 5.078 df = 2, p = .079

^cChi Square = 6.490 df = 2, p = .039

TABLE 4-25. SAFE SEX, BE CELIBATE (ABSTINENT)?

		Yes, or selected		No, or not selected		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	40	46.0%	47	54.0%	0	.0%
	Upper class	43	32.3%	87	65.4%	3	2.3%
Group Total		83	37.7%	134	60.9%	3	1.4%
^b Gender	Male	74	34.7%	138	64.8%	1	.5%
	Female	144	47.8%	153	50.8%	4	1.3%
Group Total		218	42.4%	291	56.6%	5	1.0%
^c College Type	Public	119	37.9%	192	61.1%	3	1.0%
	Private	108	46.4%	123	52.8%	2	.9%
Group Total		227	41.5	315	57.6%	5	.9%

^aChi Square = 5.679, df = 2, p = .058

^bChi Square = 10.286, df = 2, p = .005

^cChi Square = 3.939, df = 2, p = .140

The following demographic variable was significantly related to being celibate in defining the concept of “safe sex” (See Table 4-25 above).

Female students were more likely to define the concept of “safe sex” as being celibate, abstaining from sexual intercourse (49 percent) as compared with male students (35 percent).

The following demographic variable was significantly associated with defining the concept of “safe sex” as knowing partner/being aware of partner’s background (Table 4-26).

Female respondents were more likely to agree that the concept of “safe sex” includes knowing sex partners/being aware of partner’s background (49 percent) as compared with male respondents (34 percent).

TABLE 4-26. SAFE SEX, KNOW YOUR PARTNERS/BE AWARE OF PARTNER'S BACKGROUND?

		Yes, or selected		No, or not selected	
		Count	Row %	Count	Row %
^a Classification	Lower Level	49	45.0%	60	55.0%
	Upper Level	173	41.2%	247	58.8%
Group Total		222	42.0%	307	58.0%
^b Gender	Male	72	34.0%	140	66.0%
	Female	145	48.8%	152	51.2%
Group Total		217	42.6%	292	57.4%
^c College Type	Public	120	38.6%	191	61.4%
	Private	106	45.9%	125	54.1%
Group Total		226	41.7%	316	58.3%

^aChi Square = .359, df = 1, p = .549

^bChi Square = 11.168, df = 1, p = .001

^cChi Square = 2.907, df = 1, p = .088

The following demographic variable was significantly related to defining the concept of “safe sex” as being monogamous (one partner) (Table 4-27).

Female respondents were more likely to agree that the concept of “safe sex” includes monogamous (one partner) (45 percent) as compared to male respondents (37 percent).

There were no demographic variables significantly associated with defining the concept of “safe sex” as avoiding high risk partners (Table 4-28).

OPINIONS REGARDING PUBLIC POLICY

This section examines HBCU students’ opinions regarding public policies pertaining to HIV and AIDS. Almost one in five students (19 percent) reported “high” concern for HIV and AIDS as a public health issue (i.e. rated at least seven on a scale of

TABLE 4-27. SAFE SEX, BE MONOGAMOUS (ONE PARTNER)?

		Yes, or selected		No, or not selected		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	33	37.9%	54	62.1%	0	.0%
	Upper class	48	36.1%	82	61.7%	3	2.3%
Group Total		81	36.8%	136	61.8%	3	1.4%
^b Gender	Male	72	33.8%	140	65.7%	1	.5%
	Female	136	45.2%	161	53.5%	4	1.3%
Group Total		208	40.5%	301	58.6%	5	1.0%
^c College Type	Public	115	36.6%	196	62.4%	3	1.0%
	Private	102	43.8%	129	55.4%	2	.9%
Group Total		217	39.7%	325	59.4%	5	.9%
^d Age	18-24	153	37.0%	257	62.2%	3	.7%
	25 and older	64	47.8%	68	50.7%	2	1.5%
Group Total		217	39.7%	325	59.4%	5	.9%

^aChi Square = 2.012, df = 2, p = .366^bChi Square = 8.130, df = 2, p = .017^cChi Square = 2.859, df = 2, p = .239^dChi Square = 5.823, df = 2, p = .054

TABLE 4-28. SAFE SEX, AVOID HIGH RISK PARTNERS?

		Yes, or selected		No, or not selected		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	28	32.2%	59	67.8%	0	.0%
	Upper class	41	30.8%	89	66.9%	3	2.3%
Group Total		69	31.4%	148	67.3%	3	1.4%
^b Gender	Male	65	30.5%	147	69.0%	1	.5%
	Female	116	38.5%	181	60.1%	4	1.3%
Group Total		181	35.2%	328	63.8%	5	1.0%
^c College Type	Public	101	32.2%	210	66.9%	3	1.0%
	Private	89	38.2%	142	60.9%	2	.9%
Group Total		190	34.7%	352	64.4%	5	.9%

^aChi Square = 2.000, df = 2, p = .368^bChi Square = 4.768, df = 2, p = .092^cChi Square = 2.147, df = 2, p = .342

zero-ten where ten indicates “extremely concerned”). Almost one in three students (34 percent) had contributed time or money to an organization with HIV-or AIDS-related issues.

Almost three-quarters of the students (74 percent) believed that cases with HIV infection should be reported to health departments. Public support for various policy options to prevent HIV was very strong.

The majority of students believed that the following five policies would prevent the spread of HIV:

- (1) provide condoms to prisoners (68 percent believed effective);
- (2) provide clean needles to injection drug users in the community (50 percent);
- (3) provide clean needles to injection drug users in prison (68 percent);
- (4) require doctors and clinics to report cases with HIV to the State Health Department (65 percent); and
- (5) require HIV tests for pregnant women (70 percent).

Among those who believe in the effectiveness of the above policies, a minority of respondents thought that private individuals or organizations should pay for them. The respondents reported that the state should pay either all, or in part, for each of the following:

- (1) provide condoms to prisoners (32 percent who believed this would be effective, want the state to pay);
- (2) provide clean needles to injection drug users in the community (50 percent);
- (3) provide clean needles to injection drug users in prison (29 percent);

(4) require doctors and clinics to report cases with HIV to the State Health

Department (39 percent); and

(5) require HIV tests for pregnant women (33 percent).

More than two-thirds of the respondents (68 percent) reported a “great need” for the development of microbicides (i.e. substances that women could apply prior to sexual intercourse to prevent infection by HIV and other sexually transmitted diseases), and almost one out of four (24 percent) women reported that they would be “very interested” in using these substances if they were developed.

There Has Been Considerable Debate About Whether People With HIV Should Be Counted and Thus Reported to Health Departments. And If So, What is the Best Way to Do This? Do You Feel That Persons With HIV Should Be Reported to Health Departments Using a Unique Code to Protect Their Identity, By Their Name for Greater Accuracy, or Not Reported At All?

More than half (58 percent) of respondents believed that HIV cases should be reported to health departments using a unique code to protect individuals’ identity, and an additional 16 percent believe it should be reported using individuals’ names. Only 9 percent of respondents did not support HIV reporting, and 10 percent had no opinion or refused to answer this question.

The following demographic variable was significantly associated with stated opinions about HIV reporting (Table 4-29).

Female respondents were more likely to report that persons with HIV should be reported to health departments using a unique code to protect their identity (62 percent) as compared with male respondents (53 percent).

TABLE 4-29. DO YOU FEEL THAT PERSONS WITH HIV SHOULD BE REPORTED TO HEALTH DEPARTMENTS USING A UNIQUE CODE TO PROTECT THEIR IDENTITY, BY THEIR NAME FOR GREATER ACCURACY, OR NOT REPORTED AT ALL?

		by a unique code		by name		not reported at all		don't know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	50	57.5%	14	16.1%	4	4.6%	19	21.8%
	Upper class	72	54.1%	28	21.1%	10	7.5%	23	17.3%
	Group Total	122	55.5%	42	19.1%	14	6.4%	42	19.1%
^b Gender	Male	112	52.6%	30	14.1%	25	11.7%	46	21.6%
	Female	187	62.1%	52	17.3%	21	7.0%	41	13.6%
	Group Total	299	58.2%	82	16.0%	46	8.9%	87	16.9%
^c College Type	Public	180	57.3%	54	17.2%	21	6.7%	59	18.8%
	Private	138	59.2%	33	14.2%	26	11.2%	36	15.5%
	Group Total	318	58.1%	87	15.9%	47	8.6%	95	17.4%

^aChi Square = 2.058, df = 3, p = .560 ^bChi Square = 10.595, df = 3, p = .014 ^cChi Square = 4.828, df = 3, p = .185

What Is the Main Reason You Think They Should Not be Reported?

Among the 9 percent of students who opposed reporting HIV cases to the health departments, the most commonly cited reason was “it is a private medical matter” (64 percent). Less common reasons included the concern that “the identity of the person will be revealed” (22 percent) and, you don’t trust the health department with this information (14 percent). (Table 4-30).

The following demographic variables were significantly related to the stated reasons why HIV cases should not be reported to health departments.

Male students who opposed reporting HIV cases to the health departments, were more likely to cite the reason as, “it is a private medical matter” (24 percent) as compared to female students (14 percent).

TABLE 4-30. WHAT IS THE MAIN REASON THEY SHOULD NOT BE EPORTED?

		HIV status is a private matter		The identity of the person should not be revealed		You don't trust the health department with this information		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	15	17.2%	6	6.9%	3	3.4%	63	72.4%
	Upper class	26	19.5%	11	8.3%	4	3.0%	92	69.2%
Group Total		41	18.6%	17	7.7%	7	3.2%	155	70.5%
^b Gender	Male	51	23.9%	16	7.5%	8	3.8%	138	64.8%
	Female	43	14.3%	17	5.6%	11	3.7%	230	76.4%
Group Total		94	18.3%	33	6.4%	19	3.7%	368	71.6%
^c College Type	Public	47	15.0%	18	5.7%	10	3.2%	239	76.1%
	Private	53	22.7%	17	7.3%	11	4.7%	152	65.2%
Group Total		100	18.3%	35	6.4%	21	3.8%	391	71.5%
^d Age	18-24	78	18.9%	30	7.3%	10	2.4%	295	71.4%
	25 and older	22	16.4%	5	3.7%	11	8.2%	96	71.6%
Group Total		100	18.3%	35	6.4%	21	3.8%	391	71.5%
^e Please indicate your current marital status.	Married	10	19.2%	1	1.9%	2	3.8%	39	75.0%
	Widowed	2	20.0%	0	.0%	1	10.0%	7	70.0%
	Divorced	1	16.7%	0	.0%	1	16.7%	4	66.7%
	Separated	1	14.3%	1	14.3%	2	28.6%	3	42.9%
	Never been married	73	18.0%	29	7.2%	9	2.2%	294	72.6%
	Living together	6	22.2%	4	14.8%	3	11.1%	14	51.9%
Group Total		93	18.3%	35	6.9%	18	3.6%	361	71.2%
^f Do you consider yourself heterosexual or straight, gay, lesbian, or bisexual?	Heterosexual/Straight	89	17.9%	33	6.7%	17	3.4%	357	72.0%
	Gay/Lesbian	0	.0%	0	.0%	2	33.3%	4	66.7%
Group Total		89	17.7%	33	6.6%	19	3.8%	361	71.9%

ⁱMay not equal total sample because question only asked of respondents who felt that persons with HIV should not be reported.

^aChi Square = .389, df = 3, p = .942

^bChi Square = 9.394, df = 3, p = .042

^cChi Square = 7.975, df = 3, p = .047

^dChi Square = 11.139, df = 3, p = .011

^eChi Square = 31.605, df = 3, p = .007

^fChi Square = 15.508, df = 3, p = .001

Students attending private institutions were more likely to cite the reason as, “it is a private matter” (23 percent) as compared to students attending public institutions (15 percent).

Twenty-five year old respondents were more likely to cite, “you don’t trust the health department with this information” as the reason for opposing reporting HIV cases (9 percent) as compared to respondents 18 to 24 years old (2 percent).

Separated students were more likely to cite, “you don’t trust the health department with this information” as reason for opposing reporting HIV cases (29 percent) as compared to married students (4 percent).

Do You Think That Providing Needles for Injection Drug Users in the Community Would be an Effective Method to Fight the Spread of HIV or Not?

Half of the respondents (50 percent) believed that providing clean needles to injection drug users would help prevent the spread of HIV.

No demographic variables were significantly associated with the belief that providing clean needles to injection drug users in the community would help prevent the spread of HIV (Table 4-31).

Do You Think the State or Private Individuals and Organizations Should Pay for Providing Clean Needles for Injection Drug Users in the Community?

Half (50 percent) of respondents who believed that providing clean needles for injection drug users would help prevent the spread of HIV, 29 percent indicated that the state should pay for this, 14 percent indicated that private individuals or organizations should

TABLE 4-31. DO YOU THINK THAT PROVIDING CLEAN NEEDLES FOR INJECTION OF DRUG USERS IN THE COMMUNITY WOULD PREVENT THE SPREAD OF HIV

		Yes, effectively		No, not effective		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	44	50.6%	22	25.3%	21	24.1%
	Upper class	73	54.9%	35	26.3%	25	18.8%
Group Total		117	53.2%	57	25.9%	46	20.9%
^b Gender	Male	117	54.9%	60	28.2%	36	16.9%
	Female	135	44.9%	107	35.5%	59	19.6%
Group Total		252	49.0%	167	32.5%	95	18.5%
^c College Type	Public	165	52.5%	88	28.0%	61	19.4%
	Private	107	45.9%	88	37.8%	38	16.3%
Group Total		272	49.7%	176	32.2%	99	18.1%

^aChi Square = .923, df = 2, p = .630

^bChi Square = 5.176, df = 2, p = .076

^cChi Square = 5.845, df = 2, p = .054

pay, 13 percent indicated that both the state and private parties should pay, and 49 percent indicated that neither the state nor private parties should pay.

The following demographic variable was significantly associated with opinions regarding who should pay for providing clean needles to injection drug users in the community (See Table 4-32).

Female respondents were more likely to believe that “no one should pay for providing clean needles to injection drug users in the community” (10 percent) as compared to male respondents (8 percent).

TABLE 4-32. DO YOU THINK THE STATE OR PRIVATE INDIVIDUALS AND ORGANIZATIONS SHOULD PAY FOR PROVIDING CLEAN NEEDLES FOR INJECTION OF DRUG USERS IN THE COMMUNITY?

		State		Private		Neither, no one should pay		Both the state and private sources should pay		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	25	28.7%	14	16.1%	4	4.6%	13	14.9%	31	35.6%
	Upper class	38	28.6%	17	12.8%	12	9.0%	25	18.8%	41	30.8%
	Group Total	63	28.6%	31	14.1%	16	7.3%	38	17.3%	72	32.7%
^b Gender	Male	71	33.3%	36	16.9%	17	8.0%	27	12.7%	62	29.1%
	Female	70	23.3%	36	12.0%	29	9.6%	41	13.6%	125	41.5%
	Group Total	141	27.4%	72	14.0%	46	8.9%	68	13.2%	187	36.4%
^c College Type	Public	91	29.0%	48	15.3%	31	9.9%	41	13.1%	103	32.8%
	Private	67	28.8%	28	12.0%	18	7.7%	30	12.9%	90	38.6%
	Group Total	158	28.9%	76	13.9%	49	9.0%	71	13.0%	193	35.3%

^aChi Square = 2.649, df = 4, p = .618

^bChi Square = 12.546, df = 4, p = .014

^cChi Square = 3.009, df = 4, p = .556

Do You Think That Providing Clean Needles for Injection Drug Users in Prisons Would be an Effective Method to Fight the Spread of HIV?

Almost one in every two (47 percent) respondents believed that providing clean needles to injection drug users in prison would help prevent the spread of HIV? (Table 4-33).

Students 18-24 were more likely to report that providing clean needles for injection drug users in prisons would help prevent the spread of HIV (62 percent) as compared with Students 25 and older (46 percent).

TABLE 4-33. DO YOU THINK THAT PROVIDING CLEAN NEEDLES FOR INJECTION DRUG USERS IN PRISONS WOULD BE AN EFFECTIVE METHOD TO FIGHT THE SPREAD OF HIV?

		Yes, effective		No, not effective		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	41	47.1%	20	23.0%	26	29.9%
	Upper class	76	57.1%	32	24.1%	25	18.8%
Group Total		117	53.2%	52	23.6%	51	23.2%
^b Gender	Male	103	48.4%	71	33.3%	39	18.3%
	Female	133	44.2%	107	35.5%	61	20.3%
Group Total		236	45.9%	178	34.6%	100	19.5%
^c College Type	Public	153	48.7%	97	30.9%	64	20.4%
	Private	105	45.1%	88	37.8%	40	17.2%
Group Total		258	47.2%	185	33.8%	104	19.0%
^d Age	18-24	208	50.4%	127	30.8%	78	18.9%
	25 and older	50	37.3%	58	43.3%	26	19.4%
Group Total		258	47.2%	185	33.8%	104	19.0%

^aChi Square = 3.807, df = 2, p = .149

^bChi Square = .895, df = 2, p = .639

^cChi Square = 2.997, df = 2, p = .226

^dChi Square = 8.336, df = 2, p = .015

The following demographic variable was significantly related to the belief that providing clean needles to injection drug users in prison would help prevent the spread of HIV.

Students 18 to 24 were more likely to believe that providing clean needles to injection drug users in prison would help prevent the spread of HIV (50 percent) as compared to students 25 and older (37 percent).

Do You Think the State Should Pay for this or Should Private Individuals and Organizations Pay for Providing Clean Needles to Injection Drug Users in Prisons?

Of the 47 percent of respondents who believed that providing clean needles to injection drug users in prison would help prevent HIV (Table 4-34), 32 percent indicated that the State should pay for this, 13 percent indicated that neither private individuals or organizations should pay, 20 percent indicated that both the State and private parties should pay, and 8 percent indicated that neither the state nor private parties should pay.

The following demographic variable was significantly associated with opinions regarding who should pay for the provision of clean needles to injection drug users in prison among those who believed in the efficacy of this policy for HIV prevention.

African Americans were more likely to believe that the State should pay for the provision of clean needles to injection drug users in prisons (30 percent) as compared to white (Caucasian) Americans (16 percent).

Do You Think Providing Condoms for use by People in Prisons Would Help Prevent the Spread of HIV?

More than two-thirds (68 percent) of the respondents believed that providing condoms to prisoners would help prevent the spread of HIV.

TABLE 4-34. DO YOU THINK THE STATE SHOULD PAY FOR THIS OR SHOULD PRIVATE INDIVIDUALS AND ORGANIZATIONS PAY FOR PROVIDING CLEAN NEEDLES TO INJECTION DRUG USERS IN PRISONS?

		State		Private		Neither, no one should pay		Both		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	28	32.2%	10	11.5%	8	9.2%	13	14.9%	28	32.2%
	Upper class	41	30.8%	10	7.5%	12	9.0%	24	18.0%	46	34.6%
	Group Total	69	31.4%	20	9.1%	20	9.1%	37	16.8%	74	33.6%
^b Gender	Male	70	32.9%	18	8.5%	21	9.9%	29	13.6%	75	35.2%
	Female	76	25.2%	27	9.0%	35	11.6%	48	15.9%	115	38.2%
	Group Total	146	28.4%	45	8.8%	56	10.9%	77	15.0%	190	37.0%
^c College Type	Public	90	28.7%	29	9.2%	32	10.2%	44	14.0%	119	37.9%
	Private	69	29.6%	19	8.2%	26	11.2%	38	16.3%	81	34.8%
	Group Total	159	29.1%	48	8.8%	58	10.6%	82	15.0%	200	36.6%
^d Which of the following categories best describes your racial background?	White (Caucasian)	10	16.4%	9	14.8%	5	8.2%	7	11.5%	30	49.2%
	African American	127	30.4%	37	8.9%	46	11.0%	67	16.0%	141	33.7%
	Group Total	137	28.6%	46	9.6%	51	10.6%	74	15.4%	171	35.7%

^aChi Square = 1.338, df = 4, p = .885

^bChi Square = 3.698, df = 4, p = .448

^cChi Square = 1.168, df = 4, p = .883

^dChi Square = 10.241, df = 4, p = .037

The following demographic variable was significantly related to the belief that providing condoms to prisons would help prevent the spread of HIV (Table 4-35).

Students 18 to 24 years of age were more likely to believe that providing condoms for use by people in prisons would help prevent the spread of HIV (71 percent) as compared to students 25 and older (68 percent).

Do You Think the State or Private Individuals and Organizations Should Pay for Condoms for Use by People in Prisons?

Among the 68 percent of respondents who believed in the efficacy of providing condoms to prisoners to prevent the spread of HIV, 32 percent indicated that the state should pay for this, 13 percent indicated that private individuals or organizations should pay, 20 percent indicated that both the state and private parties should pay, and 8 percent indicated that neither the state nor private parties should pay (Table 4-36).

No demographic variables were significantly associated with who should pay for the provision of condoms for use to people in prisons to help prevent the spread of HIV.

Do You Think Requiring Doctors and Clinics to Report Cases of HIV Infection to the State Health Department Would be an Effective Method to Fight the Spread of HIV?

Nearly two-thirds (65 percent) respondents believed that requiring doctors and clinics to report cases of HIV infection to the State Health Department would be an effective method to fight the spread of HIV.

There were no demographic variables significantly related to the belief that the reporting of HIV cases to the State Health Department is an effective way to fight the spread of HIV.

TABLE 4-35. WOULD PROVIDING CONDOMS FOR USE BY PEOPLE IN PRISONS HELP PREVENT THE SPREAD OF HIV?

		Yes, effective		Not, effective		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	59	67.8%	14	16.1%	14	16.1%
	Upper class	92	69.2%	23	17.3%	18	13.5%
Group Total		151	68.6%	37	16.8%	32	14.5%
^b Gender	Male	141	66.2%	36	16.9%	36	16.9%
	Female	208	69.1%	56	18.6%	37	12.3%
Group Total		349	67.9%	92	17.9%	73	14.2%
^c College Type	Public	214	68.2%	53	16.9%	47	15.0%
	Private	157	67.4%	44	18.9%	32	13.7%
Group Total		371	67.8%	97	17.7%	79	14.4%
^d Age	18-24	291	70.5%	65	15.7%	57	13.8%
	25 and older	80	59.7%	32	23.9%	22	16.4%
Group Total		371	67.8%	97	17.7%	79	14.4%

^aChi Square = .292, df = 2, p = .862 ^bChi Square = 2.223, df = 2, p = .329 ^cChi Square = .456, df = 2, p = .796
^dChi Square = 5.988, df = 2, p = .050

TABLE 4-36. WOULD REQUIRING DOCTORS AND CLINICS TO REPORT CASES OF HIV INFECTION TO THE HEALTH DEPARTMENT HELP PREVENT THE SPREAD OF HIV?

		Yes, effective		No, not effective		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	52	59.8%	18	20.7%	17	19.5%
	Upper class	90	67.7%	28	21.1%	15	11.3%
Group Total		142	64.5%	46	20.9%	32	14.5%
^b Gender	Male	149	70.0%	39	18.3%	25	11.7%
	Female	181	60.1%	73	24.3%	47	15.6%
Group Total		330	64.2%	112	21.8%	72	14.0%
^c College Type	Public	209	66.6%	62	19.7%	43	13.7%
	Private	146	62.7%	55	23.6%	32	13.7%
Group Total		355	64.9%	117	21.4%	75	13.7%

^aChi Square = 2.980, df = 2, p = .225 ^bChi Square = 5.234, df = 2, p = .073 ^cChi Square = 1.245, df = 2, p = .537

Do You Think the State or Private Individuals and Organizations Should Pay for Doctors and Clinics Reporting HIV Cases to the State Health Organizations?

Among the 65 percent of respondents who believed in the efficacy of requiring doctors and clinics to report HIV infection to the State Health Department, 39 percent indicated that the state should pay for this, 8 percent indicated that private individuals or organizations should pay, 20 percent indicated that both the state and private parties should pay, and 6 percent indicated that neither the state nor private parties should pay.

No demographic variables were significantly associated with opinions regarding who should pay for HIV reporting to the State Health Department among those who believe in the efficacy of this policy (Table 4-37).

Table 4-37. DO YOU THINK THE STATE OR PRIVATE INDIVIDUALS AND ORGANIZATIONS SHOULD PAY FOR DOCTORS AND CLINICS REPORTING HIV CASES TO THE STATE HEALTH DEPARTMENTS?

		State		Private		Neither. No one should pay		Both the state and the private sources should pay	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	36	50.7%	9	12.7%	8	11.3%	18	25.4%
	Upper class	173	53.6%	34	10.5%	25	7.7%	91	28.2%
	Group Total	209	53.0%	43	10.9%	33	8.4%	109	27.7%
^b Gender/Division	Male/Lower	41	60.3%	8	11.8%	3	4.4%	16	23.5%
	Male/Upper	52	52.5%	12	12.1%	9	9.1%	26	26.3%
	Female/Lower	41	48.8%	8	9.5%	6	7.1%	29	34.5%
	Female/Upper	61	50.8%	11	9.2%	14	11.7%	34	28.3%
	Group Total	195	52.6%	39	10.5%	32	8.6%	105	28.3%
^c College Type	Public	120	52.4%	28	12.2%	18	7.9%	63	27.5%
	Private	94	54.7%	15	8.7%	15	8.7%	48	27.9%
	Group Total	214	53.4%	43	10.7%	33	8.2%	111	27.7%

¹May not equal total sample size because "don't know/not sure" and "refused" responses have been excluded.

^aChi Square = 2.301, df = 3, p = .512

^bChi Square = 2.867, df = 3, p = .413

^cChi Square = 1.313, df = 3, p = .726

Do You Think Requiring Pregnant Women to Get an HIV Test Would be an Effective Method to Fight the Spread of HIV Infection?

Almost three out of four (70 percent) respondents believed that requiring pregnant women to be tested for HIV would be an effective method for fighting the spread of HIV.

There were no demographic variables significantly related to the belief that mandatory testing of pregnant women would be an effective method to fight the spread of HIV (Table 4-38).

Do You Think the State or Private Individuals and Organizations Should Pay for HIV Testing of Pregnant Women?

Among the 70 percent of respondents who believed in the efficacy of mandatory HIV tests for pregnant women, 33 percent indicated that the state should pay for this, 11

TABLE 4-38. DO YOU THINK REQUIRING PREGNANT WOMEN TO GET AN HIV TEST WOULD BE AN EFFECTIVE METHOD TO FIGHT THE SPREAD OF HIV INFECTION?

		Yes, effective		No, not effective		Don't Know	
		Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	63	72.4%	14	16.1%	10	11.5%
	Upper class	95	71.4%	24	18.0%	14	10.5%
Group Total		158	71.8%	38	17.3%	24	10.9%
^b Gender	Male	142	66.7%	54	25.4%	17	8.0%
	Female	212	70.4%	55	18.3%	34	11.3%
Group Total		354	68.9%	109	21.2%	51	9.9%
^c College Type	Public	221	70.4%	58	18.5%	35	11.1%
	Private	159	68.2%	53	22.7%	21	9.0%
Group Total		380	69.5%	111	20.3%	56	10.2%

^aMay not equal total sample size because question asked only of respondents who felt the method would be effective in preventing the spread of HIV.

^bChi Square = .168, df = 2, p = .919 ^cChi Square = 4.586, df = 2, p = .101 ^dChi Square = 1.888, df = 2, p = .389

percent indicated that private individuals or organizations should pay, 25 percent indicated that both the state and private parties should pay, and 6 percent indicated that neither the state nor private parties should pay.

The following demographic variables were significantly associated with opinions regarding who should pay for mandatory HIV testing of pregnant women among those who believe in the efficacy of this policy (Table 4-39).

Females (29 percent) were more likely to believe that both the state and private sources should pay for mandatory HIV testing of pregnant women than were males (21 percent).

Married students were more likely to believe that both the state and private sources should be responsible for paying for mandatory HIV testing of pregnant women (27 percent) as compared to divorced students (17 percent).

There Are Some Ways That People May be Able to Protect Themselves from HIV as Well as Other STDs. Currently, Scientists are Developing Substances That Can Block Organisms That Cause These Diseases. Imagine That These New Substances Could be Added to a Cream or a Jelly, Suppository or a Sponge That a Woman Could Insert Directly Into her Vagina Before Having Intercourse, and Imagine That This Would Greatly Reduce a Woman's Chance of Getting HIV or Other Diseases, Even If Her Partner Didn't Use a Condom. How Great of a Need, If Any, Do You Think There is For These Substances?

Almost two out of three respondents (68 percent) reported a “great need” for the development of microbicides, i.e. substances that women could apply prior to sexual intercourse to prevent HIV and STD infection, 15 percent reported a “small need” for

TABLE 4-39. DO YOU THINK THE STATE OR PRIVATE INDIVIDUALS AND ORGANIZATIONS SHOULD PAY FOR HIV TESTING OF PREGNANT WOMEN?

		State		Private		Neither. No one should pay		Both the state and private sources should pay		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	37	42.5%	6	6.9%	3	3.4%	21	24.1%	20	23.0%
	Upper class	42	31.6%	15	11.3%	7	5.3%	34	25.6%	35	26.3%
	Group Total	79	35.9%	21	9.5%	10	4.5%	55	25.0%	55	25.0%
^b Gender	Male	80	37.6%	24	11.3%	10	4.7%	44	20.7%	55	25.8%
	Female	85	28.2%	29	9.6%	23	7.6%	84	27.9%	80	26.6%
	Group Total	165	32.1%	53	10.3%	33	6.4%	128	24.9%	135	26.3%
^c College Type	Public	108	34.4%	37	11.8%	11	3.5%	74	23.6%	84	26.8%
	Private	72	30.9%	21	9.0%	22	9.4%	60	25.8%	58	24.9%
	Group Total	180	32.9%	58	10.6%	33	6.0%	134	24.5%	142	26.0%
^d Please indicate your current marital status.	Married	9	17.3%	10	19.2%	6	11.5%	14	26.9%	13	25.0%
	Widowed	4	40.0%	1	10.0%	1	10.0%	4	40.0%	0	.0%
	Divorced	2	33.3%	1	16.7%	0	.0%	1	16.7%	2	33.3%
	Separated	5	71.4%	0	.0%	0	.0%	1	14.3%	1	14.3%
	Never been married	136	33.6%	41	10.1%	23	5.7%	98	24.2%	107	26.4%
	Living together	12	44.4%	2	7.4%	0	.0%	9	33.3%	4	14.8%
Group Total		168	33.1%	55	10.8%	30	5.9%	127	25.0%	127	25.0%

¹May not equal total sample size because question asked only of respondents who felt the method would be effective in preventing the spread of HIV.

^aChi Square = 2.336, df = 4, p = .674

^bChi Square = 11.313, df = 4, p = .023

^cChi Square = 1.370, df = 4, p = .849

^dChi Square = 43.123, df = 20, p = .002

microbicides, 6 percent reported “no need,” and 2 percent did not understand the question or did not have an opinion (Table 4-40).

The following demographic variables were significantly associated with support for the development of microbicides.

Sixty-nine percent of students who considered themselves heterosexual/straight were more likely to support the statement, “There is a great need for these substances” as compared with those students who considered themselves gay/lesbian (50 percent).

Seventy-five percent of students who reported getting most of their AIDS information from literature were more likely to support “there is a great need for these substances” as compared with those students reporting “not getting most of their information from AIDS literature (61 percent).

**If Such Items Were Available, How Interested Would You Be In Using Them?
(Question Asked of Female Respondents Only).**

Twenty-four percent of respondents reported that they would be “very interested” in using microbicides, and 20 percent reported that they would be a “little interested.”

Thirteen percent reported no interest, and 3 percent could not imagine such a product or did not know if they would be interested.

The following demographic variables were significantly associated with a women’s interest in using microbicides.

Upper class students were more likely to report “a great need” for microbicides (71 percent) as compared to lower class students (63 percent).

TABLE 4-40. HOW GREAT A NEED, IF ANY, DO YOU THINK THERE IS FOR THESE SUBSTANCES?

		No need for this at all		There is a small need		There is a great need for these substances		Don't understand question		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	7	8.0%	16	18.4%	55	63.2%	1	1.1%	8	9.2%
	Upper class	7	5.3%	19	14.3%	95	71.4%	2	1.5%	10	7.5%
Group Total		14	6.4%	35	15.9%	150	68.2%	3	1.4%	18	8.2%
^b College Type	Public	21	6.7%	48	15.3%	208	66.2%	7	2.2%	30	9.6%
	Private	14	6.0%	36	15.5%	164	70.4%	2	.9%	17	7.3%
Group Total		35	6.4%	84	15.4%	372	68.0%	9	1.6%	47	8.6%
^c Do you consider yourself heterosexual or straight, gay, lesbian, or bisexual?	Heterosexual/ Straight	29	5.8%	77	15.5%	342	69.0%	7	1.4%	41	8.3%
	Gay/Lesbian	0	.0%	2	33.3%	3	50.0%	1	16.7%	0	.0%
Group Total		29	5.8%	79	15.7%	345	68.7%	8	1.6%	41	8.2%
^d Do you get most of your AIDS info from literature?	Yes, or selected	11	4.1%	35	13.0%	203	75.2%	1	.4%	20	7.4%
	No, or not selected	24	8.7%	49	17.8%	169	61.2%	8	2.9%	26	9.4%
Group Total		35	6.4%	84	15.4%	372	68.1%	9	1.6%	46	8.4%

^fMay not equal total sample size because question asked to female respondents only.

^aChi Square = 1.946, df = 4, p = .746

^bChi Square = 2.758, df = 4, p = .599

^cChi Square = 16.433, df = 4, p = .002

^dChi Square = 11.009, df = 4, p = .026

Students attending private institutions were more likely to report “a great need” for these substances (70 percent) as compared to students attending public institutions (66 percent) (Table 4-41).

Older students were almost twice as likely to report being “not interested” in using microbicides than were younger students. Students 25 years and older (8 percent) report being “not interested” in using these substances, as compared to students 18-25 years of age (6 percent).

Students living with parents were more likely to report “a great need” for microbicides (74 percent), followed by students living with a roommate, and living alone (67 percent), and those living with a spouse/partner (63 percent).

Students who reported getting most of their AIDS information from TV (46 percent) were most likely to report that they would be “very interested” in using microbicides.

Students who reported getting most of their AIDS information from pamphlets/posters (45 percent) indicated they would be “very interested” in using microbicides.

TABLE 4-40. HOW GREAT A NEED, IF ANY, DO YOU THINK THERE IS FOR THESE SUBSTANCES?

		No need for this at all		There is a small need		There is a great need for these substances		Don't understand question		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	7	8.0%	16	18.4%	55	63.2%	1	1.1%	8	9.2%
	Upper class	7	5.3%	19	14.3%	95	71.4%	2	1.5%	10	7.5%
Group Total		14	6.4%	35	15.9%	150	68.2%	3	1.4%	18	8.2%
^b College Type	Public	21	6.7%	48	15.3%	208	66.2%	7	2.2%	30	9.6%
	Private	14	6.0%	36	15.5%	164	70.4%	2	.9%	17	7.3%
Group Total		35	6.4%	84	15.4%	372	68.0%	9	1.6%	47	8.6%
^c Do you consider yourself heterosexual or straight, gay, lesbian, or bisexual?	Heterosexual/ Straight	29	5.8%	77	15.5%	342	69.0%	7	1.4%	41	8.3%
	Gay/Lesbian	0	.0%	2	33.3%	3	50.0%	1	16.7%	0	.0%
	Group Total	29	5.8%	79	15.7%	345	68.7%	8	1.6%	41	8.2%
^d Do you get most of your AIDS info from literature?	Yes, or selected	11	4.1%	35	13.0%	203	75.2%	1	.4%	20	7.4%
	No, or not selected	24	8.7%	49	17.8%	169	61.2%	8	2.9%	26	9.4%
	Group Total	35	6.4%	84	15.4%	372	68.1%	9	1.6%	46	8.4%

¹May not equal total sample size because question asked to female respondents only.

^aChi Square = 1.946, df = 4, p = .746

^bChi Square = 2.758, df = 4, p = .599

^cChi Square = 16.433, df = 4, p = .002

^dChi Square = 11.009, df = 4, p = .026

Students attending private institutions were more likely to report “a great need” for these substances (70 percent) as compared to students attending public institutions (66 percent) (Table 4-41).

Older students were almost twice as likely to report being “not interested” in using microbicides than were younger students. Students 25 years and older (8 percent) report being “not interested” in using these substances, as compared to students 18-25 years of age (6 percent).

Students living with parents were more likely to report “a great need” for microbicides (74 percent), followed by students living with a roommate, and living alone (67 percent), and those living with a spouse/partner (63 percent).

Students who reported getting most of their AIDS information from TV (46 percent) were most likely to report that they would be “very interested” in using microbicides.

Students who reported getting most of their AIDS information from pamphlets/posters (45 percent) indicated they would be “very interested” in using microbicides.

SUMMARY

This chapter presented the analysis and interpretation of the data received from students attending Historically Black Colleges and Universities. It included the following sections: Sample Description and Demographics; Research Questions; Sample Description and Demographics; and Comparison of Knowledge, Attitudes, Beliefs and Behaviors of HBCU Students. The participants for this research project were

TABLE 4-41. IF SUCH SUBSTANCES WERE AVAILABLE, HOW INTERESTED WOULD YOU BE IN USING THEM?

		No need for this at all		There is a small need		There is a great need for these substances		Don't understand question		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^a Classification	Lower class	7	8.0%	16	18.4%	55	63.2%	1	1.1%	8	9.2%
	Upper class	7	5.3%	19	14.3%	95	71.4%	2	1.5%	10	7.5%
	Group Total	14	6.4%	35	15.9%	150	68.2%	3	1.4%	18	8.2%
^b College Type	Public	21	6.7%	48	15.3%	208	66.2%	7	2.2%	30	9.6%
	Private	14	6.0%	36	15.5%	164	70.4%	2	.9%	17	7.3%
	Group Total	35	6.4%	84	15.4%	372	68.0%	9	1.6%	47	8.6%
^c Do you get most of your AIDS info from literature?	Yes, or selected	11	4.1%	35	13.0%	203	75.2%	1	.4%	20	7.4%
	No, or not selected	24	8.7%	49	17.8%	169	61.2%	8	2.9%	26	9.4%
	Group Total	35	6.4%	84	15.4%	372	68.1%	9	1.6%	46	8.4%
^d Age	18-24	25	6.1%	62	15.0%	281	68.0%	8	1.9%	37	9.0%
	25 and older	10	7.5%	22	16.4%	91	67.9%	1	.7%	10	7.5%
	Group Total	35	6.4%	84	15.4%	372	68.0%	9	1.6%	47	8.6%
^e Please indicate your current living arrangement.	Living alone	9	7.3%	21	16.9%	83	66.9%	2	1.6%	9	7.3%
	Living with parents	5	4.6%	10	9.2%	81	74.3%	0	.0%	13	11.9%
	Living with roommate	13	6.1%	32	15.1%	142	67.0%	7	3.3%	18	8.5%
	Living with spouse/partner	6	8.6%	14	20.0%	44	62.9%	0	.0%	6	8.6%
	Group Total	33	6.4%	77	15.0%	350	68.0%	9	1.7%	46	8.9%

^fMay not equal total sample size because question asked to female respondents only.

^aChi Square = 12.049, df = 4, p = .017

^bChi Square = 12.173, df = 4, p = .016

^cChi Square = 11.989, df = 4, p = .017

^dChi Square = 64.513, df = 4, p = .000

TABLE 4-41 CONTINUED

		No need for this at all		There is a small need		There is a great need for these substances		Don't understand question		Don't Know	
		Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
^f Which of the following categories best describes your racial background?	White (Cau- casian)	6	9.8%	10	16.4%	41	67.2%	0	.0%	4	6.6%
	African American	23	5.5%	59	14.1%	287	68.7%	9	2.2%	40	9.6%
	Group Total	29	6.1%	69	14.4%	328	68.5%	9	1.9%	44	9.2%
^g Please indicate your current living arrangement.	Living alone	9	7.3%	21	16.9%	83	66.9%	2	1.6%	9	7.3%
	Living with parents	5	4.6%	10	9.2%	81	74.3%	0	.0%	13	11.9%
	Living with room- mate	13	6.1%	32	15.1%	142	67.0%	7	3.3%	18	8.5%
	Living with spouse/ partner	6	8.6%	14	20.0%	44	62.9%	0	.0%	6	8.6%
	Group Total	33	6.4%	77	15.0%	350	68.0%	9	1.7%	46	8.9%
^h Do you get most of your AIDS info from TV?	Yes, or selected	18	5.4%	48	14.4%	232	69.7%	5	1.5%	30	9.0%
	No, or not selected	17	8.0%	36	16.9%	140	65.7%	4	1.9%	16	7.5%
	Group Total	35	6.4%	84	15.4%	372	68.1%	9	1.6%	46	8.4%
ⁱ Do you get most of your AIDS info from your professor?	Yes, or selected	13	7.3%	25	14.1%	122	68.9%	4	2.3%	13	7.3%
	No, or not selected	22	6.0%	59	16.0%	250	67.8%	5	1.4%	33	8.9%
	Group Total	35	6.4%	84	15.4%	372	68.1%	9	1.6%	46	8.4%
^j Do you get most of your AIDS info from pamphlets/posters?	Yes, or selected	17	5.9%	39	13.4%	207	71.4%	3	1.0%	24	8.3%
	No, or not selected	18	7.0%	45	17.6%	165	64.5%	6	2.3%	22	8.6%
	Group Total	35	6.4%	84	15.4%	372	68.1%	9	1.6%	46	8.4%

^fChi Square = 36.430, df = 4, p = .000^gChi Square = 45.632, df = 4, p = .000^hChi Square = 13.168, df = 4, p = .010ⁱChi Square = 14.100, df = 4, p = .007^jChi Square = 23.030, df = 4, p = .000

SUMMARY

This chapter presented the analysis and interpretation of the data received from students attending Historically Black Colleges and Universities. It included the following sections: Sample Description and Demographics; Research Questions; Sample Description and Demographics; and Comparison of Knowledge, Attitudes, Beliefs and Behaviors of HBCU Students. The participants for this research project were students, 18-years or older, attending both private and state funded historically black colleges and universities. The data were collected during the fall semester of 2005, utilizing a 52-item paper and pencil self-report instrument, the Knowledge, Attitudes, Beliefs and Behavior Survey (KABB).

The students responses were hand tabulated then transcribed to a data table at the Statistical Consulting Center at Stokeley Management Center at the University of Tennessee, Knoxville. The data were computed using the statistical program SPSS. The statistical analysis included frequencies and percentages. Chi Square analysis was used to test whether a significant difference existed between male and female students, between lower level (first and second year) and upper level (third and fourth year) and between type of institution attended (private vs. public).

The following summary tables (Tables 4-1 through 4-41) provide a summary of the questionnaire research findings including bolded Chi Square values found to be significant during this investigative research project.

HIV RISK BEHAVIOR

SUMMARY TABLE 4-1. QUESTIONNAIRE RESPONSE FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q25: Is the response to, "What Are Your Chances of Getting Infected with the HIV Virus" independent of level of education?	Chi-Square	.4831	.035
Q25: Is the response to, "What Are Your Chances of Getting Infected with the HIV Virus" independent of gender?	Chi-Square	.938	.919
Q25: Is the response to, "What Are Your Chances of Getting Infected with the HIV Virus" independent of type of Institution?	Chi-Square	12.993	.001*

*Denotes significance at the p = .05 level

SUMMARY TABLE 4-2. QUESTIONNAIRE RESPONSE FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q32: Is the response to "Have you ever used needles to Inject non-prescription drugs including vitamins and steroids" independent of level of education?	Chi-Square	2.408	.300
Q32: Is the response to "Have You Ever Used Needles to Inject Non-prescription Drugs Including Vitamins and Steroids" independent of Gender?	Chi-Square	6.518	.038*
Q32: Is the response to "Have You Ever Used Needles to Inject Non-prescription Drugs Including Vitamins and Steroids" independent of type of institution?	Chi-Square	7.362	.025

*Denotes significance at the p = .05 level

SUMMARY TABLE 4-3. QUESTIONNAIRE RESPONSE FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q34: Is the response to, "Have you ever had sex with a partner who at the time was another man, an IV drug user, a person who tested positive for HIV or has AIDS," independent of level of education?	Chi-Square	3.007	.222
Q34: Is the response to, "Have you ever had sex with a partner who at the time was another man, an IV drug user, or a person who tested positive for HIV or has AIDS" independent of gender?	Chi-Square	7.779	.020
Q34: Is the response to, "Have you ever had sex with a partner who at the time was another man, an IV drug user, or a person who tested positive for HIV or has" independent of type of institution?	Chi-Square	.026	.987

*Denotes Significance at the $p=.05$ level

SUMMARY TABLE 4-4. QUESTIONNAIRE RESPONSE FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
H ₀ 1: Is the response to, "During the last 12 months, with how many people have you had sexual intercourse," independent of level of education?	Chi-Square	1.349	.509
H ₀ 2: Is the response to, "During the last 12 months with how many people have you had sexual intercourse," independent of gender?	Chi-Square	76.545	.000*
H ₀ 3: Is the response to, During the last 12 months with how many people have you had sexual intercourse," independent of type of institution?	Chi-Square	14.444	.001*

*Denotes significance at the p=.05 level

SUMMARY TABLE 4-5. QUESTIONNAIRE RESPONSE FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q52: Is the response to, "Was a confirmed condom used the last time you had sexual intercourse" independent of level of education?	Chi-Square	2.642	.267
Q52: Is the response to, "Was a condom used the last time you had sexual intercourse" independent of gender?	Chi-Square	4.912	.086
Q52: Is the response to, "Was a condom used the last time you had sexual intercourse" independent of type of institution?	Chi-Square	4.298	.017*

*Denotes significance at the p=.05 level

SUMMARY TABLE 4-6. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q27: Is the response to "Except for tests you may have had as part of blood donations, have you ever been tested for HIV? this includes the Saliva Test" independent of education level.	Chi-Square	.461	.794
Q27: Is the response to "Except for tests you may have had as part of blood donations, have you ever been tested for HIV? this includes the Saliva Test" Independent of gender?	Chi-Square	13.593	.001*
Q27: Is the response to "Except for tests you may have had as part of blood donations, have you ever been tested for HIV? This includes the Saliva Test" independent of type of institution.	Chi-Square	6.401	.041*

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-7. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q28: Is the response to, "When were you last tested" independent of level of education?	Chi-Square	5.597	.113
Q28: Is the response to, "When were you last tested" Independent of gender?	Chi-Square	9.526	.049*
Q28: Is the response to, "When were you last tested" Independent of type of institution?	Chi-Square	13.891	.008*

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-9. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q29: Is the response to, "What was the main reason you had your last test for HIV" independent of the level of education?	Chi-Square	14.514	.206
Q29: Is the response to, "What was the main reason you had your last test for HIV" independent of gender?	Chi-Square	25.088	.068
Q29: Is the response to, What was the main reason you had your last test for HIV" independent on type of institution?	Chi-Square	9.007	.913

SUMMARY TABLE 4-13. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q6: Is the response to, "How much do you feel you know about ways to prevent getting HIV, the virus that causes AIDS" independent of level of education?	Chi-Square	1.054	.902
Q6: Is the response to, How much do you feel you know about ways to prevent getting AIDS" independent of gender?	Chi-Square	10.543	.032
Q6: Is the response to, "How much do you feel you know about ways to prevent getting HIV, the virus that causes AIDS" independent of type of institution attended?	Chi-Square	7.497	.112

SUMMARY TABLE 4-14. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q7A: Is the response to, "How likely is it that a person can get HIV from busses and telephones" independent of level of education?	Chi-Square	1.854	.763
Q7A: Is the response to, How likely is it that a person can get HIV from busses and telephones" independent of gender?	Chi-Square	6.690	.153
Q7A: Is the response to, "How likely is it that a person can get HIV from busses and telephones" independent of type of institution attended?	Chi-Square	5.984	.200

SUMMARY TABLE 4-15. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q7B: Is the response to, "How likely is it that a person can get HIV from public toilets" independent of level of education?	Chi-Square	1.844	.764
Q7B: Is the response to, "How likely is it that a person can get HIV from public toilets" independent of gender?	Chi-Square	6.744	.150
B7B: Is the response to, "How likely is it that a person can get HIV from public toilets" independent of type of institution attended?	Chi-Square	5.035	.284

SUMMARY TABLE 4-16. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q7C: Is the response, “How likely is it that a person can get HIV from going to school with someone infected with HIV” independent of level of education?	Chi-Square	1.440	.837
Q7C: Is the response, “How likely is it that a person can get HIV from going to school with someone infected with HIV” independent of gender?	Chi-Square	8.560	.073
Q7C: Is the response, “How likely is it that a person can get HIV from going to school with someone infected with HIV” independent of type of institution attended?	Chi-Square	6.670	.154

TABLE 4-17. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q7D: Is the response to, “How likely is it that a person can get HIV from being bitten by a mosquito or an animal” independent of level of education?	Chi-Square	1.566	.815
Q7D: Is the response to, “How likely is it that a person can get HIV from being bitten by a mosquito or an animal” independent of gender?	Chi-Square	6.801	.147
Q7D: Is the response to, “How likely is it that a person can get HIV from being bitten by a mosquito or an animal” independent of institution attended?	Chi-Square	19.943	.0001*

*Denotes the significance at the p=.05 level

SUMMARY TABLE 4-18. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Items	Statistical Procedure	Value	Sig Value
Q7E: Is the response to, "How likely is it that a person can get HIV by sharing drug needles with an HIV- infected person" independent of level of education?	Chi-Square	1.504	.826
Q7E: Is the response to, "How likely is it that a person can get HIV by sharing drug needles with an HIV- infected person" independent of gender?	Chi-Square	4.704	.319
Q7E: Is the response to, "How likely is it that a person can get HIV by sharing drug needles with an HIV- infected person" independent of type of institution attended?	Chi-Square	3.062	.548

SUMMARY TABLE 4-19. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q7F: In the response to, "How likely is it that a person can get HIV by kissing a person who has HIV on the cheek" independent of level of education?	Chi-Square	1.965	.742
Q7F: Is the response to, "How likely is it that a person can get HIV by kissing a person who has HIV on the cheek" independent of gender?	Chi-Square	.432	.980
H ₀ 3: Is the response to, "How likely is it that a person c get HIV by kissing a person who has HIV on the cheek" independent of type of institution attended?	Chi-Square	1.546	.818

TABLE 4-20. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q7G: Is the response to “How likely is it that a person can get HIV by having sexual intercourse with a person who has HIV without a condom” independent of level of education?	Chi-Square	4.544	.337
Q7G: Is the response to “How likely is it that a person can get HIV by having sexual intercourse with a person who has HIV without a condom” independent of gender?	Chi-Square	7.637	.106
Q7G: Is the response to “How likely is it that a person can get HIV by having sexual intercourse with a person who has HIV without a condom” independent of type of institution attended?	Chi-Square	.649	.957

SUMMARY TABLE 4-21. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q8: Is the response to, “Can and HIV-infected pregnant woman pass HIV to her unborn child” independent of level of education?	ChiSquare	.483	.786
Q8: Is the response to, “Can an HIV-infected pregnant woman pass HIV to her unborn child” independent of gender?	Chi-Square	4.302	.116
Q8: Is the response to, Can and HIV-infected pregnant woman pass HIV to her unborn child” independent of type of institution attended?	Chi-Square	17.241	.000

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-22. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q9: Is the response to, "Do you know if there are any medicines that an HIV-infected pregnant woman can take to prevent the baby from getting HIV" independent of level of education?	Chi-Square	3.8333	.050*
Q9: Is the response to, "Do you know if there are any medicines that an HIV-infected pregnant woman can take to prevent the baby from getting HIV" independent of gender?	Chi-Square	10.936	.001*
Q9: Is the response to, "Do you know if there are any medicines that an HIV-infected pregnant woman can take to prevent the baby from getting HIV" independent of level of education?	Chi-Square	2.926	.087

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-24. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q31A: Is the response to, "Do you define safe sex as the use of condoms" independent of level of education?	Chi-Square	2.333	.311
Q31A: Is the response to, "Do you define safe sex as the use of condoms" independent of gender?	Chi-Square	5.087	.079
Q31A: Is the response to, "Do you define safe sex as the use of condoms" independent of type of institution attended?	Chi-Square	6.490	.039*

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-25. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q31B: Is the response to, "Do you define safe sex as being celibate" independent of level of education?	Chi-Square	3.679	.058*
Q31B: Is the response to, "Do you define safe sex as being celibate" independent of gender?	Chi-Square	10.286	.005*
Q31B: Is the response to, "Do you define safe sex as being celibate" independent of type of institution attended?	Chi-Square	3.939	.140

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-26. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q31C: Is the response to, "Do you consider safe sex as know partners/be aware of partner's background" independent of level of education?	Chi-Square	.359	.549
Q31C: Is the response to, "Do you consider safe sex as know partners/be aware of partner's background" independent of gender?	Chi-Square	11.168	.001*
Q31C: Is the response to, "Do you consider safe sex as know partner's /be aware of partner's background" independent of type of institution attended?	Chi-Square	2.907	.088

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-27. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q31D: Is the response to, "Do you consider safe sex as be monogamous" independent of level of education?	Chi-Square	2.012	.366
Q31D: Is the response to, "Do you consider safe sex as be monogamous" independent of gender?	Chi-Square	8.130	.017*
Q31D: Is the response to, "Do you consider safe sex as be monogamous" independent of type of institution attended?	Chi-Square	2.859	.239

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-28. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q31E: Is the response to, "Do you consider safe sex as avoid high risk partners" independent of level of education?	Chi-Square	2.000	.368
Q31E: Is the response to, "Do you consider safe sex as avoid high risk partners" independent of gender?	Chi-Square	4.768	.092
Q31E: Is the response to, "Do you consider safe sex as avoid high risk partners" independent of type of institution attended?	Chi-Square	2.147	.342

OPINIONS REGARDING PUBLIC POLICY

SUMMARY TABLE 4-29. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedures	Value	Sig Value
Q10: Is the response to, “Do you feel that persons with HIV should be reported to the health department using a unique code to protect their identity, by their name for greater accuracy, or not reported at all” independent of level of education?	Chi-Square	2.058	.560
Q10: Is the response to, “Do you feel that persons with HIV should be reported to the health department using a unique code to protect their identity, by their name for greater accuracy, or not reported at all” independent of gender?	Chi-Square	10.595	.014
Q10: Is the response to, “Do you feel that persons with HIV should be reported to the health department using a unique code to protect their identity, by their name for greater accuracy, or not reported at all” independent of type of institution attended?	Chi-Square	4.828	.185

SUMMARY TABLE 4-30. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value	
Q11: Is the response to, "What is the main reason they should not be reported" independent of level of education?	Chi-Square	.389	.942	
Q11: Is the response to, "What is the main reason they should not be reported" independent of gender?	Chi-Square	9.394	.042	
Q11: Is the response to, "What is the main reason they should not be reported" independent of type of institution attended?	Chi-Square	7.975	.047	

SUMMARY TABLE 4-31. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q12: In the response to, "Do you think that providing clean needles for injection of drug users in the community would prevent the spread of HIV" related to level of education?	Chi-Square	.933	.630
Q12: Is the response to, "Do you think that providing clean needles for injection of drug users in the community would prevent the spread of HIV" related to gender?	Chi-Square	5.176	.076
Q12: In the response to, "Do you think that providing clean needles for injection of drug users in the community would prevent the spread of HIV" related to type of institution attended.	Chi-Square	5.845	.054

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-32. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
H ₀ 1: Is the response to, "Do you think the state or private individuals and organizations should pay for providing clean needles for injection drug users in the community" independent of level of education?	Chi-Square	2.649	.618
H ₀ 2: Is the response to, "Do you think the state or private individuals and organizations should pay for providing clean needles for injection drug users in the community" independent of level of gender?	Chi-Square	12.546	.014*
H ₀ 3: Is the response to, "Do you think the state or private individuals and organizations should pay for providing clean needles for injection drug users in the community" independent of level of type of institution attended?	Chi-Square	3.009	.556

SUMMARY TABLE 4-33. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedures	Value	Sig Value
Q13: Is the response to, "Do you think that providing clean needles for injection drug users in prisons would be an effective method to fight the spread of HIV" independent of level of education?	Chi-Square	3.807	.149
Q13: Is the response to, "Do you think that providing clean needles for injection drug users in prisons would be an effective method to fight the spread of HIV" independent of gender?	Chi-Square	.895	.639
Q13: Is the response to, "Do you think that providing clean needles for injection drug users in prisons would be an effective method to fight the spread of HIV" independent of type of institution attended?	Chi-Square	.2997	.226

SUMMARY TABLE 4-34. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q13A: Is the response to, "Do you think the state should pay for this or should private individuals and organizations pay for providing clean needles to injection drug users in prisons" independent of level of education?	Chi-Square	1.338	.885
Q13A: Is the response to, "Do you think the state should pay for this or should private individuals and organizations pay for providing clean needles to injection drug users in prisons" independent of gender?	Chi-Square	3.698	.448
Q13A: Is the response to, "Do you think the state should pay for this or should private individuals and organizations pay for providing clean needles to injection drug users in prisons" independent of type of institution attended?	Chi-Square	1.168	.883

SUMMARY TABLE 4-35. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q14: Is the response to, "Would providing condoms for use by people in prisons help prevent the spread of HIV" independent of level of education?	Chi-Square	.292	.862
Q14: Is the response to, "Would providing condoms for use by people in prisons help prevent the spread of HIV" independent of gender?	Chi-Square	2.223	.329
Q14: Is the response to, "Would providing condoms for use by people in prisons help prevent the spread of HIV" independent of type of institution attended?	Chi-Square	.456	.796

SUMMARY TABLE 4-36. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q15: Is the response to, "Would requiring doctors and clinics to report cases of HIV infection to the health department help prevent the spread of HIV" independent of level of education?	Chi-Square	2.980	.225
Q15: Is the response to, "Would requiring doctors and clinics to report cases of HIV infection to the health department help prevent the spread of HIV" independent of gender?	Chi-Square	5.234	.073
Q15: Is the response to, "Would requiring doctors and clinics to report cases of HIV infection to the health department help prevent the spread of HIV" independent of type of institution attended?	Chi-Square	1.245	.537

SUMMARY TABLE 4-37. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q15A: Is the response to, "Do you think the state or private individuals and organizations should pay for doctors and clinics reporting HIV cases to the state health department" independent of level of education?	Chi-Square	2.301	.512
Q15A: Is the response to, "Do you think the state or private individuals and organizations should pay for doctors and clinics reporting HIV cases to the state health department" is independent of gender?	Chi-Square	2.867	.413
Q15A: Is the response to, "Do you think the state or private individuals and organizations should pay for doctors and clinics reporting HIV cases to the state health department" is independent of type of institution attended?	Chi-Square	1.313	.726

SUMMARY TABLE 4-38. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q16: Is the response to, "Do you think requiring pregnant women to get an HIV test would be an effective method to fight the spread of HIV infection" independent of level of education	Chi-Square	.168	.919
Q16: Is the response to, "Do you think requiring pregnant women to get an HIV test would be an effective method to fight the spread of HIV infection" independent of gender?	Chi-Square	4.586	.101
Q16: Is the response to, "Do you think requiring pregnant women to get an HIV test would be an effective method to fight the spread of HIV infection" independent of type of institution attended?	Chi-Square	1.888	.389

SUMMARY TABLE 4-39. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaite Item	Statistical Procedure	Value	Sig Value
Q16A: Is the response, "Do you think the state or private individuals and organizations should pay for HIV testing of women" independent of level of education?	Chi-Square	2.336	.674
Q16A: Is the response to, "Do you think the state or private individuals and organizations should pay for HIV testing of women" independent of gender?	Chi-Square	11.313	.023*
Q16A: Is the response to, "Do you think the state or private individuals and organizations should pay for HIV testing of women" independent of type of institution attended?	Chi-Square	1.370	.849

*Denotes significance at the $p=.05$ level

TABLE 4-40. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q17: Is the response to, "How great a need, if any, do you think there is for these substances" independent of level of education?	Chi-Square	1.946	.746
Q17: Is the response to, "How great a need, if any, do you think there is for these substances" independent of gender?	Chi-Square	2.758	.599
Q17: Is the response to, "How great a need, if any, do you think there is for these substances" independent of type of institution attended?	Chi-Square	16.433	.026*

*Denotes significance at the $p=.05$ level

SUMMARY TABLE 4-41. QUESTIONNAIRE RESEARCH FINDINGS

Questionnaire Item	Statistical Procedure	Value	Sig Value
Q17A: Is the response to, "If such substances were available, how interested would you be in using them" independent of level of education?	Chi-Square	12.049	.017*
Q17A: Is the response to, "If such substances were available, how interested would you be in using them" independent of type of institution attended?	Chi-Square	12.173	.016*

*Denotes significance at the $p=.05$ level

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS & RECOMMENDATIONS FOR FUTURE RESEARCH

SUMMARY

Procedure Followed

Students from eight Historically Black Colleges and Universities participated in the study. Introductory health classes were utilized to have a representative balance between freshman, sophomores, juniors, and seniors. The courses utilized were Personal Health and Wellness and/or any other general education courses. All participants completed the 52-item Knowledge, Attitudes, Beliefs and Behaviors Survey (KABB) within a 20 minute period of time. A total of 547 students participated in the study.

FINDINGS

Based on the analysis of the data in the study of the HIV/AIDS knowledge, attitudes, beliefs and behaviors of students attending Historically Black Colleges and Universities, the researcher finds the following:

Demographics of Study Population

Age

1. The majority of the respondents (76 percent) were between the ages of 18-24

Gender

2. Female students represented 55 percent, and male students represented 45 percent of the respondents.

Level of Education

3. The Freshman class made up the largest percentage of participants (24 percent), followed by the Graduate class (21 percent), the Junior class (20 percent), the Senior class (19 percent), and the Sophomore class (16 percent)

Type of Institution (private versus public)

Fifty-seven percent of the students attended public colleges and 43 percent attended private colleges.

RESEARCH QUESTIONS/HYPOTHESES

Primary

The findings are reported as they specifically related to the various questions and hypotheses. Results of all the participants HIV/AIDS knowledge, attitudes, beliefs and behaviors were presented and then categorized according to the independent variables of gender, level of education, and type of institution (private versus public) **(All the major findings reported and identified by an (*) asterisk provide a relevant basis for the**

development of a conceptual teaching/learning format. Additionally, instrument items relating to relevant findings are also identified by an (*) asterisk.

Research Question 1. What is the AIDS knowledge and what are the attitudes, beliefs and behaviors of the HBCU students?

Knowledge, Attitudes and Beliefs

1. Eight percent of students responding to the question, “How informed are you about ways to prevent HIV,” considered themselves “not informed ” about ways to prevent HIV, 87 percent believed they were “very informed” and 10 percent responded “don’t know”.
2. Forty-nine percent of students correctly believed that it is “definitely not likely” that a person can get HIV from buses and telephones, while 11 percent incorrectly believed that it is “somewhat likely” to contract HIV in this manner.
3. More than a third (35 percent) of students correctly believed that it is “not likely” to get HIV using public toilets, while 21 percent incorrectly believed that it is “somewhat likely” or very likely to contract HIV in this manner.
4. Thirty-eight percent of respondents correctly believed that it is “definitely not likely” to get HIV by attending school with an HIV-infected person, while 19 percent incorrectly believed that it is “somewhat likely” to contract HIV in this manner.
5. Thirty-two percent of students correctly believed that it is “not very likely” to contract HIV from an animal or mosquito bite, while 25 percent incorrectly believed that it is “somewhat likely” to contract HIV in this manner.

6. Almost all students (93 percent) correctly believed it is “very likely” one can contract HIV by sharing drug needles with an infected person, while 3 percent incorrectly believed that it is “definitely not likely” to contract HIV in this manner.
7. Half of the respondents (50 percent) correctly believed that it is “definitely not likely” that a person can contract HIV by kissing a person on the cheek who has HIV, while 7 percent believed that it is “somewhat likely” to contract HIV in this manner.
8. Nearly all students (91 percent) correctly believed that a person can get HIV by having sexual intercourse with a person who has HIV without a condom. However, 3 percent incorrectly believed that it is “definitely not likely” that a person can contract HIV by having sexual intercourse with a person who has HIV without a condom.
9. Nearly all students (91 percent) correctly believed that an HIV-infected pregnant woman can pass HIV to her unborn child, while 3 percent incorrectly believed that an HIV-infected woman cannot pass HIV to her unborn child.
10. Sixty-one percent of students did not know of any medicines that would prevent HIV transmission from an HIV-infected mother to her baby. Only 35 percent indicated that they knew of these medicines.
11. When students were asked to define “safe sex,” condom use was the most common definition provided (50 percent). Other common definitions reported included celibacy (42 percent), monogamy (40 percent), and knowing partners or being aware of their background (41 percent).

Opinions Regarding Public Policy

12. Almost three quarters of students (74 percent) believed that cases of HIV infection should be reported to the health departments. Public support for various policy options to prevent HIV was very strong.

Almost three-quarters of the students (74 percent) believed that cases with HIV infection should be reported to health departments. Public support for various policy options to prevent HIV was very strong.

The majority of students believed that the following five policies would prevent the spread of HIV:

- (a) provide condoms to prisoners (68 percent believed effective);
- (b) provide clean needles to injection drug users in the community (50 percent);
- (c) provide clean needles to injection drug users in prison (68 percent);
- (d) require doctors and clinics to report cases with HIV to the State Health Department (65 percent); and
- (e) require HIV tests for pregnant women (70 percent).

Among those who believe in the effectiveness of the above policies, a minority of respondents thought that private individuals or organizations should pay for them. The respondents reported that the state should pay either all, or in part, for each of the following:

- (a) provide condoms to prisoners (32 percent who believed this would be effective, want the state to pay);
- (b) provide clean needles to injection drug users in the community (50 percent);

- (c) provide clean needles to injection drug users in prison (29 percent);
- (d) require doctors and clinics to report cases with HIV to the State Health Department (39 percent); and
- (e) require HIV tests for pregnant women (33 percent).

More than two-thirds of the respondents (68 percent) reported a “great need” for the development of microbicides (i.e., substances that women could apply prior to sexual intercourse to prevent infection by HIV and other sexually transmitted diseases), and almost one out of four (24 percent) women reported that they would be “very interested” in using these substances if they were developed.

Personal Experience with HIV Testing

13. The survey found that a little less than half of students (43 percent) have been tested for HIV in their lifetime. Of those tested for HIV, most (30 percent) received their last test since 2001. Most common cited reasons for testing were routine checkups (90 percent), hospitalization or surgical procedure (36 percent) and curiosity (31 percent).

14. Among students who have been tested for HIV, the most common reasons reported for testing include routine checkup (17 percent), hospitalization or surgical procedure (7 percent), curiosity (6 percent), worried that my sex partner had sex with others (3 percent), because of pregnancy (2 percent), because it was part of a blood donation process (2 percent), and because of referral by my sex partner (2 percent).

Research Hypothesis 1. HBCU AIDS knowledge, attitudes, beliefs and behaviors depend on level of education.

15. Lower level students were more likely to correctly believe that a person cannot get HIV from being bitten by a mosquito or other animal (38 percent) as compared to upper level students (33 percent).

16. Opposition to HIV reporting was greater among students with less education.

Lower level students (5 percent) were more likely to support not reporting at all persons with HIV to the health department as compared to upper level students (8 percent).

Lower level students (58 percent) were more likely to support reporting by a unique code when compared to upper level students (54 percent).

17. Lower level students were most likely to believe that providing clean needles to injection drug users would help prevent the spread of HIV (51 percent) than upper level students (55 percent).

18. Upper level students were more likely to report that providing clean needles for injection of drug users in prisons would help prevent the spread of HIV (57 percent).

Lower level students were most likely to report that providing clean needles for injection drug users in prisons would not be effective in helping prevent the spread of HIV (23 percent).

19. Upper level students (80 percent) were more likely than lower level students (68 percent) to believe that requiring pregnant women to get an HIV test would be an effective method to fight the spread of HIV.

Research Hypothesis 2. HBCU students' knowledge, attitudes, beliefs and behaviors were related to gender.

20. Males were more likely than females to perceive themselves to be at risk of HIV infection. Thirty-four percent of males were more likely to perceive themselves to have a moderate to high risk of HIV infection, as compared to females (19 percent).*

21. More males (5 percent) than females (2 percent) answered "yes" to the question, "have you had sex with a partner who at the time was another man, an IV drug user, or a person who tested positive for HIV or has AIDS?"**

22. Males were more likely than females to have had three or more partners in the last 12 months (23 percent) as compared to females (16 percent).*

23. Females were more likely to have had a recent HIV test (2006) (3 percent) as compared to males (2 percent).

24. Females (48 percent) were almost twice as likely to define safe sex as celibacy (abstinent) as compared to males (35 percent).

25. Females (49 percent) were more likely than males (34 percent) to define safe sex as knowing your partners/being aware of partner's background.

26. Females were more likely to define safe sex as being monogamous (one partner) (45 percent) when compared to males (34 percent).

27. Females (62 percent) were more likely than males (53 percent) to support HIV reporting using unique codes. Males (12 percent), as compared to females (7 percent) were more likely to support not reporting persons to the health department at all.

28. Male respondents were most likely to believe that providing clean needles to injection drug users would help prevent the spread of HIV (55 percent), than females (45 percent).

Research Hypothesis 3. HBCU students' knowledge, attitudes, beliefs and behaviors are related to the type of institution (private versus public).

29. Students attending public institutions (15 percent) were more likely to perceive themselves to be at moderate to high risk of HIV infection as compared to students attending private institutions (11 percent).*

31. Students attending public institutions were more likely to have had three or more sex partners in the last 12 months (21 percent), as compared to students attending private universities (14 percent).*

32. Students attending private universities were more likely to have been recently tested for HIV (49 percent) as compared to students attending public institutions (39 percent).

34. During the years 2001-2003 students attending private institutions were more likely to be tested for HIV (30 percent) than were students attending public universities (29 percent). Students attending private universities were more likely to be tested for HIV during the more recent years of 2003-2006 (9 percent) and 2006 (4 percent) as compared to students attending public universities (3 percent and 2 percent for the same respective years).

35. Students attending private HBCUs were twice as likely to correctly believe that it is "not likely" one can get HIV from being bitten by a mosquito or other animal (41 percent) as compared to students attending public HBCUs (33 percent).

36. Students attending private institutions (4 percent) were more likely to believe that an HIV-infected woman cannot pass HIV to her unborn child as compared to students attending public institutions (2 percent).

37. Students attending private institutions (44 percent) were more likely to know about medications that an HIV-infected woman can take to prevent the baby from getting HIV as compared to students attending public institutions (29 percent).

38. Students attending private institutions (23 percent), more than students attending public institutions (15 percent) believed that “HIV status is a private matter,” and should not be reported to the health departments.

Research Question 2. What major findings of this investigation will serve as the basis for the development of the conceptual teaching/learning framework? **(All of the findings reported and identified by an (*) asterisk provide a relevant basis for the development of a suggested format. Additionally, instrument items relating to relevant findings are also identified by an (*) asterisk).**

39. The self-reported lifestyle behaviors and perceived-risk of HIV/AIDS infection of students attending historically Black colleges and universities revealed a population at greater than acceptable risk of infectious disease. *For example, 4 percent of the sample incorrectly believed that it is “not very likely,” or “definitely not possible” to contract HIV by having sexual intercourse with an infected person without using a condom (See Table 4-18). When one considers that the chance of contracting HIV/AIDS is 1 in 588 (CDC, 2001) then the negative perceived-risk among 4 percent of the population remains unacceptable.

40. Despite the high rate of high-risk behaviors (e.g. using needles to inject non-prescription drugs including vitamins and steroids, having three or more sexual partners within the past 12 months, and the frequency of unprotected receptive anal intercourse in the past 12 months), and previous HIV testing in this population, the majority of the participants in this study (74 percent)) did not perceive themselves at-risk for HIV infection at the time of their most recent HIV tests. *Twenty-four percent of HBCU respondents surveyed perceived themselves to have “no” risk of HIV infection, 41 percent believed their risk of infection to be “low,” 13 percent perceived their risk as “moderate,” while 10 percent perceived their risk as “high.” (See Table 4-1).
41. Because a substantial proportion of the students either did not identify as gay (91 percent) or were not open about their sexual identity (i.e. responded with “don’t know” or “refused”), HIV/AIDS prevention modules that focus on sexual risk reduction rather than sexual lifestyle can and should be developed.

CONCLUSIONS

As the AIDS epidemic continues to expand and as there is not substantial hope for curative treatment, prevention remains the only tool to cope with the threat of HIV transmission and AIDS. This study presented a conceptual framework and detailed guidelines for the planning, implementation and evaluation of HIV/AIDS/STD health promotion for students attending Historically Black Colleges and Universities. The framework focuses on basic principles of health promotion and refers to the living conditions and lifestyles of HBCU students being of relevance for the development of

gender roles and sexual behavior. Only comprehensive approaches taking account of social and cultural conditions present an adequate arena for successful AIDS health promotion.

The following conclusions are based on an analysis of the major findings related to the research questions/hypotheses:

Research Question #1. The HIV/AIDS knowledge and self-reported attitudes, beliefs and behaviors of HBCU students were below to above average.

Research Hypothesis #1

Overall, there was an inverse relationship between higher level of education (upper class), and HBCU students AIDS knowledge, attitudes, beliefs and behaviors. Perhaps an explanation for this observable fact can be found among the “don’t know” responses submitted by respondents.

Research Hypothesis #2

Among the HBCU students, gender is a significant factor influencing the level of AIDS knowledge, attitudes, beliefs and behaviors. Male HBCU students were more likely than females to perceive themselves to be at risk of HIV infection. Male HBCU students were more likely than female HBCU students to engage in those behaviors that increase their risk of HIV infection

Research Hypothesis #3

Overall, the influence of being a public or private HBCU is negligible in terms of determining the level of HBCU students AIDS knowledge, attitudes, beliefs and behaviors.

Research Question 2

1. The major findings provide a substantial base for the development of a suggested teaching/learning framework.

RECOMMENDATIONS

The following are primarily recommendations for further study of improving the basis for developing more relevant teaching/learning frameworks for HBCU students:

1. The range of studies similar to this research needs to be expanded since this study potentially has implications for health and safety education in HBCUs.
2. Replicate this study with a larger and more diverse population (e.g., HBCU institutions outside the Southeastern United States).
3. Develop and validate an instrument similar to KABB specifically for college and university students, particularly HBCU students.
4. Also important are studies to assess the appropriate training of program presenters. Training needs could be assessed through a questionnaire asking program presenters how they would deal with some of the foreseeable problems in education on HIV/STD/AIDS (for example, what would they do when teaching a lesson about STD if a student said that he/she has a sexually transmitted disease?).
5. Expanding the scope of HIV/AIDS-related public opinion questions. For example, students could be asked to what degree they support or do not support the following HIV/AIDS-related measures:
 - Increased federal funding for domestic and foreign HIV/AIDS programs;

- Increased government funding of AIDS medication and provision of free, anonymous rapid HIV tests for those in need;
- Abstinence-plus sex education for middle and high school students;
- Mandatory HIV testing for pregnant mothers and/or newborn infants;
- Community needle exchange programs;
- Sale of needles and HIV saliva test kits without prescription in pharmacies; and
- Availability of HIV testing, HIV prevention education, and condoms to all prisoners.

CHAPTER VI

THE STUDY IN RETROSPECT

INTRODUCTION

When the AIDS epidemic was first recognized, the high prevalence of HIV infection was found among specific groups: homosexual and bisexual men, users of injectable drugs, and hemophiliacs. Nowadays, it no longer seems appropriate to focus on *high risk groups*, as the epidemic has contaminated all kinds of population groups. Prevention programs have to concentrate on high-risk behaviors instead, that is on behaviors that expose people to infection.

The primary purpose of this study was to assess the self-reported knowledge, attitudes, beliefs and behaviors of a sample of students attending historically Black colleges and universities. The secondary purpose of this study was to develop a teaching/learning framework. This chapter presents insights pertaining to the study not addressed in chapters one through five. This will focus on problems in methodology, observations about the study, strengths and weaknesses, and future directions.

PROBLEMS IN METHODOLOGY

Like other research endeavors involving human subjects, this research was predestined to encounter problems. A minor problem included assessing the sensitive issues of HIV/AIDS/HIV and lifestyle-related behaviors, the issue of confidentiality of participants and the potential adverse psychological reactions to answering the questions presented in the KABB Survey. Participants were informed, both in the Human Subjects Research Consent Letter and the Protocol for Recruitment and Questionnaire Administration (PRQA) that they may skip over any questions and could terminate the questionnaire at any time. Some did just that.

OBSERVATIONS ABOUT THE STUDY

Although the HBCU students were warned of possible psychological reactions to questions in the KABB Survey, most students at each HBCU completed the instrument without skipping any of the questions or terminating the questionnaire prior to completion of most if not all of the items. None of the students requested the HIV/AIDS hotline number as a result of reading the sensitive KABB questions. The high degree of survey completions was the result of the awareness among these students of the disproportionate impact of HIV/AIDS/STD on African Americans, the urgent and specific attention to prevention programs and strategies that target this population.

The KABB had already been utilized with the college population. Based on a validation by field experts, the instrument demonstrated its viability and usefulness in a

college setting, and was able to identify HIV/AIDS/STD knowledge, attitudes, beliefs and behaviors of HBCU students which will enable college health professionals to establish teaching modules that address these variables.

This study was delimited to students matriculating at historically black colleges and universities, and not to African American students attending these HBCUs. Therefore, the investigator did not exclude data from participants who did not indicate being of African American descent. Future studies may want to do a comparative analysis of the knowledge, attitudes, beliefs and behaviors of male versus female African Americans attending HBCUs and to explain any differences.

A RETROSEPECTIVE COMPARISON OF A SIMILAR INVESTIGATION

Bazargan et al (2000) examined the effect of HIV knowledge, motivation, and behavioral skills among a sample of sexually active African American students recruited from two HBCUs. The results imply that attention to behavioral skills for negotiating safer sex and training in the proper use of condoms are key elements in reducing high risk behaviors. The results show that male students, those who had more knowledge about transmission of HIV through sexual activities and those with positive experiences with previous use of condoms, were more likely to use condoms recently. Both studies revealed the following:

Similarities

1. Positive attitude toward condoms prevailed among those who had higher

levels of knowledge about HIV infection through unprotected sex along with more positive experiences with the use of condoms.

2. Students with positive attitudes toward condoms also reported higher levels of behavioral skills for practicing safer sex.

3. Levels of knowledge about HIV infection through unprotected sex showed significant impact on behavioral skills.

4. Males were less likely to report monogamous relationships than the females.

5. Older students were more likely to report lower peer support for safe sex practices.

Although the major findings relating to the roles of HIV/AIDS knowledge, experiences with and attitudes toward condom use, peer influences, perceived vulnerability, monogamy, and behavioral skills were similar, this researcher observed subtle differences, including the following:

Differences

1. Analysis showed that knowledge about HIV transmission through sexual activities had a direct effect on condom use. The present study shows an absence of a relationship between HIV knowledge and condom use and practice of safer sex.

2. The present study also shows that knowledge failed to predict having fewer sex partners, adopting safer behaviors, and changing attitudes to reduce risk among the sample of college students. Whereas, Bazargan et al's study showed that sexual transmission knowledge was related to both behavioral skills and positive attitudes toward condom use.

These inconsistencies may partially stem from the fact that Bazargan et al's (2000) study divided HIV/AIDS-related knowledge to sexual and nonsexual (casual contacts) indices.

The few studies that have evaluated the sexual risk reduction behaviors among students attending historically Black colleges and universities have failed to follow up with a suggested application of major findings and conclusions. There is a void in the literature of an attempt to apply solution to the results. Based primarily on the findings and conclusions of this study, a conceptual teaching/learning framework may lead to a foundation of knowledge that may assist health education counselors in assessing and developing communication strategies that capitalize on the knowledge HBCU students already possess while simultaneously assisting them in assessing and reducing their risk of disease infection.

CHAPTER VII

A CONCEPTUAL TEACHING/LEARNING FRAMEWORK

PURPOSE OF THE TEACHING/LEARNING FRAMEWORK

The secondary purpose of this research project is to provide a “Framework” within which HBCU educators can design, implement, assess, and evaluate HIV/AIDS/STD instruction targeting HBCU students. It emphasizes the importance of education about human behavior and sexuality that is designed to help HBCUs provide structured, sequenced, university-based approaches to developing effective HIV/AIDS/STD instruction and concludes that education about HIV and STDs is best given within a broad health education program. Also provided in the framework is information on program evaluation methods, content options, teaching resources, and teaching strategies.

Description

This framework is designed as a guide to provide direction for the development of effective HIV/AIDS/STD instruction programs for students at historically Black colleges and universities. The framework, based upon findings and conclusions, is not a ready-made HIV/AIDS/STD module rather the framework provides programs with Strands and Standards that serve as the basis for the module design within each content area. Strands are the themes that run through a framework; for instance, the strands of the HIV/AIDS/STD framework are HIV/AIDS/STD knowledge, and lifestyle attitudes and

behaviors. Standards are the indicators of performance within each strand that help HBCU instructors to determine a student's level of proficiency, target areas for improvement, and design instruction and assessment that will meet students' needs.

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HIV/AIDS/STD Conceptual Teaching/Learning Framework: HBCUs

Domain Description: HIV/AIDS/STD prevention is greatly influenced by health enhancing knowledge, attitude and behavior change practiced throughout life.

Standard: The student will understand attitudes and behaviors for preventing and controlling HIV/AIDS/STD

Learning Expectation:

The student will (Refer to discussion in Research Question 2, page 132):

S.1 describe signs, symptoms, and risk factors related to HIV/AIDS/STD and other related communicable diseases;

S.2 evaluate how attitudes, beliefs and lifestyle behavior impact both the well and disease process.

Performance Indicators:

At Level 1, the student will be able to:

- list HIV/AIDS/STD, and other communicable diseases
- define the following communicable diseases: human immunodeficiency virus, herpes, gonorrhea, Chlamydia, hepatitis B, human papilloma virus.

At Level 2, the student will be able to:

- describe the prevention, warning signs, and treatment of STD;
- explain the importance of universal precautions;
- explain that in terms of the relationship between sexual activity and the risk of being infected with HIV/AIDS/STD, abstinence from all genital contact is the only sure method of preventing sexual transmission.

At Level 3, the student will be able to:

- assess the impact of HIV/AIDS/STD knowledge, lifestyle related attitudes and sustained behavior change on one's health and of ergonomics in disease prevention.

HIV/AIDS/STD Conceptual Teaching/Learning Framework -2-

Professor Assessment Indicator (examples):

The professor may:

- have students design a pamphlet that includes origin, symptoms, prevention and treatment of a communicable disease;
- administer a written objective test to students to assess student's knowledge of different STDs including HIV, modes of transmission, and treatment;
- assist students in computer lab searching the web for information on the impact of sustained behavior change on communicable disease prevention.

SUMMARY

Based primarily on the findings and conclusions resulting from this investigation, this chapter has presented a conceptual teaching/learning Framework. It is hoped that the utilization of these tools will lead to a foundation of knowledge that may assist health education counselors in developing communication strategies that capitalize on the knowledge HBCU students already possess while simultaneously assisting them in assessing and reducing their risk of HIV infection.

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A SAMPLE HIV/AIDS/STD TEACHING/LEARNING FRAMEWORK

Note: This is available as a supplement to this investigation. Interested parties may obtain this document by contacting John F. Michael at Lateef88@utk.edu.

CONCEPTUAL HIV/AIDS/STD TEACHING/LEARNING FRAMEWORK

Topic Areas of the Teaching/Learning Framework

The suggested framework is divided into the following focus areas: 1) The Purpose of HIV/AIDS/STD education; 2) The goals and objectives of school health education about HIV/AIDS/STD; 3) Moral, cultural, religious, and philosophical issues in HIV/AIDS/STD education; 4) The context of HIV/AIDS/STD education; 5) Planning the evaluation of the educational program on HIV/AIDS/STD; 6) Content of the HIV/AIDS/STD curricula; 7) The need to coordinate the integration of HIV/AIDS/STD education; 8) Teaching about HIV/AIDS/STD; 9) Teaching style for HIV/AIDS/STD education; 10) Planning to provide an appropriate school and classroom environment for HIV/AIDS/STD education; 11) Planning informal education on HIV/AIDS/STD; 12) Planning for training; Appendix 1) Evaluation; Appendix 2) The content of education on HIV/AIDS/STD; Appendix 3) Teaching resources and strategies.

Health Education Framework

For

Historically Black Colleges & Universities

To Prevent

HIV/AIDS and Sexually

Transmitted Diseases

John Franklin Michael

University of Tennessee Knoxville

2006

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Introduction

Infection with the human immunodeficiency virus (HIV) and the acquired immunodeficiency virus (AIDS) are urgent problems worldwide with broad social, cultural, economic, political, ethical, and legal implications. Sexual intercourse is the predominant mode of transmission of HIV infection. Because of the sensitivity of issues associated with sexual behavior, health educators confront major problems in the prevention and control of HIV/AIDS and sexually transmitted diseases (STDs).

In the United States, the number of HIV/AIDS/STD cases continues to grow, especially among African Americans. The southwest region is now seeing the fastest growth rate; seven out of ten states with the highest AIDS rates are in the South. African Americans account for more than half of all Southerners living with AIDS.

African American college students are at significantly higher risk for heterosexual transmission of HIV. Evidence indicates that students attending historically black colleges and universities are experiencing negative consequences of sexual behavior, such as AIDS and high pregnancy rates. HBCUs are a vital national resource and the backbone of Black American leadership. These institutions have produced nearly 70% of all the Black college graduates in our nation's history. In the future, they are expected to produce more than 300,000 college graduates every 10 years. HBCUs have a vital role in the health of Black college undergraduates and have a major responsibility in educating those students about health promotion, health protection, and preventive health services. This research aims to identify barriers keeping HBCU students from engaging in safer

sex behaviors; determine whether barriers to safer sex differ for male versus female students; and put forward strategies that are likely to promote safer sex practices among HBCU students.

Overview

This guide provides a framework within which HBCU authorities can assist students with learning the facts about AIDS and STDs and make mature decisions that will reduce the risk to themselves and others. It emphasizes the importance of education about human behavior and sexuality that is appropriate to the student. The This guide provides a framework within which HBCU educators can work to help students learn the facts about AIDS and STDs and make mature decisions guide is designed to provide structured, sequenced approaches to the problem of HIV/AIDS/STD. It is primarily concerned with formal education on HIV/AIDS/STD in historically Black colleges and universities. It is acknowledged, however, that informal (non-structured) education on HIV/AIDS/STD can greatly enhance an existing formal program and, where a formal program does not exist, may provide students with valuable educational experiences.

HBCU education Interventions developed through this framework include (1) a blending of HIV/AIDS/STD prevention education into the HBCU curriculum, (2) required attendance of entering freshmen at campus-wide HIV/AIDS/STD symposiums, (3) grade incentives for student participation in campus outreach organizations, (4) annual campus-wide events to coincide with World AIDS Day and National Black HIV/AIDS Awareness Day, to include such activities as song/dance and martial arts (Capuara), stepping exhibitions, and poetry reading competition, (5) regular on-campus promotion of HIV testing days, and (6) the implementation of a “Decisional Balance Sheet” which would be especially valuable for analyzing the degree to which the student does a thorough and

accurate job of exploring the full range of alternatives open to him/her and considering the favorable and unfavorable consequences of each alternative (See Appendix 4) .

Goals of the HIV/AIDS/STD teaching/learning framework

The HBCU health education program on HIV/AIDS/STD aims to develop in students the knowledge and skills needed for healthy human relationships, effective communication, and responsible decision-making that will protect themselves and others from HIV/AIDS/STD infection and optimize health. The goals of such a program include promoting behavior that prevents the transmission of HIV/STD, fostering attitudes and behavior that will prevent discrimination against those who are infected with HIV/STD, and promoting solidarity with them. The problem of preventing HIV/STD infection and fighting discrimination are faced by the community as a whole, and HBCU education interventions to prevent their spread should also help promote ideas and values that are conducive to social concern, willingness to cooperate, and respect for human rights.

Key considerations in reaching the goals

A key in developing the education program is accurate assessment of the knowledge, attitudes, beliefs and behavior of the HBCU students at whom the program is targeted. The assessment should cover HIV/AIDS and STD, as well as broader issues such as communication within relationships, sexuality, control over one's own life, access to resources, and options for the future. Such an assessment cannot be made on the basis solely of the perceptions of those who work with HBCU students or who develop programs for them; it must include the concerns voiced by the students themselves.

The development of attitudes and behavior (skills) should be considered as a continuous process. Where health education programs already exist, the topic of AIDS/STD should be integrated within them. Integration will enable sexuality, self-esteem, communication, and decision-making to be taught in relation to AIDS/STD education.

- A school health education program on HIV/AIDS/STD should be developed within the context of the traditions, beliefs, values, and behavioral and educational norms of HBCU institutions – themselves a manner of allied societies (Issue 3). It must address the needs and concerns of students as well as students in the society at large (Issue 4). It must be established on the paramount set of operational orders determined by the African ethos of values and customs, e.g., cooperation, collective responsibility, cooperateness, Interdependence.
- A comprehensive program must foster understanding to prevent fear and discrimination. The program must emphasize the right of HIV-infected students and staff to privacy and confidentiality and to full participation in the school community. This promotes mental health and/or illness as relating to the indices of a particular world-view; in which one understands and respects the ‘sameness’ of himself and other persons; wherein one concedes a high sense of personal responsibility for the well-being of himself/herself and others; whereupon one perceives the interdependence of man and man, as well as the synthesis between man and nature.
- The implementation of the HIV/AIDS/STD education framework is greatly facilitated if all elements of the program are well coordinated. Several useful

elements of an effective HIV/AIDS/STD program already exist in most HBCU institutions. Education on HIV/AIDS/STD can be integrated most easily into education on the development of personal values and skills, tendered by a set of psycho-behavioral modalities characteristic of mental health and functioning. This would include education on sexuality, family life, health and responsibility, decision making and responsible parenthood and child-rearing.

- Because these institutions are often the focus of the fears of staff and students when the facts about HIV transmission are not understood, a comprehensive program must foster understanding to prevent fear and discrimination. The inference of this point is simply that the value base associated with traditional African philosophical thought (i.e., oneness of being, interdependence, interconnectedness, vitalism, complementarity) will mitigate the societal
- alienation currently experienced by African American youth in that way redefining mental health and functioning.

Evaluation

Full and continuous evaluation should be an integral part of the HBCU program on HIV/AIDS/STD. Planning should allow for reassessment of the program at stated intervals and provide an opportunity for HBCU health educators to make such changes as are indicated by the evaluation.

- It is necessary to decide who is to evaluate a program (Issue 9). Evaluation is best conducted by a trained evaluator. Educators who already have extensive experience in evaluating educational matters may be given further training in

evaluation techniques for the purposes of the program. However, outside evaluators may add objectivity and facilitate confidentiality where it is needed.

- Because of the personal nature of education on HIV/AIDS/STD and sexuality and the behavior it seeks to influence, evaluators must take into account a number of ethical considerations, including respect for each student's right to privacy and confidentiality.

Curriculum

- The position of AIDS/STD education within the curriculum is important, as the context chosen will provide a framework for decisions about the content and teaching style. Ideally, education on HIV/AIDS and STD should occur within the context of health education on sex and human relationships.
- Program developers should have an understanding of the principles and trends of preventive education and of program development methodology. They should know about HIV infection and STD, be able to prepare programs that bring together knowledge, attitudes and skills into a coherent whole, and be sensitive to the beliefs, needs and characteristics of students.
- In addition to increasing knowledge, HIV/AIDS/STD programs should help students develop appropriate skills and attitudes, change risk behaviors, and counter discrimination (Issue 10).
- Educators and counselors may require training to enable them to choose the most appropriate teaching style and strategies for education on HIV/AIDS/STD. Communicating biological and medical information may, for example, require

didactic methods, such as reading assignments and lectures, while attempts to change behavior may require interactive methods, such as role-playing and discussions.

Staffing

- The quality and style of presentation of an HIV/AIDS/STD program are affected by the presenter and ultimately, is the impact of the program on the recipients (Issue 12). It is considered a given that when instructors are specially trained, they are capable of presenting an effective program. It is also believed that an instructor with a good relationship with students may be the most effective with the training.
- The training of instructors is important in the successful implementation of an effective education program on HIV/AIDS/STD (Issue 12). For appropriate training, the needs of program presenters should be appraised followed by the development of appropriate training programs. The end result will be superior knowledge, skills and attitudes of students with whom they interact.

How to use the guide

The issues outlined above, related to the development, implementation and evaluation of an HBCU health education program on HIV/AIDS/STD, are considered in detail in the chapters that follow. HBCU health educators can therefore examine each issue in turn and thus fully develop, implement, and evaluate a program on HIV/AIDS/STD where none previously existed. Certain sections of the guide, such as Topic 4, “Content of the

HIV/AIDS/STD education program”, may also be helpful in the detailed planning of some elements of the program.

- For each issue, the text is structured as far as possible under the following headings:
- Rationale – Why, precisely is this issue important?
- Possible approaches – What are the choices available for addressing each issue?
- Discussion – Allows for the examination and consideration of the different possible approaches to each issue.

The planning and implementation of the HBCU education on HIV/AIDS/STD should be developed by HBCU educators as an important part of the National Center for HIV, STD and TB Prevention (NCHSTP) program. This guide encourages coordinated approaches to education on AIDS that are consistent with the purposes of the NCHSTP AIDS plan that are part of the Center for Disease Control and Prevention’s core measures for HIV/STD risk behavior and prevention.

Focus 1

The purpose of HIV/AIDS/STD education program

Rationale

The purposes of this program on HIV/AIDS/STD are to prevent and control the spread of HIV/STD, and raise the level of understanding about associated problems.

The first essential step in the development of a program on HIV/AIDS/STD targeting HBCU students is the development of clear purposes. Although the purposes may be stated differently in different ethos, it is imperative that a program should be designed, implemented, and evaluated to ensure that students attending HBCUs understand the nature of HIV infection and the actions they can take to protect themselves and others from HIV/STD infection, and to counter fear and discrimination.

Discussion

Program planners need to be aware that some of the students participating in the program may already be infected with HIV. Many students may suspect that they are infected; some may be sure. Students who are infected with HIV face complex problems about relationships, sex and work, just as uninfected students do. Programs should be designed to address such problems, as well as to help students acquire the knowledge, skills and support they may need to avoid transmitting HIV to others.

The same safer practices that protect uninfected young people from becoming infected will also protect HIV-infected students from STD and further exposure to HIV, which may place stress on their immune systems. A narrow medical approach,

however, is not adequate. Studies have indicated that, twenty-five years after HIV infection, 50% of HIV-infected people will develop AIDS. This also means that, after twenty-five years, 50% of HIV-infected people have developed AIDS, although diagnosis of AIDS does not now mean death within a few years. In fact, some people with AIDS have many more years of productive life. HIV-infected students need help in making life choices, not only to deal with eventual illness but also to cope with the years of life during which they feel physically well.

Focus 2

The goals and objectives of education about HIV/AIDS/STD

Rationale

In planning school health education about HIV/AIDS/STD, HBCU educators should develop:

- a goal;
- a series of sub-goals;
- a series of objectives related to the knowledge, attitudes, beliefs and behaviors (skills) and support needed to achieve the goal. These objectives should be both achievable and measurable. Measurement may be difficult, however, especially of program components such as the development of values, self-awareness, and skills.

The HBCU education health goal and sub-goals listed below are critically important to all efforts to prevent the further spread of HIV/STD infection.

Goal

To promote behavior that prevents the transmission of HIV/STD.

Sub-goals

HBCU students completing the program should:

- understand the nature and modes of transmission of HIV/STD;
- recognize the symptoms of HIV infection, AIDS and STD and know where to find appropriate resources, counseling, and medical care; informed decisions

be able to make informed decisions about personal and social behavior that reduces the risk of HIV/STD transmission;

- be capable of rejecting biased information and myths relating to HIV infection, AIDS and STD;
- show solidarity towards people infected with HIV/STD, respecting their right to privacy and confidentiality and recognizing the benefits of the continued participation of HIV-infected HBCU students and staff in school activities.

Possible approaches

The HBCU health education objectives established to meet these important goals should focus on knowledge, attitudes, beliefs, behaviors (skills) as well as support that students need to avoid becoming infected with HIV or STDs. Objectives will depend on the values and needs of HBCU students.

Discussion

Education about HIV/AIDS/STD must be primarily concerned with the prevention of transmission and the optimization of health. HBCU health education programs that focus only on knowledge may fail to foster the skills, attitudes, and support that can help to reduce the risk of transmission and maintain health. Such programs are not likely to meet the goals listed above. The development of appropriate knowledge, skills, and attitudes must therefore be considered as core objectives of the program. HBCU health educators join with health authorities, HBCU students, and community groups in framing objectives that meet the program goal and sub-goals and that are appropriate to the African American culture. Objectives should be developed from the

sub-goals, be capable of full evaluation, and ideally, be concerned with knowledge, attitudes, beliefs, and behaviors as well as skills relevant to the following topics:

- the nature of AIDS, STD;
- the transmission of HIV/STD
- sexual behavior;
- behavior that reduces risk;
- sexual relationships;
- cultural and religious mores;
- self-esteem;
- informed decision-making;
- communication and negotiation within human relationships;
- relationships in general;
- combating discrimination;
- HIV/AIDS/STD prevention and control activities (national and local programs and services).

Objectives should be simple and concise so that they can be easily evaluated. Setting targets, using specific indicators that show whether the objectives are being met, is important for program evaluation. Information from the initial assessment should be used to indicate which areas of knowledge, attitudes, and practices the program should focus on. Objectives and targets reflecting these should receive high priority for evaluation.

School program objectives and student behavior

It is essential to establish a relationship between school education on HIV/AIDS/STD and individual student behavior. The program presenter is a key person in establishing this relationship.

At classroom level, knowledge, attitudes, and skills are closely linked. The attainment of objectives regarding knowledge is essentially a step towards achieving other goals. For example, knowledge about modes of HIV transmission should increase the student's motivation and ability to protect him/her and others. However, it is behavior that reduces the risk, not knowledge alone. Education about skills can enable HBCU students to act on knowledge learned in the classroom

Observers often note a direct association between education and behavior in very young children. This link is less obvious in college students as the influence of their peers becomes more powerful and the urge to act independently becomes more marked. For this reason, education involving the "rehearsal" of skills and behavior is important, to assist HBCU students to choose behavior that is in line with their own knowledge and attitudes, even if it differs from that of their peers.

Focus 3

Moral, Cultural, Religious, and philosophical issues in HIV/AIDS/STD education

Rationale:

HBCU health education programs about HIV/AIDS/STD must take into account the culture, sexual behavior, and educational norms in the African American community.

Possible Approaches

HBCU program planners need to take into account the religious and cultural outlook of the community in which the program will be implemented. They can do this by involving community leaders, including religious leaders, in some aspect of program design or review.

Discussion

It is important to create a program that takes account of the customs and culture of the African American community and to base it on a realistic assessment of risk behavior and situations that arise in the community. For example, in a community where there is a significant amount of sexual intercourse among unmarried young people, it is unrealistic to promote monogamy and celibacy as the only options for prevention. Cultural mores and religious or philosophical principles may either be in conflict with or supportive of preventive options, and it will therefore be important to involve community and religious leaders in defining appropriate approaches. There is much to be gained from informing and involving people outside the education and health sectors. Assistance can often be obtained from the African American church and community, and nongovernmental organizations. Other countries have reconciled moral, cultural, religious, and

philosophical issues in their implementation of school programs on HIV/AIDS/STD.

Supportive statements from leaders or institutions may help to convince others who are reticent. For example, in Sydney, Australia, the education authorities of the Roman

Catholic Church enunciated this policy (AIDS Education, 1987):

Just as Jesus broke through the social and cultural barriers of his time to reach out with compassion, love and hope to people in great need, Catholic educators are now called to respond in the same way to the crisis of AIDS, a new and fatal [disease]. In their message to the Australian people (May 1987), the Catholic Bishops called for programs in schools to ensure that students are given accurate and appropriate information on AIDS, presented within a full Christian vision of human sexuality. Schools have a major role to play in the battle against ignorance and prejudice.

Catholic schools fulfill their authentic mandate when they develop and implement a curriculum which is both truthful and challenging. While factual information is vital, knowledge alone is not sufficient. In the Australian community, a radical shift in attitudes is needed to halt the advance of this epidemic. A successful AIDS Education program will not only provide students with knowledge about the virus, but also assist them to develop an acceptance and understanding of self, an appreciation of family and social influences, moral sensitivity in the light of the law of God and the church, and competence in a range of living skills. AIDS Education should not be confined within one area of the curriculum; all areas of learning must deal with the subject at the appropriate level...

Focus 4

The context of the HIV/AIDS/STD education program

Rationale

The context chosen for HIV/AIDS /STD education in historically Black colleges and universities will provide a framework for, and may facilitate, decisions about its content, the teaching style to be adopted, and who is to teach the program.

The following questions need to be considered:

- Should HIV/AIDS/STD education be a curriculum subject area on its own, additional to the subjects already existing within the HBCU classrooms?
- Should HIV/AIDS/STD education be placed within other health-related subject areas in the curriculum?
- Should HIV/AIDS/STD education be integrated, as appropriate, into other subjects?

Possible Approaches

HIV/AIDS/STD education could be provided within one or more of the following areas:

- education on sexuality;
- population education;
- health education;
- family life education;
- education on personal development and living skills;
- biology or general science;
- social science;

- civics, political science and current affairs;
- religious and philosophical education.

It could also be covered in any other appropriate subject area or across a number of subject areas.

Discussion

In choosing the most appropriate subject areas, HBCU education authorities should consider the follow questions:

- What are the benefits and costs to the educational system of providing HIV/AIDS/STD education within an existing subject area or, alternatively, as a separate subject area?
- Who will teach the program and how will HBCU educators be trained?
- What resources will the program require and how they be obtained?
- What existing subject areas best accommodate the philosophies, directions, and goals of HBCU HIV/AIDS/STD education?

A program may be ineffective if HBCU students do not appreciate that HIV/AIDS/STD prevention is related to education on human behavior and, in broader terms, to health education. The maximum opportunity for reinforcement is afforded by a program integrated within a number of subject areas. Broad integration, however, may result in the difficult areas being left out; each HBCU educator may assume that these areas are someone else's responsibility.

If education on AIDS/STD is incorporated within a single subject area, that subject must accommodate the goals, objects, and teaching content of the program. It must also be taught in a style appropriate to the content and philosophy of the program.

HIV/AIDS/STD education is most effective when provided within a comprehensive health education program that includes teaching on the relationship between personal behavior and health. HIV/AIDS/STD education is more effective when HBCU students are not only given information but also have to develop self-esteem and communication and decision-making skills. If these skills are not covered in the curriculum, inclusion of HIV/AID/STD may provide a focus for a shift towards a more effective and relevant program whose implications reach well beyond AIDS/STD. Education provided in a comprehensive school health education program may be reinforced by integrating relevant content into other appropriate subject areas.

Focus 5

Planning the evaluation of HBCU educational programs On HIV/AIDS/STD

Purpose of evaluation

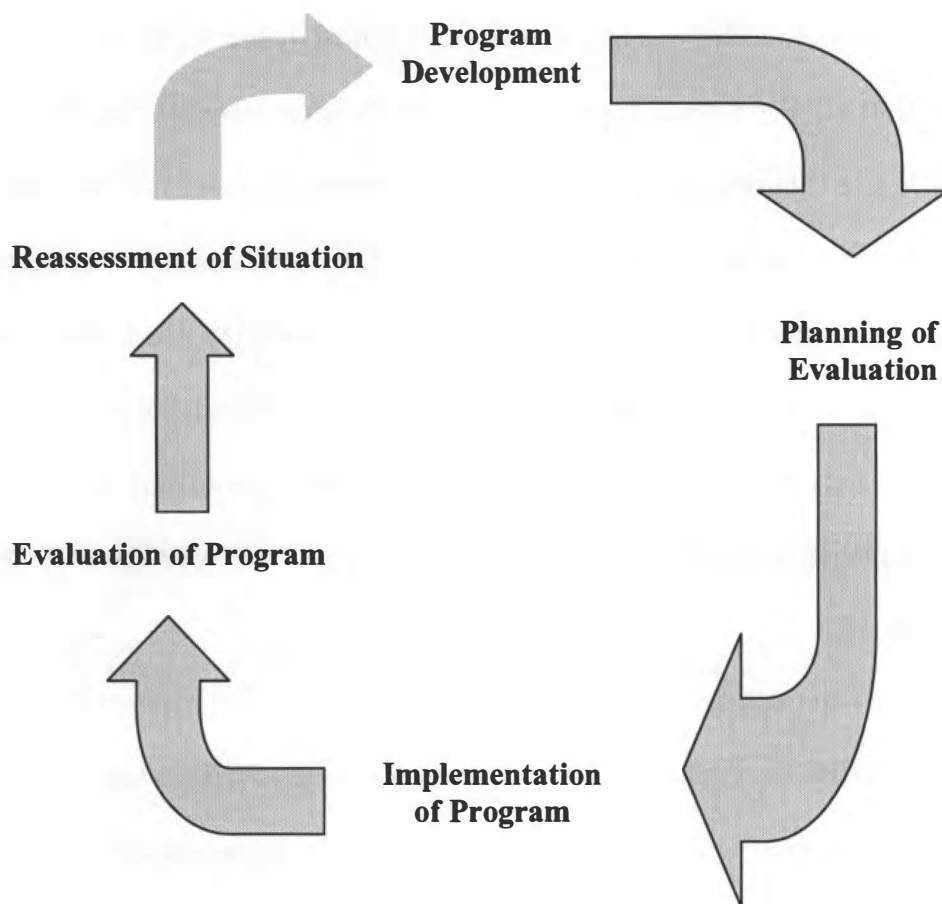
Rationale

Evaluation of HBCU health education about HIV/AIDS/STD should be concerned both with the progress of the program and with the outcome. It should provide the program developer with a view of how the program is being implemented and whether the goals and objects are being met.

To improve school health education about HIV/AIDS/STD, HBCU evaluators need to determine pre-program levels of knowledge, beliefs and behavior among HBCU students, and obtain evidence of the impact the program is having on these factors. With such information, programs can be revised to meet the needs of HBCU students.

Evaluators should then assess the impact of the revised program, for evaluation is a continuous process. Far from being an optional extra, evaluation should be an integral component of the school health education program. It provides program coordinators with information relevant to other aspects of the national AIDS prevention and control program as well as evidence of the effectiveness of the school program.

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Possible approaches

- A minimum evaluation might include standardized tests to be given to students before and after the program, with questions on knowledge and attitudes and practices. There should be central assessment of the results of the tests and reassessment of the program in light of the results.
- A pre-and-post program “Decisional Balance Sheet” should be administered. This would be especially valuable for analyzing the degree to which the student does a thorough and accurate job of exploring the full range of alternatives open to him/her and considering the favorable and unfavorable consequences of each alternative (See Figs. 1 and 2, pages 250 and 251).

The utility of the above approach can be expanded if, in a small experimental program, the tests are also administered to classes that do not receive the program and so could serve as a control group. A comparison between the program and the control students will help evaluators decide whether learning is in fact associated with the program or with other educational inputs (e.g., media reporting on AIDS) to which most young people are exposed. This type of evaluation must be carefully designed, however, if meaningful conclusions are to be drawn. For example, the control group must be similar to the group participating in the program, and a sufficient number of students must be included in each group.

Thorough evaluation may be planned for a selected number of pilot HBCUs and control HBCUs. Evaluation strategies may make use of written tests, in-depth individual interviews, focus-group interviews, and objective indicators that may show that program

objectives are being met (a decrease in HIV/STD infection and pregnancies among HBCU students). To obtain indications about why behavior and attitudes are *not* changing, qualitative methods should be built into the evaluation plan.

Process evaluation should provide answers to such questions as:

- Is the program being implemented as planned?
- Are HBCU educators being trained, and is the training effective?
- Is the curriculum meeting the needs of HBCU students?

All the above formal evaluation methods can be combined with informal discussion sessions in which evaluators meet program implementers, students, and interested community members to discuss the progress and the outcome of the program.

Discussion

Advantage of effectively evaluating the HBCU AIDS/STD program

If school health education about AIDS/STD is effectively evaluated, HBCU administrators will be able to:

Improve its educational efforts;

- demonstrate the degree to which HBCU students are acquiring the knowledge, attitudes, modifying beliefs and behaviors, and arriving at the skill levels they may need to avoid preventable health problems, such as HIV infection, STD, and drug use, and to alleviate unwarranted fear and discrimination;
- demonstrate the extent to which HBCU students currently practice behavior that can result in HIV infection and STD;
- demonstrate to the Centers for Disease Control and Prevention that effective

programs are being carried out;

- satisfy existing funding requirements and gain additional funding for health programs;
- gain prestige for the HBCU institution;
- determine which program and program components are most successful;
- assess the effectiveness of educators and the quality of programs in preventing the spread of HIV/STD, and use this knowledge to revise policies and programs;
- obtain information for national epidemiological or public health planning purposes.

If an HIV/AIDS/STD program is effectively evaluated, individual HBCUs will be able to:

- assess the extent to which students are practicing risky or risk-reducing behavior;
- judge the degree to which students are acquiring the knowledge, attitudes, skills and support they may need to prevent HIV transmission and combat discrimination;
- assess the change in beliefs and behaviors necessary to decrease incidents of HIV/STD infection and unwanted pregnancies.
- improve the program by revising its objectives, content, and strategies based on current needs;
- make a case for obtaining additional staff or funds;
- ascertain the extend to which the program meets the needs and concerns of HBCU students and is accepted by them;

- judge the extent to which the program addresses the needs and concerns of HBCU educators and is accepted by them as planned;
- evaluate the quality of HBCU educator training and performance;
- consider the incorporation of successful experimental educational techniques into other subject areas.

Determining who will plan and carry out the evaluation

Rationale

The choice of evaluator determines the quality of the evaluation, the extent to which evaluation takes place at the HBCU and the amount of emphasis on formative (process) or outcome evaluation.

Discussion

Whether evaluation is carried out at the HBCU or elsewhere, there is little doubt that it is best carried out by a trained evaluator. Evaluation of school health education about HIV/AIDS/STD can be difficult for various reasons:

- It is difficult to find evaluation methods that accurately measure development of skills. Evaluators with experience in assessing school education programs may concentrate on assessing how well information has been disseminated rather than on the more difficult assessment of acquisition of skills and changes in behavior.
- A number of factors influencing trends in behavior are difficult to study. It may be difficult to determine whether components of the program or other factors are associated with behavior change or lack of change.
- It may be difficult to collect data at an appropriate time or to establish a follow-up

period for data collection that is long enough. Changes in individual behavior, skills, or values associated with program components may manifest themselves at very different times – immediately, a year later, or even ten years after the program has been completed.

- Students and instructors may respond to surveys in what they believe is an “appropriate” way. For example, questions that attempt to discover whether or not a person has had an STD may not be answered honestly.
- Evaluation of the effectiveness of program in modifying behavior requires a considerable research effort, necessitating expertise, time and money. The actual amount of resources needed, will vary with the scope of the evaluation. Process evaluation is simpler than outcome evaluation, and the latter may be restricted to a carefully selected sample of participants.

Useful data can be gathered and processed by school personnel with special training in evaluation techniques, by an outside evaluation team, or by a combination of the two working in collaboration. Instructors who already have extensive experience in evaluation aspects of the education are often best suited for further training in evaluation techniques for the purposes of the program. The inside knowledge of school personnel is an advantage in evaluation, but the fresh and possibly more objective approach of an outsider may also be advantageous. Evaluators from outside the school community may also be needed to safeguard the privacy and confidentiality of individuals. Collaboration between outside evaluators and school is likely to be an effective approach. Appendix 2 contains individual information on evaluation methodology that may be particularly

useful to the HBCU institution.

Ethical considerations

Rationale

Because of the personal nature of education on HIV/AIDS/STD and sexuality, and of the behavior it seeks to influence, HBCU evaluators have to take into account a number of ethical considerations, among them the personal right to privacy as expressed in confidentiality and anonymity. While the evaluation of educational programs is of primary importance in controlling the spread of HIV/AIDS/STD, the privacy of the individual should not be compromised. The development of a code of ethics on the issue of privacy and other related issues is an important part of evaluation.

Possible approaches

Mechanisms to guarantee anonymity (bringing in interviewers from outside the local area, substituting numbers for names on interview forms, administering anonymous written tests) may be built into the evaluation.

If anonymity cannot be guaranteed, evaluators may decide to omit questions or assessments of HIV/STD status and sexual practices for individuals. Data that provide information about the group as a whole (for instance, community population figures on AIDS/HIV/STD from wider surveys or medical facilities) may be used instead as useful indicators.

Discussion

HBCU evaluators need to consider:

- the students' right to privacy;

- the students' right to consent or refuse consent to being involved in the evaluation;
- the students' right to confidentiality and anonymity.

The major kinds of consideration that enter into decisional conflicts. The types of expected consequences of each alternative courses of action can be exhaustively classified into the four main categories of the balance sheet schema (See page 250 and 251 for example of the Decisional Balance Sheet).

1. *Utilitarian gains and losses for self.* This category includes all the expected instrumental effects of the decision with regard to personal utilitarian objects. For example, the student who is deciding whether or not to change to a healthy lifestyle, typically takes account of such utilitarian considerations as the benefits to be derived, the sacrifices to be made, and a variety of other factors that he anticipates will affect his state of mind while making the necessary sacrifices.
2. *Utilitarian gains and losses for significant others.* The instrumental considerations in this category pertain to the goals of persons and groups with which the decision maker is identified or affiliated. When a student, for example, is considering a lifestyle change, he/she is likely to give considerable weight to utilitarian gains and losses pertaining to the feelings of others in his/her circle of interests. When one is making a personal decision, this category includes all the effects the decision is expected to have for satisfying the needs of people in one's social network, particularly one's family.
3. *Self-approval or –disapproval.* Internalized moral standards, ego ideals, and components of self-image are implicated in every important decision. These

considerations, at least in derivative form, involve self-esteem. Among the questions a student might put to himself/herself are, “Will I feel proud of myself if I make this choice? Will I be living up to my ideals? Will this decision enable me to become the kind of person I want to be?”

4. *Approval or disapproval by significant others.* The potential approval or disapproval of reference groups and reference persons who are expected to evaluate either the decision itself or the student’s competence as a decision maker constitute another important kind of consideration. She/he is likely to pose to himself the question “Will my friends and other important people in my life feel that I made the right choice?” Anticipated social feedback, which includes being criticized and ridiculed by a group as well as receiving praise and respect, can play a crucial role in determining the student’s judgment as to the best possible alternative, his/her willingness or unwillingness to commit herself/himself, and his/her willingness to stick to a decision to change to a healthy lifestyle or reverse it after she/he encounters distressing setbacks.

The utility of this approach can be expanded if, in a small experimental program, the tests are also administered to classes that do not receive the program and so could serve as a control group. A comparison between the program and the control students will help evaluators decide whether learning is in fact associated with the program or with other educational inputs (e.g., media reporting on HIV/AIDS/STD) to which most students are exposed. This type of evaluation must be carefully designed, however, if meaningful conclusions are to be drawn. For example, the control group must be similar to the group participating in the program, and a sufficient number of

students must be included in each group.

Evaluation strategies may make use of written tests, in-depth individual interviews, focus-group interviews, and objective indicators that may show that program objectives are being met (a decrease in STD among the student population).

Focus 6

Content of the HIV/AIDS/STD curricula

Rationale

The context of the teaching on HIV/AIDS/STD will influence the content of the program. Assessment of the needs of HBCU students is an essential component in establishing the broad direction. As with objectives, the content must encompass knowledge, attitudes, beliefs, behaviors as well as skills and values.

Possible approaches

Some examples of possible content are given below. Further examples are contained in Appendix 2

Knowledge

What is HIV? What is HIV infection? What is AIDS?

What are STDs?

What causes HIV/AIDS/STD?

How are HIV/AIDS/STD transmitted? How are they *not* transmitted?

Who can become infected with HIV/AIDS/STD?

What can individuals do to prevent transmission of HIV/AIDS/STD and to maintain health? (If the person is HIV-negative? If the person is HIV positive?)

What national and local HIV/AIDS/STD prevention and control activities and services are available in the local community? What other resources are available?

Attitudes, beliefs and values

What is an attitude, a belief?

What are the attitudes and beliefs of the African American culture towards behavior that puts people at risk of HIV/AIDS/STD infection?

What are the students' attitudes towards sexual behavior and towards drug injection and other skin-piercing practices, and how do they relate to HIV/AIDS/STD?

What are the students' attitudes (and those of their peers) towards sexual relationships?

What are the attitudes of those close to the students (for example, parents, friends, partners, religious leaders) towards sexual behavior, drug-injecting, and other skin-piercing practices?

What are the HBCU students' feelings about themselves and their worth, and how do those feelings affect how they make decisions, how they communicate, and how they behave towards others?

What are the students' attitudes towards other people (for example care and respect)? What are the attitudes of the HBCU students and of others towards people with HIV/AIDS/STD and towards groups of people who are regarded as at risk of HIV/STD infection? How would students feel if a friend had HIV infection?

What values within society and within the students' peer group promote unsafe behavior?

What values promote discrimination or misunderstanding? How can these be counteracted?

What values within society and within the HBCU students' peer group promote safe behavior and concern for self and others? How can these be strengthened?

When and with whom is it

Skills

How do communication skills contribute to HIV/STD transmission? (For instance, is communication within relationships, including negotiation about sexual issues, a skill that needs to be cultivated?) How, when, and with whom can HBCU students talk about relationships, including, when appropriate, sexuality? What decisions must HBCU students make about HIV/AIDS/STD and how can they act on them?

How, when, and with whom can HBCU students talk about HIV, AIDS and STD?

How do HIV and STD affect students' relationships?

How can HBCU students protect themselves and others from contracting or transmitting HIV/STD?

How can HBCU students act to counter discrimination and promote solidarity between those who are infected and those who are not?

Support

What can people in the community do to help prevent HIV infection and STD?

What can HBCU students do to promote solidarity?

How do economic issues contribute to HIV/STD transmission? (Economic issues include both accessibility of resources, such as condoms, and the effects of economic situations on choices about sexual relationships, including marriage.)

Where can HBCU students go and what can they do to get further information and services?

How can HBCU students support each other's decisions about HIV/AIDS and STD?

Discussion

HBCU educators and other planners need to consider a number of important factors in deciding on content, including:

effective education always depends on the physiological and emotional preparedness of the learner; the student's ethos religious values;

local data regarding:

the prevalent modes of transmission of HIV/STD, the incidence among African Americans youth of HIV/AIDS/STD, use of inject able drugs, other skin-piercing practices, and sexual behavior, the current and future risk among African American youth of contracting HIV/STD, ethical considerations, for example, are the privacy of the student or of his or her family affected?

It is well recognized that influencing behavior is complex and demanding. There are lessons to be learned from other preventive education initiatives, for example population education and drug education. In some educational settings the relative emphasis given in AIDS/STD programs to the development of self-esteem, communication skills and decision-making skills reflects the results of evaluations of other education programs that aim to change behavior.

It is difficult to give a clear indication of the optimum amount of school time which should be given to HIV/AIDS/STD education. As yet, programs that exist in the educational setting have not been extensively evaluated. Preventive education, however, is a process that often involves extensive amounts of classroom time, especially when skills need to be learned and practiced.

Focus 7

The need to coordinate the integration of education of HIV/AIDS/STD

Rationale

Coordination is particularly important because of the increasing number of educational and social issues competing for limited school time. For example, an already crowded school curriculum may need to accommodate health education on communicable diseases, sexuality, community health, maternal and child health, and preventive education about drugs and AIDS/STD.

Possible Approaches

- Modules can be pre-tested with students by inserting them into existing subject areas. The results of the evaluation will help planners decide how best to harmonize new subject matter into the overall curriculum.
- A special task force can be set up to examine the current curriculum, identify appropriate subject areas, conduct an initial assessment with representative students and instructors, and design, implement, monitor, evaluate, and support the program.

Coordinating the elements of an AIDS/STD program

Existing subject areas such as communicable diseases, human anatomy and physiology, sexual behavior and contraception, and health education provide a valuable context within which HIV/AIDS/STD education can be integrated. Several useful elements of an effective HIV/AIDS/STD education program already exist in many HBCUs; they need to be identified and coordinated so that additional elements can be added in the most productive way.

Education on HIV/AIDS/STD can be integrated most easily with existing subject areas that deal with the development of values and personal skills. Where such subjects exist, much of what is already being done will be relevant to education on HIV/AIDS/STD.

Focus 8

Teaching About HIV/AIDS/STD

Rationale

The decision on who will teach about HIV/AIDS/STD will influence the quality and style of presentation and, ultimately, the impact of the program.

The basic choices are:

- HBCU educators within the institution;
- Resource people from the community;
- Both instructors and community resource people;
- Peers of the students;
- Combinations of all the above.
 - HBCU educators need to reconcile the pressure for an immediate educational response to the problem of HIV/AIDS/STD with the need to consider the quality, context and design of the program and its monitoring. The combined expertise of outside personnel and HBCU instructors can be used to train personnel to integrate HIV/AIDS/STD education into the curriculum.

Possible Approaches

Any of the following people can be chosen to teach about HIV/AIDS/STD;

- teachers within the school system
 - the HBCU instructor
 - the instructor teaching a specific subject, for example health education;
 - the instructor who is professionally suited to teach about HIV/AIDS/STD;
 - the instructor who volunteers to teach about HIV/AIDS/STD;
 - the school counselor or psychologist;
 - the department head
 - a member of the school's health personnel;
- community resource people
 - local community health personnel;
 - other local community experts;
 - religious leaders in the community;
 - educators drawn from a specific relevant organization, for example, the family planning association, the STD clinic, or the national Centers for Disease Control and Prevention;
 - a parent;
 - a visitor invited by students;
- peers
 - peers who are slightly older than the students;

- class members who have researched and written a paper on the topics or attended special training programs.

Combinations of presenters can also be selected from the above groups.

Discussion

To be effective, an HIV/AIDS/STD program presenter should be:

- Willing and interested in teaching about HIV/AIDS/STD;
- Knowledgeable about HIV infection and STDs, their transmission, and their prevention;
- accepted by the HBCU school staff and students
- able to maintain confidentiality and objectivity;
- concerned with the welfare of the students;
- familiar with and at ease when using sexual terminology and discussing sexual issues;
- knowledgeable about the curriculum as a whole and the ways in which information on AIDS/HIV/STD can be harmonized with other areas;
- respectful of student values;
- an effective communicator;
- an effective facilitator of classroom learning;
- accessible to students for follow-up discussion;
- familiar with the background of the students.

Many educational authorities consider that instructors with most of the above characteristics will be appropriate presenters for an HIV/AIDS/STD program. Such persons should be specially chosen and trained for this purpose.

Focus 9

Teaching style for HIV/AIDS/STD Education

Rationale

A comprehensive preventive program on HIV/AIDS/STD needs to provide biomedical information, to facilitate exploration of personal issues, and ultimately to influence attitudes and behavior. Program presenters will need guidance in choosing a teaching style and teaching strategies that achieve these purposes. Often the subject area in which education on HIV/AIDS/STD is placed determines the teaching style to be used.

Possible Approaches

Teaching styles range from didactic to the participatory.

Discussion

Communicating biomedical information may require didactic educational methods, whereas influencing attitudes and behavior may require a more participatory approach.

The balance between these two approaches is determined by:

- the underlying policies and principles of the HBCU institution;
- the training the presenter has received;
- the relative weight given to knowledge, skills and attitudes within the HBCU institution;
- the case and competence of the individual educators in didactic and participatory education;

The didactic style involves the presentation of accurate information in a clear, concise, and systematic way. The instruction is usually leader-centered rather than participant-

centered. Although didactic methods can occasionally be used to provide instruction on the skills and attitudes associated with a particular issue, they usually focus primarily on transfer of knowledge.

The participatory style often involves a learner-centered group process. In this approach, communication and interaction are encouraged and the orientation may be towards problem-solving. Students and teachers together employ their knowledge, skills, and attitudes to examine problems related to HIV/AIDS/STD. The use of participatory methods alone may not provide sufficient factual knowledge.

The most appropriate approach to teaching about HIV/AIDS/STD is a combination of the didactic and the participatory styles which is:

- in accordance with the goals of the program
- focused on the needs of the students;
- applicable to their lives.

For successful preventive education, presenters must be competent in both didactic and participatory methods. Appendix 3 provides information on teaching resources and strategies appropriate to HIV/AIDS/STD education.

Focus 10

Planning to provide an appropriate school and classroom environment for HIV/AIDS/STD education

Rationale

The quality of the relationship and interactions in the HBCU classroom is of importance in the prevention of HIV/AIDS/STD. Because of the potential influence of the instructor as a model and motivator and the opportunities for counseling and support, the relationship between instructor and students is exceptionally important. Preventive education on HIV/AIDS/STD is more effective in an environment that accords with the goals of the program and where the relationships between instructor and students are open and pleasant. Both the curriculum and instructor training should take into account the need to create such an environment.

Possible Approaches

If the program envisaged does not allow for the creation of a suitable classroom environment for the discussion of personal issues, alternative facilities may be created with the school. For instance, small group discussions or individual counseling sessions may be organized after regular school hours.

If the school cannot provide such services in or outside the classroom, information about alternative facilities (drop-in centers, counselors, hot lines) should be given.

Discussion

An environment based on respect and trust, in which teachers and students can share opinions and feelings, facilitates growth in knowledge and skills and the exploration of values. An environment that promotes interaction is important for participatory teaching methods. For example, the arrangement of chairs in a circle encourages people to talk more freely to each other.

The establishment of a good classroom atmosphere is largely the responsibility of individual instructors. A well-trained instructor is able to predict whether an environment will be conducive to achieving the goals of the program.

Focus 11

Planning informal education on HIV/AIDS/STD in HBCU institutions

Rationale

Because HIV/AIDS/STD has received, and will probably continue to receive, much media coverage, instructors will be frequently asked questions about it. Program planners should anticipate that these questions may be on topics that have not been included in the formal program. School personnel may also have to manage spontaneous situations that are associated with HIV/AIDS/STD, as for example when a student discloses that a family member or acquaintance has AIDS. Program planners need to consider how informal education might be used to meet the needs of students while respecting cultural and educational norms.

Possible Approaches

Answering questions asked by students

Educators may be given training to help them to:

- provide direct, clear, factual answers;
- provide factual answers and follow up with a discussion;
- provide general answers and refer the students to other figures of authority;
- refer students to other figures of authority without answering the questions;
- refer students to a written source;

Dealing with the specific situation

Educators may have to deal with many different situations, for example, if certain students have read an article in a journal, discussed HIV/AIDS/STD information, or know someone who has AIDS or a sexually transmitted disease.

Educators may be trained to:

- use such incident as an opportunity to educate students further about HIV/AIDS/STD and allow them to discuss their concerns;
- deflect attention from sensitive subjects or subjects that require lengthy discussion;
- state clearly that it would be preferable that certain aspects of HIV/AIDS/STD be discussed with the student's physician or the local health department.

Discussion

Using all opportunities for further education about HIV/AIDS/STD is clearly the best alternative, but training, guidance, and support are needed to enable instructors to use these opportunities well. If a formal program on HIV/AIDS/STD exists in the school, informal references to the topics provide an opportunity to reinforce the formal program. If no formal program exists, informal references can provide an opportunity for some education about HIV/AIDS/STD. Informal (or incidental) teaching provides an excellent opportunity for needs-based education. This is particularly true in the case of education about HIV/AIDS/STD and related topics because the level of student interests is often

high. HBCU instructors who discuss HIV/AIDS/STD informally and to answer questions give the students access to information at a time when their need to know is great.

Informal education can also provide opportunities for the discussion of values within the natural context of a question or remark.

Instructor training should include skills in making the most of informal education opportunities. Other school personnel are likely to be asked questions or encounter situations which will allow them to participate in informal education on HIV/AIDS/STD, and they too should be provided with information and training so that they are well informed, and knows how to react to particular questions or issues. Instructors and other school personnel must feel that they have the active support of the department heads in dealing frankly with difficult topics. Reliance on formal education alone to provide all the knowledge and skills HBCU students need to protect themselves from HIV/AIDS/STD is however, unsatisfactory.

Planning for training

Assessing the needs of program presenters

Rationale

The appropriate training of program presenters is of paramount importance for the successful implementation of an education program on HIV/AIDS/STD. The needs of program presenters should be assessed broadly by the department head. Assessment of training needs should begin with an evaluation of the existing competence of program presenters, including their knowledge, attitudes, and concerns about HIV/AIDS/STD.

Possible approaches

Training needs can be assessed by the individual HBCU through:

- interviews with the staff/department head and instructors;
- surveys of proposed program presenters;
- training sessions or interviews with proposed program presenters aimed at establishing their needs, knowledge and skills;
- a questionnaire asking program presenters how they would deal with some of the foreseeable problems in education on HIV/AIDS/STD (for example, what would they do when teaching a lesson about STD if a student said that he/she had a sexually transmitted disease?);
- an anonymous survey of the knowledge (or the knowledge, attitudes, behavior, and practices) of prospective program presenters.

Discussion

A survey of needs may appear to be time-consuming and expensive, but the results are invaluable for the planning of a training program. Skilled personnel should be able to complete the survey quite quickly, with the maximum use of existing data and a simple methodology. Focus group sessions and individual interviews with selected program presenters and others concerned are appropriate for this task.

Appendix 1

Evaluation

This addendum presents a brief description of methods that may be useful to the HBCU in evaluating education on HIV/AIDS/STD. The evaluation methods are examples only, and are not intended to be exhaustive or prescriptive. School-oriented evaluation methods are still scarce and examples are difficult to find. It is essential for HBCU educators to develop methods appropriate to the needs of African American students.

Process evaluation takes place during the course of the program and, with regard to the program's objectives, may:

- identify and monitor potential causes of success and failure;
- monitor the relevance and effectiveness of decisions made before the teaching is implemented;
- observe and describe what is actually occurring.

It can be carried out by, for example:

- analysis of classroom interaction ;
- a suggestion box;
- rating scales;
- diaries;
- records of staff meetings interviews;
- interviews;
- feedback sheets.

Outcome evaluation takes place at the completion of the program and measures the extent to which the program's objectives have been achieved. The methods used in outcome evaluation include:

- surveys – written or personal;
- already available information;
- interviews (for example on the street);
- focus group interviews;
- rating scales;
- questionnaires.

Process evaluation is particularly important during the initial period of a new program.

Once the program is established and accepted, it becomes important to plan for outcome evaluation. Both process and outcome evaluation are important to assess the extent to which objectives have been achieved, and together provide a basis for interpretation of the results.

Example of evaluation methods

Tests

Tests are often used to evaluate knowledge and are primarily methods for evaluating outcome. It is difficult to devise valid, reliable tests, especially when the results are to be used for evaluating the program rather than a student's knowledge.

Sample tests

1. (a) What is the name of the virus that suppresses the immune system and can lead to the development of AIDS?

- (b) What is the name of the virus that causes genital warts?

- (c) Describe briefly how the virus that causes AIDS is transmitted from one person to another

- (d) Describe briefly how the virus that causes genital warts is transmitted from one person to another.

- (e) Who can get AIDS?

- (f) Where in this community can you get further information about AIDS?

2. (a) What are the major symptoms of gonorrhea? (Pick two of the possible answers below)

- ☐ itchiness in the genital area;
- ☐ swollen feet;
- ☐ a sore throat;
- ☐ a sore on the penis or vulva;
- ☐ headache and nausea

(b) A person who is infected with HIV (pick two statements):

- ☐ is always homosexual.
- ☐ Has AIDS.
- ☐ May feel well for years.
- ☐ Is not a danger to others at school or in the workplace.
- ☐ Can receive treatment to kill the virus.
- ☐ Always dies within a few years.

3. Are the following statements true or false?

Hepatitis B is a form of STD _____

Sexually transmitted diseases are only caught by dirty people. _____

STDs have been around for a long time _____

AIDS is a punishment for being homosexual _____

People with AIDS sometimes feel well for long periods of time _____

I could never catch HIV/STD _____

HIV only spreads between homosexual men who have sex _____

STDs are widespread around the world _____

4. What virus:

- (a) damages the immune system?
- (b) Causes hepatitis B?
- (c) Causes herpes?
- (d) Causes genital warts?

Choose your answers from the following:

- ☐ Herpes virus
- ☐ Human papilloma virus
- ☐ Human immunodeficiency virus
- ☐ Hepatitis B virus

5. The symptoms of Chlamydia are:
- ☐ itchiness
 - ☐ pain on urination
 - ☐ headache
 - ☐ fever
 - ☐ nausea
 - ☐ rash
 - ☐ Check the correct symptoms.
6. The condom *does protect/does not protect/nearly always protects, if used correctly*, against HIV transmission.
Circle the correct choice.

7. True or false? HIV infection can result from:

HIV entering the bloodstream on a needle or sharp instrument.

Blood or sperm touching the intact skin of another person.

HIV being breathed in through the mouth _____

8. Join each disease with the correct route of transmission.

Disease

Route of transmission

AIDS

air

malaria

lack of hygiene

influenza

unprotected sexual intercourse

gastroenteritis

mosquitoes

STD

blood products

Interviews

Interviews are a useful means of gaining information, especially on the outcomes of the program related to skills and values. The interviewer may use either an established list of questions or a system of flexible questions. For most evaluation interviews, a list of questions is prepared, especially if comparison between groups is sought.

Example of an interview with HBCU students (focus groups) on the skills component of education on HIV/AIDS/STD

1. What has the HIV/AIDS/STD program taught you about skills to protect yourself and others against these conditions?
2. What skills and resources are needed that the program did not provide?
3. How could you tell your partner what you believe about having sex? What is likely to happen then?
4. Describe how a condom is used, and how it can be obtained.
5. What would you say to a friend who you thought might be in danger of becoming infected with HIV or another sexually transmitted disease?
6. Describe some situations that might put young people in this school at risk of HIV infection/transmission. What are the safer types of behavior that could minimize the risk? What conditions would encourage them to practice safer behavior? What conditions would discourage them?

Sample anonymous questions

Rating scales are particularly useful in assessing the beliefs and attitudes of Students in relation to particular issues as measures of either process or outcome

They provide the evaluator with information about the values that underlie Behavior and may point the way to future program development. The data Collected must be anonymous.

Examples

1. Rank the following statements from 1 to 7, putting the statement you think the most accurate as 1, and the one you think the least accurate as 7.

- Only homosexuals have AIDS/STD.
- Anyone who has unprotected sexual intercourse or shares needles can become Infected with HIV.
- STDs are only a worry when you do not use a condom.
- AIDS is a real danger to everyone in the community.
- Prostitutes are the main carriers of HIV in this community.
- If a person never has anal sex, he/she will not become infected with HIV.
- People having unprotected sexual intercourse with many partners are at HIV/STD infection in our community.

2. Complete the following by putting a mark on the line between 1 and 5.

A mark near to 1 means that you strongly agree.

I would be able be able to touch and care for someone with AIDS.

1	2	3
Strongly agree		Strongly disagree

3 I would dislike having some in my class with gonorrhea.

1	2	3
Strongly agree		strongly disagree

STDs are only avoidable in an exclusive sexual relationship

1	2	3
strongly	strongly	

	agree	disagree
AIDS is a disease syndrome from which I can protect myself	1 strongly agree	2 3 strongly disagree
Using a condom while having sex can be fun.	1 strongly agree	2 3 strongly disagree
Condoms spoil the Spontaneity of sex.	1 strongly agree	2 3 strongly disagree

3. Select the attitudes that are nearest to yours:

- ☐ I believe that people should only have sex with a single partner.
- ☐ I believe that it is fine to have sex with anyone as long as you are not cheating on someone.
- ☐ I believe that sex is fine with one person at a time.
- ☐ I am not going to have sex with anyone right now.
- ☐ Girls are frigid and do not like sex.
- ☐ I won't have sexual intercourse with someone without a condom.
- ☐ I hate condoms and won't wear them or ask my partner to wear them.
- ☐ I want to have sex but I prefer at present to have non-penetrative rather than penetrative sex.

The following words describe how you might feel about education on AIDS/STD.

Rank the words from 1 to 8; 1 = the feeling you have most often, 8 = the feeling you have least often.

informed
interested
board
angry

happy
improved
frustrated
responsible

Rank the following outcomes of evaluation on AIDS/STD in the order of their importance for you.

Education on AIDS/STD:

- helps me to know how to use a condom.
- helps me to understand my own values.
- helps me to realize that I am responsible for my own sexual relationships.
- helps me to take better decisions about sex and drug use.
- gives me more information about AIDS/STD.
- helps me to know the symptoms and causes of AIDS/STD.
- changes my attitudes towards sex.
- helps me to change my sexual behavior in the direction of monogamy.

Surveys

Surveys are primarily a means of gaining information about behavior and behavioral change. When carried out before and after a program, they give clear indications of the status of risk behavior among participants. Such information combined with information about behavioral determinants, are important planning tools. The question of how often

and when to conduct surveys is always difficult as AIDS/STD programs aim at sustained behavioral change.

Sample survey

The data collected should be anonymous.

How are the important things you can to protect yourself and others against HIV/STD?

What are the obstacles that could make it difficult for you or others to avoid risk?

What have you learned from the program?

What has been the worst thing about this program?

What effect will this program have on your behavior:

Next month? _____

Next year? _____

Next 5 years? _____

for the rest of your life? _____

Write three words to describe your feelings so far about this program.

What are the two most important things you have learned about AIDS and STD?

The program on AIDS/STD has so far influenced me:

To learn more about AIDS/STD.

1	2	3
strongly disagree		strongly agree

to use condoms every time I have sex.

1	2	3
---	---	---

not to inject myself with drugs for non-medical reasons and not to share needles and syringes.

1	2	3
---	---	---

What else do you need to know before the lessons on AIDS/STD are completed?

Pre-existing data

A great deal of useful data is available to HBCU planners from such sources as:

- national census figures (for example, age-specific birth rates for adolescents);
- surveys conducted by other agencies (for example, newspapers and magazines);
- birth rates and abortion rates,
- sales figures from contraceptive manufacturers (for example condom sales in specific areas);
- programs conducted by other agencies (for example, needle exchange programs).

The above indicators help in evaluation. The extent to which they can be used depends on:

- How regularly they are available;
- How specific the information is (for example, whether they give rural and urban

figures for specific age groups);

- How they take account of contributing factors.

The quality of these indicators can be improved through review of the methods by which they are collected and adjustment of the systems of collation and analysis. It is the responsibility of the educational system to obtain the information in the most useful form. Some pressure may therefore need to be brought to bear on the agency involved to provide more use information.

Reports, agendas, records, etc.

Agendas and reports of meetings can provide useful details for evaluation by indicating the current situation and possible future trends. They also give evaluators subjective information about the program and whether its objectives are being met.

The data may be obtained from HBCU health educators (staff meeting reports), and HBCU students (small focus group discussions on program trends).

Suggestion boxes

Suggestion boxes may be useful in obtaining feedback from HBCU health educators, and students on how the program is progressing. Suggestions will often be made that influence the trends positively. It is unrealistic, however, to expect that there will always be suggestions in suggestion boxes. At times, the program planner will need to create situations that elicit suggestions, for example, meetings, competitions, memoranda.

Feedback sheets

Feedback sheets are used to obtain immediate feedback about a lesson, a training session, a meeting, etc. They permit a quick response and provide the program presented with information about the progress of the program.

Example

1. This lesson was (circle the most appropriate face):

I learned _____

I liked _____

I will _____

2. This meeting of HBCU health educators was (circle the worlds that most suit your feelings):

uncomfortable
boring
useful

challenging
interesting
a waste of time

enjoyable
informative

Comments:

Appendix 2

The content of education on HIV/AIDS/STD

A list of options, additional to those on above is given below. It is provided for guidance only, as the actual content will vary from HBCU to HBCU.

The content an HIV/AIDS/STD program must reflect the realities of transmission and emphasize the prevention of transmission. Risk reducing behavior must therefore be discussed in the specific context of the HBCU setting and appropriate to the needs of their students.

Example 1

Knowledge	What are STDs and how are they caused?
Attitudes	I do not have HIV/AIDS/STD. Therefore, I am not very concerned about HIV/AID/STD as a public health issue.
Beliefs	Only homosexuals need to worry about contracting AIDS.
Behaviors	I do not have HIV/AIDS or an STD. Therefore, I will continue to participate in unsafe sex without wearing a condom.
Skills	How can people avoid getting an STD?
Values/feelings	How would you react if someone you knew had a sexually transmitted disease? Why? How would you feel if you Had a sexually transmitted disease? Why?
Support	Where can a person with an STD get help?

Example 2

Knowledge	What do people do that puts them at risk of contracting HIV?
Attitudes	I do not have HIV/AIDS or an STD. Therefore, I do not think that it is necessary that I discuss the use of condoms with my casual sex partner.
Beliefs	Women are at very low risk of getting HIV.
Behaviors	AIDS is a gay man's disease. I am not a gay man. Therefore, I do not wear a condom when having casual sex.
Skills	How do you avoid contracting or transmitting HIV?
Values/feelings	Do your values or feelings influence the way you behave?
Support	What values in the community influence our behavior?

Example 3

Knowledge	What factors may influence communication within relationships? What needs to be changed and what can individuals do by themselves and with others to make these changes?
Attitudes	Discussing to a casual sex partner takes the enjoyment out of sex.
Beliefs	People who are HIV-positive are easy to pick out of a crowd even if they have not developed AIDS.
Behaviors	In the past 12 months I have engaged in high-risk sex even though this behavior has increased my chances of acquiring HIV.
Skills	How can we communicate effectively within relationships?

Values/feelings	Which values/feelings about gender, power, social acceptability, and culture facilitate good communication and how can we strengthen these? Which make good communication difficult and how can we overcome these?
-----------------	--

Support	Who can you talk to about relationships?
---------	--

Example 4

Knowledge	Do condoms protect from HIV infection and STD?
-----------	--

Attitudes	Wearing a condom destroys the pleasure of sex. Therefore I do not use a condom during sexual intercourse.
-----------	---

Beliefs	I do not believe that even a condom coated with N9 can prevent HIV/STD. Therefore, I do not wear a condom during sexual intercourse.
---------	--

Behaviors	I have injected non-prescription drugs within the past 12 months.
-----------	---

Skills	How do you talk to your partner about using a condom?
--------	---

Values/feelings	What are your beliefs about condoms?
-----------------	--------------------------------------

Support	Where can people obtain condoms?
---------	----------------------------------

Appendix 3

Teaching resources and strategies

Program presenters require a variety of teaching resources and strategies to enable their students to acquire knowledge and skills related to HIV/AIDS/STD. The teaching needs to be both didactic and participatory. A collection of resources and strategies should be obtained or developed by the HBCU institutions.

A brief description of teaching resources and strategies that may be appropriate to education about HIV/AIDS/STD is given below.

Resources

- Books: either for use by students or as a reference for instructors.
- Films and videos: these must be appropriate and provide accurate information.
- Other audiovisual material: for example, slides, posters, pamphlets, and photographs.
- Flip charts: a collection of large paper sheets with illustrations and short messages. Sheets must be large enough to be seen by the students. The instructor uses the illustrations to stimulate discussion or to draw attention to important topics.
- Worksheets: question sheets for students to fill in.
- Information sheets: handouts and pamphlets containing relevant information in a form intelligible to the reader.

Teaching strategies

- **Small group discussion:** Discussion in groups ranging from two to ten or more students. As a general rule, the more personal the topic under discussion, the smaller the group. For example, the most important risk behavior in the transmission of HIV in the community would be discussed in a small group.
- **Large group discussions:** groups may include the whole class. The large group discussion is often used in association with more didactic methods of teaching.
- **Role playing:** a technique in which students are given a role and a situation to act out. The interaction can be analyzed and discussed by the group. It is important to debrief all the participants at the end. Role playing may be conducted in small or large groups; students who do not have a role to play are observers. (As an example, students may play the roles of a boy, P, who persuades a girl, M, to have sex with him; M does not really want to, but ends up complying. They then discuss the situation with their friends.)
- **Rehearsal play:** in this strategy one person does not play a role, but other people do. The interaction involves the person without a role (therefore being himself or herself) in rehearsal of a real situation. This strategy is valuable in helping students to practice assertive behavior or in communicating about difficult issues in actual situations they feel they may encounter. For example, a student practices resisting pressure to use drugs or to have unprotected sexual intercourse.
- **Strategies to clarify values:** all strategies identified by this term attempt to help students to discover what values they prize and choose to act on. All encourage

the analysis and justification of one's own values while listening to and tolerating the values of others.

- ***Rank ordering*** is a method in which students are given a case to study and ask to rank the behavior of the characters according to their own values. Students then discuss their values.
- ***Value questionnaires*** are worksheets containing questions that have no definitely right or wrong answers; students are encouraged to analyze their values. The answers may be discussed.
- **Moral dilemma:** this is a strategy where an unfinished scenario is provided for discussion. Students are encouraged to finish the story; (a) for characters involved, and (b) as if they themselves were the central characters. Discussion follows on the various decisions, consequences, and possible courses of action.
- **Case studies:** these may be used to provide information, demonstrate use of particular skills, or present a range of values. Case studies are usually used to promote reflection, analysis and discussion.
- **Brainstorming:** a discussion among students on a given topic, where participants feel free to express their opinions. The conclusions of thoughts, questions and experiences.
- **Reflection:** students are encouraged to take time to reflect on a question. This usually precedes discussion and allows for the ordering of thoughts, questions and experiences.

- **Debates:** a topic is discussed, one student taking a position for and another, a position against. Debates on issues may be formal or informal.
- **Play–writing/reading:** this involves the use of creative reading or the writing of relevant material.
- **Collage–making:** students present their ideas on a topic by developing a picture usually made from cut–out sections of newspapers and magazines but at time drawn or written.
- **Peer teaching:** informed students talk to their peers. These students are sometimes a little older than the target group. They must be trained in how to be peer teachers and be given accurate information on HIV/AIDS/STD.
- **Quizzes:** worksheets may be used as quizzes (including crosswords) or the quizzes may be oral.
- **Talks, lectures:** information is given to the whole group by a speaker.
- **Songs:** these can be developed by students, or appropriate popular songs can be used as “trigger” material – material which will trigger discussion about relevant issues.
- **Posters:** these can be developed by students, or appropriate existing posters can be used as trigger material.

Glossary

The definitions given here relate to the use of terms in this work, and are not necessarily applicable in other contexts.

Comparative world view A re–conceptualization of the problem of HIV/AIDS/STD

implying that the solution to HIV/AIDS/STD infection among African American college students, and in the population at large, will require the “Africanization” of America.

Curriculum The entire body of courses of study designed to meet the goals and objectives of HBCU institutions

Family life education Education, within the socio-cultural context of the HBCU family and society, designed to assist HBCU students in their physical, social, emotional, and moral development as they prepare for life after college, marriage, parenthood, and aging.

Family planning Practices that help HBCU individuals or couples to avoid unwanted births, bring about wanted births after marriage, regulate the intervals between pregnancies, and decide the number of children in the family.

Focus group interviews Interviews with representatives (usually 6–12) of a target audiences who are asked prepared questions on a selected topic and encouraged to speak freely, so that the interviewers can gain an insight into what the target audience thinks about the topic.

Formal education Education that is planned, structured, imparted, and evaluated in due form to meet specific subject or program objectives.

Health education Any combination of learning experiences designed to promote the adoption of behavior conducive to health.

Informal education Education that takes place in an unstructured way, often as the result of a question or during a general discussion.

Population education Education presenting information to HBCU students and instructors about population and population control with the aim of developing rational

and responsible attitudes and behavior in relation to the family, the community, and the national and world population situation.

Risk behavior In the context of this guide, any behavior by an HBCU student that may place that student or other people at risk of contracting HIV infection or any STD, for example, unprotected sexual intercourse or the use of potentially infected skin-piercing equipment.

HBCU health education program A course or group of courses of study designed to meet the HBCU health goals and objectives, such as the prevention of HIV/AIDS/STD.

Sex education Education designed to develop understanding of the biological, socio-cultural, psychological, spiritual, and ethical aspects of sexual behavior among HBCU students.

Target audience HBCU students with common characteristics to whom health promotion messages are specifically addressed.

Fig. S-1. A Decisional Balance Sheet. A schematic balance sheet grid for conceptualizing decisional conflict (i.e. utilitarian gains/losses) Based on Janis (1989). Operationalized for *Assessment of the HIV/AIDS Knowledge, Attitudes, Beliefs and Behaviors of Students Attending Historically Black Colleges and Universities in the Southeastern United States: The basis for Developing a Conceptual Teaching/Learning Framework*.

TYPES OF ANTICIPATION	ALTERNATIVE COURSES OF ACTION					
	Alternative 1 (e.g. engage in unprotected sex and I.V. drug use.)		Alternative 2 (e.g. practice 'safe sex' and give up I.V. drug use)		Alternative 3 (e.g. become asexual and I.V. drug free)	
	+	-	+	-	+	-
A. Utilitarian gains or losses for self: 1. Provides daily pressure; relieves tension and emotional stress. 2. Increases chances of developing HIV/AIDS/STD. 3. Offers emotional stress of poor health and impending death from a catastrophic illness. • • n.						
B. Utilitarian gains or losses for significant others: 1. The emotional stress associated with the knowledge that a friend or loved one is dying from HIV/AIDS. 2. The loss of respect from friends and loved ones. 3. The financial burden of a catastrophic illness. • • n.						

TYPES OF ACTICIPATION	ALTERNATIVE COURSES OF ACTION					
	Alternative 1 (e.g. engage in unprotected sex and and I.V. drug use)		Alternative 2 (e.g. practice 'safe sex' and give up I.V. drug use)		Alternative 3 (become asexual and I.V. drug free)	
	+	-	+	-	+	-
C. Self-approval or –disapproval 1. Moral considerations associated with the stigma of a sex-related illness. 2. The 'good feeling' that comes with making a decision that reflects maturity and intelligence. 3. The 'guilt trip' associated with experimentation with sex and drugs. . . n.						
D. Social approval or disapproval 1. From family 2. From close friends 3. From health professionals (e.g. sex therapists, drug treatment counselors, etc.). . n.						

Fig. S-2. A Decisional Balance Sheet. A schematic balance sheet grid for conceptualizing decisional conflict (i.e. approval/disapproval)). Based on Janis (1989). Operationalized for *Assessment of HIV/AIDS Knowledge, Attitudes, Beliefs and Behaviors of Students Attending Historically Black Colleges and Universities in the Southeastern United States: The Basis for Developing a Conceptual Teaching/Learning Framework*.

APPENDICES

APPENDIX A

PROTOCOL FOR RECRUITMENT AND

QUESTIONNAIRE ADMINISTRATION

PROTOCOL FOR RECRUITMENT AND QUESTIONNAIRE ADMINISTRATION

A. Contact professors at HBCUs:

Professors at Fisk College, Tennessee State University, Atlanta University, Savannah State University and others will be contacted (via phone and e-mail) to explain the study's purpose and importance, to obtain approval to recruit their students, and to gain permission to conduct the study of HIV/AIDS knowledge, attitudes, beliefs and behaviors of students attending Historically Black Colleges and Universities in the Southeastern United States. They will be informed of the approval obtained from the University of Tennessee Knoxville Institutional Review Board (IRB) to administer the survey, which will take approximately 20 minutes to complete. The researcher will solicit the professor's assistance in recruiting students 18 years and older without restrictions on race, gender or ethnicity. The researcher will re-contact the various professors/departments head one week prior to mailing the letter soliciting participation to confirm the day and time agreed upon, by telephone and email, for the PI to arrive on the HBCU campus to present the PRQA and administer the KABB Survey questionnaire to students enrolled in Personal Health and Wellness and/or any other general education course.

B. Class Presentations:

- After written permission is obtained, the PI will explain the study's purpose and importance to the class.

C. Guidelines for Class Presentation:

- The entire presentation should take no longer than 10 minutes.
- The PI will conduct the presentation at the beginning (or end) of the class period.
- Introduction: The PI will mention his affiliation with the University of Tennessee Knoxville, College of Education Health and Human Sciences.
- The PI will inform the students that he has received approval to conduct the study from both the University of Tennessee's Health and Safety Program's Review Committee and the university's institutional review board (IRB).
- The PI will inform the students that participation in this survey is voluntary.

The following steps will be implemented for all class presentations:

STEP 1: Describe study and study's purpose. My name is John Michael. I am the Principle Investigator, hereafter known as the PI, of this project. This is a study in the area of HIV/AIDS. The purpose of this study is to assess HIV/AIDS knowledge, attitudes, beliefs and behaviors of students attending historically Black colleges and universities for the purpose of developing a teaching/learning framework for use with the appropriate

- HBCU course, that can assist HBCU counselors in assisting students in assessing and reducing their risk of HIV (and STD) infection.
- STEP 2: Describe population inclusion criteria. The researcher is interested in recruiting HBCU students between the ages of 18 years of age or older.
- STEP 3: Describe procedure. Participants will be asked to complete a structured closed-end, self-administered questionnaire which will take approximately 20 minutes.
- STEP 4: Describe confidentiality procedures. All materials will remain confidential meaning that completed questionnaires will be kept in locked files. There will be no way a participant can be linked to data in the study. Confidentiality is required through regulation of the Human Subject Review Committee to protect all data. This research has been approved by both the University of Tennessee Knoxville Health and Safety Programs Review Committee, and the University of Tennessee Knoxville Institutional Review Board by reviewing the study and seeing that all requirements for confidentiality are complete.
- STEP 5: Data use. The data will be used solely for the purposes of producing this dissertation for publication and for discovering information or adding to the existing body of knowledge concerning the factors that directly influence HIV/AIDS related behavior among HBCU students.
- STEP 6: Describe participants' indirect benefits. Participants will be contributing to and assisting in a very important study that can help to understand college students' HIV/AIDS knowledge, attitudes, beliefs and behaviors. Further applications of this research in different populations will allow college instructors to understand the health-seeking behaviors of students from a variety of cultural backgrounds; the desired outcome being information that will assist counselors in assisting students in assessing and reducing their risk of disease infection.
- STEP 7: Inform sensitive nature of questions. Some questions are of a sensitive nature which could make some participants uncomfortable. Participants are asked to try to answer as best and honestly as possible. Participants can terminate answering the questionnaire at any time.
- STEP 8: Describe potential adverse psychological reactions. There is the risk that participants could suffer adverse psychological reactions from exposure to the research material in this instrument. Some participants may consider the terms used to construct some of the questions disturbing. If so, he/she may discontinue the survey. If she/he chooses not to discontinue the survey, the participant should quietly bring the questionnaire to the front of the classroom and hand the instrument to the PI. The PI will make available a telephone number to your school's counseling service or to the local HIV/AIDS/STD crisis hotline for psychological counseling, should this be required.
- STEP 9: Describe voluntary participation. Participation is voluntary. Each participant will be required to sign the attached Human Subjects Research Consent letter prior to opening the questionnaire.

- STEP 10: Questions during completion of questionnaire. While filling out the questionnaire, if participants have any questions, they may ask the PI by raising their hand.
- STEP 11: Allow for questions. Are there any questions regarding the study, participation, or any procedures?
- STEP 12: Distribute Human Subjects Research Consent letter. Those participants who chose to participate must first sign the consent form. The consent forms will be collected and kept separate from the questionnaires.
- STEP 13: Distribution of self-administered questionnaire in group setting. Those who chose to participate will be handed the instrument. Questionnaire distribution will be given in exam format to protect subject confidentiality. The PI will request, whenever possible, that the subjects sit two seats and two rows from each other. To maintain confidentiality, the student is not to write his/her name on the questionnaire. Please use a #2 pencil. The student who chooses not to participate is instructed to leave the classroom at the end of this class period and prior to the administering of this survey.
- STEP 14: Collection of completed survey. Upon completion of the instrument, the student is to place the survey in a specified envelope located at the front of the classroom.

D. Thank the Participants:

Thank you for your patience, time, cooperation and participation in this important research project.

APPENDIX B
KNOWLEDGE, ATTITUDES, BELIEFS AND BEHAVIOR (KABB) SURVEY

**HIV/AIDS RELATED KNOWLEDGE, ATTITUDES, BELIEFS
AND BEHAVIORS (KABB) QUESTIONNAIRE**

Dear Participant:

The purpose of this questionnaire is to assess the HIV/AIDS/STD knowledge, attitudes beliefs, and lifestyle related behaviors. Several questions ask about your ideas and feelings about sexual behavior. It is possible that some questions may make you feel a bit uncomfortable. Your participation is entirely voluntary and you may withdraw permission to participate in this study without explanation at any time. Your answers are completely confidential; no one will know what you say or how you answer the questions. Please answer all questions as honestly as possible, and to the best of your ability. The information from this study will be used solely for the purpose of producing this research and to serve as a basis for developing instructional materials for colleges and universities. Thank you for your participation in this important project.

SECTION I: Opinions Regarding Public Policy

Q1. How concerned are you about HIV and AIDS as a public health issue? On a scale of 0 to 10, where 0 means you are not concerned at all and 10 means you are extremely concerned, how would you rate yourself? 0 _____ 10

Q2. Have you ever contributed time or money to an organization that is concerned with HIV or AIDS related issues?

PLEASE CIRCLE THE NUMBER ADJACENT TO YOUR REPLY FOR THE FOLLOWING ITEMS.

Yes 1 No 5 (*Skip to Q4*) Don't Know 8 (*Skip to Q4*)

Q3. Have you contributed time or money to these organizations within the past 12 months?

Yes 1 No 5 Don't Know 8

Q4 Do you think that HIV prevention information should be provided in public schools?

Yes 1 No 5 (*Skip to Q6*) Don't Know 8 (*Skip to Q6*)

Q5. At what grade do you think children should begin receiving education in school about HIV infection and AIDS?

Grade 0 Kindergarten 66 Never 77 Don't Know 88

Q6. Generally speaking, how much do you feel that you know *about* ways to prevent getting HIV, the virus that causes AIDS? On a scale of 0 to 10, where 0 means you are not at all informed and 10 means you are very informed, how informed are you about ways to prevent getting HIV?

Rating _____ Don't Know _____ 88

Q7. How likely do you think it is that a person can get HIV, the virus that causes AIDS? Please indicate your answer by circling the number under the choices of very likely, somewhat likely, not very likely, definitely not possible or you don't know.

A. Using public facilities, such as buses and telephones?

B. Very Likely, Somewhat likely, Not Likely, Definitely Not Likely, Don't Know

1 2 3 4 8

C. Using public toilets?

Very Likely, Somewhat Likely, Not Likely, Definitely Not Likely, Don't Know

1 2 3 4 8

D. Going to school with a child or teacher who is infected with HIV?

Very Likely, Somewhat Likely, Not Likely, Definitely Not Likely, Don't Know

1 2 3 4 8

E. Being bitten by a mosquito or other animal?

Very Likely, Somewhat Likely, Not Likely, Definitely Not Likely, Don't Know

1 2 3 4 8

F. Sharing drug needles with a person with HIV?

Very Likely, Somewhat Likely, Not Likely, Definitely Not Likely, Don't Know

1 2 3 4 8

G. Kissing a person on the cheek who has HIV?

Very Likely, Somewhat Likely, Not Likely, Definitely Not Likely, Don't Know

1 2 3 4 8

H. Having sexual intercourse with a person who has HIV without a condom?

Very Likely, Somewhat Likely, Not Likely, Definitely Not Likely, Don't Know

1 2 3 4 8

Q8. Can an HIV-infected pregnant woman pass HIV to her unborn child?

Yes 1 No 5 (*SKIP TO Q10*) Don't Know 8 (*SKIP TO Q10*)

Q9. Do you know if there are any medicines that an HIV-infected pregnant woman could take to help prevent the baby from getting HIV?

Yes, I know there are some 1 No, I don't know if there are any 2

Q10. Do you feel that persons with HIV should be reported to health departments using a unique code to protect their identity, by their name for greater accuracy, or not be reported at all?

Be reported by a unique code 1 (*SKIP TO Q12*), be reported by name 2 (*SKIP TO Q12*),
Not be reported at all 3 (*GO TO Q11*), don't know 8, REFUSED 9 (*Skip to Q12*)

Q11. What is the main reason you think they should not be reported?

HIV status is a private medical matter	1
The identity of the person should not be revealed	2
You don't trust the health department with this information	3
Other/Specify _____	77
Don't Know	88
REFUSED	99

There are several methods that have been suggested to fight the spread of HIV, the virus that causes AIDS. Please indicate if you think each method would help prevent the spread of HIV or not.

Q12. Providing clean needles for injection of drug users in the community

Yes, effectively 1, No, not effective 5 (*Skip to Q13*),
DK 8 (*Skip to Q13*), REFUSED 9 (*Skip to Q13*)

Q12A. Do you think the State should pay for this or should private individuals and organizations pay for it?

State 1, Private 2, Neither. No one should pay 3
Both the state and the private sources should pay 4, Don't Know 8, REFUSED 9

Q13. Providing clean needles for injection drug users in prisons. Would this help prevent the spread of HIV, or not?

Yes, effective 1,

DK 8 (*Skip to Q14*),

No, not effective 5 (*Skip to Q14*)

REFUSED 9 (*Skip to Q14*)

Q13A. Do you think the State should pay for this or should private individuals and organizations pay for it?

State 1,

Private 2,

Neither. No one should pay 3

Both the state and the private sources should pay 4, DK 8, REFUSED 9

Q14. Providing condoms for use by people in prisons. Would this help prevent the spread of HIV or not?

Yes, effective 1

DK 8 (*Skip to Q15*)

No. Not effective 5 (*Skip to Q15*)

REFUSED 9 (*Skip to Q15*)

14A. Do you think the State should pay for this or should private individuals and organizations pay for it?

State 1,

Private 2,

Neither. No one should pay 3,

Both the state and the private sources should pay 4, DK 8, REFUSED 9

Q15. Requiring doctors and clinics to report cases of HIV infection to the Health Department. Would this help prevent HIV or not?

Yes, effective 1

DK 8 (*Skip to Q16*),

No. Not effective 5 (*Skip to Q16*)

REFUSED 9 (*Skip to Q16*)

Q15A. Do you think the State should pay for this or should private individuals and organizations pay for it?

State 1,

Private 2,

Neither. No one should pay 3

Both the state and the private sources should pay 4, DK 8, REFUSED 9

Q16. Requiring pregnant women to get an HIV test, would this help prevent the spread of HIV or not?

Yes, effective 1

DK 8 (*Skip to Q17*)

No, not effective 5 (*Skip to Q17*)

REFUSED 9 (*Skip to Q17*)

Q16A. Do you think the State should pay for this or should private individuals and health insurance organizations pay for it?

State 1 Private 2 Neither. No one should pay. 3
Both the state and private sources should pay. 4 DK 8 REFUSED 9

Q17. Now I would like to tell you about some new ways that people may be able to protect themselves from HIV as well as other sexually transmitted diseases. Currently scientists are developing substances that can block organisms that cause HIV as well other sexually transmitted diseases. Imagine that these new substances could be added to a cream or to a jelly, a suppository or a sponge that a woman could insert directly into her vagina before having intercourse. And imagine that this would greatly reduce a woman's chances of getting HIV or other diseases, even if her partner didn't use a condom.

How great of a need, if any, do you think there is for these substances?
Would you say there is. . .

No need for this at all 1 There is a small need 2
There is a great need for these substances 3 Don't understand question 7
DK 8 REFUSED 9

[IF GENDER == MALE THEN SKIP TO Q18]

Q17A. If such items were available, how interested would you be in using them?
Would you say that you would be. . .

Not interested at all 1 A little interested or 2 Very interested 3
Can't imagine such a product 4 DK 8 REFUSED 9

Q18. Using a scale from 0 to 10, where 0 means that you completely disagree and 10 means that you completely agree, please indicate how much you disagree or agree with the follow statements.

- A. In Africa, most AIDS patients are heterosexual. _____
 - B. Not everyone infected with the HIV virus will go on to develop AIDS. _____
 - C. Infected individuals may look and feel fine and may not know that they are capable of spreading the disease. _____
 - D. Only homosexuals need to worry about contracting AIDS. _____
 - E. AIDS is a gay man's disease. _____
 - F. People who are HIV positive are easy to pick out of a crowd even if they have not developed AIDS. _____
 - G. Women are at very low risk of getting HIV, the virus that causes AIDS. _____
- DK 88 REFUSED 99

Q19. Would you agree or disagree with the following statement? I would feel uncomfortable if I learned that my neighbor was a gay man.

Agree 1 Disagree 2 Neither agree or disagree 3 (*Skip to Q20*)
DK 8 (*Skip to Q20*) REFUSED 9 (*Skip to Q20*)

Q19A. Would that be strongly or somewhat?

Strongly 1 Somewhat 2 DK 8 REFUSED 9

Q20. Do you favor or oppose allowing students with HIV to attend school if health officials say there is no danger?

Favor 1 Opposed 2 DK 8 REFUSED 9

Q21. If a person with HIV worked in the produce department of a grocery store where you shop, would you be concerned about buying produce there?

Yes, concerned 1 No, not concerned 5 (*Go to Q22*)
DK 8 (*Go to Q22*) REFUSED 9 (*Go to Q22*)

Q21A. Would you be .

Very concerned 1 Somewhat concerned 2, or Just a bit concerned 3
DK 8 REFUSED 9

Q22. Do you personally know or have you known anyone who has been diagnosed with HIV or died from AIDS or any AIDS-related condition?

Yes 1 No 2 (*Skip to Q25*) DK 8 (*Skip to Q25*) REFUSED 9 (*Skip to Q25*)

Q23. Of those people you personally know who were diagnosed with HIV, how many are still living?

Number ____ DK 888 (*Skip to Q25*) REFUSED 999 (*Skip to Q25*)

Q24. How many people do you know who have died from AIDS?

Number ____ DK 888 (*Skip to Q25*) REFUSED 999 (*Skip to Q25*)

Q25. What are your chances of getting infected with HIV, the virus that causes AIDS? Would you say high, medium, low, or none?

High 1 Medium 2 Low 3 None 4 DK 8 REFUSED 9

Q26. Have you donated blood in the last 12 months?

Yes 1 No 5 DK 8 REFUSED 9

Q27. Except for tests you may have had as part of blood donations, have you ever been tested for HIV? This includes the saliva test.

Yes 1 No 5 (*Skip to Q34*) DK 8 (*Skip to Q34*) REFUSED 9(*Skip to Q34*)

Q28. When were you last tested?

YEAR _____ DK 888 REFUSED 999

Q29. What was the main reason you had your last test for HIV?

Reason Code _____

Hospitalization or surgical procedure 1 To apply for health insurance 2
To apply for life insurance 3 For employment 4
To apply for a marriage license 5 For military induction or military service 6
For immigration 7 Just to find out if you were infected 8
Because of referral by a doctor 9 Because of pregnancy 10
Because of referral by your sex partner 11
Because it was part of a blood donation process 12
For routine checkup 13 Because of occupational exposure 14
Because of illness 15 Because I am at risk for HIV 16
Worried my sex partner had sex with others 17
OTHER 77 DON'T KNOW/NOT SURE 88 REFUSED 99

Q30. Generally speaking, are you familiar with the concept of safe sex, or not very familiar with it?

Familiar with safe sex 1 Not familiar with safe sex 5 (*Skip to Q36*)
DK 8 (*Skip to Q36*) REFUSED 9 (*Skip to Q36*)

Q31. According to information you have, how would you define Safe Sex?

CIRCLE ALL ITEMS THAT APPLY.

Reduce number of sex partners 1 No exchange of body fluids 2
Use condoms 3 Avoid anal intercourse 4
Be monogamous (one partner) 5 Be celibate (be abstinent) 6
Take sanitary precautions/be clean 7
Know partners/be aware of partners background 8
Avoid high-risk partners 9
Having sex with only one person who is not infected 10 Get tested for HIV 11
OTHER ANSWER 77 DK 88 REFUSED 99

These next few questions are about your own personal behaviors, including sexual intercourse. Sexual intercourse here is defined as vaginal intercourse, which is when the penis is put into a vagina, or anal intercourse, which is when a penis is put into an anus or rectum.

It is important for us to ask these questions of everyone so we can find out how many students are at risk. I want to remind you that all of your answers are confidential. In order to protect your privacy, you will be able to give me just the number of your answers for some of these questions.

Q32. Have you ever used needles to inject non-prescription drugs including vitamins and steroids, 1 “yes”, 2 “no”?

Yes 1 No 5 (*Skip to Q34*) DK 8(*Skip to Q34*) REFUSED 9 (*Skip to Q34*)

Q33. Have you injected these drugs within the past 12 months?

Yes 1 No 5 DK 8 REFUSED 9

[IF GENDER = FEMALE THEN SKIP TO Q41]

Q34. Have you ever had sexual intercourse with a partner who at the time was any of the following: another man, a person who has injected non-prescription drugs, or a person who has tested positive for HIV or has AIDS, 1 “yes”, 2 “no”?

Yes 1 No 5 (*Skip to Q40*) DK 8(*Skip to Q40*) Refused 9 (*Skip to Q40*)

Q35. About how many of these were casual sex partners? By casual sex, I mean any sex that is not a part of a long-term or committed relationship. Those people include any casual sex partners who were men who had sex with other men, injected non prescription drugs, or who tested positive for HIV/AIDS.

None	1	(<i>Skip to Q40</i>)	(1)	2	(<i>Skip to Q36</i>)
(2)	3	(<i>Skip to Q37</i>)	(3 or more)	4	(<i>Skip to Q37</i>)
DK	8	(<i>Skip to Q40</i>)	REFUSED	9	(<i>Skip to Q40</i>)

Q36. Have you had sex with this person within the past 12 months, 1 “yes”, and 2 “no”? [*This person was a casual sex partner and was a man who had sex with another man, a person who has injected non-prescription drugs, or a person who has tested positive for HIV/AIDS*].

Yes	1	(<i>Skip to Q40</i>)	No	5	(<i>Skip to Q40</i>)
DK	8	(<i>Skip to Q40</i>)	REFUSED	9	(<i>Skip to Q40</i>)

Q37. Have you had sex with any of those people within the past 12 months, 1 “yes”, and 2 “no”? *[Those people include any casual sex partners who were men who had sex with other men, injected non-prescription drugs, or who tested positive for HIV/AIDS].*

YES 1 NO 5 DK 8 REFUSED 9

[IF GENDER == MALE THEN SKIP TO Q46]

Q38. Have you ever had sexual intercourse with a partner who at the time was any of the following: a man who has had sex with other men, a person who has injected non-prescription drugs, a person who has tested positive for HIV/AIDS, 1 “yes”, 2 “no”

Yes 1 No 5 (Skip to Q42) DK 8 (Skip to Q42) Refused 9 (Skip to Q42)

Q39. About how many of these were casual sex partners? Casual sex means any people with whom you were not in a long-term or committed relationship. *[Those people include any casual sex partners who were men who had sex with other men, injected non-prescription drugs, or tested positive for HIV/AIDS].*

None 1(Skip to Q41) (1) 2 (Skip to Q40) (2) 3 (Skip to Q41)
(3 or more) 4 (skip to Q41) DK 8 (Skip to Q42) REFUSED 9 (Skip to Q42)

Q40. Have you had sex with this person within the past 12 months, 1 “yes”, and 2 “no”? *[This person was a casual sex partner and was a man who had sex with another man, a person who has injected non-prescription drugs, or a person who has tested positive for HIV/AIDS].*

Yes 1 No 2 (Skip to Q42) DK 3 (Skip to Q42) Refused 4(Skip to Q42)

Q41. Have you had sex with any of those people within the past 12 months, “yes”, 2 “no”? *[Those people include any casual sex partners who were men who had sex with other men, injected non-prescription drugs, or who tested positive for HIV/AIDS].*

Yes 1 No 5 DK 8 Refused 9

Q42. During the last 12 months, with how many people have you had sexual intercourse? Again, sexual intercourse is meant vaginal or anal sex.
[If Q46 = 0/888/999 then skip to Q57].

Number _____ DK 888 REFUSED 999

(If Q42 == 0/888/999 then skip to Q57)

(If Q42 == 1 then go to Q43)

(IF Q42> 1 then skip to Q44)

Q43. Was this person a casual sex partner? Casual sex means any sex that was not a part of a long term or committed relationship?

Yes 1 (*Skip to Q45*) No 5 (*Skip to Q46*)
DK 8 (*Skip to Q46*) REFUSED 9 (*Skip Q46*)

Q44. About how many of these were casual sex partners? Casual sex means any sex that was not a part of a long term or committed relationship.

Number _____ DK 888 REFUSED 999

Q45. Thinking only about your casual sexual partners, during the last 12 months, when you have had sexual intercourse with these people, how often have you used a condom?

Every time 1 Most of the time 2 Sometimes, or 3 Never 4
DK 8 REFUSED 9

Q46. Thinking about your steady sexual partners, during the last 12 months, when you have had sexual intercourse with these people/this person, how often have you used a condom. Steady sexual partner means someone with whom you had a close, ongoing sexual relationship.

Every time 1 Most of the time 2 Sometimes, or 3 Never 4
Don't have any steady sexual partners 6
DK 8 REFUSED 9

Q47. How difficult is it to talk to your casual sex partner about using condoms?
Would you say it is ...

Very difficult 1 Somewhat difficult, or 2 Not difficult at all 3
Don't use condoms 4 DK 8 REFUSED 9

Q48. How difficult is it to talk to your steady sex partner about using condoms?
Would you say it is ...

Very difficult 1 Somewhat difficult, or 2 Not difficult at all 3
Don't use condoms 4 DK 8 REFUSED 9

Q49. Have you and your sexual partner ever used the female condom, 1 "yes", and 2 "no"?

Yes 1 No 5 I don't know what a female condom is 6
Know what it is, not sure if used it 7 REFUSED 9

Q50. Was a spermicidal such as a foam or gel used the last time you had sexual intercourse? This does not include a condom that was coated with nonoxynol-9 spermicidal.

Yes 1 No 5 (*Skip to Q52*) DK 8 (*Skip to Q52*) REFUSED 9 (*Skip to Q52*)

Q51. The last time you had sexual intercourse, was the spermicidal used 1, “to prevent pregnancy”, 2 “to prevent diseases like syphilis, gonorrhea, and HIV”, 3 “for both of those reasons”, or 4 “for some other reason”?

To prevent pregnancy 1	To prevent diseases like syphilis, gonorrhea, and HIV 2
For both of these reasons 3	For some other reason 4
DK 8	REFUSED 9

Q52. Was a condom used the last time you had sexual intercourse, 1 “yes”, and 5 “no”?

Yes 1 No 5 DK 8 Refused 9

Q52A. Was the condom coated with nonoxynol-9 spermicidal?

Yes 1 No 5 DK 8 Refused 9

Q52B. The last time you had sexual intercourse, was the condom used 1 “to prevent pregnancy”, 2 “to prevent diseases like syphilis, gonorrhea, and HIV”, 3 “for both of those reasons”, or 4 “for some other reason”?

To prevent pregnancy 1	To prevent diseases like syphilis, gonorrhea, and HIV 2
For both of these reasons 3	For some other reason 4
DK 8	REFUSED 9

SECTION II: *DEMOGRAPHICS*

Gender:

Male	1
Female	2

S1. What is your age? _____

S2. Please indicate your current marital status:

Married...	1
Widowed...	2
Divorced ...	3
Separated ...	4
Never been married...	5
"Living together"...	6

S3. Which of the following categories best describes your racial background? Are you:

White (Caucasian)	1
African American	2
Hispanic or Latino	3
Asian or Pacific Islander	4
American Indian	5
Alaskan Native	6
Something else (SPECIFY) _____	7
DK	8
REFUSED	9

S4. Please indicate your current living arrangement:

Living alone...	1
Living with parents...	2
Living with roommate...	3
Living with spouse/partner...	4

S5. If married: how long have you been married?

_____ Years _____ Months

S6. If living together:

How long have you been married?

_____ Years _____ Months

Please Continue On Reverse Side

S7. In 2004, was your total family income before taxes...

Under \$22,850 or	1
Over \$22,850	2
DK	8
REFUSED	9

S8. Do you consider yourself heterosexual or straight, gay, lesbian, or bisexual?

HETEROSEXUAL/STRAIGHT	1
GAY/LESBIAN	2
BISEXUAL	3
DON'T KNOW	8
REFUSED	9

S9. Classification

Freshman	1
Sophomore	2
Junior	3
Senior	4
Graduate	5

S10. Where do you get most of your information about HIV/AIDS?

Literature _____
TV _____
Radio _____
Newspaper/Magazine _____
Spouse _____
Doctor _____
Professor _____
Pamphlets/Posters _____
Church _____
Friend _____
Other _____

END. That was the last question. We greatly appreciate your help with this survey.

Thank you for your participation!

APPENDIX C

COVER LETTER

**University of Tennessee Knoxville
Health and Safety Programs
College of Education, Health & Human Sciences
1914 Andy Holt Avenue
Knoxville, TN 37996-2710**

October 13, 2005

Dr. Elizabeth Graham, Associate Dean
CVMNAH
Office of the Dean
Tuskegee University
Tuskegee Alabama 36088

Dear Dr. Graham:

I am a doctoral student attending the University of Tennessee Knoxville and conducting research on the assessment of HIV/AIDS knowledge, attitudes, beliefs and lifestyle-related behaviors. The sample for this study consists of students matriculating at historically black colleges and universities (HBCUs). Information gathered from this study will be used solely for the purposes of producing this dissertation for publication and for discovering new information or adding to the existing body of knowledge concerning the factors that directly influence HIV/AIDS related behavior among HBCU students.

The instrument utilized for this study is the HIV/AIDS Knowledge, Attitudes, Beliefs and Behaviors (KABB) survey, successfully administered in 2000 in California by the University of California, Berkeley, Center for Family and Community Health, on behalf of the California Department of Health Services, to gather information about HIV/AIDS KABB among the general population of California. In 2003, the National HIV Prevention Conference employed the KABB model to collect data regarding HIV prevention needs in a rural Midwestern state. This study, which has received the approval of my doctoral committee, will apply the KABB model to the study of HIV/AIDS among students attending HBCU institutions in the Southeastern United States.

What is hoped to be achieved from this research would be a foundation of knowledge that may assist HBCU instructors in developing communication strategies that capitalize on the knowledge HBCU students already possess while simultaneously assisting them in assessing and reducing their risk of HIV (and STD) infection.

Your cooperation is sought in recruiting students 18 years of age or older on a volunteer basis to complete a questionnaire that will require approximately 20 minutes. All information received will be treated confidentially. At no time will the students' identity/name be connected to their answers. The participants may refuse/withdraw at any time without penalty. Attached is a copy of the Human Subjects Research Consent Letter, which will be provided for each participant's signature. Due to the sensitive and personal nature of this study, the department heads and/or professors will identify their classes so that the PI can recruit the subjects to participate in this research project.

Should you have any questions regarding this research study, please feel free to contact me or my advisor Dr. Robert H. Kirk, Professor Emeritus, at the College of Education Health and Human Sciences at (865) 974-5041 or you may email me at Lateef88@utk.edu.

Thank you for your consideration and participation in the research project.
John F. Michael (Principle Investigator) MS, MA (Doctoral Candidate)

APPENDIX D
HUMAN SUBJECTS RESEARCH CONSENT LETTER

HUMAN SUBJECTS RESEARCH CONSENT LETTER

University of Tennessee Knoxville
Health and Safety Programs
College of Education, Health & Human Sciences
1914 Andy Holt Avenue
Knoxville, TN 37996-2710

Letter of Informed Consent

Date: _____

I (participants printed name in full) _____ am a student registered at (name of HBCU institution) _____. In signing this consent form, I agree to volunteer in the HIV/AIDS/STD research project being conducted by John F. Michael, the Principal Investigator on _____ (enter date).

I understand the research being conducted relates to the assessment of the HIV/AIDS/STD knowledge, attitudes, beliefs and lifestyle-related behaviors of students attending Historically Black Colleges and Universities. I understand that the results of this study may be published in a doctoral dissertation and in future papers, journal articles and books that will be written by the researcher.

I grant authorization for the use of the above information with the full understanding that confidentiality will be preserved at all times. I understand that my full name or other identifying information will never be disclosed or referenced in any way in any written or verbal context. I understand that completed questionnaires will be secured in the privacy of the researcher's (and/or his Chair's) office. I understand that this signed consent form will be filed separately from the completed questionnaires.

I understand that some items in the questionnaire are of a sensitive sexual nature and could make me feel uncomfortable, even conceivably cause adverse psychological reactions; therefore, I may skip over any questions and can terminate the questionnaire without explanation at anytime. In addition, telephone numbers of school counselors and HIV/AIDS/STD crisis hotlines will be provided, should this be necessary.

Student's Signature

Date

APPENDIX E

LIST OF PARTICIPATING HISTORICALLY BLACK COLLEGES AND
UNIVERSITIES

The following list contains the HBCUs that graciously participated in this research project.

Fort Valley State University
Fort Valley, Georgia

Jackson State University
Jackson, Mississippi

Knoxville College
Knoxville, Tennessee

Lemoyne Owens College
Memphis, Tennessee

Norfolk State University
Norfolk, Virginia

Stillman College
Tuscaloosa, Alabama

Tennessee State University
Nashville, Tennessee

Tuskegee University
Tuskegee, Alabama

APPENDIX F

LETTERS OF CORRESPONDENCE

APPENDIX G

SOCIO-DEMOGRAPHIC CHARACTERISTICS

HBCU STUDENTS

TABLE G1. SOCIO-DEMOGRAPHIC CHARACTERISTICS HBCU STUDENTS (N = 547)

		GENDER			
		Male		Female	
		Count	Row %	Count	Row %
Age	18-24	173	43.0%	229	57.0%
	25 and older	40	35.7%	72	64.3%
Group Total		213	41.4%	301	58.6%
Please indicate your current marital status.	Married	13	26.0%	37	74.0%
	Widowed	2	20.0%	8	80.0%
	Divorced	3	50.0%	3	50.0%
	Separated	3	50.0%	3	50.0%
	Never been married	171	43.3%	224	56.7%
	Living together	9	36.0%	16	64.0%
Group Total		201	40.9%	291	59.1%
Which of the following categories best describes your racial background?	White (Caucasian)	17	28.3%	43	71.7%
	African American	180	44.2%	227	55.8%
Group Total		197	42.2%	270	57.8%
Please indicate your current living arrangement.	Living alone	42	35.6%	76	64.4%
	Living with parents	54	50.9%	52	49.1%
	Living with roommate	94	45.0%	115	55.0%
	Living with spouse/partner	18	26.9%	49	73.1%
Group Total		208	41.6%	292	58.4%
If married: how long have you been married?	Under five years	7	21.2%	26	78.8%
	Five years or more	10	45.5%	12	54.5%
Group Total		17	30.9%	38	69.1%
If living together: how long?	Under 5 years	7	28.0%	18	72.0%
	Five years or more	8	34.8%	15	65.2%
	9.00	0	.0%	1	100.0%
Group Total		15	30.6%	34	69.4%
In 2004, what was your total income?	Under \$22,850	48	38.7%	76	61.3%
	Over \$22,850	89	43.6%	115	56.4%
Group Total		137	41.8%	191	58.2%
Do you consider yourself heterosexual or straight, gay, lesbian, or bisexual?	Heterosexual/Straight	194	40.8%	281	59.2%
	Gay/Lesbian	0	.0%	6	100.0%
Group Total		194	40.3%	287	59.7%

TABLE G2. SOCIO-DEMOGRAPHIC CHARACTERISTICS HBCU STUDENTS

		Gender			
		Male		Female	
		Count	Row %	Count	Row %
Do you get most of your AIDS info from literature?	Yes, or selected	96	36.5%	167	63.5%
	No, or not selected	117	46.6%	134	53.4%
Group Total		213	41.4%	301	58.6%
Do you get most of your AIDS info from TV?	Yes, or selected	131	41.1%	188	58.9%
	No, or not selected	82	42.1%	113	57.9%
Group Total		213	41.4%	301	58.6%
Do you get most of your AIDS info from the radio?	Yes, or selected	50	42.7%	67	57.3%
	No, or not selected	163	41.2%	233	58.8%
Group Total		213	41.5%	300	58.5%
Do you get most of your AIDS info from news magazines?	Yes, or selected	106	41.9%	147	58.1%
	No, or not selected	107	41.0%	154	59.0%
Group Total		213	41.4%	301	58.6%
Do you get most of your AIDS info from your spouse?	Yes, or selected	20	62.5%	12	37.5%
	No, or not selected	193	40.0%	289	60.0%
Group Total		213	41.4%	301	58.6%
Do you get most of your AIDS info from your doctor?	Yes, or selected	70	35.5%	127	64.5%
	No, or not selected	143	45.1%	174	54.9%
Group Total		213	41.4%	301	58.6%
Do you get most of your AIDS info from your professor?	Yes, or selected	84	49.4%	86	50.6%
	No, or not selected	129	37.5%	215	62.5%
Group Total		213	41.4%	301	58.6%
Do you get most of your AIDS info from pamphlet/posters?	Yes, or selected	94	33.9%	183	66.1%
	No, or not selected	119	50.2%	118	49.8%
Group Total		213	41.4%	301	58.6%
Do you get most of your AIDS info from the church?	Yes, or selected	39	54.2%	33	45.8%
	No, or not selected	174	39.4%	268	60.6%
Group Total		213	41.4%	301	58.6%
Do you get most of your AIDS info from a friend?	Yes, or selected	61	51.7%	57	48.3%
	No, or not selected	152	38.4%	244	61.6%
Group Total		213	41.4%	301	58.6%
Do you get most of your AIDS info from another source?	Yes, or selected	51	42.5%	69	57.5%
	No, or not selected	162	41.1%	232	58.9%
Group Total		213	41.4%	301	58.6%

VITA

Vita

John Franklin Michael was born in New Hope, North Carolina. He was raised in Cincinnati and attended grade school in Cincinnati. He moved to Oakland, California to live with his aunt. He graduated from Merritt Community College (with *High Honors*). He entered Clark College, Atlanta, Georgia, where he received a Bachelor's of Art degree in Medical Illustration (He received the *Best in Medical Illustration* award, with honorable mention in both the Clark College Dean's List and the National Dean's List). In 1988, John entered The Ohio State University, Columbus, where he graduated with a Master's of Art degree in Community Health. His Master's thesis entitled, *Evaluation of Student Attitudes, Intentions, and Personal Health Behaviors as a Result of Having Completed AIDS Education 214, AIDS: What Every College Student Should Know at the Ohio State University During the Spring Quarter of 1990*, was selected for publication by Microform Publications, University of Oregon, and distributed to universities throughout North America, Europe and Australia. He received a second Master's degree in Science Education from the University of Tennessee, Knoxville prior to entering the PhD program.

John brings a diverse background to the PhD program. From 1971 to 1988 he worked as a broadcast journalist. He was Director of News and Public Affairs at WCIN Radio, Cincinnati and WVOL Radio, Nashville. While employed at WCIN, he produced documentaries on drug abuse among inner-city youth. One of his documentaries was nominated for the coveted Peabody Award for Journalistic Excellence. He served as Honorary Publicity Chairman for the Tribute to Dr. Martin Luther King, Jr. For his Jobs-

for-Youth program, he received a letter of commendation from the Vice-President of the United States. In recognition to his work with inner-city youth, he was invited to be the keynote speaker at the Cincinnati Advertiser's Club annual dinner. Shortly after transferring to WVOL, he was appointed Director of News and Public Affairs. The researcher hired Oprah Winfrey as a news reporter in her first job in journalism. While in this position, he produced weekly editorials on topics of interest to the Nashville community. For his outstanding editorials, the researcher received the Community Service Award from the Department of Military, State of Tennessee. He received the Outstanding Personality Award from WDCN TV's "Who's Who?" program. He later returned to Cincinnati, where he worked as a news reporter for WLW Radio/TV. He also worked for two years as a news reporter with the Mutual Broadcasting System (The Mutual Black Network) in Washington, D.C. before leaving the country for an extended stay abroad.

John lived in Tortola, (BVI) with his wife from 1976 until returning in 1984. While there, he was self-employed as a freelance artist (portrait painting), and broadcaster for the local radio stations (located on the islands of Ana Gorda and Virgin Gorda, BVI), after which he returned to California to begin his journey in pursuit of academic achievement. The acquisition of the Associate's of Art degree in Health Sciences from Merritt College, Oakland, California, fulfilled the most basic part of that journey, a journey that has ended with the awarding of the PhD degree from the University of Tennessee Knoxville College of Health Education and Human Sciences.