ABSTRACT

Title of Dissertation: PREDICTORS OF ABSTINENCE, SAFER SEX AND HIGHER RISK SEXUAL BEHAVIORS AT A HISTORICALLY BLACK COLLEGE & UNIVERSITY

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In this cross sectional study, purposive sampling was used to examine the sexual behaviors and practices of African American college age students (n=681) attending a Mid-Atlantic HBCU. The majority of participants were women (72%) and sexually attracted to men (69%); the mean age was 20 (SD=1.3). The primary purpose of this research was to explore specific factors that may contribute to African American college students' decisions to practice abstinence, engage in safer sex or higher risk sexual practices. The Theory of Planned Behavior loosely guided the selection of variables, specifically normative beliefs, attitudes and behavioral control constructs were used to examine the sexual behaviors of African American college students. Binge drinking, marijuana use, the number of hours per day students' listened to rap music and viewed rap music videos, and the extent rap music or rap music videos influenced their sexual attitudes were variables examined using backward logistic regression. Additionally, the investigator examined religiosity and students' perceptions of whether peers and parents would approve of their engagement in specific sexual behaviors, using valid and reliable scales developed by other researchers. Demographic variables explored included age, gender and the students' sexual orientation. Results from research question one

(predicting whether students would be abstinent or sexually active) indicated age, marijuana use, and binge drinking were the best predictors, accounting for 22% of the variance. Students who reported binge drinking or marijuana use were more liked to report being sexually active than students not engaging in these behaviors. Research question two (distinguishing between sexually active students who engage in safer vs. riskier sexual behaviors) found that sexual orientation was the only significant predictor. The study documented greater sexual risk-taking behaviors among heterosexual women when compared to heterosexual males. This exploratory study helps fill the void in the literature about the sexual behaviors of African American college students.

PREDICTORS OF ABSTINENCE, SAFER SEX & HIGHER RISK SEXUAL BEHAVIORS AT A HISTORICALLY BLACK COLLEGE & UNIVERSITY

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Dissertation submitted to the Faculty of the Graduate School of the
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Dedication

I dedicate this dissertation to the memory of my grandmothers, Vermal M. Clements, and Annie D. Layton who are always with me in spirit. They would have proudly told everybody with their chests bulging out that their granddaughter received her Ph.D. from the University of Maryland, School of Public Health. My grandmothers were exemplars of faith and endurance. They ran their race with honor, dignity, distinction, and determination. Their lives touched me in profound ways that words do not fully express. I am grateful for their legacies.

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I first thank Jesus Christ for His grace, faithfulness, strength, and help every step of the way! He conceived this goal and He saw me through to its attainment.

When I reflect on some of the challenges, and obstacles I encountered in pursuing this terminal degree, "my soul wonders how I got over". One of the ways I know that I endured was through the prayers, encouragement, and support of my family, friends, mentors and colleagues.

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Chapter I: Introduction

Overview

The sexual behavior of African American college students is an area where more research is warranted. We know more about the negative consequences associated with engaging in unprotected sexual intercourse in this population but far less about the influences that converge and possibly contribute to African American college students choosing abstinence, engaging in safer sex or participating in higher risk sexual behaviors. Learning more about the sexual practices of African American college youth is a positive step in filling a void in the research and towards developing interventions, programs, and services to reduce negative health outcomes in this population.

Negative consequences associated with unprotected intercourse included HIV/AIDS, other sexually transmitted infections (STIs), and unintended pregnancies. Statistics revealed that racial and ethnic minorities have been disproportionately affected by HIV/AIDS since the beginning of the epidemic and now represent 72% of the new HIV/AIDS cases in the United States (Kaiser Family Foundation, 2005a). African Americans have the highest HIV/AIDS case rates of any racial/ethnic group followed by Hispanics/Latinos. In 2006, non-Hispanic Blacks made up 13% of the population but accounted for 49% of the diagnosed HIV/AIDS cases while Hispanics/Latinos made up 14% of the population and accounted for 18% of reported HIV/AIDS cases (CDC, 2008a). In 2002, HIV/AIDS was the third leading cause of death among African Americans between the ages of 25 and 34 and the sixth leading cause of death for

Hispanics/Latinos and whites (NCHS, 2005). African Americans accounted for 55% of deaths due to HIV/AIDS in 2002; Hispanics/Latinos accounted for 13% (NCHS, 2004).

Additionally, HIV/AIDS disproportionately impacts women of color. In 2002, HIV/AIDS was the leading cause of death for African American women 25 to 34 years of age (NCHS, 2005). Young adults and teens under the age of 25 continue to be at risk (CDC, 2006a, 2006c). Most young people are infected through sex, particularly teen girls and minorities. In 2006, teen girls represented 39% of the HIV/AIDS cases reported among 13-19 year olds. African American teenagers accounted for 69% of new AIDS cases reported in 2006, while Hispanic/Latino teens represented 19% (CDC, 2006a).

Statistics showed that teens and young adults under 25 also acquire other types of STIs. Sexually active youngsters (10 to 19 years old) and young adults (20 to 24 years old) are at highest risk for acquiring a sexually transmitted disease (STD) for various biological and cultural reasons. Each year there are approximately 19 million new STIs, including herpes, human papillomavirus (HPV), chlamydia, gonorrhea, and HIV/AIDS and almost half of the cases are among youth aged 15 to 24 (CDC, 2006b). African Americans have the highest rates of STIs (CDC, 2008b). In 2004, the chlamydia rate among women ages 15 to 19 was nearly seven times higher among Black females when compared to White females, 1,729 and 237.2 per 100,000 respectively; among Black males ages 15 to 19, the chlamydia rate was 11 times higher when compared to White males (645.2 and 57.3 per 100,000 respectively) (CDC, 2005b).

Gonorrhea rates in 2004 among Black males aged 15-24 years were the highest among all racial ethnic groups. In 2004, Black females aged 15-19 years had a gonorrhea rate of 2,790.5 cases per 100,000 females. This rate was 14 times greater than the 2004

rate among White females of similar age (CDC, 2006b). Black males in the 15 to 19 year old category had a 2004 gonorrhea rate of 1,390 cases per 100,000 males, which was 37 times higher than the rate among 15 to 19 year old White males (37.9 per 100,000). Among 20 to 24 year olds in 2004, the gonorrhea rate among Blacks was 17 times greater than the rate among Whites (2,487.2 and 149.0 cases per 100,000 respectively) (CDC, 2006b).

There has been progress in the reduction of teen pregnancy rates in the United States. The US teen pregnancy rate for teens 15-19 decreased 36 percent between 1990 and 2002 (Guttmacher Institute, 2006). The pregnancy data included births, abortions, and miscarriages. In the United States, 35 percent of girls get pregnant at least once by age 20. Despite recent declines, the U.S. still has the highest teen pregnancy and birth rates of any Western industrialized nation. African Americans achieved some of the steepest declines in both teen pregnancies and births. The birth rate for Black, non-Hispanic females ages 15–17 dropped by three-fifths between 1991 and 2005, reversed the increase between 1986 and 1991 while the birth rate for White, non-Hispanic teenagers declined by half during 1991–2005 (Federal Interagency Forum on Child and Family Statistics, 2007). Despite this decline, African Americans adolescents ages 15-17 had the second highest birth rate across racial and ethnic groups preceded by Hispanic teens. In 2005, the birth rate per 1,000 females for this age group was 8 for Asians/Pacific Islanders, 12 for White, non-Hispanics, 31 for American Indians/Alaska Natives, 35 for Black, non-Hispanics, and 48 for Hispanics (Federal Interagency Forum on Child and Family Statistics, 2007).

Although these trends were encouraging, other statistical data revealed that African American youth were engaged in sexual behaviors that jeopardize their health and well-being. In the most recent Youth Risk Behavior Surveillance Study (CDC, 2006c), African American youth reported the highest rates of having ever had intercourse: 67 percent compared to 42 percent of Whites. African American youth also reported having more sexual partners. Almost 30 percent of African American youth reported more than four lifetime partners, compared to just fewer than 11 percent of Whites. Most startlingly, almost one fifth of African American youth reported having had sex by the age of 13, compared to 4 percent of White youth.

Much that we learned about the sexual behaviors of African American youth and young adults have transpired, in large part, by prevention efforts and intervention studies to reduce HIV/AIDS in this community. Therefore, the researcher discussed the status of HIV/AIDS prevention education and intervention studies in the United States to further elucidate the need for this exploratory study.

Statement of the Problem

An important aspect of effective HIV/AIDS prevention education is implementing appropriate programs and services for the target population. Despite the multiplicity of school and community-based intervention programs implemented in the United States educating young people about the virus and teaching life skills to avoid infection, there are still far too many young people becoming infected. Most of the school-based interventions target students in grades 6 through 12. There is no uniformity in HIV/AIDS classroom instruction. The content of these programs varied from state to state and was governed by local school boards. School districts opted to

provide comprehensive sexuality education, abstinence based or abstinence only instruction. The type of instruction affected the extent and manner that youth receive information about contraception, pregnancy and STIs, all vital topics in HIV/AIDS prevention education. Comprehensive sexuality education included both messages about abstaining as well as information on how to avoid disease and pregnancy prevention when sexually active.

There was literature on promising interventions to reach young people (CDC-ACDP Research Group, 1999, AIDS Community Demonstration Projects; Jemmott et al., 1992, Be Proud, Be Responsible!; Kirby et al., 1991, Reducing the Risk!; Magura, et.al., 1994, Intensive AIDS Education in Jail; Main et al., Get Real About AIDS 1992; Rotheram-Borus, et al., 1997, Street Smart; Stanton, et al., 1996, Focus on Kids; and St. Lawrence, et al., 1995 Becoming a Responsible Teen). These interventions met the criteria established by the Centers for Disease Control Prevention Research Synthesis (PRS) Project (CDC, 1999). Unfortunately, data had not been systematically updated and published. In an effort to update previous work and focus on the most relevant scientific evidence reflecting the current state of the HIV epidemic, the PRS team conducted a review of the US-based HIV behavioral interventions research literature from 2000 through 2004. HIV/AIDS interventions developed by DiClemente 2004, Ehrhardt, 2002, and Stanton, 2002 were found effective in reaching high-risk youth (Lyles et al., 2007).

There was less research on effective interventions for college students, the population inclusive of the fastest growing rates of new HIV/AIDS infections (CDC, 1999 and CDC, 2005). A review of the literature on HIV/AIDS prevention programs for college students indicated the majority of these programs focused on self-efficacy and

risk reduction activities such as increasing condom use, limiting the number of sexual partners, knowing one's HIV status, knowing one's partners' sexual history, making informed decisions, negotiating sexual activity, practicing refusal skills, avoiding high risk situations, and not over-indulging in alcohol and other drugs (UCSF AIDS Research Institute, 2006; Duncan. 2002; Jemmott, 2001). The premise of most HIV prevention programs was that youth are engaging in sex and they need to have the cognitive information and necessary skills to reduce their risk for HIV infection, other STDs, and unwanted pregnancies. This approach was substantiated by epidemiological data and through prevention specialist who develop interventions designed to reduce risk behaviors that lead to HIV infection (Chunn, 2002). Unfortunately, social, economic, and cultural barriers limited the ability of many youth of color to receive accurate and adequate information on preventing HIV, STIs, and unwanted pregnancy (Advocates for Youth, 2004). Early age of first coitus, multiple and concordant partners were possible explanations given by researchers of higher rates of pregnancy, STIs and HIV infection among African American adolescents and young adults.

However, there were college age students who chose abstinence. Empirical data on abstinence in the college population was extremely limited. Perhaps this is the case because the majority of college age students, typically 18 years and older, were considered to be sexually active based upon research on age at sexual debut (Albert, 2003). The median age of first intercourse was 16.9 years for boys and 17.4 years for girls (Kaiser Family Foundation, 2006). Debut occurred earlier for many African American youth as previously discussed. Despite this trend, there were college students who were abstinent when they enrolled in college and some who maintained this status

throughout their undergraduate years (Lacson, 1997; Fehring et al., 1998; and Yabroff, 2008). These student's sexual behaviors and intentions had not been investigated.

Purpose of the Study

This study proposed a comparative analysis of African American college students engaging in three different sexual behaviors: those practicing abstinence, those engaged in safer sex, and those involved in higher risk sexual practices, in an attempt to understand the underlying factors associated with these decisions. African American college age students were the population examined, given the high rates of HIV infection, sexually transmitted infections, and teenage pregnancies in the African American community.

The goal of this investigation was to learn what influences the sexual decisions of African American college students. Specific aims of the study were to:

(1) Investigate factors that play a role in African American college students' decisions to choose abstinence, adopt safer sex practices, or engage in higher risk sexual behaviors.

(2) Investigate which variables (alcohol and marijuana use, religiosity, parental and peer influences, frequency of listening to rap music and viewing rap videos and rap music and video influence on sexual attitudes, gender, sexual orientation, and age) best predict engagement in abstinence, safer sex practices or higher risk sexual behaviors.

Significance of the Study

More evaluated interventions are needed on college students' sexual behaviors in general and particularly for African American students. There is a dearth of large-scale epidemiological studies on black college students' HIV/AIDS knowledge, attitudes and behaviors. Concerted efforts are necessary to develop prevention programs based on evidence-based interventions to halt the prevalence of HIV/AIDS, and to reduce the transmission of other STIs among African American youth. In order to develop appropriate interventions to reach African American college youth, it is necessary to understand their sexual risk-taking behaviors. This exploratory study helped to fill this gap in the literature. The results of adopting programs without conscious tailoring to the target population can result in misuse of resources, wasted time, and increase rates of sexually transmitted infections among youth 15-24 years of age.

The predictors selected in this study were those identified in the literature as playing a pivotal role in youth sexual decision-making. The researcher gathered data on all sexual behaviors, not just vaginal/penile intercourse. A recent investigation by Sawyer and Howard (2007) substantiated this approach. They found that many of the national surveys on youth sexual behaviors did not ask students about their engagement in oral sex and/or anal sex. Recent trends revealed that oral sex is an activity youth are engaging in more frequently and often without thought of contracting a STD, so barrier protection is often not used (Prinstein et al., 2003).

Understanding potential correlates to abstinence and the sexual behaviors of African American college age youth may assist health educators, prevention specialist,

and counselors in designing educational programs for both sexually active students and those who choose abstinence.

Theoretical Framework

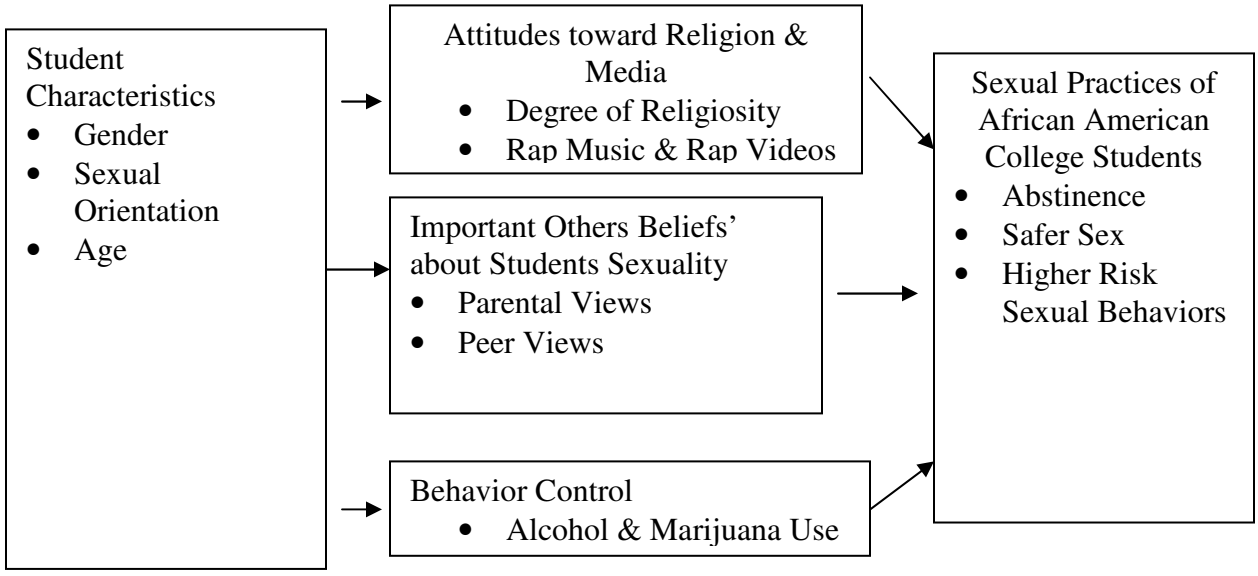
A modified form of the Theory of Planned Behavior (Ajzen, 1991) is the theoretical framework used in this exploratory study. This theory provides a conceptual model to study attitudes, intentions, subjective norms, and control beliefs related to specific behaviors. The decision to practice abstinence or engage in sexual activity (i.e., vaginal/penile intercourse, oral sex, and anal sex) does not occur in isolation for adolescences and youth adults. Sexual decision-making is not an activity that is completely under one's volitional control. The decision of whether or not to engage in sexual behavior is contingent, at least in part, on the decision of another person. The Theory of Planned Behavior (Ajzen, 1991) provided a framework to look at other factors that influence sexual behaviors, particularly behaviors that are not completely under one's control. This study explored attitudes, social norms, and behavior control predictors in a model of hypothesized determinants of African American college students' sexual behaviors. Behavior intentions were not examined in this model since college students self-reported their sexual behaviors. Student characteristics were added to this model to help possibly explain observed differences in predictors and sexual behavior outcomes.

Attitudes referred to the value students' place on religion, sexual practices and the media (e.g., music and music videos) in their personal lives. Subjective Norms are what others value as important that influences students' sexual beliefs and behaviors. Perceived Behavioral Control referred to the student's abilities to negotiate sexual

behaviors under the influence of alcohol and marijuana use. Student characteristics referred to socio-demographic variables such as gender, sexual orientation, and age.

The hypothesized relationship of predictors to behavior outcomes is depicted in Figure 1-1.

Figure 1-1: Predictors of Sexual Behaviors



Research Questions:

This cross sectional exploratory study investigated the sexual behaviors of African American college students through the following questions.

Question 1:

Of the independent variables examined (gender, sexual orientation, age, alcohol use, marijuana use, rap music and video influence on sexual attitudes, frequency of listening to rap music and watching rap videos, peer influence, parental influence, and religiosity) which are the best predictors of abstinence and sexual behavior?

Questions 2:

Of those students who are sexually active, which variables (listed above) best predict safer sex and higher risk sexual behavior?

Definition of Terms

The following is a list of terms and variables used in the study along with their definition.

Abstinence

Avoidance of any type of sexual intercourse (Greenberg, Bruess & Conklin 2007). For the purposes of this study, abstinence included not engaging in vaginal or anal intercourse, and oral sex.

Higher Risk Sexual Behaviors

Any classification of sexual behaviors that placed an individual at higher risk for acquiring a sexually transmitted infection and/or HIV infection such as vaginal-penile and/or anal intercourse without a barrier such as latex condom or female condom; oral stimulation of the genitals (fellatio and/or cunnilingus) without use of latex condom or female condom; engaging in sexual activity and/or intercourse under the influence of alcohol and other drugs, and injecting drugs; unprotected sexual intercourse and/or sexual activity with multiple partners without use of condom.

Safer Sex

Referred to sexual activity and especially sexual intercourse in which various measures (e.g., the use of latex condoms or the practice of monogamy) were taken to avoid diseases (e.g., HIV/AIDS) by sexual contact.

Historically Black Colleges and Universities (HBCUs)

An institution accredited and established prior to 1964 whose principal mission was the education of black Americans (Title III of the Higher Education Act of 1965). Most HBCUs are 50 to 100 years old. Approximately 214,000 or 16 percent of all African American higher education students in the nation were enrolled at HBCUs, which comprise three percent of all colleges and universities nation-wide (www.doi.gov/hrm/black.html).

Religiosity

Referred to various aspects of religious activity, dedication, and belief and has been measured in various ways, sometimes using a single item dealing with religious affiliation and at other times using lengthy, multidimensional scales (Penhollow, Young, & Bailey 2007). In this study, religiosity measures included church attendance and participation in religious activities.

Spirituality

An individual's quest to discovering that which was sacred via many different pathways, such as traditional organized religion (e.g., Christian, Buddhist, and Hinduism) to holistic health practices (e.g., meditation and exercise). Spirituality can be associated with a wide variety of practices and/or situations without being confined to a single institution or belief system (Beckwith, 2005).

Media

Media referred to information in more than one form that includes the use of text, audio, graphics, animation and full-motion video. For the purpose of this investigation, media referred to listening to rap music and or viewing rap music videos.

Parental Views

Opinions regarding their son's or daughter's behavior regarding sexual practices.

Peer Views

Perceptions that the student have of their friends or other individuals in their age group sexual practices.

Sexual Orientation

The American Psychological Association defined sexual orientation as an enduring pattern of emotional, romantic, and/or sexual attraction to men, women, or both sexes. Sexual orientation also referred to a person's sense of identity based on those attractions, related behaviors, and membership in a community of others who shared those attractions (American Psychological Association, 2008). For the purpose of this investigation, sexual orientation referred to students reported sexual partner preference (i.e., males, females, or an individual of the same gender). The terms sexual orientation and sexual preference were use interchangeably in the study.

Subjective Norms

A person belief that specific individuals or groups think he should or should not perform the behavior. Generally speaking, a person who believed that most referents with whom he was motivated to comply think he should perform the behavior will perceive under social pressure to do so.

Binge Drinking

Referred to males who consumed five or more drinks in a row; females who consumed four or more drinks in a row at least once in a two-week period (Wechsler, H., 2001). For this study, consuming five or more drinks in a row will be the measure used to define binge drinking.

Substance Use

Substance use referred to the use of illicit drugs including alcohol and tobacco. For the purpose of this study, substance use referred to alcohol and marijuana use.

Chapter II: Review of the Literature

Introduction

The literature review focused specifically on African American youth, the population whose sexual risk behaviors were examined. The purpose of the literature review was to understand factors that may contribute to adolescent and college youth experimentation with sexual risk behaviors. The review of literature included: cognitive/social development of adolescents and risk behaviors; postulated sexual behavioral predictors; HBCU contextual factors and theoretical framework. It was hoped that results from this study will inform the development of appropriate interventions for African American youth based on their sexual risk-taking behaviors that may mitigate negative health outcomes.

Cognitive/Social Development of Adolescents and Risk Behaviors

The period of adolescence into young adulthood (ages 13-24) is characteristic of significant biological and physiological development with the onset of puberty, questioning and self-discovery, development of interpersonal relationships, and experimentation with risk behaviors (Crooks and Baur, 2005). Experimentation serves developmentally appropriate functions such as facilitating peer interactions, teaching youth to negotiate behaviors that become legal post-adolescence, and facilitating identity achievement (Jessor & Jessor 1977; and Reitzle, 1987). Risk-taking is a part of normal development and is vital for self-actualization, but can lead to negative life-altering consequences if decisions to participate in risk behaviors are not fully weighed and vulnerability is not perceived prior to engagement.

In college, young adults are afforded greater opportunities to experiment with health compromising behaviors. The college culture to some extent encourages experimentation with risk behaviors (Dworkin, 2005). Testing limits to find out who they are, less parental monitoring and closer proximity and interactions with same age peers can fuel participation in risk behaviors.

Rates of participation with most substance use, alcohol use, and unprotected sexual activity tend to peak during emerging adulthood (Johnston, O'Malley, & Bachman, 2003). College students are prone to binge drinking, having multiple sex partners, and participate in unprotected sexual intercourse including oral and anal intercourse (American College Health Association, 2006).

Behavioral Predictors Postulated

The correlates investigated in this study were those that had been identified in the literature as factors that contributed and/or influenced sexual risk-taking behaviors in college youth. They include alcohol use and drug use, religiosity, parental influences, peer influences, listening to rap music and viewing rap music videos. The potential impact of these correlates to predict African American college youth sexual behaviors are further elucidated below.

Alcohol and Marijuana Use

There has been no significant reduction in the levels of drinking and binge drinking among college students from 1993 to 2005 (The National Center on Addiction & Substance Use, 2007). In 2005, 67.9 percent of students (approximately 5.3 million students) reported drinking in the past month and 40.1 percent (approximately 3.1 million

students) reported binge drinking (The National Center on Addiction & Substance Use, 2007).

Binge drinking refers to five plus drinks per episode for males and four plus drinks per drinking episode for females (Wechsler & Wuethrich, 2002). Females reported on average consuming 4.7 drinks within a four-hour period while men reported consuming 7.4 drinks within a four-hour period. Additionally, 22% of females and 24% of males are twice as likely to drink five or more drinks at a sitting within a two-week period (The National Center on Addiction and Substance Abuse, 2007).

Marijuana use continues to be an illicit drug of choice for many college students. From 1993 to 2005, the rate of daily marijuana use increased 110.5 percent from 1.9 percent to 4.0 percent, approximately 310,000 students (National Center on Addiction and Substance Abuse, 2007). The proportion of students who reported use of marijuana within 30 days increased 20.4 percent (from 14.2 percent in 1993 to 17.1 percent in 2005), with rates increasing over the 1990's to a peak of 20.7 percent in 1999 and then gradually declining (Johnston, 2006). Daily marijuana use refers to 20 or more days in the past 30 days (Johnston, 2006).

More college men than women (22.9 percent vs. 17.5 percent) report current use of any form of illicit drugs (Johnston, 2006). Younger college students are more likely to use marijuana than upperclassmen. One study found that in 2001, 18.4 percent of freshman reported current marijuana use compared to 15.5 percent of seniors (17.7 percent of sophomores and 16.3 percent of juniors reported current use) (The National Center on Addiction and Substance Abuse, 2007). Most college students who use illicit drugs (67.5 percent) began using them while in high school, seven percent in junior high

school, and 24.6 percent in college. College students who use marijuana before the age of 16 years were more likely to report using other illicit drugs in the past year and to become regular marijuana users (Teter, 2006).

White students are more likely to use and abuse all forms of drugs than are minority students. Students attending Historically Black Colleges and Universities (HBCUs), regardless of their race & ethnicity use all forms of substances at much lower rates than other students (The National Center on Addiction & Substance Abuse, 2007). In 1995, a comparison of data from 14 HBCUs and 14 equally sized, predominantly white colleges and universities found that students at HBCUs drank less than students at other colleges (1.8 drinks per week vs. 4.6 drinks per week) and were less likely to binge drink (22.3 percent vs. 37.5 percent)(Meilman, Presley and Cashin, 1995).

While drunk or high, college students are more likely to be sexually active and to have sex with someone they just met. More than three-fourths (78 percent) of college students who used illicit drugs have had sexual intercourse compared to 44 percent of those who never used drugs (Yu, 2001). Both females (14%) and males (17%) reported having unprotected sex within the last 12 months because of their drinking (American College Health Association, 2006).

Alcohol and illicit drug use is linked to sexual risk-taking behaviors among African American youth. Stueve and O'Donnell (2005) examined the relationship between early alcohol use and subsequent alcohol use and sexual risk behaviors of 1,034 African American and Hispanic/Latino youth between 7th and 10th grade in New York City. Their study revealed that early drinkers were more likely to report subsequent alcohol problems, multiple sexual partners, unprotected sexual intercourse, being drunk

or high during sexual intercourse, and pregnancy. Additionally, 10th grade females who reported early alcohol use were almost 4 times as likely as their peers who delayed alcohol use to report being recently drunk or high and almost twice as likely to have initiated sexual intercourse or engaged in recent sexual intercourse.

Liau and DiClemente (2001) examined the association between marijuana use, high-risk sexual behaviors and sexually transmitted diseases among unmarried African American adolescent females 14 to 18 years old (n=522). Their study revealed females reporting marijuana use (5.4%) were more likely to test positive for gonorrhea adjusted odds ratio (AOR = 3.4) and chlamydia (AOR = 3.9). They were more likely to have never used condoms in the previous 30 days (AOR = 2.9) and to have not used condoms consistently in the previous 6 months (AOR = 3.6).

It is not known whether marijuana use occurs immediately before engaging in risky sex or whether marijuana use is a co-occurring risk behavior. The authors concluded that more research is needed to determine how marijuana use affects adolescents' sexual decision-making, and consequently their sexual behaviors.

Their findings corroborated previous investigations of substance use and sexual behaviors in adolescents. Boyer et al. (2000) found that African American adolescents who self-reported marijuana use were more likely to test positive for sexually transmitted diseases. Duncan, S. & Duncan, T. (1999) found significant associations between the use of marijuana, cigarettes, alcohol, and risky sexual behaviors. Kingree, Braithwaite, & Woodring (2000) found that marijuana use was related to infrequent condom use among adolescent detainees.

There was also research that links the number of sexual partners and alcohol and or marijuana use. Valois (1999) and colleagues were among the first investigators that examined the number of sexual intercourse partners and selected health risk behaviors among public high school adolescents in South Carolina using YRBS data. Analysis of 4,232 subjects suggested that in general as the number of reported sexual intercourse partners increased, the magnitude of risk for substance use and violence also increased. For Black females, alcohol, tobacco, marijuana use, and dating violence behaviors were the strongest predictors of an increased number of sexual partners; for Black males, alcohol use and binge alcohol use, physical fighting and carrying a weapon and being a date violence victim or perpetrator were the strongest predictors of increased number of sexual partners.

Although the relationship between substance use and higher risk sexual behaviors may be inconsistent among college students as had been with other populations (Lewis, 1997), the increasing consumption of alcohol and illicit drugs (e.g., marijuana use) among adolescents and college youth (Youth Risk Behavior Surveillance Study, Monitoring the Future Study, and the National College Health Assessment) supports the need for more empirical studies to determine the link between substance use and the gradient of sexual risk behaviors.

This is particularly true in African American populations, where the data revealed their rates of alcohol use and marijuana use are generally lower than other racial ethnic minorities (Monitoring the Future Study), yet they demonstrated the highest frequencies of initial coitus and sexual intercourse (Eaton, et al., 2006). This disconnect has not been

fully studied to determine potential intervention strategies (Stevens, 1998) to reduce the risk of sexually transmitted diseases and HIV among African American youth.

Rap Music and Rap Videos

While exposure to various forms of media has been documented as influencing sexual behaviors (L'Engle, 2006; Roberts, 2000; Pardun, 2005; and Wingood, 2003), the effects of listening to rap music and viewing music videos was explored to determine whether they differentiate sexual risk behaviors of African American college students. A recent national study conducted by the Kaiser Family Foundation (2005b) revealed that teens were spending more time today than in previous years engaged with electronic media (i.e., videos, DVDs, radio, tapes, CDs, and MP3s players), and in the process were being exposed to sexually explicit messages (Liebert, 1973 and Pardun, 2005). A review of empirical research regarding the influence of media in sexual socialization of American youth estimated between 44 to 76 percent of music videos were saturated with sexual content (Ward, 2003).

Teens are being exposed to sexually provocative lyrics by artist such as Ludacris, R. Kelly, Nelly Furtado, 50 cent, Missy Elliott, and Usher with some promoting a "thug lifestyle" and "gansta love." The lyrics were explicit and references to a mutually monogamous relationship are rarely heard. What is often portrayed was pleasure for the moment. For example, R. Kelly's hit in 2003, "Ignition Remix" glamorized hanging out on the weekend with his buddies surrounded by pretty girls who later will be sexual partners.

> "Crystal poppin' in the stretch Navigata. We got food everywhere as if the party was catered. We've got fellas to my left hunnies on my right. We bring 'em both

together. We got drinkin' all night. Then afta the party it's the hotel lobby. Yeah, around about four you gotta clear the lobby. Then take it to ya room and freak somebody."

Many of the urban station play mixes include songs like this that are repeated during the day with little musical variety. Eventually through conditioning, the lyrics were taken in with little or no counter messages by adults who often are not tuned into the realities of urban music. The vast majority of teens are able to recite the lyrics of the more recent songs verbatim, which suggest how intensely and often they are listening (Hicks-Harper, 1999). "Hip Hop" and "Rap" music are the most popular music genres embraced and listened to by African American youth (Kaiser Family Foundation, 2005). Nearly two-thirds of US African American adolescents listen to "Rap" or "Hip Hop" (Kaiser Family Foundation, 2005). Rap music videos often consist of African music forms of rhythm and blues, gospel and bebop (Morley, 1992). Although there was considerable concern regarding the messages expressed in [rap music] and rap videos, there is limited research that examines the effects of music videos on adolescents' and young adults' (Jones, 1997).

Often these videos contain degrading portrayals of women and glorifies sexual prowess. One analysis of 1,000 music video characters found that males are more often depicted as adventurous, aggressive, and dominant; females, in contrast, and women were more often depicted as affectionate, fearful, and nurturing (Arnett, 1995). Other analyses associate adolescent viewing of music videos with a greater acceptance of common sexual stereotypes (i.e., that woman are sexual objects) and with dysfunctional beliefs about relationships (Haferkamp, 1999 and Ward, 2002).

Experimental results support these findings showing that women exposed to sexual and sexist media content offer stronger endorsement of casual and stereotypical attitudes about sex than do women exposed to nonsexual content (Ward 2002; Ward, Hansbrough & Walker, 2005). Gordon (2004) found that among high school girls, stronger identification with more objectifying music artists was associated with greater support of sexually objectifying attitudes toward women, while stronger identification with less objectifying music artists was associated with less support of these attitudes.

Another content analysis comparing videos in different musical genres found that rap videos are especially likely to be sexist, with females depicted as sexual objects (Utterback et al., 1995). Images presented in this media genre often give the illusion of promiscuous sexual behavior without adverse consequences.

Pardun, L'Engle, & Brown (2005) recruited a sample of 3,261 7th and 8th graders from three public school districts in the Southeastern United States to participate in the Teen Media study. A sub-sample of 1,074 respondents also participated in a 45-minute in-home health and sexuality survey to investigate the link of sexual activity and future intentions to be sexually active with media consumption and content. Content analysis of the sexual imagery across six different media revealed that 11% of the media content was sexual in nature. Music contained dramatically more sexual content (40%) than any other medium. Over 75 percent of the relationship content involved couples who were not married. Seventeen percent of the sexual content in music emphasized divorce or generally deteriorating relationships. Messages that are explicitly healthy (i.e., pubertal development, abstinence, or condom use) are seen in only 6% of the total sexual content.

Overall analyses showed strong positive association between exposure to sexual content in media and sexual activity and intentions.

A study by Wingood and colleagues (2003) provides further evidence of the potential negative effect of rap music on adolescent sexual behaviors. The study enrolled 522 single African American females between the ages of 14-18 and documented their level of exposure to rap music videos at baseline and 12 months later. Of those enrolled in the study, 92% completed 12 month follow-up assessments. The median exposure reported to viewing rap videos per week at baseline and at 6 and 12 month follow up were 14 hours and 12 hours respectively. Over the 12-month follow-up, 37% of adolescent females reported acquiring a new sexually transmitted disease, 14% reported having sexual intercourse with a steady partner, 44% reported using drugs, and 44% reported consuming alcohol. Adolescents who had greater exposure to rap music compared to those that reported less exposure to rap music were 2 times as likely to have multiple sex partners, and more than 1.5 times as likely to have acquired a new sexually transmitted disease, use drugs, and use alcohol over the 12 month follow-up. This was one of the first studies to empirically show that greater exposure to rap at baseline was prospectively associated with the occurrence of health risk behavior and laboratory confirmed new sexually transmitted disease one year later.

There was limited research examining the effects of music and music videos on adolescent sexual behavior outcomes (Robillard, 2000). What does exist provided evidence that exposure to sexual messages in the media influences adolescents' sexual norms. However, there is even less research specifically focused on youth media exposure or sexual risk behaviors of African American youth. The literature reviewed

used various measures for assessing the impact of media sexual messages including analysis of media consumed (i.e., frequency and type, number of hours, daily and weekly use, settings, as well as questions regarding sexual behaviors, intentions, and practices). Content analysis was the primary method for examining media messages and sexual behaviors.

Given African American adolescents greater propensity to engage in sexual intercourse at younger ages in contrast to other racial ethnic groups (CDC, 2006), further exploration of music and music videos as a variable that may possibly explain some of the variance in their decisions to be abstinent, engage in safer sex and/or higher risk sexual behaviors is warranted.

Religiosity

Religion and religious institutions strongly influence individual behavior and social norms. Data from a variety of surveys indicate that African Americans demonstrated a high degree of religious involvement (Taylor, Chatters, & Levin, 2004).

Despite the emergence of research in the past few years on religious participation among adolescents (Gunnoe & Moore, 2002; Smith, Denton, Faris, and Regnerus, 2002), almost no research focused specifically on African American adolescents ages 13-17 (Taylor, Chatters, and Levin, 2004). Overall, the literature that does exists revealed that 9 out of 10 adolescents have a religious affiliation and about half of all adolescents regularly participate in religious organizations in the form of service attendance and participation in religious youth groups (Smith et al., 2002). African American adolescents have significantly higher levels of religious participation than do white adolescents (Gunnoe & Moore, 2002; Smith et al., 2002; Taylor et al., 1996) and rate

religion as more important in their lives (Johnston, Bachman & O'Malley, 1999). Additionally, black adolescent girls have higher levels of religiosity than boys (Chatters, Taylor & Lincoln, 1999). It is important to look at data for African American adolescents because it provides some insights to the importance of religiosity for young adults (ages 18-24). Further, the data regarding the impact of religiosity for African Americans tend to reflect an older population and not college youth (18-24) (Taylor, Chatters, and Levin, 2004).

The literature documented the impact of religiosity on sexual decision-making. The literature also suggests that religiosity plays a protective and mediating role in sexual risk-taking behaviors. McCree et al. (2003) conducted a study of 1,130 African American adolescents residing in the South over a three-year period for eligibility in a STD/HIV prevention trial. Recruitment sites were in neighborhoods characterized by high rates of unemployment, substance abuse, and STDs. Descriptive data was captured and regression analyses performed to measure the association between religiosity and the outcome variables (African American adolescent females' sexual behaviors, attitudes toward sex, and ability to negotiate safer sex). Sixty-four of the adolescents in the study (n=522) had high religiosity scores based on a 4-item scale. Adolescents who had higher religiosity scores also reported higher self-efficacy in communicating with new and steady male partners about sex, STDs, HIV/AIDS and pregnancy prevention, and in refusing an unsafe sexual encounter. These adolescents were also more likely to initiate sex at a later age, use a condom in the past 6 months, and possess more positive attitudes toward condom use.

Empirical studies also associate religiosity with delay of adolescent coital debut Rostosky et al., 2004; Rotosky & Wright, 2003; Rostosky et al., 2001; and Kirby 1999). Rostosky & Wright (2003) analyzed data from the Adolescent Health Survey. Data was analyzed from 3,691 adolescents ages 15-21 to test the hypothesis that adolescent religiosity and sex attitudes in Wave 1 predicted later coital debut in Wave 2 and that these predictive relationships would vary by gender. The findings indicated religiosity reduced the likelihood of coital debut for both males and females even when controlling for demographic characteristics such as age, race, parent education, and the availability of romantic partners.

Steinman and Zimmerman (2004) conducted one of the few longitudinal studies in this body of literature that examined religious activity with different risk behaviors concurrently and developmentally among urban African American adolescents and tested these relationships by gender. The sample consisted of 705 African American high school students from four public high schools in a midsized city in the Midwest.

Religious activity was defined as youths' overall involvement in organized religious activities (e.g., church suppers, bible study, and youth rallies). Investigators collected data annually when participants were in 9th grade and continued through 12th grade. Sample retention rates at each wave of the study exceeded 95% and were 90% from Year one to four. For the outcome variables of alcohol use, marijuana use, and sexual intercourse the findings of this research suggests that when African American youths are more religiously active they tend to be less involved in these risk behaviors. Declining religious activity was associated with larger increases in alcohol use among

males and greater frequency of sexual intercourse for females. However, religious activity of 9th grade males limited subsequent increases in marijuana use.

Differing results between males and females in this study await closer empirical examination. One explanation may have been that males are less likely to subscribe to the religious proscriptions against sexual behavior. For example, Jensen and colleagues (1990) reported that the influence of church attendance on sexual behavior was much greater among males who had non-permissive attitudes regarding premarital sex. In contrast, the effect of church attendance on sexual behavior among females did not depend on permissiveness.

Overall, these findings were consistent with previous research on the effects of religiosity on African American youth risk behavior (Johnson et al., 2000; and Wallace & Foreman, 1998). These findings were also corroborated by the data on religiosity and substance use that reveals the greater the student's religiosity---as measured by church attendance and frequency in engaging in religious activities--- the less likely the student is to drink, smoke or use other drugs (The National Center on Addiction & Substance Abuse, 2007).

Research examining the impact of religiosity on college students' sexual decisions yielded similar findings regarding sexually permissive attitudes. Beckwith and Morrow (2005) examined the impact of religiosity and spirituality on 330 undergraduate college students. The sample consisted mostly of non-married (85%), Protestant/Catholic (40%) or "other" religious affiliated (43%) undergraduate college students. The sample consisted of 54% White students and 34% African American students. The study revealed that the more religious a person tends to be, the more likely he or she will also

hold conservative attitudes about sex. Additionally, one's spirituality is highly correlated with conservative sexual attitudes.

Fehring et al. (1998) conducted an investigation of eighty-two college students in a Midwestern private, Roman Catholic institution on measures of religiosity, sexual permissiveness, self-esteem, frequency of recent sexual encounters, and motivators for sexual activity or abstinence. Organized religious activities (i.e., church attendance) and sexual guilt were the most consistent variables in the study that showed an inverse relationship with sexual activity. Nearly all of the religious variables showed a significant positive association with less sexual permissiveness (i.e., premarital sexual relationships). Qualitative results reinforced the notion that while religious beliefs and values do motivate sexual abstinence, time in relationship, and commitment were seen as strong motivators for sexual activity.

Research by other investigators corroborated the findings from research studies cited above (Pluhar et. al, 1998; Brewster et al., 1998; Cooksey et al., 1996; Mahoney, E.R., 1980; Lindermann C., 1974; Hendrick S. & Hendrick, C. 1987, and Thorton & Camburn, 1989). These studies all conveyed that religious affiliations, attitudes toward premarital sexual intercourse, contraceptive use, and religious values affect student's sexual behaviors.

The majority of research conducted to date supports that for adolescents and young adults, religiosity plays a protective role against sexual risk behaviors. However, adolescent's religious convictions may precipitated engagement in unprotected intercourse and possibly engagement in sexual activities that limit pregnancy but increased the likelihood of acquiring sexually transmitted diseases and HIV/AIDS

infection to avoid negative affects associated with the violation of religious teachings and religious values (Rostosky et al., 2004; and Ott & Kerr, 2006). The preponderance of studies examined religiosity and adolescent sexual behavior use penile-vaginal penetration as a measure of adolescent sexual activity neglecting other measures of sexual expression (i.e., oral sex and anal intercourse) (Crockett, 1996; and Rostosky et al., 2004). More data is needed to determine possible adverse health risks associated with these sexual practices.

Religiosity as measured by formal church attendance and participation in religious activities is significant in the African American culture. The role that religiosity plays in mitigating or extending sexual risk-taking among African American adolescents is worth examining and was examined in this investigation.

Parental Influences

The literature associates parenting style, the quality of parental relationships with their children, and parental beliefs as strong influences of adolescent sexual behaviors (Aspy et al. 2007; Cox, 2006; Aronowitz et al., 2006; Oman et al., 2004; and Felton, 2002). These correlates have been measured in terms of the degree of monitoring, nurturance, communications, and values parents ascribed to in child rearing. The review of literature pertaining to familial influences and adolescent risk-taking specified the importance of this predictor in general and in examining African American youth decisions to be abstinent, practice safer sex or to engage in higher risk sexual behaviors. Studies pertaining to the impact of parents on health compromising behaviors and African American youth sexual behaviors are elucidated in this section.

Adolescents who can openly communicate with their parents about sexual issues, who have parents that are more authoritative, and whose parents are intrinsically involved in their lives, report fewer sexual partners and they are more apt to use condoms and other contraceptive methods regularly and consistently. They also have a reduced likelihood of early sexual initiation (Aspy et al., 2007; Cox, 2006; Meschke et al., 2000; Dilorio, Kelley, and Hockenberry-Eaton, 1999; Dutra et al., 1999; Miller et al., 1999; and Romer et. al, 1994).

Conversely, a lack of parental monitoring has been associated with adolescents' participation in unprotected sexual behaviors, earlier initiation of sexual activity, and sex with non-monogamous male partners as well as sex with multiple male partners among adolescent females (Li, Feigelman, and Stanton 2000; DiClemente et al., 2001; Romer et al., 1999; and Luster & Small, 1994).

Parental values also affected sexual debut. Teens whose parents hold strong religious beliefs and attend religious services frequently are less likely to have sex before age 18 (National Campaign to Prevent Teen Pregnancy, 2005). Additionally, teens whose parents had strong religious beliefs and who enjoy a strong mother-teen relationship were more likely to delay sex than those teens who have parents with strong religious beliefs but lack a strong mother/child relationship (National Campaign to Prevent Teen Pregnancy, 2005).

Health Compromising Behaviors

Parental influence also moderates participation in other health compromising behaviors such as alcohol and drug use (Wood et al., 2004; Voisin et al., 2006; Chassin et al., 2005; and Devore & Ginsburg, 2005). In general, researchers had found that teens

that had more conversations with their parents about drinking consistently showed less positive expectations about drinking, a factor strongly related to drinking in college-and lower rates of substance use (The National Center on Addiction & Substance Abuse, 2007).

Wood and associates (2004) investigated the influences of peer and parental variables on alcohol use and problems in a sample of late adolescents the summer prior to college entry (n=556). Variables examined included perceived peer norms, parental nurturance and monitoring, parental disapproval of heavy drinking, parental permissiveness for drinking, and peer alcohol use and alcohol related consequences. Key research findings were that peers did not necessarily supplant the influence of parents as adolescents become young adults and less dependent on their parents. High levels of perceived parental monitoring were significantly and negatively associated with alcohol consequences, while low levels of perceived parental permissiveness demonstrated significant positive associations with alcohol-related consequences (e.g., hangovers, and memory loss). One of the negative consequences documented as being regretted sexual encounters.

A study examining STD risk behaviors among sexually active detained females also corroborates the importance of parents in reducing adolescent risk behaviors. Voisin and colleagues (2006) investigated the STD behavioral risks of 280 sexually active adjudicated females (14 to 18 years of age) from eight detention facilities located in Georgia. Six items assessed STD risk behaviors of females 2 months prior to being detained: had either oral or vaginal sex with a male partner; sex without a condom; had sex while high on alcohol or drugs; had sex with a partner who was high on alcohol or

drugs; had sex with two or more people at the same time; traded sex for drugs; and traded sex for money. The investigators found that detainees with the strongest risk-taking attitudes reported less parental monitoring, experienced lower levels of familial support, used substances, reported greater risky peer norms, perceived less student-teacher connectedness and were more likely to report higher levels of STD risk behaviors than detainees with lower STD behavior risks.

African American youth sexual behaviors

Empirical studies examining African American females' sexual behaviors found that infrequent parental monitoring was associated with higher risk sexual practices, multiple partners, and partners that are non-monogamous (Crosby et al., 2003; and DiClemente, et al., 2001). Black female teens who viewed their parents' monitoring as either too lax or too strict were more likely to make an early sexual debut. Once having made their sexual debut these teens were more likely to have sexual intercourse more frequently than teens who view their parents' monitoring as appropriate (DiClemente et al., 2001 and St. Lawrence et al., 1994).

Cox (2006) found differences in parenting styles to be relevant in adolescents condom use at sexual debut among adolescent-mother pairs. Parental demandingness (e.g., the promotion of age-appropriate maturity, discipline, supervision, and suitable confrontation for disobedience) predicted increased likelihood of condom use among African American female participants in this investigation taken from a sub-sample of the National Longitudinal Adolescent Health Survey.

Aspy et al. (2007) investigated parental communication patterns among an ethnically diverse population and found various types of parental communications to be

predictive of African youth sexual debut. This investigator found that African American parents that communicated high expectations for their youth was a protective factor against their adolescent currently being sexually active compared to African American parents who had not communicated high expectations to their youth.

There is a dearth of research regarding familial influence of African American fathers and adolescent sexual health concerns (Ohalete, 2007). The available research revealed that African American fathers influence coital debut (Smetana, Abernethy, and Harris, 2000). For males, empirical studies found that the presence or absence of a father strongly influences sexual debut. Black adolescent males living in a household without the presence of a male parent were more likely to report higher rates of sexual behavior (Kotchick, et al. 1999; Dittus et al., 1997; Miller et al., 1999; and Ford, 1997). These findings suggest that black males may tend to talk more with parents of the same gender about sexual issues.

There was growing evidence in the literature regarding the relevance of family structure in communicating sexual issues and concerns for black youth; however, more research is needed to clarify family structural characteristics and its interaction with other factors that influence adolescent sexuality (Meschke, Bartholomae & Zentall, 2000).

Parental influences and sexual behaviors were complex including a variety of interactions: parenting style, the quality of parental relationships, and parental beliefs. The literature was most comprehensive in the role of parental communications and sexual behaviors. Parents as important referents in youth sexual decision-making were further explored in the investigator's model of variables predicting sexual behavioral outcomes of African American youth.

Peer Influences

Research published between the late 1970's and 2000 suggested that African Americans sexual behaviors are influence by the behavior and characteristics of their peers, the racial or ethnic composition of their school setting, and the "school climate" (Leigh W. & Andrews J., 2002). For the purposes of this investigation, empirical studies that look at behaviors and characteristics of peers on sexual behaviors were examined.

Peer influences can be both negative and positive, and varied by gender for African American youth. In a study of 647 African American seventh-grade students of peer structure and risk-taking behaviors, both conventional (assessed by the socio-metric item "persons who are leaders and good to have in charge") and controversial (assessed by the socio-metric item "persons who other kids listen to"), peer status group leaders were seen as influential and popular (Miller-Johnson et al., 2003). Youth involvement in sexual behavior, substance use, and violence were measured by their responses to items adapted by the Youth Risk Behavior Surveillance System (YRBSS). The study findings indicated that early adolescent sexual activity was significantly related to adolescent peer social status. Rates of sexual activity and cigarette use were considerably higher in the controversial group 44% and 25% respectively than in the other peer status groups. Unconventional leadership increased the likelihood of early sexual activity, while conventional leadership decreased the likelihood of early sexual activity. Gender was significantly related to early sexual activity with boys reporting higher levels of early sexual activity than girls.

African American male or female adolescents who had friends with negative attributes as opposed to more positive characteristics are more likely to have had

intercourse (Perkins et al.,1998; and Blum et al., 2000). Additionally, African American youth who exhibited other "antisocial behaviors" were more likely to engage in high-risk sexual behavior (e.g., early age at first sexual experience, frequent sexual intercourse, and multiple sexual partners (Doljanac & Zimmerman, 1998). Lauritsen (1994) found that African American female adolescents who spend more time with peers, regardless of the shared activities have a greater likelihood of engaging in sexual activity.

Previous research has shown that adolescents' perceptions of the extent to which their peers are engaging in sex is an important measuring stick to their own sexual behaviors. Adolescents were more likely to have vaginal sex when they perceive it is more prevalent among their peers (Selvan et al., 2001; O'Donnell et al., 2003; and Kinsman et al., 1998). Recent investigations have yielded similar findings for adolescents who engage in oral sex.

Prinstein, Meade & Cohen (2003) conducted an investigation of 212 tenth graders asking questions about their engagement in oral sex and their perception of their best friends' sexual behavior and peer-reported popularity. Research findings indicated that youth perception and popularity influenced oral sex behaviors. Adolescents were more likely to report engagement in oral sex than intercourse (33% males and 53% females), report more oral sex partners than intercourse partners (21% males and 24.5% females reported 3-4 partners), and were unlikely to report use of STI protection during oral sex (24% males and 36% females). Perceptions of best friends' behavior were significantly associated with adolescents' own oral sex behavior (56.5% who reported engagement in oral sex), but not intercourse. Adolescents who reported sexual activity had high levels of reputation-based popularity.

Halpern-Felscher et al., (2005) investigation of 580 ethnically diverse ninth graders also found that more adolescents engaged in oral sex (19%) than vaginal sex (13%). Their findings also revealed that adolescents believed that oral sex is more acceptable than vaginal sex for adolescents their own age in both dating and non-dating situations, oral sex is less of a threat to their values and beliefs, and more of their peers will have oral sex than vaginal sex in the near future.

Peers also influenced safer sex behaviors. If adolescents perceived that their friends are engaging in or not engaging in risky sexual practices (i.e., multiple partners, sex without condoms, alcohol, and substance use) then they may be more likely to adopt what they believe to be friends' behavior (Crosby et al., 2000; Millstein & Moscicki, 1995; Voisin, 2002, 2003; Bachanas et. al., 2002; and DiClemente et al., 1996).

Previous research indicates that perceived peer norms is consistently one of the strongest predictors of sexual behaviors among youth; therefore, the researcher further examined the influence of peers on the sexual behaviors of African American college students in this investigation.

HBCU Contextual Factors and Risk Behaviors

The academic and social environment at HBCUs differed in many ways from predominantly white institutions and was important to consider in this investigation that examines predictors of youth sexual behaviors on one HBCU campus. Most of the HBCUs were founded by religious denominations that provided education for black students who otherwise were not permitted to attend majority institutions in the early to mid 20th Century. These religious origins, affect the overall policies and programs provided to students today.

Engaged learning and service were characteristic of HBCUs (Campbell, 2005; and Boyd et al., 2003). One study found that 57 percent of black male graduates from HBCUs participated in community service, compared with 35 percent of black male graduates and 50 percent of black female graduates from non-HBCUs (Stewart et al., 1997). Volunteer and service opportunities are considered a central part of the college experience for HBCU students. Students engaged in their own learning and who participate in meaningful volunteer extracurricular activities had greater opportunities to develop supportive networks with faculty, peers and other role models, as well as build self-esteem that may deter participation in risk behaviors.

Additionally, the literature pointed to some protective factors (e.g. lower overall substance use, and stronger religious underpinnings) associated with matriculation on HBCU campuses that may not be present or as deeply embedded in the campus culture of students attending predominantly white non-religious institutions. For example, several aspects of HBCUs may be attributed to lower rates of substance use relative to non-HBCUs: (1) strong leadership in creating an environment of zero tolerance for substance use and where there is a strong emphasis on character development, nurturing students and engaging them in their learning and in service; (2) strong role of family expectations for success which may influence students' substance use and sexual related decisions and choices; (3) strong peer modeling from non-substance using students; and (4) strong role of religion or spirituality in campus life (The National Center on Addiction & Substance Abuse, 2007).

Along with the above stated factors, lower substance use may be associated with the over-representation of female students on these campuses who historically have been

somewhat less prone to substance use as well as Black Greek Organizations (BGO's) that, contrary to Greek organizations on other campuses, strongly discourage substance use and other risk behaviors (Austin & Chen, 2003).

Just as there are environmental protective factors that may safeguard HBCU students against certain health risks, there are competing community environmental factors that may adversely affect student's sexual health on these campuses. For example, many of the HBCUs are located in urban neighborhoods and/or are in rural or lower socioeconomic communities where the convergence of alcohol, illicit substance use, violence, and poverty adversely affect health outcomes (Whaley and Winfield, 2004). African American females at these institutions may have a greater propensity for forging short-term sexual relations with men not attending their college for a variety of reasons including supply versus demand (e.g. imbalance of the male-to-female ratio on HBCU campuses), dating older males for financial reasons and dating men that are bisexual who may not maintain a monogamous or long term relationship with a female (McLean, 1994; and Chunn, 2002). African American males on these campuses may consider sex as a rite of passage or identify their masculinity with having multiple sexual partners, and may have partners of the same gender as well as female partners.

These cultural realities may place both females and males matriculating on these campuses at higher risk for HIV/AIDS and other STDs by having multiple partners in the same age cohort that are more sexually experienced, dating individuals with more sexual partners over a life time, linking with partners that are engaging in other health compromising behaviors, and having partners who have been incarcerated (DiClemente et al., 2002; Fennell, 1997; Ferguson, 1999; Whaley and Winfield, 2004; and Abrams,

2005). Interventions geared at this population must take into account the ethnic and cultural realties of students matriculating on these campuses (Braithwaite & Thomas, 2001).

Theoretical Framework

The Theory of Planned Behavior (TPB), derived from the Theory of Reasoned Action, Ajzen (1985) and Ajzen & Fishbein (1980), was the theoretical framework used in the study. TPB takes into account facilitating or constraining conditions that affect intentions and behaviors. This is particularly important for behaviors over which a person has less volitional control (e.g., negotiating condom use). It is a robust framework for empirically identifying factors on which intervention efforts should focus. This was particularly salient in the current investigation that identifies correlates of abstinence, safer-sex, and higher risk sexual behaviors in African American college students.

TPB has been tested in studies examining behavioral beliefs, attitudes, subjective norms, intentions, self-efficacy, and behavior control for STD/HIV interventions among African American adolescents (Jemmott & Jemmott, 1991, 1992, and 2002; Basen-Engquist & Parcel, 1992; Braithwaite R.L. et al., 1998; Bazargan et al., 2000; Braithwaite and Thomas 2001; Carvajal et al., 1999; and Gillmore, 2002). Collectively these investigators have found this framework and/or its constructs useful in predicting or explaining adolescent sexual behavior or intentions.

For example, Carvajal et al. (1999) found that social norms and beliefs were important constructs associated with delaying onset of sex, while self-efficacy to refrain from sex was not associated with ever having sex. Gillmore (2002) found that sexual intercourse (including anal and vaginal) was associated with intentions to have sex and in

turn, intentions were associated with attitudes and norms about sex. Flores (2002) found that only social norms predicted intentions to have sex when included with attitudes. Collazo (2004) found that adolescent's intentions to abstain from sexual intercourse were best predicted by subjective norms and self-efficacy. Villarruel and colleagues (2004) investigated sexual intercourse and condom use intentions and found that attitudes along with self-pride and partner approval predicted sexual intercourse intentions. Attitudes, intentions, self-pride, parental pride, and partner approval predicted ever having sexual intercourse.

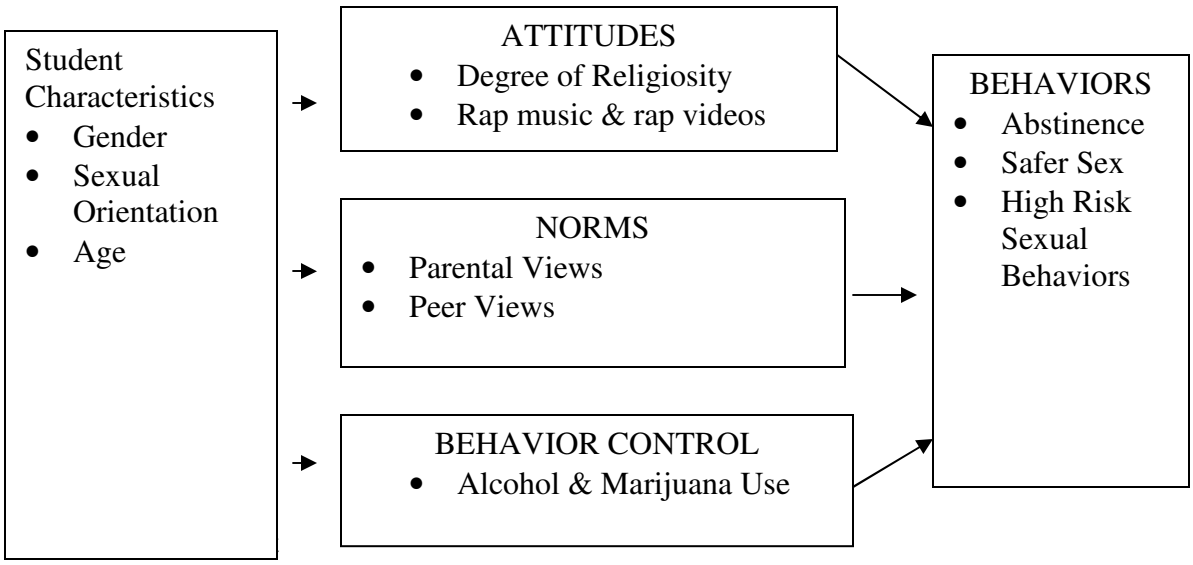
Instrumentation

This section describes the experimental model, measures used, and the validity and reliability of these measures when assessing predictors of students' sexual behavior.

Experimental Model

The investigator's model for this study used constructs from the Theory of Planned Behavior (TPB) (see Figure 1-2). Students' attitudes were examined by the degree they rated religion as being important in their daily life, decisions, and church attendance. Students' attitudes were examined by the frequency that they listened to rap music and viewed rap videos as well as the impact that rap music and rap music videos influenced their sexual attitudes. Students' normative behaviors were examined by the extent they reported that their parents and peers influenced their sexual behaviors. Student's self-reported alcohol and marijuana use within the past thirty days, and prior to sexual activity were measures of perceived behavioral control for engaging in the three sexual behavior outcomes.

Figure 1-2: Predictors of Sexual Behaviors & TPB



Four different instruments the Duke Religion Index, the Parental and Friends' Approval of Sexual Behavior Scale, the National College Health Assessment, the National College Health Risk Behavior Study, and the Rap Music Influencing Sexual Attitudes Scale (RMSA), and Rap Video Influencing Sexual Attitudes Scale (RVSA) were used in this questionnaire, in addition to items developed by this investigator to obtain demographic and background data.

Sexual Behaviors

Items from the National College Health Assessment (NCHA) survey created by the American College Health Association (ACHA) were used to measure student's sexual behaviors (Appendix A, items 22-26). The NCHA was a survey instrument designed to collect information on a broad range of health behaviors, indicators, and perceptions. It contains approximately 300 items that assess students' health status and health problems, risk and protective behaviors, and impediments to academic success.

The ACHA-NCHA instrument was developed in 1998 by the ACHA-NCHA work group, using the CDC's National College Health Risk Behavior Survey (NCHRBS) as a foundation for survey development. The reliability analyses of the ACHA-NCHA demonstrated consistent standardized alphas and average inter-item correlation coefficients when compared with the NCHRBS (ACHA, 2005 and Douglas et al., 1997). Construct validity analyses showed similar correlation coefficients when compared with the National College Women's Sexual Victimization Study, and showed similar odds ratios when compared with the College Alcohol Study (Wechsler, et. al. 2000, and Fisher et. al. 2000). A number of items from this scale were used to classify students as abstinent, practicing safer sex or engaging in higher risk sexual behavior and measure student's frequency of sexual activity. How these specific variables were operationalized is described in chapter 3.

Religiosity

The Duke Religion Index (DRI) developed by Koenig (1997) was the measure used to examine the influence of religion on sexual behavior. The DRI is a five item scale that measures three aspects of religious involvement: public or organizational religious behavior (e.g., church attendance), private or non-organizational religious behavior (e.g., prayer or meditation), and intrinsic religious motivation (e.g., involvement of religion in all of one's dealings in life). Two items assessed attendance at religious activities using a six-point scale where scores range from 1="never" to 6= "2-3 times per week" (Appendix A, items 17-18). The other three items (Appendix A, items 19-21) concern non-organized religion and spiritual beliefs and are scored on a five-point scale where scores range from

1= “Definitely Not True” to 5= “Definitely True.” Total scores range from 5 to 27 with higher scores reflecting greater religiousness.

The five-item subscale had a Cronbach’s alpha of 0.75 and was strongly correlated (r=.85) with the original 10-item scale (Storch et al., 2004). Moderate to high correlations with other measures of religiousness such as the Age Universal Religious Scale and Santa Clara Strength of Religious Faith showed evidence of convergent validity (Sherman, et al. 2000). The standardized coding scheme of the religiousness scale was used in this study.

Parental-Peer Influences

The Parental and Friends’ Approval of Sexual Behavior Scale (PASB, FrASB) developed by Treboux and Busch-Rossnagel (1995) was the measure used to examine parental and influences on sexual behaviors. The items on this scale and the response format was based on the Parental Approval of Problem Behavior Scale (Jessor & Jessor, 1977) and Levels of Relationship – Premarital Permissiveness Scale (Thomson, 1982).

The PASB and FrASB is a 16-item questionnaire, with items that elicited adolescent’s beliefs regarding parents and friends approval of their sexual behaviors (Appendix A, items 1-16). These scales were used with predominantly white middle class boys and girls between the ages of 13 and 21. One sample included 161 male and 200 high school students from New Jersey. Average age was 16.5 with 49% sexually active by self-report and with mean age at first intercourse of the sexually active group being 14.9 years. Alphas for the PASB and FrASB with a high school sample were .96 and .92 respectively. The scales were also tested with a college sample. Test-Retest

reliability with a college sample was .84 on the PASB and .81 on the FrASB. How parental and friends approval of certain sexual measures is described in chapter 3.

Alcohol and Marijuana Use

The prevalence of health risk behaviors among college students had not been well characterized until the National College Health Risk Behavior Survey (NCHRBS) by the Centers for Disease Control and Prevention (CDC) was conducted in 1995 (CDC, 1995). This study had not been conducted again with post-secondary students. The NCHRBS provided data on priority health-risk behaviors for college students including unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors; dietary behaviors and physical activity. The NCHRBS was derived from the Youth Risk Behavior Surveillance System (YRBSS) developed in 1989 by CDC to monitor six categorizes of priority health risk behaviors among students in grades 9-12.

The 1995 NCHRBS used a two-stage cluster sample design was produce a nationally representative sample of undergraduate college students 18 years of age and older. The first sampling frame contained 2,919 primary sampling units (PSUs), consisting of 2- and 4-year colleges and universities. From the 2,919 colleges and universities, 74 4-year institutions and 74 2-year institutions were selected from 16 strata formed on the basis of the relative percentage of black and Hispanic students at the institutions. The colleges and universities were selected with probability proportional to undergraduate enrollment size. Overall, 136 (92%) of the 148 selected institutions participated in the survey.

The second sampling stage consisted of random sample drawn from a list of the full- and part-time undergraduate students aged ≥18 years enrolled in the 136

participating colleges and universities. Differential sampling rates were used to ensure sufficient numbers of black and Hispanic students in the sample.

Data was edited for inconsistency and a weighting factor was applied to each student record to adjust for the school sampling weight, the school non-response adjustment factor, the student sampling weight, and the student non-response adjustment factor. Information on the total number of students by race/ethnicity, sex, and institution type (2-year versus 4-year) was used to post-stratify the sample.

In 1992, CDC conducted a test-retest reliability of the YRBSS (Brener et al., 1995). Their study was the first to demonstrate test-retest reliability of all categories of health risk behavior among a diverse sample of adolescents. They found that nearly three-quarters of the questionnaire items had "substantial" or higher reliability according to the categories selected. The 1995 NCHRBS coding scheme will be used to measure student alcohol and marijuana use.

Rap Music and Rap Videos

The influence of listening to rap music and viewing rap videos had on sexual attitudes was be measured by two scales developed the by investigator: The Rap Music Influencing Sexual Attitudes scale (RMSA) and the Rap Video Influencing Sexual Attitudes scale (RVSA). In chapter 3, the investigator described the items on these scales and how they were operationalized to measure sexual attitudes regarding rap music and rap music videos.

Summary

The independent variables selected by the investigator for this study (alcohol and marijuana use, listening to rap music and viewing rap videos, religiosity, parental

influences and peer views) have all been identified in the literature as influencing, regulating or predicting sexual behaviors. In examining these predictors among African American college students, the investigator contributes to the understanding of behavioral risk factors that have been delineated in the literature to affect sexual decisions. There was limited or no research studies to date that examined these variables simultaneously and in a model to predict sexual behavior outcomes in a sample comprising of only African American college students.

It was hypothesized that certain predictors contribute more to distinguishing among individuals practicing abstinence, safer sex, and higher risk sexual behaviors in this cohort. The findings and implications of this research are instrumental in designing tailored prevention programs and subsequent research to address the disproportionate rates of HIV/AIDS infection and sexually transmitted disease acquisition among African American youth.

Chapter III: Methodology

This chapter focused on the methodological considerations of conducting this study, including research questions, research design, study site, subjects, procedures, data collection and analysis plan. The primary purpose of this study was to examine factors that predict abstinence and sexual activity among African American College Students.

Research Questions

There are two research questions. What factors predict abstinence and sexual activity in African American college students? Which factors best predict safer sex or higher risk sexual behaviors for sexually active students? The independent variables selected were those identified in the literature that impact sexual behavior in this age group. These variables included alcohol and/or marijuana use, listening to rap music and viewing rap videos, religiosity, peer influence and parental influence. In addition, socio-demographic factors were also examined to determine their influence, including gender, sexual orientation, and age.

Research Design

A cross-sectional research design of African American undergraduate students from a large HBCU in the mid-Atlantic region was used to explore factors that may predict their sexual behaviors. Data was collected using a self-administered survey (Appendix A). The questionnaire included seven sections and the first addressed parental and peer influences on sexual behaviors (Appendix A, items 1-16). Section two examined religiosity (Appendix A, items 17-21). Section three assessed sexual behavior (Appendix A, items 22-26) and section four examined alcohol and marijuana use (Appendix A, items 27-29). Section five examined the number of hours per day spent

listening to rap music and viewing rap videos (Appendix A, items 30-31) while section six looked at the influence of listening to rap music and viewing rap videos had on sexual attitudes (Appendix A, items 32-41). The final section contained demographic items (Appendix A, 42-51). The study protocol was submitted to the University of Maryland's Institutional Review Board (IRB) and to the HBCU's IRB where data was collected before pilot testing and administering the instrument. An expert review panel (n=3) was conducted for content analysis, clarity, and formatting of the instrument. A pilot test (n=30) was conducted with African American college students not participating in the main study.

Study Sample

As previously mentioned, this study was conducted at a large HBCU located in the Mid-Atlantic Region. A non-probability purposive sample was used in this investigation (Huck S., 2008). The primary issue in sample size was ensuring it is sufficiently large to reveal hypothesized differences should any exist. Three sexual behavior categories were examined, so there must be sufficient numbers of students surveyed to detect differences among these groups.

The number of participants comprising the sample size was based on research conducted by Cohen (1992) for multiple regression considering power, alpha level, effect size and number of independent variables. Setting the alpha level at .01, power equal to .80 and a medium effect size of .15 required 147 participants per group. Using this formula, the researcher would need to recruit 441 students for the study. The investigator anticipated a high response rate (70%) given the proposed data collection method that included surveying students in intact classes. Therefore, the researcher over sampled the

minimum population needed by 30% and recruited 132 additional participants. The researcher recruited 573 African American students between the ages of 18-24 to comprise the study sample.

Procedures

Recruitment

The Associate Chair of the Health & Physical Education department and the Chair of the Psychology department had agreed to sponsor the research project, a necessary step given that data collection did not occur at the investigator's home institution. Undergraduate students from all academic years were recruited from courses offered in these departments. An email letter (Appendix B) was sent to faculty teaching health and physical education courses requesting permission to administer the survey during class time. Follow-up e-mails were sent to non-responsive faculty two-weeks after the original mailing to ascertain their willingness to allow the investigator to collect data from their class. The investigator coordinated with faculty times to administer the survey.

Surveys were administered to students taking Psychology courses through procedures established for data collection in that department. Upon obtaining IRB approval from the University of Maryland and the HBCU, the investigator received the Psychology department's packet of procedures for data collection including sign-up sheets from the department chair for recruiting students. In the Psychology department, data collection was prohibited during class time. Rather, sign-up sheets were posted for sponsored research projects in the back of classrooms where psychology courses were taught. The investigator checked sign up sheets on a weekly basis. Fifty slots were offered per sign up sheet. The investigator administered the survey in a classroom at the

HBCU to groups of 25 to 50 students until the number of students needed was reached. The investigator sent an email reminder to students the day prior to survey administration. Student's email addresses were used for the sole purpose of recruiting students for the study; the survey itself was anonymous. The investigator worked with the Psychology chair to secure rooms on campus for administering the survey. Psychology majors received one credit for participating in this study that counted toward the five credits required per semester for participating in sponsored research projects.

To avoid having duplicate surveys from students who may be taking courses from the Health & Physical Education department and Psychology department, the investigator made a general statement prior to survey administration requesting that those who may have completed the survey in another class not take the survey again.

Expert Review Panel

The survey instrument (Appendix A) and a cover letter (Appendix C) was emailed to a three member expert review panel, two of whom are experts in adolescent sexual health and one an expert in survey design. Experts answered questions regarding clarity of survey items, grouping of questions, the appropriateness of items for the topic under study, relevancy of items with current knowledge of African American college students' sexual behaviors and the length of the instrument (Appendix D). The investigator conducted a SMOG Analysis, a test used to determine the reading grade level of the survey. The survey was finalized reflecting comments of the expert review panel before conducting the pilot study.

Pilot Study

Thirty African American students were recruited from a large land-grant public research institution located in the Mid-Atlantic Region to complete the pilot study and a subset of this group reviewed the instrument for understandability and acceptability of the items. Additionally, participants were asked about their perceptions regarding the length of the questionnaire and formatting of the instrument (Appendix E). Students participating in the pilot study had similar characteristics as those in the study population (i.e., age, race, and gender). The researcher made needed revisions to the instrument based on student feedback and the internal consistency reliability analysis.

Data Collection

The final survey was administered by the investigator to intact classrooms of students taking health and physical education courses and through the procedures described above for students taking courses in the Psychology department during the summer I and II 2008 sessions and fall 2008. Students were briefed about the purpose of the study (Appendix F). Confidentiality and anonymity was maintained by not having student names on surveys. Further, students placed the surveys in a designated box in front of the room after completion; this researcher kept surveys in a secured locked file drawer.

Surveys were reviewed before data entry and those that did not meet the study inclusion criteria of race and age were excluded. A probability level of .05 was used to establish statistical significance for all analyses.

Data Analysis Plan

Variables of Interest

The independent variables included alcohol and marijuana use, religiosity, parental and peer influences, frequency of listening to rap music and viewing rap videos and rap music and video influence on sexual attitudes, gender, sexual orientation, and age. The dependent variable was sexual behavior categorized as those who were abstinent, practicing safer sex, or practicing higher risk sexual behaviors. Two items were used to classify students as abstinent, practicing safer sex or engaging in higher risk sexual behaviors (Appendix A, items 22 and 25).

Three additional items developed by the investigator were used to measure students' sexual activity. Students were asked about the number of sexual partners they had vaginal, oral, or anal sex within the last school year and whether they engaged in vaginal sex, received or gave oral sex, or engaged in anal sex with more than one person in the past 30 days (Appendix A, items 23 and 24). The number of sexual partners was reported on a scale ranging 0 to 4 plus partners. Students were asked about the gender of their sexual partner(s) (Appendix A, item 26). Students marked "yes" or "no" or if they had "no partner" in the last 30 days. Quantitative data was analyzed using SPSS 13 for Windows. Logistic regression was used to examine which variables were most influential in predicting sexual behavior outcomes. Logistic regression was used because this study included two or more categorical or continuous independent variables with a dichotomous dependent variable in this study. Bivariate analyses were done to determine the degree the predictors were related to the outcome variables (i.e., abstinence, safer sex, and higher risk sexual behaviors). The correlation of the independent variables with each

other was assessed through a correlation matrix. Correlations greater than .85 were assumed to indicate collinearity for the purpose of this study.

Once bivariate analysis had been performed, all the predictors related to the dependent variable were examined in multivariate analysis. Frequency distributions for discreet categorical variables and univariate descriptive statistics for continuous variables (i.e., mean, standard deviations, and range) were computed. The variables that were examined in multivariate analysis included age, gender, sexual orientation, alcohol use, marijuana use, religiosity, parental and peer influences, the frequency of listening to rap music and viewing rap music videos, and the influence of rap music and rap music video on sexual attitudes, abstinence, safer sex, and higher risk sexual behaviors.

Backward selection was used for logistic regression. All of the variables were entered into the equation and removed (eliminated) one at a time according to whether they met specific criteria. Two logistic regression analyses were performed. The first model examined abstinence and sexual behaviors. The second model examined safer sex and higher risk sexual behaviors. Stepwise regression was a model-building rather than model-testing procedure (Tabachnick, 2001). Since this was an exploratory study, this method allowed the investigator to determine which variables best predicted abstinence, safer sex, and higher risk sexual behaviors.

Findings were reported for each of the logistic regression analyses on the Likelihood Ratio Tests, Odds Ratios with 95% confidence limits, Goodness of Fit analyses (Hosmer-Lemeshow Test) and R^2 for Logistic Regression.

Test of Research Questions

Research Question 1: What factors predict abstinence and sexual activity in African American college students?

The independent study variables were examined simultaneously to determine which best predicted whether students practiced abstinence or had sex. The Parental and Friends' Approval of Sexual Behavior scale with 16 items were used to measure the influence of peers and parents on students' sexual behaviors. Items were structured based on a hierarchy level of relationship (gone out with once or twice, felt strong affection for or were going steady with, in love with, and plan to marry) and four increasingly intense sexual behaviors (kissing, light caressing and kissing, passionate caressing and kissing, and sexual intercourse). One example of a sexual behavior (kissing) as it appeared on the survey is illustrated below (Table 1). The other behaviors described above are formatted in the same manner on the survey. The degree of parental and peer influence were measured on a 5 point scale from "would strongly disapprove" (1) to "would approve" (5). A "don't know" (0) response option was added to this scale. Therefore, mean scores ranged from 0 to 80 for each scale (parental and peers) with higher scores indicating stronger parental and peer approval of sexual behaviors.

Table 1: Survey Items Measuring Parental & Friends Approval for Kissing

1. "If you engaged in kissing with someone you've gone out with once or twice---"
2. "If you engaged in kissing with someone you felt strong affection for---"
3. "If you engaged in kissing with someone you're in love with----"
4. "If you engaged in kissing with someone you plan to marry---"

The five-item Duke Religiosity scale was used to gather data regarding the degree of religiosity (Table 2). Items 17 and 18 had a 6-point range from never (1) to 2-3 times per week (7). Items 19-21 had a 5-point range from definitely not true (1) to definitely true (5). Therefore, mean scores on the religiosity subscale could range from 5 to 27. The higher the mean score the greater the influence of religiosity on sexual behaviors.

Table 2: Survey Items Measuring Religiosity

17. How often do you attend church, synagogue, or other religious meetings?
18. How often do you spend time in private religious activities, such as prayer, meditation, or Bible Study?
19. In my life, I experience the presence of the Divine.
20. My religious beliefs are what really lie behind my whole approach to life.
21. I try hard to carry my religion over into all other dealings in life.

Items from the National College Health Risk Behavior Study (NCHRBS) were used to collect data on students' binge drinking and marijuana use. Two questions (items 27 and 28) assessed frequency of each substance ranging from 0 to 4 or more times a month (Table 3). Students responded "yes" or "no" or "I had no intercourse" (item 29) regarding alcohol and marijuana use prior to sexual intercourse (Table 3).

Table 3: Survey Items Measuring Frequency of Alcohol Use and Marijuana Use

	Survey Question	Times
27.	During the past 30 days, how many times did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?	0-4+
28.	During the past 30 days, how often did you smoke marijuana?	0-4+
29.	The last time you had sexual intercourse, oral sex or anal sex, did you drink alcohol or smoke marijuana beforehand? _____I have never had sexual intercourse _____Yes _____No	

Student responses to the 4 item Rap Music Influence on Sexual Attitudes (RMSA) and 4 item Rap Video Influence on Sexual Attitudes (RVSA) scales were used to assess the influence of rap music and rap music videos on respondents' attitudes toward sexual behavior (Tables 4 and 5 respectively). RMSA and RVSA were measured on a four-point scale with the response format ranging from strongly disagree (1) to strongly agree (4). A "don't know" response option (0) was added to both scales. Each scale could range from "0 to 20". The higher the score, the more rap music or rap music videos influenced attitudes toward sexual behavior. Scores ranging from "0-10" were categorized as low influence, those ranging from "11-15" as moderate influence, and those ranging from "16-20" as high influence. A mean score for the influence of rap music and rap videos on sexual attitudes were calculated using the RMSA and RVSA scales respectively.

Table 4: Survey Items Assessing the Influence of Rap Music on Sexual Attitudes

32. Lyrics in rap music positively influence my attitudes about sex.
33. I am more likely to practice safer sex because of rap music
34. My expectations about how easy it is to get a partner for sex are influenced by rap music.
35. I am more likely to be abstinent because of rap music.
36. The number of sex partners I have is influenced by rap music.

Table 5: Survey Items Assessing the Influence of Rap Music Videos on Sexual Attitudes

37. My expectations about how easy it is to get a partner for sex are influenced by rap videos
38. Images portrayed in rap videos negatively influence my perceptions about sex.
39. I am less likely to practice safer sex because of rap videos.
40. I am more likely to be abstinent because of rap videos.
41. The number of sex partners I have is influenced by rap videos.

The frequency of listening to rap music and viewing rap videos were measured by (Appendix A, items 30-31). Rap music consumption was measured by calculating hours per day and number of days per week one listens. Rap music video consumption will be

measured by summing the hours per day one watches rap videos as well as the number of days per week they watch.

The socio-demographic independent variables (gender, sexual orientation, and age) were captured using items 42-51. Respondents were categorized regarding their sexual behavior (abstinence, safer sex, and higher risk sexual behaviors) as follows. Students who responded not engaging in oral, vaginal, and anal sex in item 22 were labeled abstinent (Table 6).

Table 6: Students Categorized as Abstinent

Survey Question	**Student Response**	**Sexual Behavior**
22. Have you engaged in any of the following: vaginal sex? oral sex? anal sex?	No	Abstinence

Students who responded "yes" to always using a condom during vaginal and/or anal sex (item 25) were labeled as "practicing safer sex" (Table 7). Students who responded "no" to (item 25) were labeled as "engaging in higher risk sexual behaviors" (Table 8).

Table 7: Students Categorized as Practicing Safer Sex

Survey Question	**Student Response**	**Sexual Behavior**
25. Do you or your partner always use a condom when you engage in: vaginal sex? anal sex?	Yes N/A	Safer Sex

Table 8: Students Categorized as Engaging in Higher Risk Sexual Behaviors

Survey Question	**Student Response**	**Sexual Behavior**
25. Do you or your partner always use a condom when you engage in: vaginal sex? anal sex?	No N/A	Higher Risk

For item 25, students were only asked if they engaged in vaginal and/or anal sex without a condom when distinguishing between safer sex and higher risk sexual behaviors. The researcher acknowledged there is risk of acquiring a sexually transmitted infection when engaging in oral sex; however, engaging in vaginal and/or anal sex without a condom is riskier.

To examine the first research question, a logistic regression was performed to determine which independent variables predict abstinence and sexual activity.

Research Question 2: Which factors best predict safer sex or higher risk sexual behaviors for sexually active students?

The independent variables were measured in the same manner described above. Items 42-51 assessed socio-demographic influences on sexual behaviors. Safer sex and higher risk sexual behaviors were assessed by item 25 described above. To examine research question two, a logistic regression was performed to see which variables best predict safer sex and higher risk sexual behaviors.

Summary

This study involved examining variables that influence African American college students' sexual behaviors. The methodology of this study involved the following statistical analyses:

(a) face validity testing of the instrument during the piloting phase of research;

(b) reliability analyses to determine whether the instrument were internally consistent; and

(c) logistic regression to assess the relationship of all independent variables and sexual behavior outcomes.

Chapter IV: Findings

The purpose of this study was to: 1) investigate which variables best predicted abstinence or engaging in sexual activity among African American college students, and 2) investigate which variables best predicted practicing safer sex or engaging in higher risk sexual behaviors. The variables examined included alcohol and marijuana use, religiosity, parental and peer influences, rap music and rap music video influences on sexual attitudes, frequency of listening to rap music and viewing rap videos, gender, sexual orientation and age. To measure these variables a 51 item survey was developed by the researcher (primarily using already existing scales) and distributed to African American college students. Prior to survey distribution, an expert review panel was convened and a pilot study conducted to establish face and content validity and internal consistency reliability of the instrument. Results from the expert review panel and pilot study as well as statistical findings from the research questions are presented in this chapter.

Expert Review Panel

The "Factors Influencing Sexual Behaviors survey" was reviewed by three experts in the fields of human sexuality and survey methodology for face and content validity. The survey was sent to each reviewer along with a cover letter and reviewer comment form. The surveys and review panel questionnaires were returned to the investigator within a two-week period (See Appendix G for Reviewer Comments).

Changes incorporated into the survey were minimal and included: adding a statement that directed students who answered "yes" to items 22 (if they ever engaged in vaginal sex, oral sex, and/or anal sex) to go ahead and answer items 23-26 which asked

about their sexual behaviors: adding a transgender response option for item 26 (within the last 30 days, were your sexual partners female and/or male) so that this new item read "within the last 30 days, were your sexual partners (check all that apply) female, male, transgendered individual", and modifying the drinking and marijuana use items to include options for not drinking 5 drinks in a row and never smoking marijuana. Overall, all three experts had favorable comments regarding the instrument. They believed intended respondents would find the items relevant and the instrument appropriate in length.

Pilot Study

The pilot study was conducted at two universities in the mid-Atlantic region with students (n = 48) who were health or education majors in April 2008. Seven of these students participated in a focus group following survey administration. Students who completed the survey and participated in the focus group after survey administration were entered into a raffle to win a $25 Visa gift card. Students took between 15 to 20 minutes to complete the survey.

The investigator reviewed each survey item with students participating in the focus group. These students thought the survey was clear, straightforward, easy to understand, and not too long. Suggested changes were minimal. The Parental and Friends' Approval of Sexual Behavior scale was modified to include "would strongly agree" and "don't know" to the response format. The original response format was "would approve" to "would strongly disapprove".

Item 45 was changed to "Are you married?" The original format asked students "Are you single?" In Table 9, the reliability statistics for survey subscales are displayed. The internal consistency reliabilities were excellent for all subscales ranging from .85 to

.92 with the exception of the Rap Music Sexual Attitudes scale and Rap Video Sexual Attitudes scale that had acceptable reliabilities (**α =** .68 and **α=.**66) respectively.

TABLE 9: Subscale Scores

Scale	**# of items**	**α**	$\bar{X}$	**(SD)**
Parental & Friends Approval Scale				
Mother Approval	16	.89	36.5	(11.23)
Father Approval	16	.92	32.9	(13.67)
Friend Approval	16	.84	48.4	(7.91)
Religiosity	5	.87	20.4	(5.54)
Rap Music Sexual Attitudes	5	.68	6.8	(2.83)
Rap Video Sexual Attitudes	5	.66	8.1	(3.32)

Demographic and Background Characteristics of Sample

Six hundred and eighty-five surveys were administered and collected between June 2008 and September 2008 during class sessions. Students participating in the research took courses in the Health, Physical Education Department and the Psychology Department. The investigator was able to collect surveys during class periods for students taking psychology courses (contrary to the data collection procedures described in chapter 3) because data was collected during the summer months and professors had additional in class time and greater flexibility. The majority of students asked to complete a survey from all the classes agreed to participate (97% response rate). Four surveys were not included in the analysis because respondents reported an age below or above the 18-24 year range, were married, and/or a race other than African American. Statistical analyses were performed on the remaining surveys collected (n=681).

The majority of students were women (72%) between the ages of 19 and 21 (75%) who lived on campus (43%) (Table 10). Nearly 60% of the students did not

respond to the ethnicity item. One-third reported attending church, synagogue or other religious meetings 2-3 times a month and 45% reported participating in religious activities such as prayer, meditation or Bible study 2-3 times a week (Table 11). The majority of respondents (87%) reported being sexually active.

TABLE 10: Selected Demographic Characteristics of Students

Variable	n	Percent
Gender		
Female	494	72
Male	187	27.3
Missing	4	.6
Ethnicity		
Hispanic or Latino	29	4.2
Not Hispanic or Latino	245	35.8
Don't Know	16	2.3
Missing	395	57.7
Age		
18	69	10.1
19	175	25.5
20	189	27.6
21	153	22.3
22	64	9.3
23	22	3.2
24	9	1.3
Missing	4	.6
Rank		
Freshman	36	5.3
Sophomore	185	27
Junior	201	29.3
Senior	251	36.6
Missing	12	1.8
Residence		
On campus	293	42.8
Off campus housing	89	13.0
Off campus non-campus housing	239	34.9
At home with family	52	7.6
Other	3	.4
Missing	9	1.3

Total N = 685

TABLE 11: Selected Background Characteristics of Students

Variable	n	Percent
Church Attendance		
Never	52	7.7
Once/year	46	6.8
2-3/year	161	23.8
2-3/month	223	33
Once/week	151	22.3
2-3/week	43	6.4
Missing	9	
Religious Activities		
Never	78	11.5
Once/year	43	6.3
2-3/year	58	8.5
2-3/month	90	13.3
Once/week	106	15.6
2-3/week	304	44.8
Missing	6	
Sexual Behaviors		
Sexually Active	590	86.6
Abstinent	91	13.4
Missing	4	

Total N=685

A small percentage of students reported sexual abstinence: 10% of females (65) and 4% of males (26) (Table 12). The mean age of students who reported abstinence was $\bar{X}$ = 19 (1.14) and for sexually active students was $\bar{X}$ =20 (1.32). In Table 13, the sexual behaviors of students are reported by gender. The majority of females (93%) reported being sexually attracted to men and the majority of males (94%) reported being sexually attracted to females (Table 13).

TABLE 12: Female & Male Sexual Behavior

Gender		Sexual Behavior Abstinent	Sexually Active	Total
Female	Count	65	429	494
	% row	13.2%	86.8%	100%
	% of column	71.4%	72.7%	72.5%
	% of total	9.5%	63%	72.5%
Male	Count	26	161	187
	% row	13.9%	86.1%	100%
	% of column	28.6%	27.3%	27.5%
	% of total	3.8%	23.6%	27.5%
Total	Count	91	590	681
	% of column	100%	100%	100%
	% of total	13.4%	86.6%	100%

TABLE 13: Students Reported Sexual Attraction

Gender	Who are you sexually attracted to? Men	Women	Both	Not Certain	Total
Female					
Count	458	10	25	0	493
Percent	92.9	2.0	5.1	0	100
Male					
Count	8	173	3	1	185
Percent	4.3	93.5	1.6	.5	100
Missing					7

Total N=685

When asked about drinking and marijuana use, the majority of respondents (60%) did not report binge drinking during the past 30 days (Table 14). Thirteen percent did report consuming 5 or more drinks in a row on four or more occasions in the past month.

Similarly, 47% of students stated they had never used marijuana and 24% had not engaged in marijuana use in the last thirty days; 13% reported using marijuana four or more times in the past month. Sixty percent reported they did not drink alcohol or smoked marijuana prior to sexual intercourse, oral sex, or anal sex and 24% reported drinking alcohol or smoking marijuana prior to engaging in these sexual behaviors.

TABLE 14: Students Reported Drinking & Marijuana Use

Variable	n	Percent
During the past 30 days, how times did you have 5 or more drinks of alcohol in a row within a couple of hours?		
I did not have five or more drinks	403	58.8
One time	79	11.5
Two times	70	10.2
Three times	35	5.1
Four or more times	87	12.7
Missing	11	1.6
During the past 30 days, how often did you smoke marijuana?		
I have never smoked marijuana	323	47.2
I have not smoked marijuana in past 30 days	162	23.6
One time	37	5.4
Two times	37	5.4
Three times	26	3.8
Four or more times	90	13.1
Missing	10	1.5
The last time you have sexual intercourse, oral sex or anal sex, did you drink alcohol or smoke marijuana beforehand?		
I have never had sexual intercourse	102	14.9
Yes	161	23.5
No	408	59.6
Missing	14	2.0

Respondents were asked about their sexual behaviors, including the kinds of sexual behaviors they practiced, whether they used condoms, the number of partners they had sex with and the gender of their sexual partners (Table 15). Of respondents who

reported being sexually active (n =590), 80% reported engaging in vaginal sex while 78% reported participating in oral sex. Nearly 16% reported engaging in vaginal sex with more than one partner in the last thirty days and/or receiving oral sex. Of those students who engaged in vaginal sex, 43% stated they always used condoms when they had sex while 33% reported not always using condoms when they had sex.

The number of partners with whom students engaged in vaginal, oral, or anal sex within the past year is presented in Table 16. The majority of respondents (66%) reported not engaging in anal sex. Within the past year, nearly thirty-five percent reported engaging in oral sex with one partner and 30% reported engaging in vaginal sex with one partner.

TABLE 15: Students' Sexual Behaviors

Variable	**Yes**		**No**	
	n	%	n	%
Have you ever engaged in:				
Vagina Sex	550	(80.3)	135	(19.7)
Oral Sex	531	(77.5)	154	(22.5)
Anal Sex	125	(18.2)	560	(81.8)
***Do you or your partner always use a condom when you engage in:**				
Vaginal Sex	295	(43.1)	229	(33.4)
Anal Sex	47	(6.9)	57	(8.3)
Not Applicable	63	(9.2)	26	(3.8)
Within the last 30 days, did you do any of the following with more than one person?				
Vaginal Sex	109	(15.9)	427	(62.3)
Gave Oral Sex	54	(7.9)	462	(67.4)
Received Oral Sex	107	(15.6)	427	(62.3)
Anal Sex	8	(1.2)	373	(54.5)

***** Condom use reported for vaginal and anal sex only

TABLE 16: Number of Sexual Partners within the Past Year

Number of Partners	Vagina Sex		Oral Sex		Anal Sex	
	n	%	n	%	n	%
0	72	(10.5)	93	(13.6)	456	(66.6)
1	206	(30.1)	238	(34.7)	67	(9.8)
2	130	(19.0)	114	(16.6)	9	(1.3)
3	80	(11.7)	66	(9.6)	3	(.4)
4	97	(14.2)	66	(9.6)	7	(1.0)
Not Sexually Active	84	(12.3)	87	(12.7)	87	(12.7)
Missing	16	(2.3)	21	(3.1)	56	(8.2)

In Tables 17, 18, and 19 student responses to whether they engaged in vaginal sex, gave oral sex, and/or received oral sex with more than one person within the last 30 days is reported by gender.

Sixty percent of females reported having vaginal sex with more than one partner within the last 30 days compared to 40% of males who reported engaging in this behavior (Table 17). Sixty-seven percent of females reported having gave oral sex and 57% reported having received oral sex with more than one partner within the last thirty days compared to 33% of males who reported having gave oral sex and 43% reported having received oral sex during the same period (Tables 18 and 19).

TABLE 17: Engaged in Vaginal Sex with >1 Person within the Last 30 days

Gender	Vaginal Sex Multiple Partners		Total
	No	Yes	
Female			
Count	326	65	391
% row	83.4%	16.6%	100%
% of column	76.3%	59.6%	72.9%
% of total	60.8%	12.1%	72.9%
Male			
Count	101	44	145
% row	69.7%	30.3%	100%
% of column	23.7%	40.4%	27.1%
% of Total	18.8%	8.2%	27.1%
Total	427	109	536
% of column	100%	100%	100%
% of total	79.7%	20.3%	100%

TABLE 18: Gave Oral Sex to > 1 Person within the Last 30 days

Gender	Gave Oral Sex Multiple Partners		Total
	No	Yes	
Female			
Count	339	36	375
% row	90.4%	9.6%	100%
% of column	73.4%	66.7%	72.7%
% of total	65.7%	7%	72.7%
Male			
Count	123	18	141
% row	87.2%	12.8%	100%
% of column	26.6%	33.3%	27.3%
% of total	23.8 %	3.5%	27.3%
Total	462	54	516
% of column	100%	100%	100%
% of total	89.5%	10.5%	100%

TABLE 19: Received Oral Sex from >1 Person within the last 30 days

Gender	Received Oral Sex Multiple Partners No	Yes	Total
Female			
Count	325	61	386
% row	84.2%	15.8%	100%
% of column	76.1%	57%	72.3%
% of total	60.9%	11.4%	72.3%
Male			
Count	102	46	148
% row	68.9%	31.1%	100%
% of column	23.9%	43%	27.7%
% of total	19.1%	8.6%	27.7%
Total	427	107	534
% of Column	100%	100%	100%
% of Total	80%	20%	100%

Students' mean scores on the predictor subscales are presented in Table 20. Students reported the highest mean scores for friend's approval ($\bar{X}$ =57.8, *SD*=11.46) in comparison to mother's or father's approval if they were to engage in specific sexual behaviors at their current age. Mean scores could range from 0 to 80 on this subscale. Higher scores indicated greater parental and friends approval for engaging in certain sexual behaviors. Mean scores ranged from 0 to 27 on the Religiosity scale (a higher score indicated that religion played a greater role in shaping your outlook on life and decisions) and from 0 to 20 on both the Rap Music Sexual Attitudes Scale (RMSA) and the Rap Video Sexual Attitudes (RVSA) scales. The higher the score on the RMSA and RVSA scales, the greater impact that rap music and rap music videos had on sexual attitudes.

TABLE 20: Respondent's Mean Scores for Survey Scales

Scale	$\bar{X}$ (SD)
Mother Approval	44.77 (12.88)
Father Approval	38.47 (16.84)
Friend Approval	57.85 (11.46)
Religiosity	16.31 (4.09)
Rap Music Sexual Attitudes	6.66 (2.48)
Rap Video Sexual Attitudes	7.20 (2.96)

Bivariate Analyses

Bivariate analyses were conducted with the predictor variables and sexual behavior outcome variables. Additionally, gender and sexual behaviors were examined through bivariate analyses to learn if any significant effects exist between the independent variables of interest and the dependent variable. The results of these analyses are reported in the proceeding tables.

Abstinence and Sexual Activity

Independent samples t-tests were performed comparing abstinence and sexually active students with independent variables (marijuana use, binge drinking, parental and peer influences, religiosity, frequency of listening to rap music and viewing rap music videos, rap music and video sexual attitudes, gender, and age). There were statistically significant differences for students who binge drink, smoke marijuana, on perceptions of mother's and friend's approval of sexual behaviors, religiosity, and by age between students who reported abstinence or being sexually active (Table 21).

Table 21 Independent Samples T-Tests for Abstinence and Sexual Activity

Independent Variables	**t**	**df**	**p value**	**Mean Difference**
Times had 5+ drinks in past 30 days	-4.820	672	.000*	-.781
Times smoked marijuana in past 30 days	-6.264	673	.000*	-1.22
Mother Approval	-3.620	654	.000*	-5.34
Father Approval	-1.368	646	.172	-2.69
Friend Approval	-4.091	643	.000*	-5.42
Religiosity	2.036	656	.042*	.948
Listen to Rap Music	-.022	564	.982	.057
View Rap Videos	-.701	561	.484	-4.98
RVSA	.153	550	.879	-.038
RMSA	-1.573	552	.116	-.009
Gender	-.255	679	.799	-.114
Age	-1.499	679	.000*	-.727

*p<.05

Students who reported being sexually active reported more binge drinking and marijuana use than students who reported they were abstinent (Tables 22 and 23). Fifteen percent of sexually active students reported binge drinking and smoking marijuana 4 or more times a month.

TABLE 22: Sexual Behavior and Frequency of Binge Drinking in the Past 30 Days

		Sexual Activity		Total
Number of Times 5+ Drinks In a Row at One Time		**Abstinent**	**Sexually Active**	
No drinks	Count	75	328	403
	% row	18.6%	81.4%	100%
	% of column	82.6%	56%	59.8%
	% of total	11.1%	48.7%	59.8%
1 time	Count	4	75	79
	% row	5.1%	94.9%	100%
	% of column	4.5%	12.8%	11.7%
	% of total	.6%	11.1%	11.7%
2 times	Count	5	65	70
	% row	7.1%	92.9%	100%
	% of column	5.7 %	11.1%	10.4%
	% of total	.7%	9.6%	10.4%
3 times	Count	2	33	35
	% row	5.7%	94.3%	100%
	% of column	2.3%	5.6%	5.2%
	% of total	.3%	4.9%	5.2%
4+ times	Count	2	85	87
	% row	2.3%	97.7%	100%
	% of column	2.3%	14.5%	12.9%
	% of total	.3%	12.6%	12.9%
Total	Count	88	586	674
	% of column	100%	100%	100%
	% of total	13.1%	86.9%	100%

TABLE 23: Sexual Behavior and Smoking Marijuana in the Past 30 Days

Times Smoked		Sexual Activity Abstinent	Sexually Active	Total
Never smoked	Count	74	249	323
	% of row	22.9%	77.1%	100%
	% of column	82.2%	42.6%	47.9%
	% of total	11.0%	36.9%	47.9%
Did not smoke in past 30 days	Count	11	147	158
	% of row	6.8%	93.2%	100%
	% of column	12.2%	25.8%	24%.
	% of total	1.6%	22.4%	24%
1 time	Count	2	35	37
	% of row	5.4%	94. 6%	100%
	% of column	2.2%	6%	5.5%
	% of total	.3%	5.2%	5.5%
2 times	Count	2	35	37
	% of row	5.4%	94.6%	100%
	% of column	2.2%	6%	5.5%
	% of total	.3%	5.2%	5.5%
3 times	Count	1	25	26
	% of row	3.8%	96.2%	100%
	% of column	1.1%	4.3%	3.9%
	% of total	.1%	3.7%	3.9%
4+ times	Count	0	90	90
	% of row	0	100%	100%
	% of column	.0%	15.4%	13.3%
	% of total	.0%	13.3%	13.3%
Total	Count	90	585	675
	% of column	100%	100%	100%
	% of total	13.3%	86.7%	100%

Safer Sex & Higher Risk Sexual Behavior

Independent samples t-tests were performed for sexually active students who reported engaging in safer sex or engaging in higher risk sexual behaviors for independent variables described in the previous section (Table 24). Statistically significant differences were found between students who reported engaging in safer sex and higher risk sexual behaviors by gender and sexual preference.

Table 24 Independent Samples T-Tests for Safer Sex & Higher Risk Sexual Behaviors

Independent Variables	**t**	**df**	**p value**	**Mean Difference**
Times had 5+ drinks in past 30 days	. 164	511	.870	.022
Times smoked marijuana in past 30 days	.994	511	.321	.164
Mother Approval	-.314	494	.753	-.357
Father Approval	.701	489	.483	1.11
Friend Approval	.281	488	.779	.273
Religiosity	-1.666	495	.096	-.603
Listen to Rap Music	-1.070	433	.285	-.310
View Rap Videos	-.626	434	.531	-.076
RVSA	.048	422	.962	.013
RMSA	-.304	423	.761	-074
Gender	3.555	513	.000*	.420
Age	1.455	513	.146	.167
Sexual Preference	3.488	512	.001*	.316

*p< .05

Table 25 represents the results of students who reported engaging in safer sex or sexual risk-taking behaviors by gender in the past 30 days. Thirty-six percent of sexually active females engaged in higher risk sexual behaviors compared to 9% of sexually active males.

TABLE 25: Gender, Safer Sex & Higher Risk Sexual Behaviors in the Past 30 Days

Sexual Behavior		Gender Female	Gender Male	Total
Higher Risk	Count	186	48	234
	% row	79.5%	20.5%	100%
	% of total	36.1%	9.3%	45.4%
Safer Sex	Count	184	97	281
	% row	65.5%	34.5%	100%
	% of total	35.7%	18.8%	54.6%
Total	Count	370	145%	515
	% of total	71.8%	28.2%	100%

The sexual preference of students and their sexual risk-taking behaviors are reported in Table 26. Sixty-five percent of heterosexual males reported practicing safer sex compared to 50% of heterosexual females who reported practicing safer sex. Gay men reported practicing safer sex all of the time and lesbians reported practicing safer sex 57% of the time. Bisexual men reported practicing safer sex all of the time and bisexual women reported practicing safer sex 41% of the time.

TABLE 26: Sexual Preference and Sexual Risk-Taking

Sexual Preference		Sexual Risk Taking High Risk	Sexual Risk Taking Safer Sex	Total
Gay Male	Count	0	6	6
	% within row	.0%	100%	100%
	% of column	.0%	2.1%	1.2%
	% of total	.0%	1.2%	1.2%
Heterosexual Male	Count	48	87	135
	% within row	35.6%	64.4%	100%
	% of column	20.5%	31.1%	26.3%
	% of total	9.3%	16.9%	26.3%
Bisexual Male	Count	0	2	2
	% within row	.0%	100%	100%
	% of column	.0%	.7%	.4%
	% of total	0%	.4%	.4%
Heterosexual Female	Count	173	174	347
	% within row	49.9%	50.1%	100%
	% of column	73.9%	62.1%	67.5%
	% of total	33.7%	33.9%	67.5%
Lesbian	Count	3	4	7
	% within row	42.9%	57.1%	100%
	% of column	1.3%	1.4%	1.4%
	% of total	.6%	.8%	1.4%
Bisexual Female	Count	10	7	17
	% within row	58.8%	41.2%	100%
	% of column	4.3%	2.5%	3.3%
	% of total	.2%	1.4%	3.3%
Total	Count	234	280	514
	% within row	45.5%	54.5%	100%
	% of column	100%	100%	100%
	% of total	45.5%	54.5%	100%

Gender Differences

The results of the independent samples t-tests for gender and independent variables are displayed in Table 27. Statistically significant differences were evident by gender for binge drinking, marijuana use, parental and friend's approval of sexual behaviors, the extent that religiosity moderates sexual behaviors, the number of hours per day listened to rap music, and the impact of viewing rap videos on sexual attitudes.

Table 27 Independent Samples T-Tests for Gender & Independent Variables

Scale	t	df	p value	Mean Difference
Times had 5+ drinks in the past 30 days	5.363	672	.000*	.654
Times smoked marijuana in the past 30 days	3.748	673	.000*	.566
Mother Approval	4.491	654	.000*	5.01
Father Approval	7.667	646	.000*	10.86
Friend Approval	4.751	643	.000*	4.74
Religiosity	-2.832	656	.005*	-1.00
Listen to Rap Music	3.883	564	.000*	1.112
View Rap Music	.862	561	.389	.100
RVSA	-2.201	550	.028*	-.606
RMSA	-.536	552	.592	-.124

* p <.05

In tables 28, 29, 30, and 31 binge drinking and marijuana use for females and males are reported. Of the females who reported binge drinking (n=172), 9% reported doing so once during a month's period (Table 28). Of the males who reported binge drinking (n=99), 6% reported binge drinking four or more times a month (Table 29). Seven percent of females and 6% of males reported smoking marijuana 4 or more times a month (Tables 30 and 31).

TABLE 28: Female Binge Drinking in the Past 30 Days

		Number times had 5+ drinks				
Gender	**No Drinks**	**1**	**2**	**3**	**4+**	**Total**
Female						
Count	318	59	44	22	47	490
% row	64.9%	12.0%	9.0%	4.5%	9.6%	100%
% of total	47.2%	8.8%	6.5%	3.3%	7.0%	72.7%

TABLE 29: Male Binge Drinking in the Past 30 Days

		Number times had 5+ drinks				
Gender	**No Drinks**	**1**	**2**	**3**	**4+**	**Total**
Male						
Count	85	20	26	13	40	184
% row	46.2%	10.9%	14.1%	7.1%	1.7%	100%
% of total	12.6%	3.0%	3.9%	1.9%	5.9%	27.3%

TABLE 30: Female Marijuana Use in the Past 30 Days

		Number times smoked marijuana					
Female	**Never Smoked**	**Not in past 30 Days**	**1**	**2**	**3**	**4+**	**Total**
Count	245	124	25	29	18	49	490
% row	50%	25.3%	5.1%	5.9%	3.7%	10%	100%
% of total	36.3%	18.4%	3.7%	4.3%	2.7%	7.3%	72.6%

TABLE 31: Male Marijuana Use in the Past 30 Days

Male	Never Smoked	Number times smoked marijuana: Not in past 30 Days	1	2	3	4+	Total
Count	78	38	12	8	8	41	185
% row	42.2%	20.5%	6.5%	4.3%	4.3%	22.2%	100%
% of total	11.6%	5.6%	1.8%	1.2%	1.2%	6.1%	27.4%

Research Questions

Research Question 1: What factors predict abstinence and sexual activity in African American college students?

To answer research question one, a backward logistic regression was performed using the following predictor variables: sexual orientation, age, marijuana use, alcohol use (binge drinking), religiosity, frequency of listening to rap music, frequency of viewing rap videos, RMSA and RVSA scale scores, and mean scores for each subscale on the Parental and Friends' Approval Scale.

Table 32 represents the results of the backward logistic regression. A test of the model was statistically significantly. The chi square for the model was 7.752 with a *p* value of .355. A non-significant chi square indicates the predicted probabilities match the observed probability, which is the desired outcome (Meyers, Gamst, & Guarino, 2006). The model accounted for 21% of the variation found between students who were abstinent and those who were sexual active. With all the variables in the model, the goodness of fit -2 Log Likelihood (-2ll) was 431.704. The referent group was sexually active students. The independent variables that showed significant effects for predicting

abstinence and sexual activity were age, marijuana use, and binge drinking. The most efficient significant predictor for determining whether a student is abstinent or sexually active was marijuana use.

Holding all other variables constant, students who binge drink were 1.4 times more like to be sexually active and students that smoked marijuana were twice as likely to be sexually active. Holding all other variables constant, students that are older are twice more likely to be sexually active than younger age students.

TABLE 32: Logistic Regression Predicting Whether Students Reported Abstinence or Sexual Activity

Predictor value	**B**	**SE**	**Wald (X^2)**	**df**	**Exp (B)**	**95% (CI)**	**p**
Binge Drinking	.322	.142	5.489	1	1.395	1.05-1.84	.019
Marijuana Use	.738	.179	16.902	1	2.090	1.47-2.97	.000
Age	.732	.204	12.851	1	2.080	1.39-3.10	.000

B=coefficient; SE = standard error; Wald= Wald statistic, Exp (B) =Odds Ratio; CI= confidence interval, p<.05

Research Question 2: For sexually active students, which factors best predict safer sex or higher risk sexual behaviors?

To answer this question, again a backward logistic regression was run with the same predictor variables described above for the first research question. A test of the model was statistically significant. The model explained only 3.4% of the variation between students who practiced safer sex compared to those who engaged in higher risk sexual behaviors. The Log Likelihood Ratio (-2ll) for the model was 503.606. The referent group for this analysis was students who reported practicing safer sex. In Table 33, the findings from the logistic regression model are reported. The independent

variable that showed significant effects for predicting sexual risk-taking behaviors among those who were sexually active was the students' reported sexual orientation.

TABLE 33: Logistic Regression of Sexually Active Students Predicting Whether Students Reported Safer Sex or Higher Risk Sexual Behaviors

Predictor value	**B**	**SE**	**Wald (X^2)**	**df**	**Exp (B)**	**95% (CI)**	**P**
Sexual Orientation	-.280	.104	7.269	1	.756	.616 - .926	.001

B=coefficient; SE = standard error; Wald= Wald statistic, Exp (B) =Odds Ratio; CI= confidence interval, p<.05

Holding all other variables constant, a students' sexual orientation (whether they chose to have sex with males, females or an individual of the same gender) affected whether they practiced safer sex or engaged in higher risk sexual behaviors. A students' sexual orientation decreased the likelihood by 75% of whether they practiced safer sex. In this study, lesbian, bisexual and heterosexual females reported practicing safer sex less frequently than gay, bisexual, and heterosexual males (Table 26).

Summary

This exploratory study was conducted to assess which variables best predicted abstinence or sexual activity. Results from research question one indicated age, marijuana use, and binge drinking were the best predictors in determining whether students were sexually abstinent or sexually active. To explore whether sexually active students practiced safer sex or engaged in higher risk sexual behaviors, the same set of predictors were used in a backwards logistic regression. A students' sexual orientation was the only variable that predicted practicing safer sex or engaging in higher risk sexual behaviors.

Chapter V: Discussion, Recommendations and Conclusions

This chapter primarily includes a discussion of the findings. A brief overview of the purpose and procedures appears first, followed by a discussion of significant findings for each research question. The variables that did not contribute in the predictive models are discussed in the context of study findings and relevance to the study population as supported by the literature. A discussion of study limitations is followed by implications for future research and a summary of this exploratory research.

The primary purpose of this research was to explore specific factors that may contribute to African American college students' decisions to practice abstinence, engage in safer sex or higher risk sexual practices. The definition of abstinence used in this study included never engaging in vaginal, oral or anal sex. The predictor variables of interest were religiosity, binge drinking, marijuana use, parental and peer perceptions about student's sexual behaviors, and the effects, if any, of viewing rap videos and listening to rap music has on one's sexual attitudes. The Theory of Planned Behavior loosely guided the selection of variables explored to examine the sexual behaviors of African American college students, specifically normative beliefs, attitudes and behavior control.

A cross sectional study design was employed, examining the sexual behaviors and practices of a purposive sample of African American college age students (N=681) attending a Mid-Atlantic HBCU. An expert review panel was consulted and a pilot study and focus group conducted prior to survey implementation. Statistical analyses included frequencies, means, chi-square tests and logistic regression.

Discussion

The majority of the respondents were female which was expected given the greater ratio of males to females on HBCU campuses. What was not anticipated was that the majority of women would report being sexually active, 73% reported engaging in vaginal sex and 71% reported engaging in oral sex. These college women may not have considered oral sex as "really having sex" as reported by others who have conducted research on college students' sexual behaviors (Sawyer and Howard, 2007; Kerr & Ott, 2006 and Horan et al., 1998).

Another surprise finding was that religiosity was not a significant variable in predicting sexual abstinence. The investigator speculated there might be a stronger relationship between religiosity and abstinence given that the study was conducted at an HBCU campus and that these campuses have steep religious underpinnings. Religiosity was measured by two items that looked at the frequency that students attended religious meetings and time spent in prayer, meditation and Bible study and by three items that measured the importance of religion to informing their life decisions and outlook on life.

Lower rates of sexual activity were hypothesized because of the study being conducted at a HBCU, the anticipated higher number of female respondents, and the higher frequency with which African American women attend church (Smith et al., 2002, Johnston et al., 1999, and Chatters et al., 1999). Further, the teachings of most religious denominations promote abstinence until marriage.

The majority of research conducted to date supports that religiosity plays a protective role against sexual risk behaviors. In chapter two, there were studies that showed the impact of religiosity on sexual risk-taking behaviors for African American

adolescents and youth (Johnson et al., 2000; Wallace & Foreman, 1998; and McCree et al., 2003). Studies were also presented in the literature review that showed that religious convictions might support sexual abstinent students' engagement in sexual activities that limit pregnancy but increase the likelihood of acquiring sexually transmitted diseases and HIV/AIDS infection to avoid negative affects associated with the violation of religious teachings and religious values (Rotosky, et al., 2004; and Ottt & Kerr, 2006). Additionally, the preponderance of studies that examined religiosity and sexual behaviors look primarily at penile-vaginal penetration and have not included students who engage in oral sex or anal sex as examined in this investigation. Therefore, it would be plausible that the higher reporting of religiosity and engagement in sexual behaviors as found in this sample was attributed to the inclusion of these items on the survey.

Fehring et al. (1998) and colleagues also found an inverse relationship for college students between measures of religiosity, sexual permissiveness, self-esteem, frequency of sexual encounters, and motivations for sexual activity or abstinence. In his research, what accounted for the difference in reported religiosity and sexual behaviors was time in relationship and commitment. It may be plausible that students in this sample shared the same view that students reported in this study, specifically that religious convictions may have had less value in regulating sexual behaviors than being in an intimate relationship. Whatever the case for these findings, it is abundantly clear that although the expected norm for those who regularly participate in religious services and profess strong religious convictions was abstinence until marriage, in reality this does not occur.

The investigator was interested in learning more about the sexual behaviors and preferences of college age African American men since there is very little data available

about this group's possible proclivity to various sexual partners' orientation (CDC, 2004); however; the data did not support this analysis. This research revealed a very small percentage of males who reported being gay and bisexual. There may be several reasons why this data could not be captured. First, there were a small number of males that were in the sample (males = 187; females = 494). Second, homophobia and stigma may have caused some black men that have sex with other men to identify themselves as heterosexual or not to disclose their sexual orientation (CDC, 2008). Third, the timeline for identifying the sexual partner preferences was only 30 days. Given this 30-day period, this timeline may have been too short. Therefore, in future research, the timeline for reporting sexual partner preferences (for both male and female) may need to be extended (e.g. 3 months or 6 months).

Research question one explored which of the independent variables examined (gender, sexual orientation, age, alcohol use, marijuana use, rap music and video influence on sexual attitudes, frequency of listening to rap and watching rap videos, peer influence, parental influence and religiosity) best predicted whether these college students would be sexually abstinent or sexually active. The variables that best predicted sexual abstinence vs. sexual activity was marijuana use, binge drinking, and the age of a college student. Study findings indicated that as college students' get older, they are more likely to be sexually active. The mean age of students who reported being sexually active was $\bar{X}$ =20 (*SD*=1.32) and abstinent was $\bar{X}$ =19 (SD=1.14).

National data revealed an increase in daily marijuana use for college students between 1993 and 2005 (National Center on Addiction and Drug Abuse, 2007), but this was not the case with these respondents. Overall, African American students in this

sample reported low rates of marijuana use and binge drinking. This finding is consistent with the literature that reported lower overall substance use for students attending HBCUs (The National Center on Addiction and Substance Abuse, 2007). Only a small percentage reported binge drinking (12.7%) or smoking marijuana (13.1) four or more times a month. A slightly higher percentage of students that reported being sexually active (15%) reported binge drinking and smoking marijuana four or more times a month. When looking at binge drinking patterns by gender, the majority of females (8.8%) who reported binge drinking did so at least once during a month and the majority of males (6%) who reported binge drinking drank on four or more occasions during a month. Sixty percent of sexually active youth reported that they did not drink alcohol or smoke marijuana before the last time they had sexual intercourse. It is plausible that students could have answered this item and other items regarding their sexual behavior in a socially desirable manner because other studies have shown a correlation in substance abuse use and sexual risk behaviors in adolescents (Boyer et al., 2000, Steuve & O'Donnell 2005, and Liau et al., 2002).

As anticipated, older students were significantly more likely ($p < .01$) to report being sexually active. The mean age of students in the sample was 20 years (SD =1.32). The investigator did not look at the age of initial coitus or number of partners over a lifetime, however; study findings did reveal that very few African American students reported two or more sexual partners in a year period or multiple sexual partners in a 30-day period. The majority of sexually active students reported having one partner within the past year for both vaginal sex and oral sex. Relatively few students (1.3% or less) reported more than one partner for anal sex. Serial monogamy, moving through a

succession of sexually exclusive relationships, is common practice for college age students and does not necessarily safeguard against disease (Crooks and Baur, 2008).

Of the females who reported having multiple sexual partners for vaginal sex in the past 30 days (n=65), 60% reported vaginal sex with >1 partner; Of the 44 males who reported having multiple sexual partners for vaginal sex in the past 30 days, 40% reported vaginal sex with >1 partner. Thirty-six females reported giving oral sex to >1 partner in the past 30 days (67%) and 61 females reported receiving oral sex (57%) from >1 partner. Eighteen males reported giving oral sex to >1 partner (33%) and 46 reported receiving oral sex (43%) from >1 partner for the same period. Even with the low reporting of sexual partners and multiple sexual partners, given that the majority of students in this sample were sexually active makes them vulnerable to acquiring a sexually transmitted disease especially considering the epidemiological data for young adults less than 25 years of age (CDC, 2006b). The sexual risk-taking behaviors of students that reported engaging in vaginal intercourse and oral sex with <1 partner in the past 30 days presents significant health risks and is of notable concern.

Research question two explored which variables predict risky sexual practices compared to safer sex practices among the sexually active students. Which category students were assigned, (safer sex vs. higher risk sexual behavior) was determined by whether respondents used condoms every time when engaging in vaginal and anal sex. Of all variables examined, sexual orientation, defined as students' reported sexual partner preference (male, female, or an individual of the same gender), was the only one that predicted engagement in safer sex or higher risk sexual behaviors. Again, 72% of respondents were women and 27% were men. The majority of women (67%) reported

being heterosexual, 4% reported being bisexual, and 2% reported being gay. Twenty-five percent of males reported being heterosexual, 1% reported being gay and .4% reported being bisexual. A plausible explanation for the very low percentage of men reporting being bisexual is the stigma in the African American community of being labeled on the "down low," men having sex with other men and not telling their female partners (Lewis, 2002).

Sixty-four percent of heterosexual males reported practicing safer sex compared to 50% of heterosexual females who reported practicing safer sex. In this study, gay men reported practicing safer sex all of the time and lesbians reported practicing safer sex 57% of the time. Bisexual men reported practicing safer sex all of the time and bisexual women reported practicing safer sex 41% of the time.

The definition used for safer sex was use of condoms for vaginal and anal sex. The research findings indicate that gay and heterosexual men are taking greater precautions in reducing their risk of acquiring an STI. Women in this sample are exposing themselves to getting HIV or acquiring a STI by inconsistent condom use. Further, 60% of females reported having vaginal sex with more than one partner within the last 30 days compared to 40% of males who reported engaging in this behavior. These findings provide insights as to why African American women have the leading rates of HIV/AIDS when compared to other racial ethnic groups and the highest incidence of STIs. Other researchers through their empirical studies of the risk taking behaviors of African American women offered contributing explanations. One possible explanation is that the desire to be in a long-term serious relationship outweighs the necessity of using condoms (Foreman, 2002) and greater emotional investment of

females in relationships when compared to males exposing them to greater risks of sex with males who have multiple partners and a host of short-term relationships (Ferguson, 1999). Still other researchers found that fear of losing a relationship because of partner displeasure, anger, tension, and violent abuse affected African American women's decisions to mention condom use to their partners (Nura-Khem, 2002). Researchers have found negative attitudes associated with condom use for African American females that include inconvenience, embarrassment, and loss of pleasure, and spontaneity (Jemmott & Jemmott, 1991).

Other Variables in the Logistic Regression Analyses

Listening to rap music and viewing rap music videos did not predict abstinence or engaging in safer sex or higher risk sexual behaviors. These variables were presumed to have an effect on sexual behaviors because of the sexually explicit content in most rap music and rap music videos, and the frequent depictions of sexual gratification by having casual and/or multiple sex partners (Arnett, 1995; Haferkamp, 1999; and Ward, 2002). Further, rap music and rap music videos glorifies masochistic roles with men having numerous female partners and the use of alcohol and illicit drug use with little or no reference to safer sex. There is emerging literature as discussed in Chapter 2 that associates listening to rap music a certain number of hours with sexual behaviors, with the increased practice of risky sexual behaviors, and with increased transmission of sexually transmitted diseases (Wingood et al., 2003; and Robillard, 2000). Because of these studies, these variables were examined in the current study as possibly contributing to higher risk sexual behaviors.

However, study findings indicated this was not the case. It may be that the instruments used to measure this possible effect were not psychometrically sound given the researcher designed them for this investigation. Because reliable scales that measure the influence of rap music and rap videos on sexual attitudes do not currently exist, the investigator developed the Rap Music Influencing Sexual Attitudes (RMSA) scale and the Rap Video Influencing Sexual Attitudes (RVSA) scale. Even though the internal consistency reliability coefficients were acceptable for the pilot study (r=.68 for the RMSA and r=.66 for the RVSA), additional analyses need to be conducted (e.g., test retest reliability and validity testing). Reliability analyses were also run using the final study sample where the Cronbach alpha scores dropped for the RMSA scale to r=.47. Currently, the primary method used by researchers to examine media messages and sexual behaviors is through content analysis of media messages.

Measures of the frequency which respondents listened to rap music and viewed rap videos were used to examine whether increased exposure affected sexual attitudes. Students were asked to estimate the number of hours per day and week they listened to rap music or viewed rap videos. The hours per day they listened to rap music and viewed rap videos were included in the logistic regression analyses. The students that did not listen to rap music or view rap music videos were directed to not answer the items on the RMSA and RVSA scales (n=97, 14%). Several students (n = 5) indicated on their surveys that rap music did not affect their sexual decisions and checked strongly disagree to all items from the final sample. The average number of hours respondents listened to rap music was 3 hours (*SD*=3.14) and the average time spent viewing watching rap music videos was 0.91 hours (*SD*=1.26).

As noted earlier, the investigator presumed that students reporting higher religiosity mean scores would report not being sexually active. College students in this sample reported a high-level of religiosity but this did not necessarily equate to abstinence, only 11 percent of students who reported the highest religiosity scores reported being abstinent.

Students' perceptions regarding what their parents and friends thought of them engaging in certain sexual behaviors did not predict sexual behavior, safer sex or higher risk sexual behaviors. In the logistic regression equations, father and mother's approval stayed in the models longer than friend's approval but was not a strong enough in the model to remain significant in the final models. Students reported higher levels of friend's approval ($\bar{X}$ =58, *SD*=11.46) for engaging in certain sexual behaviors followed by mother's approval ($\bar{X}$ =45, *SD*=12.88) and father's approval ($\bar{X}$ =38, *SD*=16.84). Although the literature documents the effect of parental and peer influences on various sexual behaviors such as contraceptive use and sexual activity, this variable did not play a stronger role in students' decisions to be sexually active or practice safer sex (McCree et. al 2003; Rostosky et al, 2004; Rotosky et al, 2003; Rotosky, Wilcox, et al, 2001; Steinman and Zimmerman 2004).

In summary, none of the new exploratory variables described above predicted abstinence. The model with these variables accounted for 22% of the variance found between students who were abstinent and those who were sexual active. These study findings indicated that we possibly still need to identify variables that may contribute to student's decisions to be abstinent. The variables that did predict sexual behaviors were

binge drinking, marijuana use, and age all of which had been previously documented in the literature.

A student's sexual orientation (whether she or he reported being heterosexual, gay, lesbian or bisexual) was the only variable that predicted safer sex or higher risk sexual behaviors in this sample. The model that examined safer sex practices only accounted for 3.4% of the variance for African American college students' decisions to practice safer sex or to engage in higher risk sexual behaviors. This may have been the case because the only item the investigator used to distinguish whether students practiced safer sex or engaged in higher risk sexual behaviors was the reported condom use for vaginal and anal sex within the last 30 days.

Study Limitations

A limitation of this study was that it was a cross-sectional survey using a purposive sample. Because it was a cross sectional design, cause and effect relationships cannot be determined, but the reader is reminded that the study was exploratory in nature, specifically looking at African American college students due to their disproportionate rate of HIV/AIDS and STIs. It was hoped the examination of new variables that may have potentially influenced their sexual behaviors would provide direction for further research. From an historical perspective, there has been less research conducted in this population than in the majority population on sexual behaviors and practices.

In purposive sampling, we sample with a "purpose in mind" and with one or more specific predefined groups to gather insights on certain groups (Huck, 2008). This differs from convenience sampling that does not exclude individuals given a set of "predetermined" criteria. The investigator had clear study criteria for inclusion in the

sample that included being: (1) an African American students matriculating at a HBCU (2) a student between 18-24 years of age and (3) not married.

A third limitation was that the sample was drawn from an urban environment that may not be representative of African American students attending HBCUs in suburban and rural areas. This research was conducted in an urban setting because it was believed that their may be richer insights into the sexual behaviors and risk practices of African American students attending college in these environments. Future studies could be conducted at HBCUs in the North, South and Midwest.

A fourth limitation of the study may have been that there were specific questions on the instrument regarding students' sexual behaviors and practices. Some students may have been embarrassed or reluctant to answer all questions honestly or may have answered the questions in a socially desirable manner. This is a limitation of survey research. Researchers replicating this study should add items that would help identify respondents that are answering items in a socially desirable manner. This was not done in this exploratory study due to the concerns regarding the length of survey and the time it would take students to complete the survey. The survey took students approximately 15-20 minutes to complete. Any thing longer may have hindered the response rate or hindered professors from allowing the investigator to administer the survey during a class period.

Another study limitation that was not anticipated was the unreliability of the rap music scale given its acceptable internal consistency reliability in the pilot study phase of this research. A final limitation was the absence of a culturally appropriate model in the literature to predict sexual behaviors for African American college students. As

discussed, the theoretical framework that loosely guided the variable selection was the Theory of Planned Behavior. This theory was selected because of its utility in other empirical studies to account for facilitating or constraining conditions that affected intentions and behaviors (Jemmott & Jemmott, 1991, 1992, and 2002; Basen-Engquist & Parcel, 1992; Braithwaite et al., 1998; Braithwaite and Thomas, 2001; Carvajal et al., 1999; and Gillmore, 2002). This framework is useful in examining behaviors where a person feels that he/she may has less volitional control over such as negotiating sexual behaviors and condom usage with a partner under the influence of alcohol or illicit drugs use.

Implications for Further Research

A benefit of this research is that it provided insights into the sexual behaviors of African American college students. This study identified the need for future research in several areas. Researchers should conduct the study with African American college students in non-urban settings at multiple (non-HBCU) universities to see if these study findings are replicable with other African American students given the same demographics. There is a greater female to male ratio on HBCU campuses. Implementing the study across universities would help to neutralize this effect and provide additional data on the sexual behaviors of African American college students.

Investigators may want to add other variables to the instrument. The variables identified in the study were those reported in the literature to predict abstinence, sexual activity or risky sexual behaviors, repeating this study again with the same variables would help to establish the validity of these findings. However, other variables of interest may include whether a student is currently in a relationship, use of oral

contraceptives, and age of sexual debut. Additionally, this instrument can be used with other racial ethnic populations at two-year and four-year institutions of higher education for comparative analyses of sexual behaviors in college students to ascertain if there are differences in risk-taking behaviors within certain groups and ages of students.

Future studies are needed to examining the impact of the media on sexual behaviors. A new study conducted by researchers from the Rand Corporation confirms the link between teenagers' exposure to sexual content on TV and teen pregnancies (Chandra et. al., 2008). The study found that teens exposed to higher levels of sexual content on television were twice as likely to be involved in a pregnancy in the following three years compared to teens with limited exposure. There is also a need to develop a reliable instrument that would measure the influence of other various musical genres and music videos on sexual attitudes. Including other forms of music into a scale may better gauge the impact that explicit sexual lyrics have on shaping one's sexual attitudes. Exposure to various forms of media has been documented in influencing sexual behaviors (L'Engle, Brown & Kenneavy, 2006; Roberts, 2000; Pardun, L'Engle & Brown, 2005; and Wingood et al., 2003). As previously discussed, adolescents who had greater exposure to rap music compared to those who reported less exposure to rap music were twice as likely to have multiple sex partners, and more than 1.5 times as likely to have acquired an STD, use drugs, and use alcohol (Wingood et al., 2003).

A demographic item modified on the study instrument categorized students as being single or married. The researcher noted conflicting responses from females. For example, a couple of females reported no sex partners for vaginal, oral, and anal sex and checked yes to item 45 that they were married. A few females stated that they had sex

with more than one partner within the last year and that they engaged in vaginal, oral, and anal sex with more than one partner but also checked yes that they were married. Finally, one person indicated that they were "married" but in a handwritten note next to the question explained that she was engaged. Again, replicating this study with a variable that looks at relationship status may help explain some of the risk-taking behaviors of African American women (Bazargan et al., 2000).

Summary

This exploratory study helps fill the void and dearth in the literature regarding the sexual behaviors of African American college students. The majority of students at this urban HBCU were sexually active and females. This study documented greater sexual risk- taking behaviors among females than males. Heterosexual males reported greater condom use than females regardless of females reported sexual orientation. This study was significant because it tested predictors cited in the literature that influenced adolescents' sexual decisions simultaneously in a model on a large sample of African American college students. More studies of this nature are needed given the disproportionate rates of HIV and sexually transmitted diseases in this community.

Far too many African American college age women are still reporting inconsistent condom use. This is alarming given what we know about the transmission of HIV/AIDS. Attitudes toward condoms and inconsistent use need to be further studied and this information needs to be included into the curriculum of sexuality education curricula. This research provides confirmatory data that alcohol and marijuana use contributes to students' decisions to be abstinent or sexually active. Students who use these drugs are more likely to report riskier sexual behaviors. College sexual health

awareness campaigns should highlight the inextricable link of illicit drug use and sexual risk-taking behaviors and the adverse consequences that may result from having sex while intoxicated or high. Finally, this study confirms the literature that sexual activity increases with age.

Appendix B

Re: Predictors of Abstinence, Safer Sex and High Risk Sexual Behaviors among African American College Students Attending a Historically Black College & University Study

Dear Faculty,

You have been identified by the Coordinator of Health, Physical Education and Recreation Programs at your institution as a faculty member within the Department who may be willing to allot 30 minutes of your class period for me to administer a survey to your students regarding their sexual behaviors. This research is being done for my dissertation that I am completing in the Department of Public & Community Health at the University of Maryland College Park. I would greatly appreciate your assistance in data collection!

The purpose of my study is to look at the factors that may influence African American college students' sexual behaviors. The information provided by your students will help us understand factors that may predict whether African American college students will choose not to have sex, have safer sex, or engage in high risk sexual behaviors. I am very familiar with the research conducted at your institution on HIV/AIDS Prevention and Testing, and I believe this research will strengthen efforts underway at your institution to educate and provide students with information to lower their risk of acquiring HIV or other sexually transmitted infections (STIs).

The information provided by your students is anonymous and their participation is voluntary. Your students will be free to stop participating in the study at any time. Any information from the study will only be reported in the aggregate. Attached is the IRB approval to conduct this study at your institution.

You will be contacted within two weeks to ascertain your interest in assisting in data collection and to discuss a possible date and time for me to administer the survey to your students. If you have any additional questions please feel free to call me at 202-550-7533 or via email at drsaunders2@yahoo.com or your site coordinator.

Thank you so much for considering this, and hopefully allowing me to come to your class. I would be more than happy to come back and provide a guest lecture on a health topic. I will also provide you a copy of my findings or study results if you are interested.

Sincerely,

Darlene R. Saunders, MPH, CHES
Doctoral Candidate
University of Maryland, College Park

Enclosures

Appendix C

Re: Predictors of Abstinence, Safer Sex and High Risk Sexual Behaviors among African African American College Students Attending a Historically Black College & University Study

Dear Review Panel Member,

You have been identified as a colleague having significant experience in the field of public health, HIV prevention and or survey design. Your assistance is requested to refine a survey instrument developed for college students to examine the influences of their sexual behaviors (see study abstract). This research is being done in conjunction with my PhD program in Public & Community Health at the University of Maryland College Park.

The information gathered from this instrument will help us understand the factors that predict whether African American college students will choose not to have sex, have safer sex, or engage in high risk sexual behaviors. This information will then be used to develop appropriate messages and interventions to lower their risks of acquiring HIV or other sexually transmitted infections (STIs).

Attached you will find a questionnaire to be used to critique the survey. An electronic copy of this letter and questionnaire is also being sent. Ample room is provided on the questionnaire for you to make overall comments to improve the survey. An enclosed stamped envelope is provided for you to return the questionnaire by mail. You may also send it electronically to drsaunders2@yahoo.com. Please return your questionnaire within two weeks.

A courtesy copy of the final instrument will be sent to you upon completion of the pilot study.

Thanks so much for your willingness and time to assist in the development of a research tool to provide information that may further improve the overall health of African American youth!

Sincerely,

Darlene R. Saunders, MPH, CHES
Doctoral Candidate
University of Maryland, College Park

Enclosures

Appendix D: Questionnaire for Expert Review Panel

Directions: After you have completed the questionnaire, please comment on each of the following items:

1. The title clearly describes the intent of survey?

2. The introductory statement explaining the study clearly written?

3. Directions for completing each section clear?

4. Which questions were difficult to read, used awkward language, or were ambiguous?

5. Were you uncertain about what any of the words or any of the terms meant? Please list.

6. Which questions did you not understand? Please explain why?

7. What did you think about the length of the questionnaire?
   _____ Too short _____Acceptable _____Too long

8. Do the questions reflect well the topic being studied?

_____ Yes _____No

If no, please comment below.

9. Are the questions consistent with current knowledge of African American college student's sexual behaviors?

_____ Yes _____No
If no, please explain

10. Are there any questions that should be added or deleted?

_____ Yes _____No
If yes, please list below.

11. Method for returning survey clear?

_____ Yes _____No

12. Do you have any other comments about this survey?

13. Please comment on the overall format of the survey. How could it be modified to make it easier to complete?

Thank You for Your Comments!

Appendix E: Pilot Study Questionnaire

Now that you have had time to take the survey, I am going to go through the instrument and ask specific questions about the individual items.

On page 1, items 1-16 are designed to find out how friends and parents influence your sexual behaviors. The questions ask about different forms of sexual contact and different levels of relationship involvement.

- Were these items easy to understand?
- Are the terms used to describe sexual behaviors and different relationships relevant and up-to-date?
- If not, what suggestions would you make to use terminology more reflective of what other college students are doing?

On page 5, there are five items (17-21) about the importance of religion in your daily life.

- Were these items easy to understand?
- Do students who live on campus have opportunities to attend worship services/and or meetings?
- Do you think that students living at home are more likely to attend worship services/meetings?
- Do you think that where a student lives has any affect on their church attendance? If so, please explain.

On page 6, there are five items (22-26) about sexual behaviors.

- Are these items clearly stated?
- Were you uncertain about what any of the words or terms meant? Please identify.
- Would you want any of these items to be worded differently? If yes, how?

On page 7, items 27-29 ask about alcohol and marijuana use.

- Are these items clearly stated?
- Would you want any of these items to be worded differently? If yes, how?

On the bottom of page 8, items 30 and 31 ask about how often you listen to Rap Music and watch Rap Music Videos.

- Any concerns regarding these two items?

On page 8, items 32-41 have to do with your attitudes about rap music, rap music videos and sex.

- Were any of these items difficult to read or ambiguous?
- Were you uncertain about what any of the words or terms meant? Please identify.
- Were there any items you did not understand? Please explain why.
- The purpose of these questions is to learn how listening to rap music and looking at rap music videos affects your attitudes about sex. Are there any other questions you would ask/include? If yes, please write on the bottom of the survey.

On pages 9 and 10, you were asked to provide some demographic information.

- Were the demographic questions clearly written?
- Do any questions on these pages need to be reworded?

On page 10, items 51 and 52 asked questions about who raised you.

- Were these items clear to you?
- Is there a better way of asking this information or wording this question so it would be clearer to you? If so, please explain.

Do you have any other comments about the survey we have not discussed?

Thank you so much for participating in this pilot study! If you have any additional comments or questions about the study please do not hesitate to contact me at drsaunders2@yahoo.com, 202/550-7533, or my dissertation Chair, Dr. Sharon Desmond at desmond@umd.edu.

Appendix F: Informed Research Script for Survey

Answering questions about sexual behaviors may be uncomfortable but you do not have to answer any questions you do not want to. You may feel uncomfortable responding to some of the survey questions about sexual behaviors and drug use. Participation in this research will not require any costs from you. Be assured that all information you give will be kept strictly confidential. The purpose of the study is to look at factors that may influence African American college students' sexual behaviors.

All data collected is confidential and will only be reported as group data. Do not put your name on the survey. Participation is completely voluntary. You must be at least 18 years of age to participate in the study. You will not be penalized in any way if you decide not to participate. And of course, you are free to stop participating in the study at any time. It will take you approximately 15 minutes to take the survey.

Please feel free now to ask me any questions you have about the study.

Appendix G:

Influences of Sexual Behaviors among African American College Students Expert Review Panel Questionnaire

Directions: After you have completed the questionnaire, please comment on each of the following items:

1. The title clearly describes the intent of survey?

Yes

2. The introductory statement explaining the study clearly written?

No. I think it would be helpful to state purpose of the study, that there are no right or wrong answers, and that they can skip a question if they want to.

I would recommend not having them put NA if parent is deceased. If they knew how their parent would react prior to death that may be relevant. Only put NA if you don't know.

3. Directions for completing each section clear?

Yes

4. Which questions were difficult to read, used awkward language, or were ambiguous?

No, some comments after 36 about questions

5. Were you uncertain about what any of the words or any of the terms meant? Please list.

"the Divine"

6. Which questions did you not understand? Please explain why?

I would check to see if young people use the term “go steady” or if there is a term that is more relevant.
“Your friends” is very broad and their friends might vary considerably in what they think. I don’t think this works as a category. Other possibilities “ your closest friend” or “The majority of your friends” might work better.
Suggest making sure you have labels above a, b, and c for each question (WA, WNC, WD and WSD may be confusing without labels after questions)\
“Passionate” caressing might not be best language depending on what you are trying to ask. (Perhaps it is term used now for heavy petting?) to me passionate means adoring or loving—but you could do “heavy” petting with someone for whom you did not have feelings. I assume you mean moving beyond light caressing and kissing and I don’t know if passionate captures that.

Question 25—suggest including oral sex
Question 26, suggest including Transgender

Question 27 and 28—option one needs to take out never and add “in the past 30 days” at the end—as question is written if you have had five drinks in a row but not in last 30 days there is no where to answer correctly. You could also keep as it is written now but add option “I have not had 5 or more drinks of alcohol in a row in the last 30 days” (same for 28).
Questions 36 and 41 are the same.
Question 52—more than one may apply, can they check more than one?

7. What did you think about the length of the questionnaire?
_____ Too short ___x____Acceptable _____Too long

8. Do the questions reflect well the topic being studied?

_____ Yes _____No
If no, please comment below.

I think these questions are relevant but there are probably many of topics that would be relevant as well

9. Are the questions consistent with current knowledge of African American college student's sexual behaviors?

_____ Yes ___x_____No
If no, please explain

10. Are there any questions that should be added or deleted?

_____ Yes _____No
If yes, please list below.

11. Method for returning survey clear?

_____ Yes _____x___No I would include information about where the box is located.

12. Do you have any other comments about this survey?

13. Please comment on the overall format of the survey. How could it be modified to make it easier to complete?

Thank You for Your Comments!

Name of Reviewer ___Jennifer Galbraith

Influences of Sexual Behaviors among African American College Students Expert Review Panel Questionnaire

Directions: After you have completed the questionnaire, please comment on each of the following items:

1. The title clearly describes the intent of survey?

Yes, the title is quite clear.

2. The introductory statement explaining the study clearly written?

Also clearly written.

3. Directions for completing each section clear?

Yes, although I have recommended that where appropriate, a "Don't know" response be provided. This will aid in distinguishing between those who refuse to answer from those who simply aren't certain how to respond.

4. Which questions were difficult to read, used awkward language, or were ambiguous?

I thought that it would be extremely important to use the same care in defining such terms as "passionate kissing" as was used in defining and describing sexual acts!

5. Were you uncertain about what any of the words or any of the terms meant? Please list.

No, but I did suggest adding definitions to some of these terms, as noted above, so that everyone would be "on the same page" when they responded to the questions.

6. Which questions did you not understand? Please explain why?

Not understanding was NOT a problem, but obtaining greater clarity was something I suggested get more attention and focus.

7. What did you think about the length of the questionnaire?
_____ Too short __x_____Acceptable _____Too long

8. Do the questions reflect well the topic being studied?

___x___ Yes _____No

If no, please comment below.

9. Are the questions consistent with current knowledge of African American college student's sexual behaviors?

__x____ Yes _____No
If no, please explain

10. Are there any questions that should be added or deleted?

_____ Yes ____x_____No
If yes, please list below.

11. Method for returning survey clear?

___x__ Yes _____No

12. Do you have any other comments about this survey?

I have yet to see anyone explicitly address the issue of the influence of rap music and videos on sexual behavior. We always talk about 'getting in the mood,' so it will be interesting to see whether or not sexual behavior is [or is not] correlated with the degree to which people report that they use this music.

13. Please comment on the overall format of the survey. How could it be modified to make it easier to complete?

Already noted previously.

Thank You for Your Comments!

Name of Reviewer _____Robert E. Fullilove, EdD, professor and associate dean_____

Influences of Sexual Behaviors among African American College Students Expert Review Panel Questionnaire

Directions: After you have completed the questionnaire, please comment on each of the following items:

1. The title clearly describes the intent of survey?

The title suggests you're trying to find out how sexual behaviors influence something. What you're really trying to find out is what influences the behaviors. So shouldn't it be Influences on rather than of? E. G.

"Influences [of Parents and Friends] on the Sexual Behaviors of African American College Students."

2. The introductory statement explaining the study clearly written?

Yes. But perhaps you could spell out exactly what influences you're trying to ascertain: parents, friends, religion, and rap music are the four I see asked about in the questionnaire.

3. Directions for completing each section clear?

(1) In the definitions prior to # 22, you refer to both a male and female condom. But I see only one question that refers to condom, and it doesn't specify male or female. I would suggest changing the definition to define "condom" as either male or female, or, if you want to know which was used, you have to ask that directly.

(2) After # 22, you say "If you answered no to all items, skip to item 27". I think you should also say "If you answered yes to any of the items, proceed to item 23."

4. Which questions were difficult to read, used awkward language, or were ambiguous?

I found the questions "if you engaged in…" a bit awkward because of the placing of the phrase "…what would you expect from the following if they knew about it."

What about if someone taking the questionnaire doesn't listen to rap music at all? Should you have a third option after 30 and 31 # of hours # days per week None "If you answered none, skip to Demographics"

I think items 34 and 37 are duplicates?

5. Were you uncertain about what any of the words or any of the terms meant? Please list.

The words were clear. The terms that were not clear are discussed in my answer to question 6 (bel.ow).

6. Which questions did you not understand? Please explain why?

It's hard to differentiate between "light" caressing and "passionate caressing" unless you specify that one may involve genital rather than just breast fondling, etc. Likewise, "strong affection" for and "love" may be hard for some people to differentiate.

7. What did you think about the length of the questionnaire?
_____ Too short _____Acceptable _X_____Too long

8. Do the questions reflect well the topic being studied?

___X___ Yes _____No

If no, please comment below.

9. Are the questions consistent with current knowledge of African American college student's sexual behaviors?

_____ Yes _____No
If no, please explain

10. Are there any questions that should be added or deleted?

_____ Yes _____No
If yes, please list below.

11. Method for returning survey clear?

_____ Yes _____No

12. Do you have any other comments about this survey?

13. Please comment on the overall format of the survey. How could it be modified to make it easier to complete?

Thank You for Your Comments!

Name of Reviewer: Dr. Nan Smith

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