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Factors Related To Condom Use Among Sexually Active African American Females Using Health Belief Model Constructs And Potential Cues To Action With A Mass Communication/ Interpersonal Communication Approach

Shiree Monika Southerland
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To the Graduate Council:

I am submitting herewith a dissertation written by Shiree Monika Southerland entitled "Factors Related To Condom Use Among Sexually Active African American Females Using Health Belief Model Constructs And Potential Cues To Action With A Mass Communication/Interpersonal Communication Approach." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

Paula Carney, Major Professor

We have read this dissertation and recommend its acceptance:

Debora Baldwin, James J. Neutens, Susan Smith

Accepted for the Council:
Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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

Shiree Monika Southerland
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DEDICATION

This dissertation is dedicated to the women who have had the most influence over my life and served as my guiding spirits:

Matilda R. Southerland

Dorothy M. Southerland

M. Annette Southerland

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I would first like to give honor to my Lord and Savior Jesus Christ without whom none of this would have been possible.

No project such as this would have been possible without the love and support of many people.

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ABSTRACT

The primary purpose of this study was to assess the factors that relate to male condom utilization among sexually active African American college women at The University of Tennessee.

College women between the ages of 18 to 24 are the most susceptible to contracting a sexually transmitted disease (STD) as they do not perceive themselves to be at risk. It is estimated that each year 12 million new cases of STDs occur and two thirds of those infected are under the age of 25 (Hale & Trumbetta, 1996). Women are among the fastest growing groups being infected with HIV. In 1997, 22% of all reported new cases of AIDS were women and of those 60% were African-American. African American women of all ages were approximately 16 times more likely to be diagnosed with HIV than their White counterparts (Wingood & DiClemente, 1998).

This study consisted of a convenience sample of 196 African American undergraduate females between the ages of 18 to 24. Participants were recruited through various student organizations affiliated with the Black Cultural Center.

The Health Belief Model (HBM) Constructs perceived susceptibility, partner, perceived barriers, turnoffs, hassles, execution relationship concerns, self-efficacy, and cues to action were found to be positively correlated with condom use. There was no correlation between HIV/AIDS level of knowledge, perceived benefits, and perceived susceptibility, self and condom use. A stepwise regression was performed in order to ascertain whether or not the HBM constructs would predict the utilization of male condoms among African American college students. The results indicated that 22% of

the variance in condom use could be attributed to the HBM constructs. The strongest predictor of condom use was self-efficacy (beta=.257) and perceived barriers, turnoffs (beta=.232).

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CHAPTER I

INTRODUCTION

The purpose of this chapter was to introduce the problem of high risk sexual behaviors among African American college women, outline the problems that were studied, and the research questions that were addressed.

Understanding how biological, epidemiological, and social vulnerability impacts a woman's health is essential to analyze how knowledge, attitudes, and beliefs play a role in an individual's risk for contracting Human Immunodeficiency Virus (HIV). More specifically African American women are at an increased risk for developing HIV and other sexually transmitted diseases. Research involving college students has used this comprehensive approach in identifying why they are more likely to be at risk. Lewis and coworkers have found that college students are particularly susceptible to HIV infection because of their pattern of sexual behavior, which includes engaging in sex with multiple partners and inconsistent condom usage (Lewis, Melton, Succop, & Rosenthal, 2000). When these behaviors are coupled with a decrease in knowledge concerning the demographics, transmission, and potential risk behaviors associated with HIV transmission, individuals are more at risk of contracting the virus (Lollis et al., 1996). Research on sexual behavior in African American women can utilize the findings from research on the general college student population. If social mores within the African American community give rise to a potential aversion to relevant information about HIV prevention, African American college students may feel less threatened by the potential transmission of the virus.

The Health Belief Model (HBM), developed in the 1950s by a group of social psychologists at the US Public Health Service to explain the widespread failure of people to participate in programs to prevent or detect disease, is clear about the relationship between attitude, information, and disease. It is believed that individuals will take preventive measures to avoid certain illnesses or diseases if they feel that they are susceptible to them or if they are deemed severe. Individuals will take the necessary course of action if they feel that it will be beneficial in reducing either their susceptibility to or the severity of the conditions, and if they believe that the anticipated barriers to taking the action are outweighed by its benefits (Glanz et al., 1996).

For many African American women, the perceived benefits of using male condoms do not outweigh the risks of unprotected sex. For example, introducing a condom may suggest issues of trust and may lead to a less stable relationship. St. Lawrence et al. also report that African American women tend to view condoms in a very negative light. African American women are found to view condoms as an interference with lover spontaneity, unromantic, and distracting from sexual pleasure. St. Lawrence and colleagues have also found African American college women to be particularly receptive of the social stigma associated with condom usage. They associate condom usage with casual (uncommitted) relationships, infidelity, disease, and a rejection of emotional intimacy. All of these attributions occur despite information about the dangers of non-condom usage and the effects HIV have on the quality of one's life. St. Lawrence et al. measured knowledge, attitudes, and self-efficacy but did not use a theoretical framework, such as the Health Belief Model, that enables prediction of condom use.

These attributions continue to occur despite information that African American and Latina women constitute only 15 and seven percent respectively of the population, yet account for 73 percent of all US women with AIDS (Highsmith, 1997). It is because of this attitude that exists among African American women that makes this study so warranted. Once barriers are identified then comprehensive heath education programs can be created and implemented to address this problem. Thus, this study will contribute important information about factors associated with the Health Belief Model and how they relate to male condom use as well as potential cues to action.

Statement of the Problem

The problem addressed in this research dealt with the low use of condoms among single sexually active African American college women at The University of Tennessee for the prevention of HIV/AIDS. The research also dealt with the association, which may have existed between perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy and male condom utilization.

Purpose of the Study

The purpose of this study was to assess the factors associated with the Health Belief Model constructs (perceived benefits, perceived severity, perceived susceptibility, perceived barriers, and self-efficacy) and male condom utilization among single sexually active African American college women at The University of Tennessee.

Research Questions

The following research questions were developed to address the purpose of the study:

Research Question 1: What is the relationship between perceived susceptibility, perceived benefits, and perceived barriers and male condom utilization among single African American college women?

Research Question 2: Are cues to action related to the likelihood of male condom utilization among single African American college women?

Research Question 3: Is there a relationship between self-efficacy and male condom utilization among single African American college women?

Research Question 4: Is there a relationship between the level of knowledge about HIV and male condom utilization among single African American college women?

Research Question 5: Do responses to the Health Belief Model constructs (perceived benefits, perceived severity, perceived susceptibility, perceived barriers, and self-efficacy) predict the utilization of male condoms among single African American college women when controlling for risk?

Need for the Study

College women between the ages of 18 to 24 are particularly susceptible to contracting a sexually transmitted disease (STD) as they do not perceive themselves to be at risk. In addition, it is estimated that each year 12 million new cases of STDs occur and two thirds of those infected are under the age of 25 (Hale & Trumbetta, 1996). Women are among the fastest growing groups being infected with HIV. In 1997, 22% of all reported new cases of AIDS were women and of those 60% were African-American. African American women of all ages were approximately 16 times more likely to be diagnosed with HIV than their White counterparts (Wingood & DiClemente, 1998). According the CDC nearly 11,840 people ages 20-24 were diagnosed with AIDS between 1981 and 1993. It is estimated that approximately 67% of all AIDS cases have occurred in adults 20-39 years of age. Due to the long incubation period for this disease, it appears that many may have been infected as adolescents or young adults. Recent studies conducted by the American College Health Association report that 25,000 college students may be infected with HIV. Activities such as alcohol use, experimentation with drugs, early onset of sexual activity, and lack of knowledge place this group at risk for contracting an STD (Mahoney et al., 1995).

Latex condoms are the most effective method of HIV and sexually transmitted disease prevention among sexually active persons. Despite the benefits of consistent condom use many women experience barriers to using them regularly. Rates of STDs in the general female population are a serious problem. Condom-use rates in the general population vary considerably across studies, depending in how use was defined. Leigh,

Temple, and Trocki (1993) found that less than 5% of all women used condoms consistently in the previous year and Cantina et al. (1994) found that 11% of White women and 14% of African American women used male condoms consistently in the past year. Programs to increase condom use have not been successful thus far (Leigh, Temple, and Trocki, 1993). In Tennessee African Americans comprised thirteen percent of the total population and 54.83% of the HIV cases as reported by the Tennessee Department of Health (Epi-News, 2000). Finally, in order for these strategies to be successful it first must be understood the decisions that play a role in whether or not an individual will use a condom or not.

Theoretical Framework

The theoretical framework used for this study was the Health Belief Model (HBM). This model was chosen because of its behavioral components and use in explaining why individuals fail to take preventive measures despite the obvious health risks. This model was developed in the 1950s by a group of social psychologists at the US Public Health Service to try and explain why individuals were reluctant to participate in public health prevention programs (Hochbaum, 1958; Rosenstock, 1974). It was later expanded to include people's responses to symptoms and to their behavior in response to diagnosed illness (Kirscht, 1974). Since its inception more than three decades ago the HBM has been one of the most influential and widely used psychosocial approaches to explaining health related behavior. The major components of the model are perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and cues to

TABLE 1-1: THE HEALTH BELIEF MODEL KEY COMPONENTS OUTLINED

I. Threat to Personal Health And Well-Being
- A. Perceived susceptibility to an ill-health condition (or acceptance of a diagnosis)
  Example: HIV/AIDS, heart disease, or lung cancer
- B. Perceived seriousness of the ill-health condition
  Example: Possibility of death, disability, or impairment

II. Expected Outcomes
- A. Perceived benefits of preventive measure
  Example: Long and good quality of life
- B. Perceived barriers to taking the preventive measure
  Example: Time investment, cost, knowledge, and convenience

III. Efficacy expectations: belief that one has the ability to carry out the preventive measure (self-efficacy)
  Example: Possessing knowledge of correct usage and technique

Note: There are several Sociodemographic factors such as education, age, sex, race, ethnicity, and income that are believed to influence behavior either directly or indirectly by affecting personal threat, expected outcomes, and efficacy expectations.

action. Another component, self-efficacy, must be added to increase the explanatory of the model (Table 1-1). It is believed that individuals will take preventive measures to avoid certain illnesses or diseases if feel that they are susceptible to them or if they are deemed severe. The individuals will take the necessary course of action if they feel that it will be beneficial in reducing either their susceptibility to or the severity of the conditions, and if they believe that the anticipated barriers to taking the action are outweighed by its benefits. (Glanz, Lewis, & Rimer, 1996).

Perceived susceptibility refers to ones own belief how likely they are to contract a disease or illness. If an individual perceives themselves to be at risk the likelihood of them taking preventive measures is increased. Perceived severity refers to how contracting an illness or disease will impact the quality of life for an individual. These would include how would having the disease impact familial relations, will there be pain

and discomfort involved, or is there a risk of death involved. Perceived benefits refers to the intrinsic and extrinsic rewards an individual will receive by not engaging in the behavior that will put them at risk. Intrinsic rewards being how they feel about themselves for doing what is best for their health and extrinsic rewards being not having the disease or illness impact their life in any way. This leads the individual to adopt and implement health preventing behaviors. Perceived barriers refers to things that impede or stop the health promoting behavior. These could be things such as lack of knowledge, lack of time or money, not convenient, unpleasant, or time consuming. Lastly the cues to action are outside things that may serve as a catalyst to jumpstart the individual into action. These cues may be in the form of attendance to a community health education program, public service announcements, or advice from a physician.

Self-efficacy is not part of the HBM but must be added to increase the explanatory power of the model. The concept of self-efficacy was first introduced in 1977 by Bandura who defined it as ones belief in their ability to carry out a certain action (Bandura, 1977b). If an individual possesses the necessary skills and knowledge this will empower them to make the necessary changes.

This study used the components of perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and cues to action to ascertain the barriers that may prevent African American college women from using condoms during sexual intercourse to prevent HIV.

Assumptions

The basic assumptions made regarding this study were as follows:

1. The participants understood the questions they were asked and responded truthfully.
2. The survey instruments used were valid and reliable.

Delimitations

For the purpose of this study:

1. the population was delimitated to single sexually active African American college women between the ages of 18-24 at The University Tennessee.

Limitations

The study was limited in that it is:

1. generalizable only to African American college women at The University of Tennessee.

Definition of Terms

Specific terms operationally defined for the purposes of this study are as follows:

Self-Efficacy – the belief that one can perform a specific action successfully

Perceived risk – the belief that one has of the consequences of their actions

Perceived susceptibility - how susceptible one believes they are to a condition or illness

Perceived benefits – the rewards either intrinsic or extrinsic that one receives from engaging in a particular behavior

Perceived barriers – the forces that prevent an individual from engaging in a particular behavior

Sexually Active – having sexual intercourse one or more times

Cues to action – those things either internal or external that prompt an individual to engage in a particular health promoting behavior.

Summary

In summary there is a rise in the incidence of HIV infection among African American college women. There are many barriers that prevent consistent safe sex practices despite the benefits. To understand why African American college women are at risk for infection the HBM will be utilized to assess perceived susceptibility, perceived barriers, perceived risk, perceived benefits, and self-efficacy. This chapter provided an introduction to the problem, the purpose of the study, and the research questions that guided this study. Also the delimitations, limitations, and the justification for the study were presented.

Organization of the Study

The following chapters provide a review of the relevant literature. Various studies were analyzed and information was gleaned from them to provide validation for the study. The methodology used in collecting and analyzing the data will be discussed. The process of identifying a valid and reliable tool will be discussed as well as the study population, instrumentation, and analysis of the data. A discussion of the study results

and major findings will be presented followed by a conclusion of the study. Lastly a retrospective look at the study will be provided. This will give insight into the thoughts and feelings experienced by the researcher.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

This purpose of this chapter was to provide a careful review of the relevant literature that deals with HIV infection among African American college women. The review of related literature covers the dynamics involved in this population becoming being infected with the virus. It outlines research done in the area of behavior change, prevention, and possible solutions to the problem. This literature review is organized into four major sections: Overview of the problem, literature related in content, literature related in methodology, and literature related in content and methodology. This section will conclude with a summary.

Overview of The Problem

Recent statistics released by the Centers for Disease Control and Prevention documenting the rise in AIDS/HIV infection among African American women stunned many outside the community and public health professions. Homosexuals were among the very first demographic group targeted by health education professionals in response to the AIDS epidemic. Given the levels of religiosity, social conservatism, and homophobia prevalent within the African American community, many in this demographic group deemed education programs unnecessary, while others considered these programs offensive and suggestive of immoral, promiscuous sexual behavior. With

limited community receptivity to these HIV education and prevention programs, health educators hoped for "spillover effects" of information specifically and broadly aimed at women. Currently however, AIDS is the fourth leading cause of death for women aged 25 to 44 and is the leading cause of death for African American women (Lauby et al., 2000).

Research on sexual attitudes in African American women find that they are particularly vulnerable to HIV infection due to their negative attitudes toward condom use (St. Lawrence et al., 1998). Once an example of a women's choice to prevent pregnancy, to protect against diseases, and to claim their role in a sexual relationship, it is now primarily viewed as indicative of partner distrust. More problematically, an African American woman's insistence for her partner to wear a condom may compromise the stability in a relationship-implicit with all of its economic, sexual, and social dimensions (Highsmith, 1997; Wingood & DiClemente, 1998).

Literature Related in Content

The literature related in content provides a description of the population to be studied. It focuses on research that has been conducted in the area of behavior change and focuses on strategies for prevention. Literature related to content falls into two categories: HIV transmission and factors associated with condom use. This section includes pertinent research involving women, particularly African American women as well as late adolescents since some college students are still in this category.

HIV Transmission

College students and African American women constitute the fastest growing segment of the population at risk for contracting a sexually transmitted disease (STD). College students are more likely to be at risk because of their pattern of sexual behavior, which includes engaging in sex with multiple partners and inconsistent condom usage (Lewis, Melton, Succop, & Rosenthal, 2000). African American women are particularly vulnerable to HIV infection. AIDS is the fourth leading cause of death for women aged 25 to 44 and for all African American women it is the leading cause of death. Despite the fact that African American and Latina women constitute only 15 and seven percent respectively of the population, they account for 73 percent of all US women with AIDS (Highsmith, 1997). According to Highsmith, 1997, the World Health Organization (WHO) lists three primary reasons for the increase of HIV infection among women (WHO Report, 1993):

1. Women are more biologically vulnerable; semen contains a far higher concentration of HIV than does vaginal fluid.
2. Women are epidemiologically more vulnerable; they tend to marry or have sex with older men, who have had more sexual partners, and are thus more likely to be infected with HIV.
3. Women are socially more vulnerable; they are expected to be more passive in their sexual relationships, and are often more dependent on men for economic support.

To date latex condoms have been proven to the most effective means of preventing STD's among those that are at risk and sexually active (Bedimo, Bennet,

Kissinger, & Clark, 1998). Yet despite the benefits of prevention many women still do not use condoms consistently. In order to receive the benefit of prevention condoms must be used consistently during every sexual encounter and correctly (Anderson, Brackbill, and Mosher, 1996). This is impacted by an individual's knowledge of condom etiquette, attitudes toward usage, and awareness of risk for contacting an STD. Unfortunately over time condoms have been perceived negatively. Among these negative perceptions are sensational (e.g. reduced pleasure, skin allergies), situational (e.g. not having one conveniently available when needed), relational (e.g. interrupting the flow of sexual interactions) or functional (e.g. concern about using correctly, breakage, and slippage) (Woodsong and Koo, 1999). Dynamics that exist between couples also play a crucial role in condom usage, such as communication between the couple about disease risk and concerns, unwanted pregnancy, and whether sex is voluntary for both parties (Finger, 1998). According to Bedimo, et al. (1998) non-condom users tend to be:

1. African American
2. have an increased risk of contracting an STD and/or HIV infection
3. use oral contraceptives and feel that condoms decrease their sexual pleasure
4. possess poor communication skills
5. engage in sex with partners who are unwilling to use condoms
6. and are in love with their partner.

Woodsong and Koo (1999) conducted a study on women's and men's perspective on dual contraceptive use. Despite the fact that 72% of pregnancies among African American women are unintended and the incidence of HIV/AIDS has increased

dramatically few studies have been done to ascertain the factors leading to or barring the use of contraceptive methods to protect against both risks. This study looks at data collected from focus groups among 18 to 34 year old women participating in a longitudinal study of contraceptive choice and change 18 to 39 year old men who were either their partners or were of similar socioeconomic status. Data for college students were not different from overall results. The conclusions were that one of the primary problems in actually using dual protection lies in the distrust between men and women. Without trust there usually exists a breakdown in communication and people are left to their own complicated devices to make decisions about dual use. The introduction of a condom would acknowledge the possibility of sexual infidelity or past "unsafe" behavior (Woodsong and Koo, 1999). Thus, condoms are negatively perceived at a time of increased risk of transmission among African American aged college women.

Factors Associated With Condom Use

Highsmith's (1997) research indicates that empowering women will increase their likelihood of using condoms during sexual encounters. The author feels that because sex is more than just the physical interaction between two people , it is also about how people feel about themselves emotionally. The author outlined four strategies for empowerment :

1. practical skills training for "how" to negotiate with male partners; how to successfully negotiate a condom with male partners;
2. promotion of principles of self-esteem and self-worth, teaching women to value and accepts themselves as full and equal partners, both in sexual encounters as well as in their lives;

3. referrals to adult education programs or job training programs, support and encouragement toward self-improvement is critical; and
4. practical support, assistance with transportation, food, or housing may be needed.

The author further states that by using these basic strategies for education programs women will respond in positive ways and make the changes necessary to empower themselves (Highsmith, 1997).

Wilson et al. conducted a study to determine the behavior, attitudes, and knowledge that adolescent males have concerning the use of condoms. The subjects included 242 sexually active black adolescent males who were attending an inner-city adolescent medicine clinic. The average age of the participants was 16.2 years. Sexual activity that begins in adolescence may have serious negative health impacts on it participants. The main impacts are unwanted teenage pregnancy and sexually transmitted diseases. The method of birth control most frequently used by this population is the male condom. The results of this shows that two-thirds of the participants have used condoms and that the majority of them preferred condoms to any other form of contraception. They also found that the higher the grade level and socioeconomic status the more likely an individual is to use condoms among these adolescent males (Wilson, Kastrinakis, D'Angelo, & Geston, 1994).

Research conducted by Bazargan et al. examined the correlation between HIV knowledge, motivation, and behavioral skills. College students are the population most at risk for contracting HIV. The nature of the college experience provides students with a sense of new independence, self-determination, and strong peer pressure to experiment with drugs and risky sexual behaviors. College students, given their environment, are

more likely to have multiple sexual partners and use condoms sporadically. The shift in the epidemic from the gay white male population to communities of color, more specifically women of color, requires that the attention be placed on college students representative of these groups. The young people represent a vital prospective leadership pool and if they are jeopardized or at risk this places their respective communities' futures at risk as well. Statistics have shown that African American women represent 55% (31,181) of AIDS cases reported among adult and adolescent women, which would suggest that African American college students are disproportionately at risk of HIV infection. They may be more at risk than their White counterparts because over time they may have developed a different set of attitudes about their risk of infection and perceive themselves not to be at risk. There also exists a huge disparity in the quality of medical care received by African Americans as compared to their White counterparts (Bazargan, Kelly, Stein, Husaini, Bazargan, 1998).

In previous studies that have been conducted between 80% and 92% of college students reported having knowledge of HIV and feel that using a condom is a good method of prevention. Unfortunately even though the level of knowledge about HIV was high, it was not associated with increased condom use. This may be attributable to the fact that many college students do not know how to translate knowledge into behavior (Bazargan, Kelly, Stein, Husaini, Bazargan, 1998).

Literature Related in Methodology

This section focuses on a review of literature related in methodology. The literature reviewed for this section focused on theoretical framework consideration,

sample selection consideration, data collection consideration, and instrument consideration.

Theoretical Framework Consideration

Wulfert, Wan, & Backus (1996) studied the sexual behaviors of gay men using an integration of three models, The Health Belief Model (HBM), Theory of Reasoned Action, and Social Cognitive Theory. The study conducted was cross-sectional and explored gay men's sexual risk behavior from the perspective of these three popular conceptual models. There were 153 participants recruited were from the sexually active gay male population in Northeastern gay organizations. Data was collected anonymously through a mail survey that was announced in the newsletters or meetings of the participating gay organizations. The questionnaire used for the study was empirically developed and pretested in extensive pilot research with heterosexuals. Given this the survey was adapted for use with gay men by adding questions about homosexual behavior in collaboration with a gay research assistant and pretested with 25 male volunteers from a gay and lesbian student organization. After the modifications were made and it was pilot tested and the questionnaire showed good test-retest reliability, with behavioral items showing reliability coefficients in the .90s, and cognitive/attitude items, in the high .70s and .80s. The response rate was 62.3%. The mean age was 37 years and 86% were predominately white and well educated. The data was first computed with zero-order correlations for all variables included in the three models. Then they conducted individual tests of the Health Belief Model, Theory of Reasoned Action, and Social Cognitive Theory. The results showed that all three models were statistically adequate and showed a reasonable fit, but their theoretical predictions were

not equally well supported. The HBM only yielded one of the postulated variables, barriers to condom use (Wulfert, Wan, & Backus, 1996). It can be concluded that the HBM is a good choice for evaluating condom use.

Lollis et al. (1997) gauged the ability of the Health Belief Model (HBM) to predict condom usage and risky sexual practices among college students. The students were recruited from a psychology subject pool at a southeastern university. For their participation the students received extra credit for an introductory psychology class. There were 122 white heterosexual participants, 58 men and 64 women, who ranged in age from 17 to 33 years of age. When participants arrived they were given a self-report questionnaire that gathered their sexual behavior histories, demographic information, and drug use for the past six months. A modified version of The Attitudes Toward Condom Usage Questionnaire was used to measure opinions about condoms as contraceptive devices. The alpha reliability coefficients for the subscales utilized to operationalize HBM constructs examined in the present study are as follows: condom excitement (.65); condom acceptance (.67) condom discomfort (.56); condom inconvenience (.79). The data was analyzed using a hierarchical linear regression procedure to examine the predictive utility of the HBM components with respect to condom usage, the number of sexual partnerships, the likelihood of being intoxicated or high on drugs during sexual activity, and total number of risk behaviors among respondents. The results were not consistent for men and women and showed that the HBM has differential and limited utility for predicting sexual practices among university students (Lollis, Johnson, & Antoni, 1997).

Mahoney et al. conducted a study imploring the Health Belief Model (HBM). Their study tested the ability of the HBM dimensions of self-efficacy, various behavioral models, and demographic measures to distinguish between three condom user groups. A convenience sample of 366 undergraduate students was drawn from a variety of classes (e.g. health education, psychology, biology, etc.) and extracurricular groups in western New York state. The age range for participants was 18 – 24 years. They were given a 94-item questionnaire that consisted of four instruments and a variety of single-item measures of sexual behavior. The first instrument was the condom use self-efficacy sale that assessed student's perceptions of their ability to use condoms in a variety of situations. Cronbachs's alpha for this instrument was .91. The remaining three instruments used in the study were measures of perceived benefits of condom use, perceived barriers to condom use and perceived susceptibility to HIV/AIDS and other sexually transmitted diseases (STD's). There were a number of single item measures used to assess frequency of drunkenness during sexual intercourse, history of STD'S, and one item measured religiosity. The data was analyzed in several ways. One way looked at the degree of interrelatedness among the measures used in the study and examined them in a correlation matrix. Another way was that in order to test the ability of the variable to distinguish among the three condom user groups, a multiple discriminant function analysis was conducted. The data suggests that despite higher levels of perceived susceptibility to HIV/AIDS and other STD's, high-risk behaviors are most important in distinguishing sporadic users from the other two condom user groups (Mahoney, Thombs, & Ford, 1995).

Sample Selection Consideration

Goldman and Harlow (1993) stated that the AIDS epidemic is a national health crisis. In their study on the behavior of college students they hypothesized that the three constructs, self-efficacy, control and meaning, and perceived risk would be positively related to AIDS-preventive behavior, so that people who scored higher on these measures would be more likely to practice safe sex than those who scored lower. Participants for this study included 201 men 401 women from a New England university. Students were recruited from undergraduate psychology classes and the individuals who volunteered were given extra credit for participating. The mean age was 20 years old with a range from 19-45. There were 88% white, 3% Hispanic, 3% African American, 3% Asian, and 3% other. The students were asked to anonymously fill out a questionnaire that measured self-efficacy, control and meaning, perceived risk, and AIDS-preventive behavior. An estimate of internal consistency for this scale yielded an alpha coefficient of .70. The data was analyzed using structural modeling techniques to examine the relationships among the independent construct of control and meaning, the mediating constructs of self-efficacy and perceived risk, and the dependent construct of AIDS preventive behavior. The overall results indicate that these college students engage in risky behavior yet continue to believe that they are not placing themselves at risk for HIV infection (Goldman & Harlow, 1993).

Lollis et al. conducted a study on an African American college age population to assess and document the differences in knowledge about AIDS, attitudes toward condom usage, negative emotional reactions to condoms, and perceived vulnerability to AIDS in individuals who vary in their self-reported risk behaviors associated with HIV infection.

During the fall and spring semesters at the University of Miami research assistants telephoned 375 enrolled students from a roll obtained from the office of the Dean of Students. A total of 307 (150 men and 157 women) undergraduate African American students agreed to participate The subjects were asked to anonymously fill out a questionnaire that assessed AIDS knowledge, attitudes toward condom usage, angry reactions to condom usage, and perceptions of risk for AIDS. The AIDS Knowledge and Attitude Survey was composed of questions related to demographics, knowledge about AIDS, and potential risk behaviors. Cronbach's alpha was used to measure internal consistency and the overall reliability was .81 for the sample of 975 predominantly African American college students upon which this survey was normed. The Attitudes Towards Condom Usage Questionnaire was used to measure opinions about condoms as contraceptive devices. An internal consistency reliability of .93 was obtained using this sample with an average inter-item correlation of .24. The Condoms Emotional Reactions Scale, which is a 13-item self-report questionnaire, was used to measure intensity of anger experienced in relationship to condom usage. The scale was normed on 304 African American college students and the item correlations for subjects ranged from .43 to .71 with the average being .62. A Perceived Risk Scale that contained six face valid questions to assess worry about AIDS or feelings regarding one's likelihood of contracting AIDS. The alpha coefficient of reliability for this scale was .40 for the sample. The data was analyzed using a Risk x Gender between subject's factorial multivariate analysis of variance, with three levels under the first variable (low, moderate, and high risk) and two levels under the second variable (male, female). There were four dependent variable: knowledge about AIDS, attitudes toward condom usage,

angry negative reactions to condom usage and perceived risk for AIDS. The findings indicate that despite the increase of HIV infection in the African American community, young African American men and women persist in behaviors which increase their risk of exposure to the virus (Lollis, Johnson, Antoni, & Hinkle, 1996). Thus African American college students are willing to participate in survey research on condom use and HIV.

According to Hobfoll et al. (1993) HIV and AIDS threatens the health of the American Public. The main group at risk is women, more specifically African American women. They conducted a study that looked at five areas: (a) women's sexual activity during the prior year, (b) women's knowledge of how HIV virus is transmitted, (c) women's knowledge of how to prevent HIV infection, (d) women's perceived risk of infection, and (e) women's current safer sex behavior. The study sought to prove the following: that young, inner-city, pregnant, single women would continue to be sexually active and would participate in high-risk behavior, their knowledge of HIV transmission and prevention would be rather low, and that they would perceive their risk for infection to be low and that they would practice few safer sex behaviors. Participants were recruited from an obstetrics clinic of a mid-sized city medical center and the women either received public assistance or were low income. A total of 280 women were recruited with 53% African American, 44% European American, and the other 3% were excluded from analysis because of low representation. The median age was 21 with a range of 16 to 29. The participants were given four questionnaires to fill out. The first questionnaire measured sexual behavior and sexual activity during the past year. The split-half reliability was .71 and a three-month test-retest reliability for the sub sample of

women was .75. The next instrument used was the safer sex behavior and intentions questionnaire where participants reported on safer sex practices. Split half-reliability was .73 and three-month test-retest reliability was .68. The next questionnaire was an eight-question knowledge of HIV transfer and prevention test, which measured level of knowledge about the disease, transmission, and prevention. Split-half reliability was .64 and test-retest reliability was .57. The last survey ascertained their perceived risk and risk behavior. Participants were asked to rate on a scale of 1 (no risk) to 4 (high risk) whether they thought heterosexual contact in general and their sexual behavior in particular placed them at risk for HIV. Reliability estimates were not calculated because one or two items do not constitute a scale. The author's findings support the predictions of the study. They found that the women in the study were involved in moderate-risk sexual behavior and that they had limited knowledge about the prevention and transmission of HIV infection (Hobfoll, Jackson, Lavin, Britton, & Shepherd, 1993). Furthermore African American women of various ages and background also participate in survey research on condom use and HIV.

Data Collection Considerations

Johnson et al. (1992) used the focus group method to ascertain the sexual behavior of African American male college students. The 14-item risk assessment survey was distributed to a convenience sample of African American males who were randomly encountered on campus during a two-week period. In order to ensure the validity of the data there was emphasis placed on the accuracy of the interpretation of statements used to access the 14 variables. Once the data was collected it was analyzed to determine the distributions of responses to specific items. To establish the

significance of the correlations between behavioral items and the outcome variables they were analyzed using the chi square and *t* tests. The researchers were able to successfully recruit 72 participants for the study representing 60% of the total population of African-American males on that campus. The average age was 19.98 and 90.27% were sexually active. The results indicated that the most powerful protective device that can be used during sexual intercourse is consistent condom use (Johnson, Douglas, & Nelson, 1992). Survey techniques may be made appropriate for a larger campus to enable increased participation.

Abraham et al. (1992) used a postal survey to gather their data to gauge the effect that health beliefs and promotion had on teenage sexual behavior. The sample of potential teenage participants were randomly drawn from current and past school lists. To gage interest in participating an opt-out permission letter was sent to potential participants' home addresses. This led to a sample of 1,075 students who were willing to participate and were sent questionnaires and cover letters explaining that all; responses would be kept strictly confidential. A total of 690 students responded giving a response rate of 64%. Of those who responded only the individuals reporting one or more sexual partners were included in the analysis. This left a sample of 351 with 194 identified as women, 154 as men, and 3 unidentified sex with a median age of 17.09 years. Standard stepwise multiple regressions were performed to analyze the data. The independent variables entered were age, gender, experience in using condoms, number of previous sexual partners, health motivation, environmental cues, perceived vulnerability, perceived severity, perceived effectiveness, and perceived barriers. The results showed that perceived barriers to preventive behaviors were found to be important predictors

(Abraham, Sheeran, Spears, & Abrams, 1992). Thus even within high school audiences students participated in a survey about HIV.

Instrument Selection Consideration

The research of Wagstaff et al. sought to identify the prevalence of HIV risk factors related to characteristics of sexual relationships among low-income urban women. A total of 671 women from two housing developments were given anonymous surveys to complete. Of those who completed the surveys, 82% were African American, 10% were white, 5% were Hispanic, and the remaining 3% belonged to a variety of racial or ethnic groups. The women ranged in age from 15 to 76 with an average age of 33.2 years. The 67-item questionnaire that was distributed garnered demographic information and assessed a number of areas relevant to HIV prevention. The Relationship characteristics survey measured the HIV risk associated with women's sexual relationships and was based on participants' reports of their level of certainty regarding whether their main or regular partner in the two months before the survey had other sexual partners in the past year. The perceived risk was measured by asking women to consider their behavior over the past two months and estimate their risk of getting the virus. Condom use was measured by asking the participants to assess their condom use intentions the last time they had sex with a man. Cronbach's alpha for the three items was .82. The barriers to condom use was measured by having participants to use a four-point scale to indicate their level of agreement with five statements. Cronbach's alpha for the five items was .68. STD treatment was measured by asking participants if they had received treatment for an STD in the past two months from a doctor or nurse in a clinic. Lastly the women were asked how many times in the past two months they had talked with their sexual

partner about using condoms and about AIDS concerns. These two items were dichotomized (no conversations vs. any conversations). The data was analyzed using a one-way analysis of variance that revealed significant difference between the group means. The study concluded that in this sample of low-income and largely, single young African American women 17% were at risk for HIV infection because they had multiple sex partners. It was also concluded that more women, 22%, were at risk because they had an exclusive sexual relationship with a partner whom they knew or believed had other sexual partners or was an IV drug user (Wagstaff, Kelly, Perry, Sikkema, Solomon, Heckman, Anderson, & the community Housing AIDS Prevention Study Group, 1995). Thus groups of females that were predominately African American provided survey responses that included some of the HBM constructs. Their responses to these had high validity values.

Robinson and Frank sought to examine the relationship between self-esteem, sexuality, and pregnancy in a racially mixed sample of male and female teens. A sample of 287 students from two university-affiliated high schools and 16 pregnant teenagers from a local physician's office was ascertained. The ages ranged from 13 to 19 and of those 83% were between the ages of 15 to 18. The gender makeup was 45% males and 55% females with 40% being African American, 53% white, 2% Hispanic, and 6% unspecified. The participants were given the Coppersmith Self-Esteem Inventory, which is a 25-item tool that asks the participants to categorize statements describing various personality traits as "unlike me" or "like me." The instrument had a reported split-half reliability of .90, correlations of .59 and .60. The results of this study showed a reliability coefficient of alpha=.7974. Students were asked to fill the surveys out in class and those

who did not wish to participate were told to return the blank questionnaires and work on other projects during this time. Anonymity was assured to the students. The sample of pregnant teens from the obstetrician's office returned their surveys by mail. The data was analyzed using an analysis of variance that showed no significant differences in levels of self-esteem in relation to race or gender. For this sample the mean level of self-esteem reported was 17.776 (Robinson & Frank, 1994). Thus, self-esteem can be measured reliably in a group that somewhat overlaps the sample used for this research.

Johnson et al., 1994 conducted a study with African American college students to examine the risky sexual behaviors, condom and drug usage, sexually transmitted diseases, and attitudes of students with HIV. The data for this report was collected as a part of a larger study of the interrelationships between HIV/AIDS risky behaviors, attitudes and knowledge about AIDS, and condom and drug use among African American young adults. The participants for this study consisted of 199 African American males and 209 African-American females in the southern United States. Participants were assured confidentiality of responses by eliciting no demographic information that could be used to identify the subjects. Out of the 408 participants of the study 13 (3.2%) reported that they were HIV positive. The participants were administered several self-report questionnaires in small groups. The Attitudes Toward Condom Usage questionnaire measured opinions about the use of condoms as contraceptive devices. This instrument reported an internal consistency reliability of .93 with an average item total correlation of .24. For the present study item total correlations ranged from .12 to .76 with an average of .44. The Condom Emotional reactions Scale is a 13-item self-report questionnaire that measures the intensity of anger experienced in

relationships to condom usage. Item total correlations for the present study ranged from .48 to .70. The AIDS Knowledge and Attitude Survey measures knowledge and attitudes about AIDS. This survey was shortened from the original 101 questions to 29 questions for the present study. The overall reliability using Cronbach's alpha to measure the internal consistency was .81. The Perceived Risk Scale measured the perception of AIDS risk by totaling the responses to six statements. The summary score ranged between 1 and 6 and the Cronbach's alpha to measure internal consistency was .80. Lastly the drug usage was measured by individual items that measured the use of several well-known drugs (i.e., alcohol, cigarettes, marijuana, crack, and cocaine). The data was analyzed by doing a comparison of the total scores of the two groups, derived by summing the correct responses of all items. The results of this study showed that students with HIV/AIDS showed a significant deficit in AIDS knowledge, especially with regards to transmission. It was also concluded that the students who were HIV negative did not differ from those who were HIV positive in their perceived risk of being exposed to the virus or their attitudes about using condoms (Johnson, Gilbert, Lollis, & Gables, 1994). This research suggests that varying levels of HIV knowledge existed among African American college students in the south.

Zimmers et al. conducted a study to assess the impact of viewing a video on women's willingness to try and to continue using the female condoms. Of specific concern was whether a video presentation supplementing written instructions would affect willingness to try the new condom. The participants for the study were recruited from a community based organization that provided education regarding HIV/AIDS, anonymous HIV testing and counseling, primary health care, and support services. There

were 167 women solicited to participate, and of those 100 were self-selected for the study, with 92% tested at the HIV test site and remaining 8% from the outreach program. The women were between the ages of 17 and 62 years with a median age of 33 years. The women were randomly assigned to a video group or a control group. Women in the video group were shown the video individually and questions about the condoms were invited. The women in this group was also given a package of three female condoms and other materials identical to those given to the control group. Of the 100 women who participated 34 did not return the questionnaire, 18 reported they had not had sex during the period of the study, and 12 did not try the female condom. The remaining 36 women, 13 were from the control group and 23 were from the video group, reported trying the condom and completed the postuse survey. The results indicated that the women in the video group were significantly more likely to try the condom and report back to the experimenter than women in the control group (Zimmers, Lowe, & Chappa, 1999).

It can be concluded that the HBM is a good choice for evaluating condom use and has not been reported in the literature with African American college students.

Literature Related in Content and Methodology

This section provides information about the research that has been done in the area of HIV prevention among African American college women. It also shows that there is a need for more information in this area. The literature was examined for content and methodology and is divided into four sections: theoretical framework other than HBM and population that included some African American females, theoretical

framework other than HBM and population that included large numbers of African American females, theoretical framework HBM and population that included some African American females

Theoretical Framework Other Than HBM And Population That Included Some African American Females

Turner et al. conducted a study on sexually active college students at risk of contracting STD's including HIV to see if comprehensive health education programs would have an impact on acquisition of these diseases. Sexually transmitted diseases have become epidemic among adolescents, which has resulted in large numbers of college students becoming infected with human papillomavirus, chlamydia, gonorrhea, and herpes. If left untreated these infections will lead infertility, chronic recurrences, and cancer. This study looked at whether or not a comprehensive health education program would have an impact on the sexual behaviors of college students. A comparison was made between the 341 students who received the health education instruction with the 227 who did not. There were several surveys distributed that were anonymous, self-report questionnaires that focused on sexual practices and behavior, as well as on knowledge and attitudes regarding STDs. The nonparametric data were analyzed statistically with the chi-square test using the EPISTAT program. It was found that sexual activity for men in the experimental group decreased as compared with those in the control group that stayed the same. Among women in the control high-risk sexual behavior increased and there was no significant change in condom use among sexually active men in either group during the semester (Turner, Korpita, Mohn, & Hill, 1993).

Hale & Trumbetta (1996) conducted a study of college women to see if increased knowledge about STD's, identification of perceived risks, and self-efficacy had any impact on sexual behavioral risk. The study hypothesized that self-efficacy might be related to behavioral risk for STD transmission and it also sought to identify what implications self-efficacy theory might have for STD prevention efforts. A convenience sample of 343 college women from the health center gynecology clinic was obtained. The median age was 25 yeas old and 66.7% were European Americans and 23% were African American. There were several instruments used. The first one was obtained from The Center for Health Statistics and it was used to measure understanding of risk for STD transmission for a series of different behaviors from sharing eating utensils to specific sexual behaviors. The perceived risk was measured by asking the participants to rate their chances of getting an STD based on their current sexual behavior. Reliability and validity for both surveys had been previously reported. Lastly self-efficacy was measured by a 25-item questionnaire scale that was derived from a self-efficacy expectation scale that was used in a study of AIDS prevention among high school students. Internal consistency for the entire modified scale was .86. At the same setting as the larger study a pilot study was conducted to test the data collection procedure and check questions for appropriate interpretation by respondents and adequate variance of items. Results of this study indicated that wording on some of the questions needed to be changed and some response options needed to be changed to clarify the intent and elicit more meaningful responses. The data was analyzed using several univariate regressions. The results indicated that a woman's perceived self-efficacy is only modestly associated with lower risk for STD prevention (Hale & Trumbetta, 1996).

Wingood and DiClemente (1998) examined the relationship between gender-related factors, partner influences and non-condom use in a community-based sample of African American young adult women. The underlying theoretical model used for this study was the Theory of Gender and Power. This theory addresses norms governing social and sexual relations. It incorporates three overlapping but distinct structures that serve to explain and constrain the culturally bound roles between men and women. The major components of this theory are the division of labor, the structure of power, and the structure of cathexis. Sexual division of labor is an allocation of particular types of work that is based on an individual's sex. The labor structure raises a fundamental question, namely, whether poverty, independent of other factors , affects women's risk for HIV. The inequalities in power that exists between the sexes characterizes the sexual division of power. This division deals with issues such as control, authority, and coercion within heterosexual relationships. The social norms that govern appropriate sexual behavior for women and encompasses the emotional attachments involved in social relationships define the structure of cathexis. This is the structure that produces the laws, taboos, and prohibitions that define normalcy, restrain sexuality, and localize the cultural norm for femininity within relationships. For this study 128 women were recruited from a low-income neighborhood in San Francisco via street outreach and media advertisements placed throughout the community. All were African American and the median age was 24. The respondents were given a $10 incentive and interviewed by an African American woman who was familiar with the neighborhood and surrounding community. The structured interview s assessed a broad range of constructs and all instruments used were proven to be valid and reliable. Once the data was gathered it was analyzed by using

two sequential steps. The one was to assess the association between potential correlates and noncondom use was assessed using contingency table analyses. Second a multivariate logistic regression model was used to identify an association with noncondom use to identify the independent contribution of each variable while adjusting for the effects of other variables in the model. The results of this study were consistent with the structure of cathexis which states that not using condoms was strongly associated with a woman's perception that asking one's partner to use a condom may imply infidelity or may compromise the stability in the sexual relationship (Wingood & DiClemente, 1998).

Theoretical Framework Other Than HBM And Population That Included Large Numbers of African American Females

Bedimo, et al. (1998) conducted a study to explore barriers to use among HIV-positive women, specifically to determine why some HIV-infected women do not use condoms and why some do. The researchers implored the focus group method to gather the necessary data. This method was chosen so that African American women could give full voice to the issues of condom use. Study participants consisted of a convenience sample of 15 HIV-infected women who were attending an HIV ambulatory care clinic in New Orleans during the fall of 1994. There were two groups, one group consisted of women ages 22 to 45 and the other group consisted of adolescent's ages 16 to 18. All the participants were African American and received a $10 incentive for participation. The topics that were covered included condoms for contraceptive use , access to condoms, timing of condom use, type of partner and its effect on condom use, barriers to condom use, negotiation and discussion of condom use with partners, partner attitudes toward

condom use, and alcohol and drug use during sex. The authors hypothesized that these topics affect condom use and were chosen to gather formative data in preparation for a condom survey. Both sessions were tape recorded and transcribed verbatim. The text was analyzed and coded using manual sorting for the emergence of categories. The study showed that specific barriers to condom use included engaging in oral and anal sex, distrust in condoms, and relationships in which partners refused to wear condoms (Bedimo, Bennet, Kissinger, & Clark, 1998).

St. Lawrence (1993) states that there are two factors that have consistently been associated with high-risk sexual behavior in adolescent populations. They are low perceived susceptibility to HIV infection and influence in peer norms. He conducted a study to assess African American adolescents' knowledge about AIDS, attitudes toward condom use, health locus of control beliefs, perceptions of personal risk, beliefs about peer norms, self-reported sexual behavior for the previous 6 months, and contraceptive preferences, as well as the reasons for favorable or unfavorable attitudes toward contraceptive options. The sample population consisted of 195 African American adolescents recruited from a public-health-service-funded clinic, community-based teen centers and after-school programs, and the waiting room of a family service agency. The mean age of the participants was 15.3 years and the average grade in school was 9.6. The participants were given a packet containing demographic measures regarding health beliefs and condoms, the AIDS Knowledge Test, and measures of perceptions of peers' sexual norms, perceptions of personal AIDS risk, reported sexual behavior frequency for the previous 6 months, contraceptive preferences, and reasons for selecting or rejecting specific contraceptive methods. All instruments had been previously used on a

population of the same size and type and were found to be valid and reliable. Multiple linear regressions were used to examine predictors of condom use for the adolescents who were sexually active. The dependent variable was the percentage of intercourse occasions on which condoms were used in the previous six months and the remaining variables comprised the predictor variable set. The results of the study indicate that with respect to timing teenagers who used condoms most often has used them from their very first intercourse experience, were younger, were more knowledgeable, endorsed more favorable attitudes toward impact of condom use on relationships, were more likely to be carrying a condom and were more confident about their self-control in sexual situations (St. Lawrence, 1993).

Lewis et al. examined the influences of condom usage on whether or not African American college students acquired an STD. Their study sought to identify sociocultural factors that influenced the frequency of condom use and the history of STD acquisition among African American college women. There were several factors that they associated with sexual behaviors. Among them were family characteristics, level of religious affiliation, and perceived normative behaviors. The African American women participants for the study were randomly recruited from a state university roster of undergraduates. This identified 442 students that were eligible for the study. A letter was mailed out to each student describing the study and her expected involvement in it. After the letters were mailed an investigator contacted each student by phone to ascertain whether or not they planned to participate in the study. Of those who agreed to participate, they were given a time to appear and fill out an anonymous questionnaire. They ended up with 140 participants between the ages of 18 and 24 who showed and

completely filled out the survey. The questionnaires distributed were ones that was previously developed, a parental monitoring, and the Family Environment Scale. Due to the fact that these questionnaires had been used before their validity and reliability had been established. A demographic sheet was also included to garner the following information: age, primary caregiver, mother's highest level of education, and mother's and female siblings' ages at first pregnancy. The participants were asked questions that related to sexual practices (i.e., age of sexual debut, frequency of condom use), STD history, pregnancy history, perceptions of peers' condom use and STD prevalence, frequency of substance use including alcohol, cigarettes, smokeless tobacco, marijuana, and other drugs for recreational purposes, and frequency of sexual intercourse while intoxicated or "high." The data was analyzed using the Statistical Analysis System (SAS) for personal computers for data analyses. A logistic regression with a backward elimination strategy to identify differences in demographics, family, peers, high-risk sexual behaviors, substance use, and frequency of condom use between regular and irregular condom users and among respondents with and without STD histories was conducted. The authors found that the factors related to condom use and STD acquisition were linked to early sexual debut. Early sexual debut was significantly related to both irregular current condom use and a history of having had an STD (Lewis, Melton, Succop, & Rosenthal, 2000).

Theoretical Framework HBM And Population That Included Some African American Females

McNair et al. (1998) proposed that theories and models of health risk perception generally assert that cognitive factors related to attitudes, beliefs, knowledge, intentions,

and perceived self-efficacy are sufficient to foster safer sex behavior. The model used for this study was the Health Belief Model. This study investigated the relationships among self-esteem, gender, and alcohol use as they are associated with risk perception and risky sexual behavior. The participants consisted of 130 female and 130 male undergraduate students at the University of Georgia. They were recruited through the undergraduate research pool in the Department of Psychology. Ages ranged from 17 to 37 years with a mean age of 20. Approximately 87% of the participants were White, with 12% from other racial or ethnic backgrounds with the majority being African American. Participants were given several questionnaires. The first questionnaire was The Daily Drinking Questionnaire used to obtain information about participants' drinking patterns. The responses from this survey have been found to be highly correlated. The condom use questionnaire, which is a 55-item questionnaire, was used to garner past condom use, alcohol use in relation to condom use, and intentions to use condoms in the future. The Rosenberg Self-Esteem Scale, which is 10-itmes, was used to gather a global measure of self-esteem. The internal reliability coefficient was .83 in a sample of over 800 adults. Lastly participants were given the 16-item risk perception questionnaire that was developed for this study to gage the participant's perceptions of their own, as well as their partners' present risk for contracting HIV through risky sexual practices. The data was analyzed by using a 2x2x2 factorial analysis of variance (ANOVA) to examine the influence of alcohol use, self-esteem, and gender on past condom use. It was concluded that gender was associated with intentions to use condoms as well as with frequency of sex after alcohol use. Lowers levels of risk perception for both self and partner were

associated with high self-esteem. The greater the amount of alcohol consumed the less likely that either used a condom (McNair, Carter, & Williams, 1998).

Yep (1993) conducted a study using the Health Belief Model in relation to prevention of HIV infection among Asian-American college students. The Health Belief Model (HBM) is composed of a number of interrelated components. The components are perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and cues to action. There were four research hypotheses proposed based on the model. The first three hypotheses proposed a positive relationship between perceived susceptibility, severity, and benefits and HIV-preventive behavior. The last one proposed a negative relationship between perceived barriers to prevention and actual HIV-preventive behaviors. Perceived susceptibility was defined as the individual's perception of the risk of contracting a specific illness. The perceived severities were defined as an individual's perceptions of the seriousness of a specific illness. Perceived benefits were defined as the individual's perceptions of the degree of effectiveness of the recommended course of action to be taken to reduce a disease threat. Perceived barriers were defined as the individual's perceptions of the cost associated with taking the recommended course of action. Finally the cues to action were defined as communication messages that led the individual to take the recommended course of action. The participants of the study consisted of 141 Asian American college students from diverse backgrounds with a median age of 20. There were 51.77% (n=73) women and 48.23% (n=68) men. The instruments used for the study was a three-section questionnaire packet consisting of a demographic sheet, a health beliefs measurement, and an HIV-prevention behavior assessment. All instruments used were valid and reliable. The data was analyzed using

several multiple regression analyses. The results indicated that some Asian American young adults in the study exhibited some changes in sexual behavior as a response to the threat of HIV infection.(Yep, 1993).

St. Lawrence et al. (1998) states that AIDS and HIV infection disproportionately affects minority women in the US. It is reported that the death rate for African American women is ten times the rate for White women and AIDS is the leading cause of death among Black women between the ages of 25 to 44 years of age. They stated that these women do not perceive themselves to be at high risk for HIV infection, even though they are engaging in high-risk sexual activities. The authors conducted a study that examined differences between sexually active African American women who used condoms consistently, inconsistently, or who never used condoms against models of health behavior and looked at the difference in condom use as a function of women's current relationship status. A total of 423 women from an inner-city area with a predominately low-income level were recruited. The cross-sectional sample was recruited from community service agencies, housing projects, WIC offices, and social organizations. The mean age of the women was 31.3 years and the mean years of education was 13.6. Of those participating in the study two thirds (66.3%) were married or in a self-described exclusive sexual relationship sexual relationship, 14.6% were not in a stable relationship, and 16.3% were in unstable or fluid relationships, including those with more than one partner. The measures that the authors used were chosen to capture the major constructs in prevailing theoretical models of health behavior. Components of models such as the Health Belief Model, Theory of Reasoned Action, Social Cognitive Theory, and the Transtheoretical Model were used as a basis. The participants were given several

questionnaires that gathered the following information: demographics, personal priority for AIDS as a life problem, attitudes relevant to HIV prevention, and their level of AIDS knowledge. The Attitudes Toward Prevention Scale was a 15 item measure used to assess relevant HIV prevention. Cronbach's alpha in the present sample was .73. Also used was the AIDS Knowledge Test which has been normed for use with gay men, heterosexual college students, African American women, and African American and White adolescents. Corbach's alpha for the 27-item version in this sample was .75. The participants were also observed on a behavioral measure of correct condom application skills using a penis model. There were several sets of MANOVAs and ANOVAs ran. The study yielded that the women most at risk for sexual transmission of HIV are those with less stable lives, less education, more unstable sexual partners, more rapid changes in sexual partners, and low family income (St. Lawrence, Eldridge, Reitman, Little, Shelby, & Brasfield, 1998).

Summary

The literature provided in this chapter provides detailed information about the scope and breath of the problem. It illustrates the lack of programs targeted towards college age African American women and why it is so critical to initiate programs at this level. The content and methodology used in the various studies were able to provide a framework that will be utilized throughout this study.

CHAPTER III

METHODOLOGY

Introduction

The Health Belief Model (HBM) and self-efficacy were used as the theoretical foundation for this survey research. The questionnaire assesses The factors that relate to male condom usage by African American college women. Data was gathered concerning the association of specific barriers and beliefs that prohibited them from using male condoms consistently. The instrument used to collect the data included questions about HIV/AIDS knowledge, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. This chapter provides a detailed description of the methodology used in the study. Included are a description of the sample population, sampling methodology, the instrument used in data collection, and the plan for the analysis of data.

Study Population

The target population for this study was single African American undergraduate women at The University of Tennessee. This audience was chosen because it provided a group of predominantly single women who were likely to be sexually active, as two thirds of all college students have reported being sexually active (Johnson, Gilbert, & Lollis, 1994). Participants were recruited from various predominantly African-American

women's organizations and organizations affiliated with the Black Cultural Center (BCC) located on campus.

Sampling Technique

This study used a convenience sample of African American college women between the ages of 18 to 24. Due to recent changes in the reporting system at The University of Tennessee, a list of currently enrolled undergraduate African American females at the UT Knoxville campus was unavailable and a convenience sample was used. Sample size was determined based on a sample size determination described by Wang, et al. (1995). According to the Department of Instrument Research and Assessment at The University of Tennessee in Knoxville, the African American female undergraduate population for 2001-2002 was 751. To effectively represent a population of 700 with a standard of error of .05 and a 95% Confidence Interval, 195 individuals would need to be surveyed. The resulting study participants were then recruited from predominately African American women's organizations and organizations associated with the BCC.

Instrumentation

The instrument used for this study was a combination of several other instruments and based on the Health Belief Model constructs (perceived benefits, perceived susceptibility, perceived barriers, perceived benefits, and self-eficacy) . The total instrument contained 143 items. The original instruments and sources are noted below.

The first 115 questions were obtained from existing questionnaires and the remaining 27 items were developed specifically for this study.

HIV/AIDS Knowledge Test

The first instrument used was a 24 item HIV/AIDS knowledge test. This is a truncated version of the National Public Health Service AIDS Information Survey and assesses individual knowledge about the disease. This 24 item version of the test was previously validated with gay men, White college students, and African-American college students. The Cronbach's Alpha for this revised version was reported to be .68 (St. Lawrence, 1993).

Health Belief Model Constructs (perceived benefits, perceived susceptibility, perceived barriers, and self-efficacy)

Perceived benefits, perceived susceptibility, perceived barriers, and self-efficacy were assessed using a survey developed by Mahoney, Thombs, & Ford, 1995. The scales were selected because they yielded good overall internal consistency and were both valid and reliable. Perceived benefits was measured with twenty-four items, perceived susceptibility contained ten items, and perceived barriers contained fifteen items. The scales were normed with a population similar to the study population of college students between the ages of 18-24. The Cronbach's Alpha for each part of this instrument was: perceived benefits .89, perceived barriers .61 and perceived susceptibility .77. Self-efficacy was determined using the 26 item condom use self-efficacy scale developed by Bradford & Beck, 1991. The internal consistency was calculated and yielded a Cronbach's Alpha of .91. The 2-week test retest reliability was .81.

Cues to Action

A search of the literature resulted in few valid and reliable instruments that specifically measure the cues that prompt an individual to engage in health promoting activities. As a result a 27 item scale was developed to measure how cues to action related to condom use.

Condom Utilization

Condom utilization was evaluated using three single item measures that ascertained past, present, and future condom practices. This scale was modified from previously developed items (Reese, 1998).

Demographic Information

Additional questions were added to collect demographic information including age, self-reported academic performance, financial support, parental educational level, and level of sexual activity.

Instrument Variables and Health Belief Model Constructs

The resulting 143 item questionnaire entitled "HIV/AIDS Knowledge and Attitudes Among College Students" utilized the various constructs of the Health belief Model. The self-administered questionnaire was nine pages in length and consisted of four sections (Table 3-1).

TABLE 3-1: THE INSTRUMENT VARIABLES AND THE CORRESPONDING HEALTH BELIEF MODEL CONSTRUCTS

Questionnaire Section and Item Numbers	Topic Areas
I, 1-24	HIV/AIDS Knowledge
IIA, 1-24	Health Belief Model Construct Perceived Benefits
IIB, 1-15	Health Belief Model Construct Perceived Barriers
IIC, 1-10	Health Belief Model Construct Perceived Susceptibility
IIC, 11-13	Condom use
IID, 1-28	Health Belief Model Construct Self-Efficacy
III, 1-27	Health Belief Model Construct Cues to Action
IV, 1-11	Demographics

Pilot Test

The survey instrument was pilot tested with sexually active African American college female students affiliated with programs associated with Multicultural Affairs at Maryville College. The pilot test was conducted to help confirm the usability of the instrument and to field any problems that potential participants may encounter such as readability, comprehension, and length of survey. Participants were informed of the purpose of the study and were asked to voluntarily answer the survey. Participants were also asked to note any concerns that they may have had about the administration of the survey or the content of the survey. Comments were used to revise the survey. Determination of test-retest reliability was not possible due to scheduling conflicts at Maryville College.

Content Validity

The cues to action portion of the survey instrument were tested to establish content validity. A panel of five health education experts from varied settings was solicited to review the instrument (Appendix A). The panel included three health educators working in university settings, one working in a county health department, and one working in a community based agency. They were provided with a copy of the items as well as with criteria for judging each as a potential to serve as a cue to prompt condom usage.

Data Collection

Approval for the collection of data was obtained from the Institutional Review Board (IRB) at the University of Tennessee. Form B was approved for this study and participants were assured of their anonymity. An outline of the study project was also submitted to graduate advisors for the sororities and the Director of the Black Cultural Center (BCC). The outline contained the purpose of the study, research questions, and a copy of the survey instrument. After they reviewed the outline a meeting was set up to discuss the collection of data. Data was collected from the sororities, campus organizations, and students enrolled in the African American Incentive Grant seminars at the beginning of their regular monthly meetings. The participants were given the study information sheet and instructed on how to complete the survey. They were also assured of their anonymity and given the opportunity not to participate.

Analysis of Data

The data were analyzed using Statistical Package for Social Sciences (SPSS) version 10.0. Once the surveys were collected they were entered into a database and analyzed as follows:

Research Question #1: What is the relationship between perceived susceptibility, perceived benefits, and perceived barriers and male condom utilization among single African American college women?

	Variables	**Scale**	**Statistic**	**α Level**
H_0: Perceived susceptibility, perceived benefits, and perceived barriers is not related to male condom utilization	Ind. - Perceived susceptibility, perceived severity, perceived benefits, & perceived barriers Dep. - Condom use	Interval	Pearson Correlation Coefficient	.05
H_R: Perceived susceptibility, perceived severity, perceived benefits, and perceived barriers is related to male condom utilization				

Research Question #2: Are cues to action related to the likelihood of male condom utilization among single African American college women?

	Variables	**Scale**	**Statistic**	**α Level**
H_0: Cues to action does not relate to male condom utilization	Ind. - Cues to action Dep. - Condom use	Interval	Pearson Correlation Coefficient	.05
H_R: Cues to action does relate to male condom utilization				

Research Question #3: Is there a relationship between self-efficacy and male condom utilization among single African American college women?

	Variables	Scale	Statistic	α Level
H_0: Self-efficacy does not relate to condom use	Ind. – Self-efficacy Dep. – Condom use	Interval	Pearson Correlation Coefficient	.05
H_R: Self-efficacy does relate condom use				

Research Question #4: Is there a relationship between the level of knowledge about HIV and male condom utilization among single African American college women?

	Variables	Scale	Statistic	α Level
H_0: Level of knowledge about HIV does not relate to condom use	Ind. – HIV knowledge Dep. – Condom use	Interval	Pearson Correlation Coefficient	.05
H_R: Level of knowledge about HIV does relate to condom use				

Research Question #5: Do responses to the Health Belief Model constructs (perceived benefits, perceived severity, perceived susceptibility, perceived barriers, and self-efficacy) predict the utilization of male condoms among single African American college women when controlling for risk?

	Variables	Scale	Statistic	α Level
H_0: The Health Belief Model does not predict the overall utilization of condoms among African American college women.	Ind. – HBM Dep. – Condom use	Interval	Stepwise Regression	.05
H_R: The Health Belief Model does predict the overall utilization of condoms among African American college women.				

For all analyses α was set at .05 and two-tailed.

Summary

This section on methodology discussed the various methods used for data collection, sample population, instrumentation, and the methods for the analysis of data. The analysis of data will determine what the factors are that relate to condom use among sexually active African American college women.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

Introduction

The purpose of this study was to determine that factors that related to male condom utilization among sexually active African American college women. Data analysis addressed description of pilot study participants, determination of content validity, description of study population, description of HBM constructs, HIV/AIDS knowledge, and self-reported condom use.

Population and Sample Description

Pilot Population

The pilot study was conducted at Maryville College and ten women volunteered to participate. Of the ten women surveyed eight were African American and two were Caucasian. Participants required a total of 20 minutes to complete the surveys. Upon completion the researcher interviewed them for feedback on the surveys. Participants reported that the survey contained too many questions and took too long to complete. Overall comments included:

1. some of the questions were ambiguous and not clear about what they wanted
2. some of the questions were repeated several times on the survey
3. the questions were too personal and detailed

4. it was easy to read and fill out
5. by it being anonymous they were able to be honest in their responses

Since these comments addressed issues that were central to the integrity of the surveys, no changes were made. Furthermore, the researcher included a statement about the personal nature of the questions and length of instrument in the verbal instructions prior to distributing surveys.

Content Validity

The panel of health education experts provided information on each as a potential cue to prompt condom usage. They were specifically asked if each cue had the potential to serve as the mechanism to prompt condom usage. It was determined that a cue would be discarded if it did not receive at least 60% of the vote based on an agreement among three of the five experts. All of the cues received at least 60% of the vote by the panel (Table 4-1). The panel also provided valuable comments about each cue. The panel was also asked if the survey was clear and easy to understand. All respondents stated that the questions were clear and easy to understand. Thus, based on responses from the health education experts, the survey exhibited content validity.

Study Population

A total of 751 African American undergraduate females were identified at The University of Tennessee. Using existing groups with African American female

TABLE 4-1: POTENTIAL CUES TO ACTION TO INCREASE CONDOM USE

Potential Cue	% Of Health Education experts indicating cue was appropriate
Campus Events (speakers, rallies, etc.)	100
Casual discussions with friends	100
Health Educator	100
Health fair	100
Interaction with people who are HIV positive or have AIDS	100
Magazine article	100
Peer Educators	100
Sorority meetings	100
Books	80
Doctor	80
Magazine ads	80
Movies	80
Pamphlet	80
Public Service Announcement (radio)	80
Public Service Announcement (TV)	80
Television commercials	80
Television programs	80
Condom display in store	60
Health Department	60
Internet	60
Newspaper article (local paper)	60
Newspaper article (student paper)	60
Posters	60
Radio programs (campus)	60
Radio programs (local)	60
Soap Operas	60
Student Health Clinic	60

memberships, students were approached to participate in the study. A total of 203 African American college women were approached to complete the survey. Three participants did not completely fill out the survey and four declined to complete the survey. Thus, 98% of women approached agreed to participate and 98% of those provided usable survey data. The final study sample included 196 African American undergraduate college women at The University of Tennessee.

Demographic data collected in the survey include: age, relationship status, academic classification, academic performance, financial support during school, parental educational attainment, level of sexual activity during a one month period, and total number of partners in lifetime.

Age

The average age of the participants was 21. Almost half of the participants were 18 or 19 years old. The age range and distribution are shown in Table 4-2.

Relationship Status

The participants were asked if they were currently in a committed relationship and seventy-six (38.8%) stated that they were while 120 (61%) stated that they were not. Thus most students were not in a committed relationship (Table 4-3).

Academic Classification

Participants reported academic classification which is shown in Table 4-4. Most respondents were freshmen and sophomores.

TABLE 4-2: AGE RANGE AND DISTRIBUTION OF STUDY PARTICIPANTS

Age	Frequency	Percent
18	44	22.4
19	50	25.5
20	36	18.4
21	27	13.8
22	28	14.3
23	2	1.0
24	9	4.6
Total	196	100.0

TABLE 4-3: CURRENTLY IN A COMMITTED RELATIONSHIP

Committed Relationship	Frequency	Percent
Yes	76	38.8
No	120	61.2
Total	196	100.0

TABLE 4-4: ACADEMIC CLASSIFICATION OF STUDY PARTICIPANTS

Class	Frequency	Percent
freshmen	73	37.2
sophomore	32	16.3
junior	36	18.4
senior	55	28.1
Total	196	100.0

Academic Performance

Students reported perceived level of academic performance on a 5 point ordinal scale (Table 4-5). Over 75% of the students reported their performance as very good or quite good.

Financial Support

Financial support was divided into five categories (Table 4-6). Over sixty percent of respondents reported that they had a combination of support for their education.

Parental Educational Attainment

Parental education attainment was expressed as four categories for father's and mother's education (Table 4-7 and Table 4-8). Over seventy percent of the respondents'

TABLE 4-5: SELF-REPORTED ACADEMIC PERFORMANCE OF STUDY PARTICIPANTS

Performance	Frequency	Percent
very good	43	21.9
quite good	81	41.3
average	70	35.7
quite poor	1	.5
very poor	1	.5
Total	196	100.0

TABLE 4-6: SOURCE OF FINANCIAL SUPPORT FOR STUDY PARTICIPANTS DURING SCHOOL

Source	Frequency	Percent
parents	31	15.8
self-supporting	10	5.1
scholarships	25	12.8
loans	7	3.6
combination of these	123	62.8
Total	196	100.0

TABLE 4-7: FATHER'S EDUCATONAL ATTAINMENT

Attainment	Frequency	Percent
university degree or above	77	39.3
completed community college, trade school, or some college	60	30.6
high school diploma	47	24.0
some high school or below	12	6.1
Total	196	100.0

TABLE 4-8: MOTHER'S EDUCATIONAL ATTAINMENT

Attainment	Frequency	Percent
university degree or above	89	45.4
completed community college, trade school, or some college	69	35.2
high school diploma	33	16.8
some high school or below	5	2.6
Total	196	100.0

fathers had post secondary education while eighty-one percent of their mothers had achieved the same.

Frequency of Sexual Activity

Almost half of the respondents reported having no sexual intercourse during a one month period of time (Table 4-9). Twenty percent reported having intercourse two or three times and seventeen percent reported having intercourse four to nine times in a one month period.

Total Number of Partners in Lifetime.

The number of sex partners varied with a range of 0 to 18. There were 58 (29.6%) who reported not being sexually active and half (51.5%) reported having between one and five partners. The distribution is shown in Table 4-10.

TABLE 4-9: FREQUENCY OF SEXUAL INTERCOURSE IN A ONE MONTH PERIOD

Frequency of Intercourse	Frequency	Percent
0 times	85	43.4
1 time	17	8.7
2 or 3 times	40	20.4
4 to 9 times	34	17.3
10 to 19 times	15	7.7
20 or more times	5	2.6
Total	196	100.0

TABLE 4-10: TOTAL NUMBER OF SEXUAL PARTNERS

Number of Partners	Frequency	Percent
0	58	29.6
1	24	12.2
2	18	9.2
3	20	10.2
4	26	13.3
5	13	6.6
6	7	3.6
7	12	6.1
8	5	2.6
9	2	1.0
10	4	2.0
12	4	2.0
13	2	1.0
18	1	.5
Total	196	100.0

Health Belief Model Constructs

Constructs in the Health Belief Model included perceived benefits, perceived barriers, perceived susceptibility, and self-efficacy. This section provides the mean and standard deviations for each construct.

Perceived Benefits

A total of twenty-four statements were used to ascertain whether or not participants viewed any benefits to using condoms. Responses were garnered using a five point Likert Scale ranging from strongly agree to strongly disagree. The means for each individual item ranged from 1.84 to 3.53. There were 14 items that yielded agree, 8 items that yield don't know, and 2 that yielded disagree (Table 4-11). The response with the highest mean was the statement: "A benefit to using male condoms is that they can be obtained by either men or women." Responses to this statement yielded a mean of 3.53 $\pm$ .78 indicating that participants agreed that this a benefit associated with using male condoms. The response with the lowest mean was the statement: "A benefit to using male condoms is that they are fun." Responses to this statement yielded a mean of 1.84 $\pm$ 1.03 indicating that participants do not agree that this is a benefit associated with using male condoms. The scale yielded an overall mean score of 2.89 $\pm$ .96 indicating that participants agree that there are benefits associated with using male condoms.

TABLE 4-11: PERCEIVED BENEFITS OF USING CONDOMS

Perceived Benefit	Mean	Std. Deviation
Can be obtained by either men or women	3.53	.781
Are easy to obtain	3.47	.740
Offer Protection against pregnancy	3.31	.790
Reduce the risk of contracting a sexually transmitted disease (STD)	3.30	.820
Do not require a doctor visit and prescription	3.28	.954
Are easily disposed of	3.28	.852
Represent sexual responsibility	3.26	.892
Are available in different varieties (textures, colors, etc.)	3.22	.960
Reduce the risk of contracting HIV/AIDS	3.19	.924
Are easy and inconspicuous to carry around	3.18	.833
Are easy to use	3.14	.883
Are not time consuming to use	3.09	.978
Are inexpensive	3.04	1.052
Are an option for females who can not use the pill	3.00	.889
Require the male to take on some responsibility, rather than always the female	2.93	1.079
Decrease the fear/nervousness of contracting a sexually transmitted disease	2.80	1.041
Decrease the fear/nervousness of pregnancy	2.76	1.018
Have no side effects like some contraceptive methods do	2.56	1.160
Are reliable	2.48	1.116
Can be used as part of foreplay	2.46	1.191
Increase lubrication	2.35	1.125
Prolong sexual interaction	2.06	1.021
Increase stimulation	1.89	1.025
Are fun	1.84	1.033
Overall Mean	2.89	.96

{ 0=Strongly Disagree, 1=Disagree, 2=Don't Know, 3=Agree, 4=Strongly Agree}

Perceived Barriers

There were fifteen statements that were used to determine the barriers to condom use among the participants. The statements included three subscales: turnoffs, hassles, and execution and relationship concerns.

Turnoffs

The turnoffs subscale contained four statements (Table 4-12). The means of these statements ranged from 2.06 to 2.28. The statement with the highest mean score was: "A negative aspect of condoms is that they make sex feel different." Responses on this statement yielded a score of 2.28 $\pm$ 1.04 indicating that participants did not know if this was a turnoff or not to using condoms. The statement with the lowest score was: "A negative aspect of condom use is that they are physically uncomfortable." This statement yielded a mean of 2.06 $\pm$ 1.02 indicating that participants also did not know whether or not this was a turnoff associated with condom use. The overall mean for this subscale was 2.16 $\pm$ 1.04 indicating that participants did not know if there were turnoffs associated with male condom use.

Hassles

The hassles subscale contained five statements (Table 4-13). The means of these statements ranged from 1.77 to 1.24. It is notable that all of the items on the "Hassles" subscale were not perceived as such by the respondents. The statement with the strongest disagreement was: " A negative aspect of condoms is that they are difficult to dispose of." This statement yielded a mean of 1.24 $\pm$ 1.06 indicating that participants do no view this as a hassle associated with male condom use. Thus the overall mean for this subscale

TABLE 4-12: PERCEIVED BARRIERS TO CONDOM USE THAT WERE VIEWED AS TURNOFFS

Turnoff	Mean	Std. Deviation
Make sex feel different	2.28	1.036
Decrease sensitivity	2.22	.993
Reduce the spontaneity of sex	2.09	1.124
Are physically uncomfortable	2.06	1.019
Overall Mean	2.16	1.04

{ 0=Strongly Disagree, 1=Disagree, 2=Don't Know, 3=Agree, 4=Strongly Agree}

TABLE 4-13: PERCEIVED BARRIERS TO CONDOM USE THAT WERE VIEWED AS HASSLES

Hassles	Mean	Std. Deviation
Are embarrassing to purchase	1.77	1.218
Are embarrassing to put on	1.54	1.107
Are inconvenient	1.52	1.143
Are time consuming to put on and take off	1.46	1.125
Are difficult to dispose of	1.24	1.063
Overall Mean	1.50	1.13

{ 0=Strongly Disagree, 1=Disagree, 2=Don't Know, 3=Agree, 4=Strongly Agree}

was 1.50 ± 1.13 indicating disagreement with these items as hassles associated with condom use.

Execution/Relationship Concerns

The execution/relationship concerns subscale contained six subscales (Table 4-14). The means for these statements ranged from 1.98 to 1.30 indicating that participants disagreed that there were execution or relationship concerns associated with male condom use. The statement with the highest mean was: "A negative aspect of condom use is that they may result in a person having a lack of trust in a partner who refuses to use one." This response yielded a mean of 1.98 ± 1.30 indicating that respondents disagreed that is a relationship concern when broaching the subject of condom use. The overall reported mean for this subscale was 1.59 ± 1.16 indicating that respondents disagreed that these would be concerns for them when deciding whether or not to use condoms.

TABLE 4-14: PERCEIVED BARRIERS TO CONDOM USE THAT WERE RELATED TO EXECUTION/RELATIONSHIP CONCERNS

Execution/Relationship Concerns	Mean	Std. Deviation
May result in a person having a lack of trust in a partner who refuses to use one	1.98	1.303
Don't fit properly	1.68	1.082
May result in the break up of a relationship because of the pressure to use one	1.62	1.207
May result in a person having a lack of trust in a partner who insists on using one	1.50	1.170
Do not include clear instructions about how to use properly	1.43	1.096
Are difficult to use properly	1.30	1.075
Overall Mean	1.59	1.16

{ 0=Strongly Disagree, 1=Disagree, 2=Don't Know, 3=Agree, 4=Strongly Agree}

Perceived Susceptibility

There were ten statements that were used to determine the participant's perceived susceptibility to acquiring a sexually transmitted disease when not using condoms. The statements included two subscales: partner and self.

Partner

The partner subscale was composed of six statements (Table 4-15). There were four statements that yielded don't know and two statements that yielded disagree. The statement with the highest score was: "I am not concerned about acquiring HIV/AIDS because I am "picky" about partners I have sex with." The mean sore for this statement was 2.30 $\pm$ 1.41 indicating that participants were not sure about this statement. The item of note is the statement with the lowest mean score: "I do not view myself as being at risk for acquiring a sexually transmitted disease." This indicates that the respondents do view themselves as being at risk for acquiring a sexually transmitted disease. This is interesting because past studies have indicated that individuals between the ages of 18 to 24 usually engage in risky sexual behaviors because they do not view themselves as a being at risk for contracting a sexually transmitted disease. Overall participants do not know if they are susceptible to acquiring a sexually transmitted disease from their partner as indicated by their overall mean score of 2.02 $\pm$ 1.33.

Self

The self subscale consisted of four statements (Table 4-16). The respondents strongly disagreed with all items on this subscale indicating that they do not view themselves at risk for acquiring a sexually transmitted disease. The overall mean score was .77 $\pm$ 1.02.

TABLE 4-15: PERCEIVED SUSCEPTIBILITY TO ACQUIRING A SEXUALLY TRANSMITTED DISEASE FROM A PARTNER

Perception of Partners	Mean	Std. Deviation
I am not concerned about acquiring HIV/AIDS because I am "picky" about partners I have sex with	2.30	1.405
I am not concerned about acquiring a sexually transmitted disease because I am "picky" about partners I have sex with	2.29	1.393
My partner(s) is (are) not the "type" to have a sexually transmitted disease	2.02	1.226
My partner(s) is (are) not the "type" to have HIV/AIDS	2.01	1.166
I do not view myself as being at risk for acquiring HIV/AIDS	1.76	1.414
I do not view myself as being at risk for acquiring a sexually transmitted disease	1.76	1.403
Overall Mean	2.02	1.33

{ 0=Strongly Agree, 1=Agree, 2=Don't Know, 3=Disagree, 4=Strongly Disagree}

TABLE 4-16: PERCEIVED SUSCEPTIBILITY TO ACQUIRING A SEXUALLY TRANSMITTED DISEASE

Self-Perception	Mean	Std. Deviation
It is possible that I am infected with HIV/AIDS even though I have not been diagnosed with it	.89	1.093
It is possible that I am infected with a sexually transmitted disease even though I have not been diagnosed with one	.85	1.097
It is likely that I will acquire a sexually transmitted disease within the next five years	.75	1.004
It is likely that I will acquire HIV/AIDS within the next five years	.59	.899
Overall Mean	.77	1.02

{ 0=Strongly Disagree, 1=Disagree, 2=Don't Know, 3=Agree, 4=Strongly Agree}

Self-efficacy

There were twenty-eight items used to measure the respondents self-efficacy associated with using male condoms. Responses were garnered using a five point Likert Scale ranging from strongly agree to strongly disagree. There were ten statements that participants agreed with, sixteen that they did not know, and two that they disagreed with (Table 4-17). The statement reporting the highest mean score of 3.34 $\pm$ .80 was: "I feel confident in my ability to persuade a partner to accept using a condom when we have intercourse." This indicates that respondents felt that if they were in a situation and their partner did not want to use a condom that they could persuade them to do so. The statement with the lowest mean score of .88 $\pm$ .995: "If I were unsure of my partner's feelings about using condoms, I would suggest using one." This indicates that if the respondents were in a situation where they were unsure of their partner's feelings about using condoms they disagree that they would suggest using one. The overall mean score for this scale was 2.80 $\pm$ 1.03 indicating that respondents reported that they do not know of their ability to use condoms consistently in every situation.

Condom Use and HIV/AIDS Knowledge

Condom Use

The dependent variable condom use was ascertained by asking three questions about past, present, and intended future condom use. Participants agreed that in the future they would be likely to use a condom but did not know whether they had used one in the past year or the past thirty days (Table 4-18). This could be due to being exposed

TABLE 4-17: SELF-EFFICACY AS IT RELATES TO CONDOM USE

Self-Perception	Mean	Std. Deviation
I feel confident in my ability to persuade a partner to accept using a condom when we have intercourse	3.34	.797
I feel confident in my ability to discuss condom usage with any partner I might have	3.30	.833
I feel confident in my ability to suggest using condoms with a new partner	3.30	.856
I feel confident I could suggest using a condom without my partner feeling "diseased"	3.27	.913
I would feel comfortable discussing condom use with a potential sexual partner before we ever engaged in intercourse	3.15	.932
I feel confident that I could use a condom successfully	3.15	.879
If my partner didn't want to use a condom during intercourse, I could easily convince him/her that it was necessary to do so	3.10	.934
I feel confident that I could use a condom with a partner without "breaking the mood"	3.07	.856
I feel confident I could stop to put a condom on myself or my partner even in the heat of passion	3.07	.929
I feel confident in my ability to use a condom correctly	3.04	.979
I feel confident in my own or my partner's ability to maintain an erection while using a condom	2.99	.934
I would feel comfortable discussing condom use with a potential sexual partner before we ever had any sexual contact (eg., hugging, kissing, caressing, etc.)	2.94	1.082
I feel confident I could remember to carry a condom with me should I need one	2.93	1.045
I feel confident in my ability to put a condom on myself or my partner	2.93	1.035
I feel confident I could purchase condoms without feeling embarrassed	2.90	1.093
I feel confident I could gracefully remove and dispose of a condom after sexual intercourse	2.86	1.080
I feel confident that I would remember to use a condom even after I have been drinking	2.85	.915
I feel confident I could use a condom during intercourse without reducing any sexual sensations	2.81	1.004
I feel confident in my ability to incorporate putting a condom on myself or my partner into foreplay	2.79	.993
I feel confident in my ability to put a condom on myself or my partner quickly	2.74	1.011
I feel confident that I would remember to use a condom even if I were high	2.73	.999
I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I have a sexually transmitted disease	2.70	1.184

TABLE 4-17: CONTINUED

If I were to suggest using a condom to a partner, I would feel afraid that he or she would reject me	2.68	1.274
If my partner and I would try to use a condom and did not succeed, I would feel embarrassed to try to use one again (eg., not being able to unroll a condom, putting it on backwards, or awkwardness).	2.55	1.345
I would feel embarrassed to put a condom on myself or my partner	2.30	1.307
I would feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I've had past homosexual experiences	2.26	1.388
I would feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I have a sexually transmitted disease	1.84	1.291
If I were unsure of my partner's feelings about using condoms, I would suggest using one	.88	.995
Overall Mean	2.80	1.03

{ 0=Strongly Disagree, 1=Disagree, 2=Don't Know, 3=Agree, 4=Strongly Agree}

TABLE 4-18: PAST, PRESENT, AND FUTURE CONDOM USE

Condom Use	Mean	Std. Deviation
In the future how likely will you be to use a condom?	3.12	1.186
In the past year how likely were you to use a condom?	2.74	1.402
In the past 30 days how likely were you to use a condom?	2.64	1.445
Overall Mean	2.8	1.34

{ 0=Strongly Disagree, 1=Disagree, 2=Don't Know, 3=Agree, 4=Strongly Agree}

to this survey and making them examine their present and past sexual behaviors and prompting them to make changes for the future.

Cues to Action

Cues to Action were measured using twenty-seven items that could potentially serve as prompts to get an individual to use condoms. The items were grouped into two avenues: interpersonal and mass communication.

Interpersonal

Interpersonal cues to action were represented by six items (Table 4-19). Interpersonal communication proved to best the most effective means for prompting condom use among respondents. The mean scores ranged from 4.37 to 3.46 indicating that participants strongly agreed or agreed with these methods as effective at prompting condom use. The statement with the strongest agreement with a mean score of 4.37 $\pm$ 1.03 was: "Interaction with people who are HIV positive or have AIDS." This may be due to participants being able to have direct contact with someone who is suffering from the consequences of not using condoms.

Mass Communication

Mass communication cues to action were represented by twenty-one items (Table 4-20). Mass communication can also be an effective avenue for prompting condom usage. The overall mean score for this subscale was 3.59 $\pm$ 1.24 indicating that overall respondents agreed that these were effective avenues at disseminating information about condom usage.

TABLE 4-19: INTERPERSONAL CUES TO ACTION

Cue	Mean	Std. Deviation
Interaction with people who are HIV positive or have AIDS	4.37	1.027
Health Educator	4.14	1.122
Doctor	4.14	1.201
Casual discussions with friends	4.11	.971
Peer Educators	3.88	1.130
Sorority meetings	3.46	1.221
Overall Mean	4.02	1.11

{ 0=Strongly Disagree, 1=Disagree, 2=Don't Know, 3=Agree, 4=Strongly Agree}

TABLE 4-20: MASS COMMUNICATION CUES TO ACTION

Cue	Mean	Std. Deviation
Health Department	4.14	1.119
Student Health Clinic	3.92	1.163
Health Fair	3.90	1.166
Pamphlet	3.85	1.039
Campus Events (speakers, rallies, etc.)	3.78	1.096
Books	3.77	1.152
Public Service Announcements (TV)	3.61	1.165
Public Service Announcements (radio)	3.60	1.170
Newspaper article (local paper)	3.58	1.158
Newspaper article (student paper)	3.57	1.164
Television commercials	3.57	1.142
Television programs	3.56	1.186
Magazine articles	3.55	1.138
Posters	3.53	1.095
Movies	3.53	1.215
Magazine ads	3.45	1.147
Condom display in store	3.39	1.161
Internet	3.38	1.245
Radio programs (campus)	3.36	1.192
Radio programs (local)	3.34	1.194
Soap Operas	3.01	1.293
Overall Mean	3.59	1.24

HIV/AIDS Knowledge Test

There were twenty-four true and false statements that measured the respondent's level of knowledge about how HIV/AIDS is transmitted and the misconceptions associated with it (Table 4-21). Respondents scored extremely well on the two subscales and overall indicating a high level of knowledge about HIV/AIDS. The HIV/AIDS knowledge test is shown in Appendix B.

Summary

This chapter contained the results of the study, primarily demographic characteristics of the study participants and the mean and standard deviations of the HBM constructs and the HIV/AIDS knowledge test. The findings were based on an analysis of the data.

TABLE 4-21: LEVEL OF KNOWLEDGE AMONG PARTICIPANTS ABOUT HIV/AIDS TRANSMISSION AND MISCONCEPTIONS

	Mean	**Std. Deviation**
Misconceptions	86.3520	16.78675
Transmission	83.8435	13.67700
Total Knowledge	85.0978	12.60233
Overall Mean	85	14.36

{ Scores are expressed as percentages}

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS FOR FUTURE RESEARCH

Summary of the Study

The primary purpose of this study was to determine the factors related to condom use among sexually active undergraduate African American females. To accomplish the purpose of this study, the following five hypotheses were tested:

1. H_0: Perceived susceptibility, perceived benefits, and perceived barriers is not related to male condom utilization

   H_R: Perceived susceptibility, perceived benefits, and perceived barriers is related to male condom utilization

2. H_0: Cues to action does not relate to male condom utilization

   H_R: Cues to action does relate to male condom utilization

3. H_0: Self-efficacy does not relate to condom use

   H_R: Self-efficacy does relate condom use

4. H_0: Level of knowledge about HIV does not relate to condom use

   H_R: Level of knowledge about HIV does relate to condom use

5. $H_{0:}$ The Health Belief Model does not predict the overall utilization of condoms among African American college women.

   H_R: The Health Belief Model does predict the overall utilization of condoms among African American college women.

To answer these research questions a survey was developed using the constructs of the health belief model and an HIV/AIDS knowledge test. The cues to action portion of the survey was validated for content by a panel of health education experts. They were able to provide feedback and changes were made to enhance the usability of the instrument. The instrument was then pilot tested on a population similar to the study population. Changes were made to the survey based on comments from the pilot group. The survey was administered to 196 African American college women. Prior to statistical analyses data were examined to assure that statistical assumptions were satisfied. Data that was collected was analyzed using SPSS version 10 and the following tests were performed: correlations, frequencies, and a stepwise regression.

Findings

The findings for this study are addressed according to the five research questions presented:

Research Question 1: What is the relationship between perceived susceptibility, perceived benefits, and perceived barriers and male condom utilization among single African American college women?

This research question was evaluated by formulating the following hypotheses:

H_0: Perceived susceptibility, perceived benefits, and perceived barriers is not related to male condom utilization

H_R: Perceived susceptibility, perceived benefits, and perceived barriers is related to male condom utilization

Two of the HBM constructs were significantly associated with condom use. The subscale of perceived susceptibility, self (r=.072; p=0.316) and perceived benefits (r=.126; p=.078) were not associated with condom use (Table 5-1).

Perceived Susceptibility – Partner

Perceived susceptibility was measured on a five point Likert type scale and was reverse scored and a low score was associated with low susceptibility and a high score was associated with high susceptibility. Condom use was based on the average of the response to three questions concerning past, present, and future intended condom use. A Pearson correlation coefficient of .197 (p=.006) indicates that a modest but significant relationship exists between perceived susceptibility, partner and condom use (Table 5-1). Thus respondents with a low score on condom use were unlikely to use a condom it they rated their partner as low susceptibility and high score on condom use was coupled with high susceptibility score. Therefore H_R was accepted and there is a relationship between perceived susceptibility, partner and condom use.

Perceived Barriers – Turnoffs

Perceived barriers, turnoffs was measured on a five point Likert type scale and a high score indicated that condoms were viewed as a turnoff and a low score indicated that condoms were not viewed as a turnoff. Condom use was based on the average of the response to three questions concerning past, present, and future intended condom use. A Pearson correlation coefficient of -.206 (p=.006) indicates a negative relationship exists between turnoffs and condom use (Table 5-1). As the perceived barriers categorized as turnoffs increases then the likelihood that an individual will use a condom decreases. Consequently, respondents with a low score on turnoffs were likely to use a condom.

Therefore H_R was accepted and there is a relationship between perceived barriers, turnoffs and condom use.

Perceived Barriers - Hassles

Perceived barriers, hassles was measured on a five point Likert type scale and a high score indicated that condoms were viewed as a hassle and a low score indicated that condoms were not viewed as a hassle. Condom use was based on the average of the response to three questions concerning past, present, and future intended condom use. A Pearson correlation coefficient of -.298 (p=.000) indicates a negative but significant relationship exists between turnoffs and condom use (Table 5-1). As perceived barriers, hassles decreases then condom use will increase. If individuals do not view condom use as a hassle or inconvenience then they will be more likely to use them. Therefore H_R was accepted and there is a relationship between perceived barriers, hassles and condom use.

Perceived Barriers – Execution/Relationship Concerns

Perceived barriers, execution/relationship concerns was measured on a five point Likert type scale and a high score indicated that condoms use was difficult to execute and there were relationship concerns involved in use. Condom use was based on the average of the response to three questions concerning past, present, and future intended condom use. A Pearson correlation coefficient of -.227 (p=.001) indicates a negative but significant relationship exists between execution/relationship concerns and condom use (Table 5-1). As execution/relationship concerns decreases then the likelihood that an

TABLE 5-1: CORRELATION BETWEEN HBM CONSTURCTS AND CONDOM USE

Independent Variable	Dependent Variable	Pearson Correlation	P Value
Perceived Susceptibility - Partner	Condom Use	.197 **	.006
Perceived Susceptibility - Self	Condom Use	.072	.316
Perceived Benefits	Condom Use	.126	.078
Perceived Barriers - Turnoffs	Condom Use	-.206 **	.004
Perceived Barriers - Hassles	Condom Use	-.298 **	.000
Perceived Barriers – Execution/Relationship Concerns	Condom Use	-.227 **	.001

** Correlation is significant at the 0.01 level (2-tailed).

individual will use a condom increases. Thus, if an individual feels that they are capable of using condoms correctly and in all relationships then they will be more likely to use them. Therefore H_R was accepted and there is a relationship between perceived barriers, execution/relationship concerns and condom use.

Research Question 2: Are cues to action related to the likelihood of male condom utilization among single African American college women?

This research question was evaluated by formulating the following hypotheses:

H_0: Cues to action does not relate to male condom utilization

H_R: Cues to action does relate to male condom utilization

Cues to action were measured on a five point Likert type scale and was divided into avenues, interpersonal and mass communication. Condom use was based on the

average of the response to three questions concerning past, present, and future intended condom use.

Interpersonal Cues to Action

A Pearson correlation coefficient of .279 (p=.000) indicates that a strong and significant relationship exists between interpersonal cues and condom use (Table 5-2). If an individual receives information from an interpersonal source then the likelihood that they will use a condom increases. Thus as exposure to interpersonal cues increases so does condom use. Therefore H_R was accepted and there is a relationship between interpersonal cues to action and condom use.

Mass Communication Cues to Action

A Pearson correlation coefficient of .223 (p=.002) indicates that a significant relationship does exist between mass communication cues and condom use (Table 5-2). As exposure to mass communication messages about condom use increases so does the likelihood of condom use. Therefore H_R was accepted and there is a relationship between mass communication cues to action and condom use.

TABLE 5-2: CORREALTION BETWEEN CUES TO ACTION AND CONDOM USE

Independent Variable	Dependent Variable	Pearson Correlation	P Value
Interpersonal Cues to Action	Condom Use	.279 **	.000
Mass Communication Cues to Action	Condom Use	.223 **	.002

** Correlation is significant at the 0.01 level (2-tailed).

Research Question 3: Is there a relationship between self-efficacy and male condom utilization among single African American college women?

This research question was evaluated by formulating the following hypotheses:

H_0: Self-efficacy does not relate to condom use

H_R: Self-efficacy does relate condom use

Self-efficacy was measured on a five point Likert type scale and condom use was based on the average of the response to three questions concerning past, present, and future intended condom use. A Pearson correlation coefficient of .319 (p=.000) indicates that a strong relationship exists between self-efficacy and condom use (Table 5-3). The more confident that an individual feels in their ability to execute condom use correctly then the likelihood that they will use them increases. Therefore H_R was accepted and

Research Question 4: Is there a relationship between the level of knowledge about HIV and male condom utilization among single African American college women?

This research question was evaluated by formulating the following hypotheses:

H_0: Level of knowledge about HIV does not relate to condom use

H_R: Level of knowledge about HIV does relate to condom use

Level of knowledge about HIV/AIDS was measured using a twenty-four item true and false test and condom use was based on the average of the response to three questions concerning past, present, and future intended condom use. A Pearson correlation coefficient of -.019 (p=.786) indicates that there is no relationship between level of knowledge about HIV/AIDS and condom use (Table 5-4). Therefore H_0 is accepted and there is no relationship between level of knowledge about HIV/AIDS and condom use.

there is a relationship between self-efficacy and condom use.

TABLE 5-3: CORRELATION BETWEEN SELF-EFFICACY AND CONDOM USE

Independent Variable	Dependent Variable	Pearson Correlation	P Value
Self-Efficacy	Condom Use	.319 **	.000

** Correlation is significant at the 0.01 level (2-tailed).

TABLE 5-4: CORREALTION BETWEEN LEVEL OF KNOWLEDGE ABOUT HIV/AIDS AND CONDOM USE

Independent Variable	Dependent Variable	Pearson Correlation	P Value
Transmission	Condom Use	.004	.958
Misconceptions	Condom Use	-.032	.654
Total Knowledge	Condom Use	-.019	.786

Research Question 5: Do responses to the Health Belief Model constructs (perceived benefits, perceived severity, perceived susceptibility, perceived barriers, and self-efficacy) predict the utilization of male condoms among single African American college women when controlling for risk?

This research question was evaluated by formulating the following hypotheses:

$H_{0:}$ The Health Belief Model does not predict the overall utilization of condoms among African American college women.

H_R: The Health Belief Model does predict the overall utilization of condoms among African American college women.

A stepwise regression model containing all of the independent variables (HBM constructs) was tested against the dependent variable condom use. The model in Table 5-5 examines the explanatory value of the HBM constructs upon overall condom use. The model explained 22% of the variance in the overall condom use (Table 5-6). The strongest predictor

TABLE 5-5: STEPWISE REGRESSION ANALYSIS OF CONDOM USE BY HBM CONSTRUCTS

Coefficients (a)

Model	B	Std. Error	Beta	t	Sig.
Constant	1.822	.622		2.927	.004
Number of partners in lifetime	-.002	.028	-.007	-.087	.930
Frequency of intercourse in a month	.053	.062	.066	.855	.393
Self-Efficacy	.618	.198	.257	3.115	.002
Perceived Barriers – Turnoffs	-.310	.092	-.232	-3.375	.001
HIV/AIDS Knowledge Test – Misconceptions	-.016	.005	-.226	-3.171	.002
Perceived Susceptibility – Partner	.173	.075	.159	2.303	.022
Interpersonal Cues to Action	.220	.109	.158	2.022	.045

(a) Dependent variable: Condom Use

TABLE 5-6: R SQUARE OF THE STEPWISE REGRESSION ANALYSIS OF CONDOM USE BY HBM CONSTRUCTS

R	R Square	Adjusted R Square	Standard Error of the Estimate
.468	.219	.190	1.08616

of condom use was self-efficacy (beta =.257) and perceived barriers, turnoffs (beta=-.232). The direction of these relationships is consistent with prior research on the association between condom use and college students. Residuals were obtained and looked at for normal variance. The errors were normally distributed with the mean 0 and the assumptions were not grossly violated. Thus there are parts of the HBM that do predict condom use. Therefore H_R was accepted and the Health Belief Model does predict the overall utilization of condoms among African American college women.

Conclusions

Based on the study's findings, the following conclusions were made as they relate specifically to the five research questions:

1. Perceived susceptibility with the subscale partner, perceived barriers with the subscales turnoffs, hassles, and execution/relationship concerns were significantly correlated with condom use among female African American college students at The University of Tennessee. Perceived susceptibility with the subscale self and perceived benefits were not significantly correlated with condom use among female African American college students at The University of Tennessee.
2. Cues to action, interpersonal and mass communication were significantly correlated with condom use among female African American college students at The University of Tennessee.
3. Self-efficacy was significantly correlated with condom use among female African American college students at The University of Tennessee.
4. Level of Knowledge about HIV/AIDS was not significantly correlated with condom use among female African American college students at The University of Tennessee.
5. HBM constructs does predict condom use among female African American college students at The University of Tennessee when controlling for risk.

Discussion

The purpose of this study was to assess the factors associated with the Health Belief Model constructs (perceived benefits, perceived severity, perceived susceptibility, perceived barriers, and self-efficacy) and male condom utilization among single sexually active African American college women at The University of Tennessee. The present study sought to address a void in the literature by focusing exclusively on African American women and utilizing all of the constructs of the Health Belief Model and examining two distinct avenues for cues to action, mass communication and interpersonal. This section will provide information as to how this study compares and contrasts to previous research studies.

Health Belief Model Constructs (perceived benefits, perceived susceptibility, perceived barriers, and self-efficacy

The results of the current study are consistent with research conducted by Goldman and Harlow (1993) when measuring the construct of self-efficacy. They reported that self-efficacy was positively correlated to AIDS preventive behavior (p=.32) and that as self-efficacy increased so did AIDS preventive behaviors. Hale & Trumbetta (1996) conducted a study on females between the ages of 18 to 46 most whom were European American and reported that only a modest association existed between self-efficacy and condom use (beta=.588). Goldman and Harlow also noted that level of knowledge about HIV/AIDS was high with a mean correct response rate of 87%. A stepwise analysis was also conducted and yielded similar results to the present study with self-efficacy and perceived risk predicting 19% of actual behavioral risk, knowledge did

not enter. This is consistent with the current study in that 22% of the variance in condom use can be explained by the model. As evidenced by previous studies and this current study self-efficacy is very strong predictor of condom use.

Wulfert, Wan, and Backus (1995) conducted a study on gay men using all of the constructs of the HBM and found that the only one construct, perceived barriers could be used as a predictor of condom use. Wulfert, Wan, and Backus postulates that HIV prevention may not fit well within the conceptual framework of the HBM. The current study disputes this finding because the components of the HBM were found to be predictors for condom use among African American females in the prevention of HIV/AIDS through condom use. The difference in the studies may be due to gender and sexual orientation.

Mahoney et al. (1995) conducted a study on college students between the ages of 18 to 24 using all constructs of the HBM to examine the differences in condom use. Mahoney et al. found that the HBM was inadequate in explaining multiple patterns (sporadic users, nonusers, and consistent users) of condom use but that self-efficacy was an effective tool to use when distinguishing between sporadic condom users from nonusers and consistent users. This is consistent with the findings of the current study which indicates that condom use can be predicted by increased self-efficacy (beta=.618).

Cues to Action

A search of the literature yielded no previous instrument that specifically measured cues to action and condom use. Jones, Fowler, & Hubbard (1998) developed "The Cues to Action Questionnaire" that contained 32 items representing a cue that could prompt one to take health-promoting action. Jones's study population consisted of

individuals attending a farm equipment exhibition and who were at least 18 years of age. The tool yielded a high internal consistency and Cronbach alpha coefficient of .88 but the scale was too general and did not examine the two avenues of interpersonal and mass communication for receiving information. A study conducted by Zimmers et al. (1999) examined the impact that viewing a video on female condom use would have on women's willingness to try and to continue using female condoms. The study participants were between the ages of 17 and 62 and were predominantly European American. It was reported that overall 72% of the females who tried the female condoms and liked them would use them in the future. These findings are consistent with the current study results in that mass communication cues are significant in prompting condom use. This current study indicated that while cues to action are important in prompting condom use, there is a benefit as to how information is delivered and the preferred method is through interpersonal communication.

HIV/AIDS Knowledge Test

Previous studies have found that level of HIV/AIDS knowledge can be associated with condom use among certain populations. Hobfall et al. (1993) conducted a study on African American and European American women living in the inner city to ascertain their sexual behavior, knowledge of HIV transmission and prevention, and perceived risk of AIDS. Hobfall et al. found that level of knowledge about HIV was poor and that the participants were involved in moderate-risk sexual behaviors. Women felt that if they had only one or two partners then they were not at risk for acquiring HIV. The differences of this study to the present study can be explained by educational attainment. As indicated by the present study college students typically do possess a high level of

knowledge in regards to HIV. St.Lawrence (1993) conducted a study on African-American adolescents to ascertain their knowledge, health-related attitudes, sexual behavior, and contraceptive decisions as implications for HIV prevention. St. Lawrence indicates that level of knowledge was correlated with condom use and that as knowledge increased so did condom use. This may be due to age and as adolescents grow and mature so does their level of knowledge about HIV, whereas college students are more mature and have had repeated exposure to HIV/AIDS information. Consistent with the findings of this study Lollis et al. (1995) conducted a study with African American men and women examining multiple risk factors associated with HIV/AIDS. Lollis et al. found that the participants had a high level of knowledge about HIV/AIDS but it did not affect risk factors associated with this disease.

The current study indicates that the Health Belief Model Constructs can be used in predicting condom use and that self-efficacy is the most significant predictor for African American college women. It also indicated that while level of knowledge about HIV/AIDS is important it is not correlated with condom use. Furthermore the current study illustrates an empirical approach for identifying cues to action in health education research.

Recommendations for Future Research

1. This study needs to be replicated using African American college men. There may be unique factors to this population that once identified may increase the chances that condoms will be used consistently throughout relationships.

2. This study also needs to be replicated among older African American women because this population has experienced an increase in HIV infection.

CHAPTER VI

THE STUDY IN RETROSPECT

Introduction

This chapter provides a reflection of the study by the researcher and will address the researchers experience, the strengths and weaknesses of the study, and the implications for health education practice.

Researcher's Experience

I chose a topic that I was interested in and that was relevant to my community. HIV/AIDS is a devastating disease that has the potential to destroy families as well communities. I felt it was necessary for me to choose a topic that I was passionate about so as not to loose interest during the process. This project was embraced and supported by almost everyone I encountered. Even though the survey was lengthy and took a long time to complete I found that people were willing to help me and my research along by participating in the study.

I was given the opportunity to conduct a community education program with my pilot study. I found this to be very rewarding on my part as well as theirs. I was able to show a video that dealt with HIV/AIDS in the African American community and have a group discussion afterwards. The participants asked a lot of thought provoking questions and I was able to share a lot of important information with them as a result.

Strengths and Weaknesses of the Study

There were both strengths and weaknesses associated with this study. One of the biggest strengths of this study was that it allowed the researcher to interact with the undergraduate African American students on campus. It was through this interaction that I was able to disseminate vast amounts of information about the increasing problem of HIV/AIDS in our community. A majority of the groups that I surveyed were composed of men as well and while the females were completing the surveys I was able to dialogue with them and share information about prevention. Another strength was the institutional support I received form the Black Cultural Center (BCC). They were able to provide me with information on the organizations associated with them as well as other groups located on campus.

One weakness associated with this study was the lengthy survey instrument. As participants were completing the surveys they began to loose interest in it and complain about how long it was. I have to wonder if towards the end of completing the survey if they were as attentive to the questions as they were at the beginning. If I were going to replicate this study I would create an instrument that is shorter. Some of the questions in the HBM construct sections were repeated and ambiguous. A second weakness of the study was that I felt rushed to collect data and would like to have had the opportunity to get more participants. This would have allowed me to interact with more people and make the results of the study more solid. Lastly I would have liked to have obtained my sample population through a random sample method as random sampling is a proven method for limiting bias.

Implications for Health Education Practice

The results of this study will be very useful to college health educators working in any academic setting. Information from the stepwise regression could be used to give validity to programs when planning them. Health educators would have research based evidence that programs which increased self-efficacy and was delivered through a smaller more personal setting would be effective. The research clearly indicates that this population is at risk for not only HIV but also all sexually transmitted diseases. Health educators could also use this information when writing grant proposals.

Relation of Study to Future Research

There is still work that needs to be done in this area. The African American male population needs to be studied because there may be unique characteristics that make them more at risk for acquiring sexually transmitted diseases. The cues to action scale could be modified to include other more specific health promoting behaviors. The HIV/AIDS knowledge test could be updated with more current information. Some of the study participants indicated that there was information abut HIV/AIDS transmission that they were unaware of. Some of these behaviors were things that they were engaging in and unknowingly putting themselves at risk.

Summary

In conclusion, I am very glad I chose the topic that I did because not only was it rewarding professionally but it also gave me an opportunity to impact my community in a very meaningful and positive way.

BIBLIOGRAPHY

Abraham, C., Sheeran, P., Spears, R., & Abrams, D. (1992). Health beliefs and promotion of hiv-preventive intentions among teenagers: a scottish perspective. Health Psychology, 11(6), 363-370.

Anderson, J.E., Brackbill, R., & Mosher, W.D. (1998). Condom use for disease prevention among unmarried u.s. women. Family Planning Perspectives, 28(1), 25-28, 39.

Bazargan, M., Kelly, E.M., Stein, J.A., Husaini, B.A., Bazargan, S.H. (2000). Correlates of hiv risk-taking behaviors among African-american college students: the effect of hiv knowledge, motivation, and behavioral skills. Journal of the National Medical Association, 92(8), 391-404.

Bandura, A. (1977a). Social learning theory. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1977b). Self-efficacy: toward a unifying theory of behavior change. Psychological Review, 84, 191-215.

Bedimo, A.L., Bennett, M., Kissinger, P., & Clark, R.A. (1998). Understanding barriers to condom usage among hiv-infected African American women. Journal of the Association of Nurses In AIDS Care, 9(3), 48-58.

Epi-News. (2000, December). Vickie Kegerise, 5.

Finger, W.R. (1998). Condom use increases. Family Health International, 18(3), 1-6.

Glanz, K., Lewis, F.M., & Rimer, B.K. (1996). Health behavior and health education theory, research, and practice. Josse-Bass: San Francisco.

Goldman, J.A. & Harlow, L.L. (1993). Self-perception variables that mediate aids-preventive behavior in college students. Health Psychology, 12(6), 489-498.

Hale, P.J., & Trumbetta, S.L. (1996). Women's self-efficacy and sexually transmitted preventive behaviors. Research in Nursing & Health, 19, 101-110.

Highsmith, C.S. (1997). Hiv and women using empowerment as a prevention tool. N&HC: Perspectives on Community, 18(1), 6-9.

Hobfoll, S.E., Jackson, A.P., Lavin, J., Britton, P.J., & Shepherd, J.B. (1993). Safer sex knowledge, behavior, and attitudes of inner-city women. Health Psychology, 12(6), 481-488.

Hochbaum, G. (1958). Public participation in medical screening programs: a socio-psychological study. US Department of Health, Education, and Welfare, Public Health Service, Bureau of State Services, Division of Special Health Services, Tuberculosis Program.

Johnson, E.H., Gilbert, D., Lollis, C. (1994). Characteristics of african-american college students with hiv/aids. Journal of the National Medical Association, 86(12), 931-940.

Johnson, R.L., Douglas, W., & Nelson, A. (1992). Sexual behaviors of African American male college students and the risk of hiv infection. Journal of the National Medical Association, 84(10), 864-868.

Jones, T, Fowler, M.C., & Hubbard, D. (2000). Refining a tool to measure cues to action in encouraging health-promoting behavior-the chaq. American Journal of Health Promotion, 14(3), 170-173.

Kirscht, J.P. (1974). The health belief model and illness behavior. Health Education Monographs,2, 387-408.

Lauby, J.L., Smith, J., Stark, M., Person, B., & Adams, J. (2000). A community-level hiv prevention intervention for inner-city women: results of the women and infants demonstration projects. American Journal of Public Health, 90(2), 216-222.

Leigh, B.C., Temple, M.T., & Trocki, K. (1993). The sexual behavior of us adults: results from a us national survey, American Journal of Public Health, 83, 1400-1408.

Lewis, L.M., Melton, R.S., Succop, P.A., & Rosenthal, S.L. (2000). Factors influencing condom use and std acquisition among african american college women. Journal of American College Health, 49, 19-23.

Lollis, C.M., Johnson, E.H., & Antoni, M.H. (1997). The efficacy of the health belief model for predicting condom usage and risky sexual practices in university students. AIDS Education and Prevention, 9(6), 551-563.

Lollis, C.M., Johnson, E.H., Antoni, M.H., & Hinkle, Y. (1996). Characteristics of African-americans with multiple risk factors associated with hiv/aids. Journal of Behavioral Medicine, 19(1), 55-71.

Mahoney, C.A., Thombs, D.L., & Ford, O.J. (1995). Health belief and self-efficacy models: their utility in explaining college student condom use. AIDS Education and Prevention, 7(1), 32-49.

McNair, L.D., Carter, J.A., & Williams, M.K. (1998). Self-esteem, gender, and alcohol use: relationships with hiv risk perception and behaviors in college students. Journal of Sex & Marital Therapy, 24, 29-36.

Reese, D. (1998). A study of the health risk behaviors of students attending historically black colleges and universities. Unpublished doctoral dissertation, The University of Tennessee, Knoxville.

Robinson, R.B. & Frank, D.I. (1994). The relation between self-esteem, sexual activity, and pregnancy. Adolescence, 29(113), 27-35.

Rosenstock, I.M. (1974). Historical origins of the health belief model. Health Education Monograph, 2(4), 328-335.

SPSS, Inc. (2000). SPSS Base 10.0 Application Guide.

St. Lawrence, J.S. (1993). African-american adolescents' knowledge, health-related attitudes, sexual behavior, and contraceptive decisions: implications for the prevention of adolescent hiv infection. Journal of Consulting and Clinical Psychology, 61(1), 104-112.

St. Lawrence, J.S., Eldridge, G.D., Reitman, D., Litle, C.E., Shelby, M.C., & Brasfield, T.L. (1998). American Journal of Community Psychology, 26(1), 7-28.

Turner, J.C., Korpita, E., Mohn, L.A., & Hill, W.B. (1993). Reduction in sexual risk behaviors among college students following a comprehensive health education intervention. Journal of American College Health, 41, 187-193.

Wagstaff, D.A., Kelly, J.A., Perry, M.J., Sikkema, K.J., Solomon, L.J., Heckman, T.G., Anderson, E.S., & the Community Housing AIDS Prevention Study Group. (1995). Multiple partners and hiv risk among low-income urban women. Family Planning Perspectives, 27(6), 241-245.

Wang, M. Q., Fitzhugh, E., & Westerfield, R.C. (1995). Determining sample size for simple-random surveys. Health Values, 19(3), 53-56.

Wilson, M.D., Kastrinakis, M., D'Angelo, L.J., & Geston, P. (1994). Attitudes, knowledge, and behavior regarding condom use in urban black adolescent males. Adolescence, 29(113), 13-26.

Wingood, G.M. & DiClemente, R.J. (1998). Partner influences and gender-related factors associated with non-condom use among young adult African American women. American Journal of Community Psychology, 26(1), 29-51.

Woodsong, C. & Koo, H.P. (1999). Two good reasons: women's and men's perspectives on dual contraceptive use. Social Science & Medicine, 49, 567-580.

Wulfert, E., Wan, C.K., & Backus, C.A. (1996). Gay men's safer sex behavior: an integration of three models. Journal of Behavioral Medicine, 19(4), 345-366.

Yep, G.A. (1993). HIV prevention among asian-american college students: does the health belief model work. Journal of American College Health, 41, 199-205.

Zimmers, E., Privette, G., Lowe, R.H., & Chappa, F. (1999). Increasing use of the female condom through video instruction. Perceptual and Motor Skills, 88, 1071-1077.

APPENDICES

APPENDIX A
LETTER TO EXPERT HEALTH EDUCATION PANEL AND RATING FORM

January 13, 2003

Mrs. Pamela R. Staples
Central Tennessee Area Health Education Center, Inc.
106A West Hills Drive
Lebanon, TN 37087

Dear Mrs. Staples:

I would first like to thank you for taking time out of your busy schedule to assist me in the completion of my dissertation.

As you know HIV/AIDS is an insidious and deadly virus that is on the rise in the African-American community. More specifically the number of new infections seems to be skyrocketing among young single African-American females. My research aims to identify the barriers that may exist which prevent this population from using condoms consistently. A portion of the survey that I have created deals with cues to action. Cues to action can be defined as those things that prompt an individual to engage in a specific behavior. I would like to know if there are some cues either, interpersonal or mass media that are more effective at prompting then others. Once these cues have been identified then the information can be used to develop culturally specific intervention programs for this community.

Attached you will find the survey and instructions for filing it out. Again thank you for your time and expertise in this endeavor.

Sincerely,

Shiree M. Southerland
Doctoral Candidate

1. Review the Sample Cues to Action Survey.
   - Will African American female college students find the survey clear and easy to understand?

     Yes No

     Comments:

2. Could each of the following sources of information serve as a cue to prompt African American women to use a condom? Please read each of the sources and place a check in the column for either **yes or no**. Please add comments to help me improve this tool.

	Yes	No	Comments
1. Books			
2. Campus Events (speakers, rallies, etc.)			
3. Casual discussions with friends			
4. Condom display in store			
5. Doctor			
6. Health Department			
7. Health Educator			
8. Health fair			
9. Interaction with people who are HIV positive or have AIDS			
10. Internet			
11. Magazine ads			
12. Magazine article			
13. Movies			
14. Newspaper article (local paper)			
15. Newspaper article (student paper)			
16. Posters			
17. Pamphlet			
18. Peer Educators			
19. Public Service Announcement (radio)			
20. Public Service Announcement (TV)			
21. Radio programs (campus)			
22. Radio programs (local)			
23. Soap Operas			
24. Sorority meetings			
25. Student Health Clinic			
26. Television commercials			
27. Television programs			
28. Other:			

APPENDIX B
STUDY INFORMATION SHEET

Study Information Sheet

"HIV/AIDS Knowledge and Attitudes Among College Students"

You are invited to participate in a research study through The University of Tennessee, Department of Health, Safety, and Exercise Science. The purpose of this study is to determine factors associated with condom use among sexually active African American females using the Health Belief Model constructs.

INFORMATION

You are invited to participate if you are between the ages of 18 and 24 and if you are an African American female college student. As a participant of this study you will be asked to complete a survey composed of questions concerning HIV/AIDS.

RISKS

There are no known risks to you as a subject in this study. If at the completion of the survey you have additional questions about HIV/AIDS then you can contact a counselor at the Knox County Health Department, Loretta James Johnson, (865) 215-5084.

BENEFITS

There are no monetary benefits to you as an individual. Information from this study can be used to develop and implement uniquely tailored comprehensive health education programs targeted towards African American women.

CONFIDENTIALITY

The information in the study records will be kept confidential. Data will be stored securely in a locked file cabinet in HPER 369 and will be available only to persons conducting the study unless you specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link you to the study.

CONTACT

If you have questions at any time about the study or the procedures you may contact the principal investigator, Shiree M. Southerland at the University of Tennessee, Department of Health, Safety, and Exercise Science, 1914 Andy Holt Ave., Knoxville, TN 37996, (865) 974-5041 or faculty advisor, Dr. Paula Carney at the University of Tennessee, Department of Health, Safety, and Exercise Science, 1914 Andy Holt Ave., Knoxville, TN 37996, (865) 974-5041. Also if you would like a copy of the study results then you can contact the principal investigator or the faculty advisor and they will be provided to you at no cost. If you have questions about your rights as a participant, contact the Research Compliance Services section of the Office of Research at (865) 974-3466.

PARTICIPATION

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at anytime without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed. Return of the completed survey constitutes your consent to participate.

APPENDIX C
SURVEY INSTRUMENT

Part I

Please read each of the following statements and place a check in the box to indicate whether it is True or False.

	True	False
1. Most people who have the AIDS virus look sick.		
2. Anal (rectal) intercourse is risky because it transmits the AIDS virus.		
3. You can get the AIDS virus during oral sex.		
4. A person can get the AIDS virus in one sexual contact.		
5. Keeping in good physical shape is the best way to keep from getting AIDS.		
6. Condoms make intercourse completely safe.		
7. A shower after sex reduces the risk of getting AIDS.		
8. When people don't have other partners, they don't need to practice safe sex.		
9. Oral sex is safe if partners don't swallow.		
10. People who have the AIDS virus quickly get sick.		
11. By having just one sex partner at a time you can protect yourself from AIDS.		
12. The AIDS virus doesn't go through unbroken skin.		
13. Cum (semen) carries the AIDS virus.		
14. A person must have a lot of different sex partners to be at risk for AIDS.		
15. People who have the AIDS virus feel quite sick.		
16. If the man pulls out (withdraws) before orgasm, then intercourse is safe.		
17. A good diet and plenty of sleep will keep a person from getting AIDS.		
18. A negative result on the HIV test can happen even if somebody has the AIDS virus.		
19. It's more important for people to protect themselves against AIDS in big cities than in small cities.		
20. Only receptive anal sex transmits AIDS.		
21. Most people who have the AIDS virus know they have it.		

22. No case of AIDS was ever caused by social (dry) kissing.		
23. Mutual masturbation or body rubbing are low in AIDS risk.		
24. All sexually transmitted diseases can be cured.		

Part II

A. Circle the number next to each item that best represents your views, attitudes, emotional responses and behaviors. There are no right or wrong answers. Please answer the questions with your own judgment.

	Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree
A benefit to using male condoms is that they:					
1. Offer protection against pregnancy	4	3	2	1	0
2. Reduce the risk of contracting a sexually transmitted disease (STD)	4	3	2	1	0
3. Reduce the risk of contracting HIV/AIDS	4	3	2	1	0
4. Are inexpensive	4	3	2	1	0
5. Are easy to obtain	4	3	2	1	0
6. Have no side effects like some contraceptive methods do	4	3	2	1	0
7. Are available in different varieties (textures, colors, etc.)	4	3	2	1	0
8. Are not time consuming to use	4	3	2	1	0
9. Are easily disposed of	4	3	2	1	0
10. Represent sexual responsibility	4	3	2	1	0
11. Can be obtained by either men or women	4	3	2	1	0
12. Are reliable	4	3	2	1	0
13. Do not require a doctor visit and prescription	4	3	2	1	0
14. Can be used as part of foreplay	4	3	2	1	0
15. Increase lubrication	4	3	2	1	0
16. Decrease the fear/nervousness of pregnancy	4	3	2	1	0
17. Decrease the fear/nervousness of contracting a sexually transmitted disease	4	3	2	1	0
18. Are an option for females who can not use the pill	4	3	2	1	0
19. Are easy to use	4	3	2	1	0
20. Are easy and inconspicuous to carry around	4	3	2	1	0

21. Prolong sexual interaction	4	3	2	1	0
22. Increase stimulation	4	3	2	1	0
23. Are fun	4	3	2	1	0
24. Require the male to take on some responsibility, rather than always the female	4	3	2	1	0

B. Circle the number next to each item that best represents your views, attitudes, emotional responses and behaviors. There are no right or wrong answers. Please answer the questions with your own judgment.

	Strongly Agree	**Agree**	**Don't Know**	**Disagree**	**Strongly Disagree**
A negative aspect of condoms is that they:					
1. reduce the spontaneity of sex	4	3	2	1	0
2. are physically uncomfortable	4	3	2	1	0
3. decrease sensitivity	4	3	2	1	0
4. make sex feel different	4	3	2	1	0
5. are embarrassing to purchase	4	3	2	1	0
6. are embarrassing to put on	4	3	2	1	0
7. are inconvenient	4	3	2	1	0
8. are time consuming to put on and take off	4	3	2	1	0
9. are difficult to dispose of	4	3	2	1	0
10. are difficult to use properly	4	3	2	1	0
11. do not include clear instructions about how to use properly	4	3	2	1	0
12. don't fit properly	4	3	2	1	0
13. may result in a person having a lack of trust in a partner who insists on using one	4	3	2	1	0
14. may result in a person having a lack of trust in a partner who refuses to use one	4	3	2	1	0
15. may result in the break up of a relationship because of the pressure to use one	4	3	2	1	0

C. Circle the number next to each item that best represents your views, attitudes, emotional responses and behaviors. There are no right or wrong answers. Please answer the questions with your own judgment.

	Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree
1. My partner(s) is (are) not the "type" to have HIV/AIDS	4	3	2	1	0
2. I am not concerned about acquiring HIV/AIDS because I am "picky" about partners I have sex with	4	3	2	1	0
3. I do not view myself at being at risk for acquiring HIV/AIDS	4	3	2	1	0
4. My partner(s) is (are) not the "type" to have a sexually transmitted disease	4	3	2	1	0
5. I am not concerned about acquiring a sexually transmitted disease because I am "picky" about partners I have sex with	4	3	2	1	0
6. I do not view myself as being at risk for acquiring a sexually transmitted disease	4	3	2	1	0
7. It is possible that I am infected with HIV/AIDS even though I have not been diagnosed with it	4	3	2	1	0
8. It is likely that I will acquire HIV/AIDS within the next five years	4	3	2	1	0
9. It is possible that I am infected with a sexually transmitted disease even though I have not been diagnosed with one	4	3	2	1	0
10. It is likely that I will acquire a sexually transmitted within the next five years	4	3	2	1	0

	Very Likely	Likely	Don't Know	Unlikely	Very Unlikely
11. In the past year how likely were you to use a condom?	4	3	2	1	0
12. In the past 30 days how likely were you to use a condom?	4	3	2	1	0
13. In the future how likely will you be to use a condom?	4	3	2	1	0

D. Circle the number next to each item that best represents your views, attitudes, emotional responses and behaviors. There are no right or wrong answers. Please answer the questions with your own judgment.

	Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree
1. I feel confident in my ability to put a condom on myself or my partner.	4	3	2	1	0
2. I feel confident I could purchase condoms without feeling embarrassed.	4	3	2	1	0
3. I feel confident I could remember to carry a condom with me should I need one.	4	3	2	1	0
4. I feel confident in my ability to discuss condom usage with any partner I might have.	4	3	2	1	0
5. I feel confident in my ability to suggest using condoms with a new partner.	4	3	2	1	0
6. I feel confident I could suggest using a condom without my partner feeling "diseased."	4	3	2	1	0
7. I feel confident in my own or my partner's ability to maintain an erection while using a condom.	4	3	2	1	0
8. I would feel embarrassed to put a condom on myself or my partner.	4	3	2	1	0
9. If I were to suggest using a condom to a partner, I would feel afraid that he or she would reject me.	4	3	2	1	0
10. If I were unsure of my partner's feelings about using condoms, I would suggest using one	4	3	2	1	0
11. I feel confident in my ability to use a condom correctly.	4	3	2	1	0
12. I would feel comfortable discussing condom use with a potential sexual partner before we ever had any sexual contact (eg., hugging, kissing, caressing, etc.).	4	3	2	1	0
13. I feel confident in my ability to persuade a partner to accept using a condom when we have intercourse.	4	3	2	1	0
14. I feel confident I could gracefully remove and dispose of a condom after sexual intercourse.	4	3	2	1	0

15. If my partner and I would try to use a condom and did not succeed, I would feel embarrassed to try to use one again (eg., not being able to unroll a condom, putting it on backwards, or awkwardness).	4	3	2	1	0
16. I would feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I've had a past homosexual experience.	4	3	2	1	0
17. I would feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I have a sexually transmitted disease.	4	3	2	1	0
18. I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I thought they had a sexually transmitted disease.	4	3	2	1	0
19. I would feel comfortable discussing condom use with a potential sexual partner before we ever engaged in intercourse.	4	3	2	1	0
20. I feel confident in my ability to incorporate putting a condom on myself or my partner into foreplay.	4	3	2	1	0
21. I feel confident that I could use a condom with a partner without "breaking the mood."	4	3	2	1	0
22. I feel confident in my ability to put a condom on myself or my partner quickly.	4	3	2	1	0
23. I feel confident I could use a condom during intercourse without reducing any sexual sensations.	4	3	2	1	0
24. I feel confident that I would remember to use a condom even after I have drinking.	4	3	2	1	0
25. I feel confident that I would remember to use a condom even if I were high.	4	3	2	1	0
26. If my partner didn't want to use a condom during intercourse, I could easily convince him or her that it was necessary to do so.	4	3	2	1	0
27. I feel confident that I could use a condom successfully.	4	3	2	1	0

28. I feel confident I could stop to put a condom on myself or my partner even in the heat of passion.	4	3	2	1	0

Part III

Please think about each of the following sources of information. How likely would you be to use a condom if you received information from:

	Very Likely	Likely	Somewhat Likely	Unlikely	Very Unlikely
1. Books	**5**	**4**	**3**	**2**	**1**
2. Campus Events (speakers, rallies, etc.)	**5**	**4**	**3**	**2**	**1**
3. Casual discussions with friends	**5**	**4**	**3**	**2**	**1**
4. Condom display in store	**5**	**4**	**3**	**2**	**1**
5. Doctor	**5**	**4**	**3**	**2**	**1**
6. Health Department	**5**	**4**	**3**	**2**	**1**
7. Health Educator	**5**	**4**	**3**	**2**	**1**
8. Health fair	**5**	**4**	**3**	**2**	**1**
9. Interaction with people who are HIV positive or have AIDS	**5**	**4**	**3**	**2**	**1**
10. Internet	**5**	**4**	**3**	**2**	**1**
11. Magazine ads	**5**	**4**	**3**	**2**	**1**
12. Magazine article	**5**	**4**	**3**	**2**	**1**
13. Movies	**5**	**4**	**3**	**2**	**1**
14. Newspaper article (local paper)	**5**	**4**	**3**	**2**	**1**
15. Newspaper article (student paper)	**5**	**4**	**3**	**2**	**1**
16. Posters	**5**	**4**	**3**	**2**	**1**
17. Pamphlet	**5**	**4**	**3**	**2**	**1**
18. Peer Educators	**5**	**4**	**3**	**2**	**1**
19. Public Service Announcement (radio)	**5**	**4**	**3**	**2**	**1**
20. Public Service Announcement (TV)	**5**	**4**	**3**	**2**	**1**
21. Radio programs (campus)	**5**	**4**	**3**	**2**	**1**
22. Radio programs (local)	**5**	**4**	**3**	**2**	**1**
23. Soap Operas	**5**	**4**	**3**	**2**	**1**
24. Sorority meetings	**5**	**4**	**3**	**2**	**1**
25. Student Health Clinic	**5**	**4**	**3**	**2**	**1**
26. Television commercials	**5**	**4**	**3**	**2**	**1**
27. Television programs	**5**	**4**	**3**	**2**	**1**

28. Other:					

Part IV – Please Tell Us About You

Please circle the item or number that best describes you:

1. How Old Are You: _____ 2. Marital Status: Single Married Divorced Separated

3. Are you in a committed relationship with a steady partner?
Yes No

4 Would you classify your race/ethnicity as African American?
Yes No Other _____

5. Classification:
Freshmen Sophomore Junior Senior

6. Which college are you currently enrolled in:

1. College of Agricultural Sciences and Natural Resources
2. College of Architecture and Design
3. College of Arts and Sciences
4. College of Business Administration
5. College of Communications
6. College of Education, Health, and Human Sciences
7. College of Engineering
8. College of Nursing
9. College of Social Work
10. School of Information Sciences
11. Other, please specify _____

7. How would you classify your academic performance?

1. very good 2. quite good 3. average 4. quite poor 5. very poor

8. Who is responsible for your financial support during school?

1. parents 2. self supporting 3. scholarships 4. loans 5. combination of the these

9. Parents' education level:

Father: 1. university degree or above 2. completed community college, trade school, or some college 3. high school diploma 4. some high school or below

Mother: 1. university degree or above 2. completed community college, trade school, or some college 3. high school diploma 4. some high school or below

10. During your lifetime, with how many males have you had sexual intercourse with?

_____

11. On average how many times do you have sexual intercourse in a month?

1. 0 times
2. 1 time
3. 2 or 3 times
4. 4 to 9 times
5. 10 to 19 times
6. 20 or more times

THANKS FOR YOUR PARTICIPATION ☺ !

APPENDIX D
LIST OF PARTICIPATING ORGANIZATIONS

The following list contains the names of organizations who participated in this research project:

Alpha Kappa Alpha Sorority, Inc.

Delta Sigma Theta Sorority, Inc.

Zeta Phi Beta Sorority, Inc.

Love United Gospel Choir

Black Cultural Programming Committee

Black Student Alliance

African Student Association

African American Incentive Grant Seminars

Minority Advisors Program

Women's Track Team

VITA

Shiree Monika Southerland grew up in Nashville, NC and graduated from Northern Nash Senior High School in 1993. Upon graduation she attended college at East Carolina University in Greenville, NC. She received her Bachelor of Science Degree in Community Health in 1997 and Master of Arts in Education with a concentration in Health Education in 1998. While at East Carolina University she was initiated into the Theta Alpha Chapter of Alpha Kappa Alpha Sorority in the spring of 1997. Upon graduation she worked as a health educator for Wake County Human Services in Raleigh, NC and later as a health education coordinator for Central Tennessee Area Health Education Center, Inc. in Lebanon, TN. In the fall of 2000 she decided to pursue a doctoral degree in Human Ecology at the University of Tennessee. While pursuing her doctoral degree she was given the opportunity to serve as a graduate teaching associate. Shiree will be continuing her education in the Fall at Johns Hopkins University School of Nursing.