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Factors Associated With Safer Sex Practices Among College Freshmen

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FACTORS ASSOCIATED WITH SAFER SEX PRACTICES AMONG COLLEGE FRESHMEN

by

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Among College Freshmen

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Abstract

Adolescents and young adults have engaged in sexual behaviors that increase the risk of becoming infected with HIV. Thus, this descriptive correlational study examined the relationship of knowledge of Acquired Immunodeficiency Syndrome (AIDS), misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time perspective to the practice of safer sex behaviors in single, sexually active college freshmen. The theoretical framework was the Health Belief Model. The research question was what is the relationship between college freshmen who practice safer sex behaviors and their knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time perspective? The participants (N = 51) were a convenience sample of college freshmen who attended one of two institutions of higher learning in Northeast Mississippi. The Modified AIDS Information Survey, the Future Time Perspective Inventory, the Knowledge of Safer Sex Practices Questionnaire, the Safe Sex Behavior Questionnaire, and a demographic data sheet were used for data collection. Only one significant positive correlation emerged between use of safer sex behaviors and future time

perspective (p = < .01). Additional analysis demonstrated a positive correlation between women and practice of safer sex behavior (p = .04). The researcher concluded that there is a direct correlation between future time perspective and safer sex behavior. College freshmen who are sexually active have a high perception of their risk for the HIV infection. However, perception of risk does not motivate college freshmen to practice safer sex behavior. Additionally, knowledge had little effect on reducing risk behavior. The advanced practice nurse needs to counsel college freshmen in the perception of their future as predictable and controllable to help prevent transmission of HIV. Factors that influence future time perspective in older adolescents should be investigated as well as differences in males and females regarding factors that influence health-promoting behavior, particularly safer sex behavior.

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Chapter I

The Research Problem

Acquired Immunodeficiency Syndrome (AIDS) has been diagnosed in more than 401,000 people in the United States. More than one million people have been infected with human immunodeficiency virus (HIV), the virus that causes AIDS (Centers for Disease Control [CDC], 1994c). AIDS has typically been associated with socially distant, stigmatized groups, particularly gay men (Wight, 1993). However, AIDS is becoming more prevalent in the young and in heterosexual men and women (U.S. Department of Health and Human Services [DHHS], 1994).

Today, most people with AIDS have been identified as young adults (CDC, 1994c). People are becoming infected with HIV at younger ages. In the early 1980s, the average age at infection was over 30 years of age. However, in the 4 years from 1987 to 1991, the average age at infection decreased to 25. During these 4 years, the CDC estimated one in every four new HIV infections occurred in people under 25 years of age (DHHS, 1994). As of June 1994, there were 75,245 cases of AIDS reported for the 20 to 29 age group (CDC, 1994b).

AIDS has been cited as one of the three main causes of death for women and men 25 to 44 years old in this country (DHHS, 1994). Many people with AIDS who are in their 20s were likely infected while they were teenagers since the time between getting infected with HIV and developing AIDS can be 10 years or more (CDC, 1992; DHHS, 1994). Since the younger age group is indicative of college age students, the focus of this study was sexual behaviors and AIDS knowledge, misconceptions about AIDS, safer sex knowledge, perceived susceptibility, and future time perspective in college freshmen.

Establishment of the Problem

Adolescents and young adults have engaged in sexual behaviors that increase the risk of becoming infected with HIV. Their involvement in unprotected sexual intercourse and experimentation with injected drugs has increased their risk of infection with the virus that causes AIDS (Kasen, Vaughan, & Walter, 1992). Surveys have found that the average age for a girl in the United States to have sexual intercourse for the first time is 16 years. The average age for a boy is 15.5 years. An estimated 3 million teens have been infected with sexually transmitted diseases each year, and the virus that causes AIDS has been determined to be sexually transmitted (DHHS, 1994).

The CDC (1994a) conducted a recent survey of persons aged 12 to 21 years which revealed that persons aged 18 to

21 years were significantly more likely to have had sexual intercourse and to have had four or more sex partners during their lifetimes than 14- to 17-years-olds. Among adolescents who reported having had sexual intercourse during the 3 months preceding the survey, 14- to 17-year-olds were significantly more likely than 18- to 21-year-olds to report having used a condom during last sexual intercourse.

Attendance at college has represented a time of transition from adolescence to young adulthood with increased autonomy from parental authority. This period has been characterized by accelerated personal, social, and intellectual development. It also has represented a time of increased sexual experimentation (DiClemente, Forrest, Mickler, & Principal Site Investigators, 1990). Given these demographic and developmental characteristics, the HIV epidemic is likely to increase in the adolescent community, particularly 18- to 21-year-old college freshmen.

The world has completed two decades of research for an effective vaccine or definitive treatment for HIV. However, the growing epidemic has not been alleviated. Without a cure or a vaccine, critical questions have arisen regarding the use of HIV preventive behaviors among vulnerable groups of adolescents, namely college freshmen.

Education has been designated as a key toward intervening to change risk-associated sexual behavior, and education continues to be the primary intervention used to prevent the spread of HIV among adolescents (DiIorio, Parsons, Lehr, Adame, & Carlone, 1993a). Therefore, knowledge has been considered an important prerequisite for changing behavior, and AIDS education programs have been based on this belief (Koopman, Rotheram-Borus, Henderson, Bradley, & Hunter, 1990).

Health education classes and media messages have been identified as the primary source of AIDS education and encouragement of risk-reduction practices for college students (Bruce, Shrum, Trefethen, & Slovik, 1990; DiIorio et al., 1993a). Several studies have found that college students have been generally knowledgeable about AIDS (Adame, Taylor-Nicholson, Wang, & Abbas, 1991; DiClemente et al., 1990; DiIorio et al., 1993b). However, misconceptions have existed, particularly regarding casual contact (DiClemente et al., 1990; Wight, 1993). Researchers determining relationships between knowledge of AIDS and the use of risk-reduction practices have found that a high level of knowledge of AIDS is not necessarily related to the use of risk-reduction behavior (DiClemente et al., 1990; DiIorio et al., 1993a; O'Leary, Goodhart, Jemmott, & Boccher-Lattimore, 1992). However, the primary aspect of knowledge studied has been the use of condoms as

a risk-reduction practice. Other aspects of knowledge that increase or decrease risk of acquiring HIV have been studied in a limited amount. One focus of this study was to assess the knowledge of AIDS and the knowledge of safer sex practices and the effects of this knowledge on the use of safer sex behaviors.

Significance to Nursing

The results of this research study added to nursing's clinical practice by providing information about factors associated with safer sex behaviors among college freshmen. By understanding the relationship between the use of safer sex behaviors and knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility and future time perspective, HIV prevention methods targeted at older adolescents can be developed. Such methods should include strategies to increase the older adolescent's perception of the future, perception of risk, and knowledge of AIDS and safer sex behaviors. In addition, an understanding of which factors influence the students to utilize safer sex behaviors can lead to effective and individualized counseling of older adolescents. The knowledge gleaned from this research could also be utilized to develop education programs for HIV susceptible adolescents.

The Health Belief Model (HBM) provided the theoretical framework for this research study. Use of the

HBM as a theoretical framework for research serves to validate and strengthen the concepts of the model. The HBM states that if an individual believes he or she is susceptible to a problem, the individual will act to avoid the problem. In this study, if an adolescent believes he or she is susceptible to HIV, he or she will practice safer sex behaviors, thus preventing HIV transmission.

Theoretical Framework

The theoretical framework for this study was the HBM. The HBM was constructed in an attempt to explain patient behavior, particularly in regard to preventive health practices, medical care utilization, delay in seeking care, and compliance with medical regimens (Becker, 1974).

According to the HBM, in order for a person to take action to avoid a disease the individual needs to feel personally susceptible. The individual needs to believe that the occurrence of the disease will have at least moderate severity on some component of the individual's life. The individual needs to believe that taking a particular action will, in fact, be beneficial and will not involve overcoming important psychological barriers, such as cost, convenience, pain, and embarrassment (Becker, 1974). Individuals are believed to vary considerably in their acceptance of personal susceptibility to a condition. Susceptibility refers to

the subjective risks of contracting an illness (Becker, 1974).

The perceived seriousness of a given health problem also may vary from person to person. The degree of seriousness is determined by the amount of emotional arousal created by the thought of a disease as well as by the kinds of difficulties the individual believes a given health condition will create. An individual may view a health problem in terms of its medical or clinical consequence. The perceived seriousness of a condition also may include more complex implications, such as the effects of the condition on one's job, family, and social relations (Becker, 1974). Perceived susceptibility and severity have a strong cognitive component. Therefore, both are at least partly dependent on knowledge (Becker, 1974).

The acceptance of one's susceptibility to disease that also is viewed as serious is thought to provide a force leading to action. The person's beliefs about the availability and effectiveness of different actions, and not the objective facts about the effectiveness of action, determine what action a person will take. The individual's beliefs in this area are influenced by the norms and pressures of the individual's social group (Becker, 1974).

For college students to take action to prevent the acquisition of HIV, they must perceive their

susceptibility and they must accept the seriousness of the disease. Their perceived susceptibility and severity are dependent in part on their knowledge of AIDS.

Perceived susceptibility has been thought to influence whether individuals engage in disease preventing behavior. Several studies have found that perceived vulnerability is one of the best predictors of whether an individual utilizes preventive behavior (Janz & Becker, 1984; Wight, 1993). It seems reasonable that if college freshmen perceive themselves as susceptible to HIV, then they will practice safer sex behavior. Therefore, perceived susceptibility was chosen for inclusion in this study of factors that affect the use of safer sex behavior.

Developmentally, adolescents perceive their futures as more goal oriented and realistic than as children (DiIorio et al., 1993a). This ability to conceptualize the future is known as future time perspective (Heimberg, 1963). The construct of future time perspective can be used to predict individual differences in an important group of behaviors. Future time perspective is defined by Heimberg as "the degree to which the future is seen as predictable, structured and controllable" (Heimberg, 1963, p. 25). The remote consequences of one's actions may be realized by the individual and may have an effect on present behavior. This effect on present behavior varies

from individual to individual. According to Heimberg (1963), the greater the person's future time perspective, the greater the influence on present behavior. With this construct in mind, if college students realize that current sexual practices may result in contraction of HIV, and subsequently the development of AIDS, the students would be more likely to practice safer sex behaviors. In the present study, the relationship of future time perspective to the use of safer sex practices also was examined.

Purpose of the Study

The purpose of this study was to examine the relationship of knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time perspective to the practice of safer sex behaviors in single, sexually active college freshmen.

Statement of the Problem

The average age at infection with HIV is rapidly decreasing. Adolescents and young adults have engaged in sexual behaviors that increase the risk of becoming infected with HIV. Determination of selected cognitive-perceptual factors may help to explain the use of safer sex practices among college freshmen. Therefore, the problem explored in this study was what is the

relationship between the use of safer sex behaviors and knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time perspective?

Research Question

The research question investigated in this study was what is the relationship between college freshmen who practice safer sex behaviors and their knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time perspective?

Definition of Terms

For the purpose of this study, the following terms were defined:

Knowledge of AIDS: familiarity with basic information regarding the cause, symptoms, transmission, treatment, severity, risk factors, and long-term outcome of AIDS. AIDS was defined as a secondary immunodeficiency syndrome resulting from HIV infection (Berkow, 1992). Knowledge of AIDS was measured by the Modified AIDS Information Survey.

Misconceptions about AIDS: an incorrect interpretation of the casual transmission of AIDS. This was measured by the Modified AIDS Information Survey.

Knowledge of safer sex practices: familiarity with the basic information on measures recommended by the

Surgeon General and Centers for Disease Control to reduce one's risk to the exposure and transmission of the AIDS virus through sexual practices (DiIorio et al., 1992). This was measured by the Knowledge of Safer Sex Practices Questionnaire.

Perceived susceptibility: awareness of the inability to resist the AIDS virus and awareness of the severity of AIDS. This was measured by the Modified AIDS Information Survey.

Future time perspective: conceptualizing the future such that the future is seen as predictable, structured, and controllable (Heimberg, 1963). This was measured by the Future Time Perspective Inventory.

Safer sex practices: behavior modifications that decrease the risk of exposure to HIV or the likelihood of transmitting it to others (DiIorio et al., 1993b). This was measured by the Safe Sex Behavior Questionnaire.

College freshmen: individuals who were first-year college students, aged 18 to 24 years, who are single, and sexually active.

Assumptions

The assumptions for this study were as follows:

1. College freshmen would take health preventive action if they believed they were personally susceptible to AIDS.

2. College freshmen's perception of susceptibility and severity of AIDS is dependent upon their knowledge of AIDS.

3. College freshman would practice safer sex behaviors if they perceived their futures as predictable and controllable.

4. Perception of risk for HIV is a measurable variable.

5. Future time perspective is a phenomenon that can be measured.

Chapter II

Review of the Literature

The review of literature focused on knowledge of AIDS, perceived susceptibility, motivating factors, and safer sex practices among college students, particularly college freshmen. The first study included future time perspective as a motivating factor as no other studies were found that included this variable.

DiIorio et al. (1993a) examined the contribution of the cognitive-perceptual variables of knowledge of AIDS, misconceptions about AIDS, perceived susceptibility, knowledge of safer sex practices, and future time perspective to understanding the use of safer sex practices among freshmen. Nonprobability convenience sampling method was used. Three hundred fifty-two single, sexually active college freshmen composed the sample.

Four instruments were used for data collection: the Safe Sex Behavior Questionnaire (SSBQ), Modified AIDS Information Survey (MAIS), Knowledge of Safer Sex Practices Questionnaire (KSSPQ), and the Future Time Perspective Inventory. The questionnaire packets for data collection were compiled and administered to students attending class on a designated day. Emphasis was placed

on the voluntary participation and the guarantee of anonymity.

Pearson product-moment correlation coefficients were computed to determine if there were relationships between the independent variables and safer sex practices. The findings revealed significant correlations among future time perspective and safer sex practices, $r(352) = .22$, $p = .002$, and between misconceptions and safer sex practices for black males, $r(352) = .12$, $p = .045$. Thus, black male respondents who viewed the future as more predictable and controllable were more likely to report the use of safer sex practices, as were those who held fewer misconceptions about the transmission of HIV.

DiIorio et al. (1993a) recommended the conduction of additional research regarding the role of these variables in the use of safer sex practices because of the complexity of the variables and the nonprobability sampling method. In the present study, the same variables were studied, but the variables were studied among college freshmen in a southern rural area as no other similar studies in this particular area were found.

In 1992 O'Leary et al. explored the utility of variables from Social Cognitive Theory in predicting safer sexual practices among college students in New Jersey. The conceptual factors assessed were knowledge, perceived potential risk, negative outcome expectancies regarding

condom use, perceived social norms, self-efficacy to discuss a partner's sexual history, and self-efficacy to perform safer sexual behaviors.

O'Leary et al. (1992) predicted that more frequent use of condoms during intercourse would be associated with (a) more knowledge concerning AIDS, (b) greater perceived potential risk, (c) perceptions of more positive social norms for safer behavior, (d) fewer negative expected outcomes of condom use, (e) stronger perceived self-efficacy to discuss history and to perform safer behavior, and (f) less frequent use of alcohol and other drugs in combination with sex.

Questionnaires were mailed to 2,400 students whose names had been randomly selected from registration records of four New Jersey colleges. A total of 923 students responded.

The results for unmarried, sexually active students revealed that men expected more negative outcomes of condom use, $t(395) = 3.73$, $p < .01$. Women reported higher perceived self-efficacy both for history taking, $t(385) = 2.05$, $p < .05$, and for achieving safer behavior, $t(389) = 2.02$, $p < .05$. Men were more likely to have sex under the influences, $t(395) = 2.31$, $p < .05$. Differences between graduate students and undergraduate students were found. Undergraduate students had a little less knowledge about AIDS than graduate students, $t(389) = 1.83$, $p < .07$,

perceived themselves to be less vulnerable, $t(387) = 2.11$, $p < .05$, and reported stronger perceived social norms for safer sex, $t(390) = 2.18$, $p < .05$.

Data were subjected to analysis of variance to determine differences between racial groups for level of knowledge, $F(3, 394) = 5.95$, $p < .01$. White students were found to be significantly more knowledgeable than students from the Asian/Pacific Islands, $t = 2.83$, $p < .01$, and black students, $t = 2.82$, $p < .01$.

Safer sexual behavior was found, by regression analyses, not to be associated with knowledge or perceived potential risk at the .0001 alpha level. Safer sexual behavior was associated with stronger perceptions of self-efficacy to engage in safer behavior, expectations of fewer negative outcomes of condom use, and less frequency of sex in conjunction with alcohol and other drug use.

O'Leary et al. (1992) successfully identified differences in knowledge of AIDS in different racial groups as well as among students of different academic status. However, neither knowledge or perceived susceptibility were found to be associated with safer sex practices. The internal consistency for the scale used to measure perceived susceptibility was explained by the researchers to be lower than optimal. Therefore, the researchers did not accept the null hypothesis. In the

current study, knowledge and perceived susceptibility were studied in relation to the use of safer sex practices.

Adame et al. (1991) studied levels of knowledge about AIDS, attitudes toward AIDS, and perceived susceptibility to AIDS among first year college students attending a university in the southeastern United States. A nonrandom sample of 226 college freshmen completed a modified version of the DiClemente AIDS Knowledge, Attitudes and Perceived Susceptibility to AIDS instrument. Responses were completely voluntary, confidential, and anonymous.

Results of the study suggested that the subjects were generally knowledgeable about AIDS using descriptive statistics. In spite of this knowledge, over half of the subjects (54.7%) believed that they were less likely than most people to get AIDS.

Based on these findings, Adame et al. (1991) recommended continuing research to assess adolescents' misunderstandings and knowledge about effective means to avoid HIV transmission so that effective and relevant AIDS education can be developed. The present study incorporated these variables by determining if there was a relationship between college freshmen who practice safer sex behaviors and their knowledge of AIDS, misconceptions about AIDS, perceived susceptibility, knowledge of safer sex practices, and future time perspective.

In another study by DiIorio et al. (1993b), knowledge of AIDS and safer sex practices among college freshmen were investigated. Six hundred eighty-nine college freshmen completed the Modified DiClemente AIDS Information Survey and the Knowledge of Safer Sex Practices Questionnaire (KSSPQ).

The results showed that the respondents had a high level of knowledge regarding the cause, transmission, and seriousness of AIDS. On the average, 23 of 25 knowledge items were answered correctly, and 4.9 of 5 misconception items were answered correctly. The subjects' knowledge of the risk of transmission through casual contact also was high. However, their knowledge of the medical aspects of AIDS was somewhat lower. Confusion regarding specific safer sex practices, particularly in regard to responses to contraceptive items, was evident. White respondents as a group were more knowledgeable than blacks. The majority of respondents had a high level of knowledge of safer sex practices. On the average, 19 of the 23 items on the KSSPQ were answered correctly.

DiIorio et al. (1993b) concluded respondents knew the basic facts about the cause and transmission of AIDS, but they were less knowledgeable about the medical aspects of AIDS. Confusion regarding specific safer sex practices particularly in regard to responses to contraception items was evident. White respondents as a group were more

knowledgeable than blacks. The relationship of knowledge of AIDS and knowledge of safer sex practices to the use of safer sex behavior was not known from this study. Therefore, the present study addressed this question.

Because most college studies have been limited to a single college which may not reflect regional variation in knowledge and attitudes about AIDS, DiClemente et al. (1990) conducted a survey at geographically diverse universities in the United States. The investigators described findings from a multiple-site, cross-sectional survey of college students' knowledge, attitudes, and behavioral changes relating to AIDS. There were 1,127 participants in the nonprobability, convenience sample. Participating investigators at each of the universities administered detailed self-report questionnaires to students during a single class period. The questionnaire (The College Health Survey) assessed knowledge and attitudes relating to AIDS transmission, misconceptions about casual contact, self-perceived risk of HIV infection, current sexual behavior, past history of receiving medical treatment for sexually transmitted diseases, changes in HIV-preventive behaviors in response to the AIDS epidemic, and contraceptive decision-making.

DiClemente et al. found students' knowledge about AIDS was generally high, with a mean of 11.2 correct responses (SD = 1.7, median = 12.0) on the 15-item

knowledge scale. Students were considerably less aware that casual contact is not a mode of HIV infection. Students reported a mean of 3.9 misconceptions from the 6-item scale measuring misconceptions about casual contact. Ninety-eight percent of students endorsed at least one of the items suggesting AIDS is transmissible by casual contact. Regarding students' attitudes about AIDS, the majority of the study sample believed AIDS will spread to the general population. Students almost unanimously (95.9%) endorsed the need for AIDS prevention education on the college campus. Most students were sexually experienced (81.7%); of these, 93.3% also reported having been sexually active in the past year and 43% with multiple sexual partners. Of the heterosexual students reporting sexual intercourse in the past year, 37% never use condoms and almost two thirds use condoms less than half the time they engage in sexual intercourse. Many students reported behavior changes in response to the threat of AIDS. However, a large proportion of students have not modified their sexual practices; 61.1% have not modified condom use and 60.2% have not changed the number of partners. The relationship between AIDS knowledge and self-perceived risk of HIV infection to self-reported changes in HIV-preventive behaviors was examined. Level of AIDS knowledge was not statistically associated with students' HIV preventive behavioral changes. On the other

hand, personal perception of susceptibility to AIDS was strongly related to an increase in health-promoting behaviors.

The researchers concluded that students are knowledgeable about AIDS transmission, but they are less aware that casual contact is not a route of disease transmission. Although students reported marked behavioral changes in response to the threat of AIDS, they still have a high prevalence of sexual risk-taking behaviors.

DiClemente et al. (1990) recommended additional research investigating the interrelationship between knowledge, attitudes, and particularly perceived vulnerability and the use of HIV-preventive behaviors in the adolescent population. The researchers recommended investigation of the interplay of psychosocial factors associated with motivating health-promoting behavior change. The relationship of college freshmen's perceptions of their futures as a motivating factor in the use of safer sex behaviors was examined in the present study.

Although there is some AIDS research on college freshmen, it is limited. No studies were found on college freshmen and safer sex practices in a southern rural area or any research in a rural area that focused simultaneously on the relationship of knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time

perspective to the use of safer sex practices. The present study did provide this information. The review of the literature revealed that college freshmen were generally knowledgeable about AIDS (Adame et al., 1991; DiClemente et al., 1990; DiIorio et al., 1993b), but knowledge did not seem to be related to the use of safer sexual behavior (DiClemente et al., 1990; DiIorio et al., 1993a; O'Leary et al., 1992). Misconceptions about AIDS, particularly regarding casual transmission, still existed in spite of college freshmen's knowledge of safer sex practices (DiClemente et al., 1990). Fewer misconceptions about the transmission of HIV were found to be related to the use of safer sex practices (DiIorio et al., 1993a). From the review, college freshmen did not perceive themselves as susceptible to AIDS (Adame et al., 1991), and the studies examining the relationship of perceived susceptibility to the use of safer sex practices have found conflicting results (DiClemente et al., 1990; DiIorio et al., 1993a; O'Leary et al., 1992). The one research study that examined the relationship of future time perspective to the use of safer sex practices found a significant correlation (DiIorio et al., 1993a). A need has been identified in the literature to study this adolescent population's motivating factors for the use of safer sex behaviors. The information from this research is valuable in the development and implementation of HIV preventive

measures designed to reduce the risk of infection among college adolescents.

Chapter III

The Method

Design of the Study

A descriptive correlational design was used to determine the relationship between the variables of (a) knowledge of AIDS, (b) misconceptions about AIDS, (c) knowledge of safer sex practices, (d) perceived susceptibility, and (e) future time perspective to the practice of safer sex behaviors. According to Polit and Hungler (1991), descriptive correlational research has as its aim the description of the relationship among variables rather than the inference of cause-and-effect relationships. Since this study's goal was to describe a relationship among variables, a descriptive correlational design was suitable.

Setting, Population, and Sample

The setting for this study was two small cities in Northeast Mississippi. Two state-funded institutions of higher learning were utilized. One university had an enrollment of 3,023 composed of 81% females and 19% males. Resident students constituted 92.5% of those enrolled. Another university had 12,384 students enrolled with 77.7% being residents of the university. At this university,

females represented 41% of those enrolled with males representing 59%.

The population for the study was college freshmen in Northeast Mississippi. The participants were single, sexually active college students. The study utilized a nonprobability, convenience sample. The sample size was determined by the number of questionnaires returned. Approximately 200 questionnaires were distributed. The actual number of respondents was 80, representing 40% of the distribution.

Instrumentation

Five measures were used for data collection. The researcher-designed demographic data sheet (see Appendix A) was developed to provide information regarding age, gender, ethnicity, sexual activity, year in school, and marital status of the sample. The four questionnaires used included the Modified AIDS Information Survey (MAIS), Knowledge of Safer Sex Practices Questionnaire (KSSPQ), Future Time Perspective Inventory, and Safe Sex Behavior Questionnaire (SSBQ).

The MAIS is a 34-item self-report questionnaire designed to assess the level of knowledge regarding general information about AIDS (see Appendix B). The instrument contains three subscales: knowledge (containing 26 items), misconceptions of casual transmission (consisting of five items), and perceived susceptibility

(with three items). The original instrument was developed by DiClemente, Boyer, and Morales in 1988. The scale used in this study was modified by DiIorio et al. (1993a) to reflect advances in AIDS research.

Three scores were obtained from the MAIS. A total knowledge of AIDS score was found by summing all correct responses in the knowledge subscale. Total possible scores ranged from 0 to 26. Higher scores indicated greater knowledge. A total misconception score was found by summing correct responses to items in the misconception subscale. Total possible scores ranged from 0 to 5. Higher scores indicated less misconception. A total perceived susceptibility score was found by summing responses to the three items in the perceived susceptibility subscale. True responses were coded 1, and false responses were coded 2. The range of possible scores was 3 to 6 with higher scores indicating greater perceived susceptibility.

The initial reliability of the three subscales computed by DiClemente et al. (1990) was .72 for the knowledge subscale, .75 for the misconception subscale, and .55 for the perceived susceptibility subscale, using a sample of adolescents in the San Francisco Unified School District. DiIorio et al. (1993a) computed the reliability of the three subscales as .33 for the knowledge subscale, and .33 for the misconception subscale, and .57 for the perceived susceptibility subscale. The low alpha

coefficients in this study were thought to reflect a lack of heterogeneity of responses rather than low internal consistency.

The KSSPQ was designed to assess the level of knowledge regarding general information on recommended safe sexual practices. DiIorio et al. (1993a) developed the KSSPQ. The instrument contains 23 items, 14 are safe sexual practices and 9 are not safe sex practices (see Appendix C). Respondents could choose safe sex practice or not safe sex practice. The total possible scores ranged from 0 to 23; no points were given for incorrect or "don't know" responses. DiIorio et al. (1993a) computed the internal consistency using Kuder-Richardson's coefficients on a sample of 352 college freshmen as .44. This low value was attributed to lack of variance in the subjects' responses.

The Future Time Perspective Inventory was developed by Heimberg (1963) to measure future time perspective. Subjects could choose from 25 items scored on a 7-point Likert scale, with choices ranging from completely agree to completely disagree (see Appendix D). Each item has a score of 1 to 7; the total score ranged from 25 to 175. Higher scores indicated more positive attitude regarding the future. DiIorio et al. (1993a) computed the internal consistency to be .85.

The Safe Sex Behavior Questionnaire (SSBQ) was developed by DiIorio et al. (1992) to measure use of safe sex practices among adolescents. In this study, the SSBQ measured the dependent variable of interest. Initial reliability computed was .82 among 89 college freshmen. Construct validity was assessed by correlating the SSBQ with measures of general assertiveness and general risk taking. The correlations were significant, thus supporting the construct validity of the instrument. The instrument is a 24-item, 4-point Likert scale (see Appendix E). Fifteen items are worded positively and 9 negatively. Responses to each item range from never (1) to always (4). Total scores ranged from 24 to 96. The higher the score, the greater the frequency of use of safe sex practices.

Permission to use these instruments was requested and granted (see Appendix F) by Colleen DiIorio. The Future Time Perspective Inventory is in the public domain.

Data Collection

Consent to conduct the study was requested from the appropriate individuals at each institution of higher learning (see Appendix G). Also, prior to implementation of the study, approvals of the Committee on Use of Human Subjects in Experimentation at Mississippi University for Women and the Institutional Review Board at Mississippi State University were granted (see Appendix H). Questionnaire packets for data collection were compiled in

the following order: a cover letter explaining the study, a demographic data sheet, the Heimberg Future Time Perspective Inventory, the Knowledge of Safer Sex Practices Questionnaire, the Modified AIDS Information Survey, and the Safe Sex Behavior Questionnaire. The questionnaire packets were administered to students attending class on the days of data collection. The researcher instructed each individual class professor on the procedure for administering the questionnaire packets. The class professors serving as intermediaries explained the study to the students and solicited volunteers. Emphasis was placed on the guarantee of confidentiality. The students were asked to complete the questionnaire packets after class and to return the questionnaire packets to the researcher in the self-addressed, stamped envelope provided. An informed consent was not necessary since participation in the study was voluntary and determined by the participants' return of the questionnaire packet.

Data Analysis

Demographics. Descriptive statistics were utilized to characterize the sample. Age of participants was reported as a range and a mean. Because race and gender were nominal data, they were reported as frequencies and percentiles.

Research question answering. Data were analyzed using the Pearson product-moment correlation. This statistical measure was used to determine the magnitude and direction of the relationship between the independent variables and safer sex practices.

The study was comprised of a voluntary convenience sample of sexually active college freshmen attending one of two universities in the northern region of a southern state. The study was limited by the use of a restricted sample size that included only college students. The use of a convenience sample limited the ability to generalize the findings to the population. External validity of the study was limited by the sample size. The findings were also limited by the socioeconomic status of the particular geographical area. The socioeconomic status of this sample may not have been representative of the socioeconomic status of the entire population of college freshmen, thus limiting the generalization of the study results. The data collection method was self-administered, thus subject to limitations inherent in self-report type of questionnaires. These include differences in individual interpretation of the questions and conditions under which the participant responded.

Chapter IV

The Findings

The purpose of this descriptive correlational study was to examine the relationship of knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time perspective to the practice of safer sex behaviors in single, sexually active college freshmen age 18 to 23 years. Findings of data analysis as related to the sample and the research question are presented in this chapter.

Description of the Sample

The data for this study were derived from four questionnaires designed to measure level of knowledge regarding general information about AIDS, level of knowledge regarding safer sexual practices, future time perspective, and use of safer sex practices. In addition, a demographic data sheet was utilized. The sample was drawn from a population of college freshmen in Northeast Mississippi who were attending one of two institutions of higher learning in April 1995. A total of 80 college freshmen returned the questionnaire packets representing 40% of the distribution. However, only 51 of the respondents met the sample criteria. The remaining 29

respondents were not sexually active; therefore, they were excluded from the sample (n = 51).

The mean age for the subjects was 18.84, with a standard deviation of .97. The age range was from 18 to 23 years. All participants were either Caucasian or African American. In addition to ethnicity, the gender was assessed. The majority were Caucasian (75%) and female (73%). Specific distribution of these variables can be seen in Table 1.

Table 1

Demographics by Ethnicity and Gender Using Frequencies and Percentiles

Variable	f	%
Ethnicity		
Caucasian	38	74
African American	13	26
Gender		
Male	14	27
Female	37	73

Results of Data Analysis

One research question was used to guide this investigation. The question was what is the relationship between college freshmen who practice safer sex behavior and their knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time perspective? The Pearson product-moment correlation was used to determine the relationships. A strong positive correlation emerged between practice of safer sex behaviors and the participants' future time perspective, $r(51) = .31$, $p = .013$. Therefore, college freshmen who practiced safer sex behaviors were more future oriented. With this group of college freshmen, no significant correlation existed for safer sex behavior and knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, or perceived susceptibility (see Table 2). Therefore, there was no relationship between knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, or perceived susceptibility to the use of safer sex behaviors.

Table 2

Relationship of Variables of Interest to Practice of Safer Sex Using the Pearson Product-Moment Correlation

Variable	n	r	p
AIDS knowledge	51	-.03	.412
Misconceptions	51	-.04	.377
Safer sex knowledge	51	-.23	.061
Perceived susceptibility	51	.08	.282
Future time perspective	51	.31*	.013

Additional Findings

Demographic data were further explored to determine the strength of relationships with safer sex behavior. Only one significantly positive correlation emerged between gender and the practice of safer sex behavior, $r(51) = .25$, $p = .04$. Females had safer sex behavior than males.

Of interest to the researcher was how the excluded sample of nonsexually active respondents compared to sample study. Mean scores were used to compare the groups. The KSSPQ contained 23 items, 14 were safe sex practices and 9 were not safe sex practices. The respondents could choose safe sex practice or not safe sex practice. The possible scores ranged from 0 to 23 with higher scores indicating higher knowledge. The mean for the sexually

active subgroup (n = 51) was 19.94 as compared to 18.62 for the not sexually active group (n = 29). The sexually active group had a higher level of knowledge regarding safer sex practices than did the not sexually active group.

The knowledge of AIDS was measured by the MAIS, a 34-item questionnaire that assesses the respondent's level of knowledge regarding general information about AIDS. The instrument contains three subscales: knowledge, misconceptions of casual transmission, and perceived susceptibility. There are 26 items on the knowledge subscale with possible scores ranging from 0 to 26. Higher scores indicate greater knowledge. There are 5 items on the misconceptions subscale with possible scores ranging from 0 to 5 and 3 items on the perceived susceptibility subscale with possible scores ranging from 0 to 3. The higher the score on these two subscales, the fewer the misconceptions, and the greater the perceived susceptibility, respectively. The sexually active subgroup (n = 51) had more knowledge of AIDS (M = 23.45) than the not sexually active subgroup (n = 29) (M = 22.86). However, both the sexually active and the not sexually active groups' mean scores indicate a high level of knowledge.

The findings on the misconception subscale showed very little variability. The mean for the total sample (N = 80) was 4.94 revealing almost no misconceptions.

The mean scores obtained from the perceived susceptibility subscale of the sexually active and not sexually active participants were compared. The sexually active group (n = 51) perceived themselves as more susceptible, M = 5.25, as compared to the not sexually active group (n = 29), M = 4.55.

Also of interest to the researcher was the comparison of the sexually active group and not sexually active group by race and gender. Two differences were found. White males who are not sexually active had a higher future time perspective (M = 136.63) than the white males who were sexually active (M = 108.00). However, the not sexually active black females had a lower future time perspective (M = 108.00) than the sexually active black females (M = 130.45). Similarly, the not sexually active white females had a lower future time perspective (M = 112.68) than the sexually active white females (M = 117.88).

Summary

This chapter presented the results of data analysis using descriptive statistics and the Pearson product-moment correlation. Results of the data collection were reported in narrative and table format.

Chapter V

The Outcomes

The average age at infection with HIV is rapidly decreasing. Adolescents and young adults have engaged in sexual behaviors that increase the risk of becoming infected with HIV. Thus, this descriptive correlational study examined the relationship of knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time perspective to the practice of safer sex behaviors in single, sexually active college freshmen. The Health Belief Model (HBM) provided the theoretical framework.

The research question presented in this study was what is the relationship between college freshmen who practice safer sex behavior and their knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, perceived susceptibility, and future time perspective? The participants were a convenience sample of college freshmen who attended one of two institutions of higher learner in Northeast Mississippi.

Four questionnaires, the Modified AIDS Information Survey, the Future Time Perspective Inventory, the Knowledge of Safer Sex Practices Questionnaire, and the

Safer Sex Behavior Questionnaire, and a demographic data sheet were the research instruments used for data collection. The demographic characteristics of the college freshmen participating in the study by completing the questionnaires were described by descriptive statistics. The Pearson product-moment correlation was used to determine correlations between safer sex practices and the variables of interest.

Summary of the Findings

The sample (N = 51) was composed primarily of Caucasian females (51%). The mean age of the sample was 18.84 with an age range of 18 to 23 years.

A significant positive relationship emerged between the practice of safer sex behavior and the participants' future time perspective (p = < .01). No correlation was found between the practice of safer sex behavior and knowledge of AIDS, misconceptions about AIDS, knowledge of safer sex practices, or perceived susceptibility. Additional analysis demonstrated a positive correlation between women and practice of safer sex behavior (p = .04).

Discussion

The results of this study suggest that there was a positive correlation between the practice of safer sex behavior and future time perspective in this group of

college freshmen. Therefore, college freshmen who perceive their future as more predictable, structured, and controllable are more likely to practice safer sex behavior. However, the relationships between the practice of safer sex behavior and any of the other variables of interest were not upheld. Thus, there was no correlation between knowledge of AIDS including misconceptions or knowledge of safer sex practices and the use of safer sex behavior. Similarly, there was no relationship between perceived susceptibility and safer sex behavior.

The results of this study supported the findings of previous research in which no relationship was found between knowledge of AIDS and the practice of safer sex (DiClemente et al., 1990; DiIorio et al., 1993a; O'Leary et al., 1992). The sample of college freshmen in this study was found to be knowledgeable about AIDS. Knowledge may be an important prerequisite for changing behavior, but it is not the single definitive motivator.

Perceived susceptibility to AIDS was found not to be related to the use of safer sex practices. This finding is contradictory to several previous studies in which a person's perceived risk was found to be associated with health-promoting behaviors, particularly safer sex behavior (DiClemente et al., 1990; O'Leary et al., 1992). This sample of college freshmen had a high perceived susceptibility as indicated by the mean score on the

perceived susceptibility subscale. Thus, perception of risk is not enough to provoke risk preventive behavior. However, the relationship of perceived susceptibility to the practice of safer sex behavior was based on a small sample size; therefore, the results may not be representative of the general population.

Future time perspective was found to be related to the use of safer sex practices for this sample of sexually active respondents. Sexually active white males differed from the not sexually active white male respondents on the variable of future time perspective. White males who were not sexually active had more extended future time perspective than the white sexually active males. For females, another finding emerged. The African American and Caucasian females who were sexually active demonstrated more extended future time perspective than the not sexually active females. Because there were no black males who reported no sexual activity and the limited sample size, this differentiation cannot be made for the black males in this study. From these results, it appears that males who see their futures as more controllable and predictable choose to refrain from sexual activity, which is a form of safe sex. Females with more extended future time perspectives were inclined to practice safer sex. Thus, it appears for both groups that conceptualization of the future has an impact on decisions for present day

behavior. The findings of this research study are consistent with the future time perspective construct (Heimberg, 1963) in which individual realization of remote consequences of present action has an effect on present behavior.

The HBM provided the theoretical framework for this study. Perceived susceptibility to contracting a serious illness is an element of the HBM. In this study the threat of personal susceptibility was present in this sample; however, the perception of the threat did not change their risk associated behavior. These findings are inconsistent with the underlying theoretical rationale of the HBM. The HBM states that in order for a person to take action to avoid a disease the individual needs to feel personally susceptible. This was not supported for this sample of college freshmen.

In the process of conducting this study, there were additional problems encountered with the research design. The voluntary convenience sample may not have adequately represented the characteristics of the population of college freshmen. The generalization of the findings beyond the sample size are affected by the small sample size, the socioeconomic status of the particular geographical area, and the inclusion of only college students.

The limitations of the measurement tools are reflected in the findings of this research. Self-report type instruments were used which contained Likert type questions as well as other types of questions. The results are limited by differences in individual interpretation of the questions. Other types of limitations are inherent in self-report surveys, such as the conditions under which the participant responds and response set biases including social desirability. However, the tools utilized in this research were the only available tools with established reliability and validity that measured the variables of interest. Therefore, the tools utilized were appropriate for this study.

Conclusion

Based on the results of this research, several conclusions were drawn. There was a direct correlation between future time perspective and the use of safer sex behaviors. College freshmen who were sexually active had a high perception of their risk for the HIV infection. Perception of risk did not motivate college freshmen to practice safer sex behavior. Knowledge had little effect on reducing risk behavior. There was a correlation between females and the use of safer sex behavior.

Implications for Nursing

A number of implications for nursing were derived from this study:

Practice. The advanced practice nurse providing primary care can utilize the findings of this research in the education and counseling of college students. The findings of this research showed that knowledge of AIDS and knowledge of safer sex practices were not related to the use of safer sex practices. Therefore, a reassessment is needed of the conventional methods of providing factual information through lecture in health education classes and through the media which have been identified as the primary sources of AIDS education (Bruce et al., 1990). The advanced practice nurse could develop education programs that emphasize skill development through actual role-playing activities. Through these role-playing activities, factual AIDS information could be provided with examples of application of the information. The advanced practice nurse's counseling of individual college students can be enhanced by assisting individuals to perceive their futures as predictable and controllable, thus enabling behavior change to include health-promoting practices, particularly safer sex behavior.

Research. The findings of this research added to the understanding of the factors associated with safer sex practices among college freshmen. Additional research is

needed to understand how older adolescents come to perceive their futures as predictable and controllable. Research is also needed to develop methods that can be used by the primary care provider to assist individuals in perceiving their futures as more predictable and controllable and enabling behavior change to include health-promoting practices.

Education. HIV and AIDS topics and related issues must be approached in the academic setting by nursing educators so that the graduates will be adequately prepared to assist older adolescents in preventing the transmission of HIV. The findings of this research can be used to illustrate to students the relationship between future time perspective and the use of safer sex practices among college freshmen.

Theory. The HBM has provided the theoretical framework in many studies of illness prevention, including AIDS. Use of the HBM as a theoretical framework for research studies serves to validate and strengthen its concepts. However, the findings of this study did not support the findings of previous research that validated the concepts of the HBM in which perceived susceptibility decreased risk associated behavior.

Recommendations

Based on the results of this research, a list of recommendations may be made for future nursing research and practice.

Research

1. This study should be replicated with a larger sample that includes geographically diverse locations.

2. More research should be conducted to examine factors that influence future time perspective in older adolescents.

3. Further research should be done to determine the factors associated with the use of safer sex practices.

4. Further research should be conducted to investigate the differences in males and females regarding factors that influence health-promoting behavior, particularly safer sex behavior.

5. Future research should be implemented with the same population using a different theoretical framework, Reasoned Action Theory.

Practice

1. Development of AIDS education programs that emphasize skill development through role-playing activities should be done.

2. Counseling of individual college students should include assisting the individual to perceive the future as more predictable and controllable.

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APPENDIX A

DEMOGRAPHIC DATA FORM

Demographic Data Form

Select the appropriate response.

1. Race
   _____ White
   _____ African American
   _____ Native American
   _____ Latino/Hispanic/Mexican
   _____ Asian

2. Gender
   _____ Male
   _____ Female

3. Marital status
   _____ Single
   _____ Divorced
   _____ Married
   _____ Widowed

4. Age: _____ years

5. Year in school
   _____ Freshman
   _____ Sophomore
   _____ Junior
   _____ Senior

6. Are you sexually active?
   _____ Yes
   _____ No

APPENDIX B

MODIFIED AIDS INFORMATION SURVEY

Modified AIDS Information Survey

Directions: Please read each item below and respond by indicating whether the statement is true (T) or false (F). Circle the appropriate letter.

	True	False
1. AIDS is a disease caused by a virus.	T	F
2. A pregnant woman who has the virus that causes AIDS can infect her unborn baby with the virus.	T	F
3. At the present time there is no cure for AIDS.	T	F
4. Lesbians are at high risk for getting AIDS.	T	F
5. You can get AIDS from hugging someone with the disease.	T	F
6. You can avoid getting AIDS by exercising regularly.	T	F
7. You can get AIDS from food handled by someone who has the disease.	T	F
8. I am less likely than most people to get AIDS.	T	F
9. AIDS is not a serious health problem; it is like having a cold.	T	F
10. Only gay men can get AIDS.	T	F
11. Having sexual intercourse with someone who has AIDS is one way of getting it.	T	F
12. People with AIDS usually have other diseases as a result of AIDS.	T	F
13. Receiving a blood transfusion with blood from a person with AIDS can infect a person with the virus that causes AIDS.	T	F
14. There is a blood test that shows the presence of the AIDS virus.	T	F
15. You can get AIDS by using the comb or brush of someone with AIDS.	T	F

16. You can get AIDS by shaking hands with someone who has the disease. T F

17. A person who has AIDS can look and feel healthy. T F

18. AIDS can be cured, if treated early. T F

19. I am not worried about getting AIDS. T F

20. AIDS cannot be transmitted from women to men. T F

21. I am not the kind of person who is likely to get AIDS. T F

22. Some drugs have been developed for the treatment of AIDS. T F

23. AIDS is caused by the same virus that causes herpes. T F

24. Using a condom during sex can lower the risk of becoming infected with the virus that causes AIDS. T F

25. AIDS is a life-threatening disease. T F

26. The virus that causes AIDS can damage the brain. T F

27. There is a vaccine available that protects a person from getting AIDS. T F

28. AIDS is a medical condition in which your body cannot fight off diseases. T F

29. Stress causes AIDS. T F

30. Anybody can get AIDS. T F

31. You can get infected with the virus that causes AIDS by sharing a needle with a drug user who has the disease. T F

32. People who get AIDS usually die from the disease. T F

33. You can get AIDS by being around someone with the disease. T F

34. You can get AIDS when you give blood. T F

APPENDIX C

KNOWLEDGE OF SAFER SEX PRACTICES QUESTIONNAIRE

Knowledge of Safer Sex Practices Questionnaire

Directions: Please read each item below and respond by indicating whether the practice is a Safer Sex Practice (SS) or is not a Safer Sex Practice (NSS). Circle the appropriate letters.

Note. Safer sex refers to practices that reduce your risk of getting AIDS.

	Safer Sex	Not Saver Sex
1. Having sexual intercourse with only one faithful uninfected partner.	SS	NSS
2. Having oral sex without using a protective barrier (rubber, rubber dam).	SS	NSS
3. Having sexual intercourse with a person who injects illegal drugs into his/her veins.	SS	NSS
4. Having more than one sex partner.	SS	NSS
5. Taking birth control pills.	SS	NSS
6. Using a diaphragm during sexual intercourse.	SS	NSS
7. Urinating after sexual intercourse.	SS	NSS
8. Avoiding sexual activities that may cause bleeding of tissues of the vagina or rectum.	SS	NSS
9. Avoiding contact with semen, blood, or vaginal secretions of sexual partner.	SS	NSS
10. Using condoms when engaging in oral sex.	SS	NSS
11. Not having sexual intercourse with a partner who has other partners.	SS	NSS
12. Having sex with someone you don't know well.	SS	NSS

	Safer Sex	Not Saver Sex
13. Using a spermicide (an agent that kills sperm) containing nonoxynol-9.	SS	NSS
14. Examining sexual partners for sores or abrasions in the genital area.	SS	NSS
15. Mutual masturbation (stimulation).	SS	NSS
16. Abstaining from sexual intercourse.	SS	NSS
17. Having sexual intercourse without using a condom.	SS	NSS
18. Masturbation (self-stimulation).	SS	NSS
19. Having anal intercourse.	SS	NSS
20. Hugging, caressing, body massage.	SS	NSS
21. Using a condom (rubber) during sexual intercourse.	SS	NSS
22. Using latex condoms or pieces of latex when engaging in oral sex.	SS	NSS
23. Using a latex rather than a non-latex condom.	SS	NSS

APPENDIX D

FUTURE TIME PERSPECTIVE INVENTORY

Future Time Perspective Inventory

Directions: Please read each item below and respond by indicating the degree to which you agree or disagree with each statement. There are no right or wrong answers.

		Completely Disagree	Mostly Disagree	Disagree More than Agree	Neutral	Agree More than Disagree	Mostly Agree	Completely Agree
1.	I find it hard to get things done without a deadline.	1	2	3	4	5	6	7
2.	Often I am upset because I feel that I am not making the best use of my time.	1	2	3	4	5	6	7
3.	I look forward to the future with hope and enthusiasm.	1	2	3	4	5	6	7
4.	I have too much to do.	1	2	3	4	5	6	7
5.	I am afraid of getting older.	1	2	3	4	5	6	7
6.	Sometimes I feel that everything is moving on ahead and leaving me behind.	1	2	3	4	5	6	7
7.	I need to feel rushed before I can really get going.	1	2	3	4	5	6	7
8.	My future seems dark to me.	1	2	3	4	5	6	7
9.	I expect to become the kind of person I most want to be.	1	2	3	4	5	6	7
10.	I always seem to be doing things at the last moment.	1	2	3	4	5	6	7
11.	I have great faith in the future.	1	2	3	4	5	6	7
12.	A person with ability and willingness to work hard will be successful.	1	2	3	4	5	6	7
13.	It is very hard for me to visualize the kind of person I will be in ten years from now.	1	2	3	4	5	6	7

		Completely Disagree	Mostly Disagree	Disagree More than Agree	Neutral	Agree More than Disagree	Mostly Agree	Completely Agree
14.	I expect that my plans for my future will change many times between now and the time I leave school.	1	2	3	4	5	6	7
15.	I don't know what kind of work I will do in the future.	1	2	3	4	5	6	7
16.	I can't even imagine what my life will be like in twenty years.	1	2	3	4	5	6	7
17.	The future seems very vague and uncertain to me.	1	2	3	4	5	6	7
18.	It's really no use worrying about the future, because what will be, will be.	1	2	3	4	5	6	7
19.	It often seems like the day will never end.	1	2	3	4	5	6	7
20.	I know the kind of job I want when I leave school.	1	2	3	4	5	6	7
21.	I generally act on the spur of the moment.	1	2	3	4	5	6	7
22.	Sometimes I feel that the future is a mere repetition of the past.	1	2	3	4	5	6	7
23.	Sometimes I feel there is nothing new to look forward to in the future.	1	2	3	4	5	6	7
24.	When I am depressed I often fear I may never be really happy again.	1	2	3	4	5	6	7
25.	I often find myself looking for ways to kill time.	1	2	3	4	5	6	7

APPENDIX E

SAFE SEX BEHAVIOR QUESTIONNAIRE

Safe Sex Behavior Questionnaire

Directions: Below is a list of sexual practices. Please read each statement and respond by indicating your degree of use of these practices.

1 = Never
2 = Sometimes
3 = Most of the time
4 = Always

		Never	Sometimes	Most of the time	Always
1.	I insist on condom use when I I have sexual intercourse.	1	2	3	4
2.	I use cocaine or other drugs prior to or during sexual intercourse.	1	2	3	4
3.	I stop foreplay long enough to put on a condom (or for my partner to put on a condom).	1	2	3	4
4.	I ask potential sexual partners about their sexual histories.	1	2	3	4
5.	I avoid direct contact with my sexual partner's semen or vaginal secretions.	1	2	3	4
6.	My partner and I use a spermicide as well as a condom with each act of sexual intercourse.	1	2	3	4
7.	I have sexual intercourse with someone who injects drugs (IV drugs) into his/her veins.	1	2	3	4
8.	I ask my potential sexual partners about a history of bisexual/homosexual practices.	1	2	3	4
9.	I engage in sexual intercourse on a first date.	1	2	3	4
10.	I abstain from sexual intercourse when I do not know my partner's sexual history.	1	2	3	4

		Never	Sometimes	Most of the time	Always
11.	I avoid sexual intercourse when I have sores or irritation in my genital area.	1	2	3	4
12.	If I know my encounter may lead to sexual intercourse, I carry a condom with me.	1	2	3	4
13.	I insist on examining my sexual partner for sores, cuts, or abrasions in the genital area.	1	2	3	4
14.	If I disagree with information that my partner presents on safer sex practices, I state my point of view.	1	2	3	4
15.	I engage in oral sex without using protective barriers such as a condom or rubber dam.	1	2	3	4
16.	I use rubber gloves for sexual foreplay when I have cuts or abrasions on my hands.	1	2	3	4
17.	If swept away in the passion of the moment, I have sexual intercourse without using a condom.	1	2	3	4
18.	I engage in anal intercourse.	1	2	3	4
19.	I ask my potential sexual partner about a history of IV drug use.	1	2	3	4
20.	If I know an encounter may lead to sexual intercourse, I have a mental plan to practice safer sex.	1	2	3	4
21.	If my partner insists on sexual intercourse without a condom, I refuse to have sexual intercourse.	1	2	3	4
22.	I avoid direct contact with my sexual partner's blood.	1	2	3	4
23.	It is difficult for me to discuss sexual issues with my sexual partners.	1	2	3	4

		Never	Sometimes	Most of the time	Always
24.	I initiate the topic of safer sex with my potential sexual partners.	1	2	3	4
25.	I have sexual intercourse with someone who I know is a bisexual or gay person.	1	2	3	4
26.	I engage in anal intercourse without using a condom.	1	2	3	4
27.	I drink alcoholic beverages prior to or during sexual intercourse.	1	2	3	4

APPENDIX F

PERMISSION TO USE TOOL

EMORY UNIVERSITY
NELL HODGSON WOODRUFF SCHOOL OF NURSING
Atlanta, Georgia 30322

October 17, 1994

Renee J. Lyles, R.N.
Route 1, Box 36B
Newton, MS 39345

Dear Ms. Lyles:

Thank you for your interest in our Safe Sex Behavior Questionnaire (SSBQ). I have enclosed a copy of the SSBQ, and the Scoring Sheet for your information.

You have our permission to use the SSBQ for research purposes. In return, we are requesting a copy of the raw data (SSBQ), a description of your sample, and the results of any hypotheses tested. This information will be used to further assess the reliability and validity of the scale.

Thank you once again for your interest and good luck with your study.

Sincerely,

Colleen DiIorio

Colleen DiIorio, PhD, RN, FAAN
Professor

CD/yg

Enclosures

EMORY UNIVERSITY
NELL HODGSON WOODRUFF SCHOOL OF NURSING
Atlanta, Georgia 30322

November 11, 1994

Renee J. Lyles, RN
Route 1, Box 36B
Newton, MS 39345

Dear Ms. Lyles:

Thank you for your interest in our study on "Safe Sex Practices Among College Students." I have enclosed the instruments we used in our study. We developed The Safe Sex Knowledge Questionnaire and The Safe Sex Behavior Questionnaire (sent 10/17/94). You have our permission to use these two instruments for research purposes. In return, we are requesting a copy of the raw data, a description of the sample, and the results of any hypothesis testing. This information will be used to further assess the reliability and validity of the SSBQ.

In regard to Dr. Heimberg's instrument on Future Time Perspective: the instrument is in the public domain. She graduated from Vanderbilt University in 1962. Her master's thesis should be available from Vanderbilt. She completed her doctorate in 1963 at Vanderbilt. It may be easier to obtain a copy of her dissertation which was further development of the scale.

Thank you once again for your interest and good luck with your study.

Sincerely,

Colleen DiIorio

Colleen Dilorio, PhD, RN, FAAN
Professor
Nursing Research Center

CD/yg
Enclosures

APPENDIX G

LETTERS TO UNIVERSITIES REQUESTING PERMISSION TO CONDUCT STUDY

March 31, 1995

Renee Lyles
Route 1, Box 36B
Newton, Ms 39345

Dr. Joseph Portera
P. O. W 1637
Columbus, MS 39701

Dear Dr. Portera,

I am a Registered Nurse attending graduate school at Mississippi University for Women. I spoke with you a couple of weeks ago about my research. At that time you gratefully granted your permission for me to distribute questionnaire packets to the freshmen in the Sociology class taught by Mr. Jerry Davis. The purposes of this letter are to obtain your signature verifying your permission and to provide you with a brief written explanation of my research.

With my research, I am attempting to determine if a relationship exists between various cognitive-perceptual variables and the use of safer sex practices among college freshmen. The participants are being asked to complete four questionnaires and a demographic data sheet which generally takes approximately 20-30 minutes. There is no risk to the participants, and they are guaranteed anonymity. The participation is strictly voluntary. Although there is no direct benefit to the participants, their participation may enable health care providers to better understand what factors are associated with the use of safer sex practices among college freshmen. Therefore, education regarding safer sex practices can potentially be more effective.

Thank you again for granting me your permission to distribute the questionnaires to the freshmen. Please sign below verifying your permission and return this letter to me.

Sincerely,

Renee Lyles

Renee Lyles

Please sign here: Joseph A. Portera 4/1/95

May 9, 1995

Renee Lyles
Route 1, Box 36B
Newton, MS 39345

Dr. Martin Levin
P. O. Box C
MSU, Mississippi 39762

Dear Dr. Levin,

I am a Registered Nurse attending graduate school at Mississippi University for Women. I spoke with you several weeks ago about my research. At that time you gratefully granted me your permission to distribute questionnaire packets to the freshmen attending some of the classes in your department. The purpose of this letter is simply to obtain your signature verifying your permission so that this letter can be made a part of my thesis in addition to the IRB approval letter.

We discussed my research earlier and I also mailed you written information about the research. However, if you have any questions please call me anytime (601) 683-6582.

Thank you again for granting me your permission to distribute the questionnaires to the freshmen. Please sign below verifying your permission and return this letter to me in the self-addressed stamped envelope as soon as possible.

Sincerely,
Renee Lyles
Renee Lyles

Please sign here:

APPENDIX H

APPROVAL OF MISSISSIPPI UNIVERSITY FOR WOMEN COMMITTEE ON USE OF HUMAN SUBJECTS IN EXPERIMENTATION AND MISSISSIPPI STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD

MISSISSIPPI UNIVERSITY FOR WOMEN
Columbus, MS 39701

Vice President for Academic Affairs
P.O. Box W-1603
(601) 329-7142

February 22, 1995

Ms. Renee Lyles
c/o Graduate Nursing Program
Campus

Dear Ms. Lyles:

I am pleased to inform you that the members of the Committee on Human Subjects in Experimentation have approved your proposed research with the recommendation that the consent form be restructured to state that consent is being given voluntarily and that the subjects can withdraw at any time. The committee further recommends that where possible the subjects be 18 years old or older.

I wish you much success in your research.

Sincerely,

Thomas C. Richardson
Vice President
for Academic Affairs

TR:wr

cc: Mr. Jim Davidson
Dr. Mary Pat Curtis
Dr. Rent

INSTITUTIONAL REVIEW BOARD APPROVAL FORM
FOR THE PROTECTION OF HUMAN SUBJECTS IN RESEARCH
MISSISSIPPI STATE UNIVERSITY

STATEMENT OF BOARD: **IRB DOCKET #** 95-070

This is to certify that the research proposal entitled, " Factors Associated with Safer Sex Practices Among College Freshmen **,"**

and submitted by: Renee J. Lyles, Mississippi University for Women
Name
Nursing
Department
Melinda E. Rush
Name of Advisor

to Sponsored Programs Administration **for consideration has been reviewed by the Regulatory Compliance Officer or the IRB and approved with respect to the study of human subjects as appropriately protecting the rights and welfare of the individuals involved, employing appropriate methods of securing informed consent from these individuals and not involving undue risk in the light of potential benefits to be derived therefrom.**

***Administrative Approval Date*:** _____

_____**(a)** **Contingent upon receipt of** _____

_____.

_____**(b)** **All necessary documents were received.**

***Expedited Approval Date*:** 4-3-95

_____**(a)** **Contingent upon receipt of** _____

_____.

__X__**(b)** **All necessary documents were received.**

***Full Board Approval Date*:** _____

_____**(a)** **Contingent upon receipt of** _____

_____.

_____**(b)** **All necessary documents were received.**

Angela J. Corder 4-3-95
Angela J. Corder, MSU Regulatory Compliance Officer **Date**

Reldavis 5-3-95
Institutional Review Board Member **Date**