Development and Validation of a Psychometric Instrument for Predicting AIDS Related Risk Behavior: Application of Theoretical Models

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ABSTRACT

DEVELOPMENT AND VALIDATION OF A PSYCHOMETRIC INTRUMENT FOR PREDICTING AIDS RELATED RISK BEHAVIOR: APPLICATION OF THEORETICAL MODELS

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AIDS is growing at an alarming rate, with approximately 1.5 million infected with the deadly disease, and adolescents are among the fastest growing groups of people with AIDS. Because a cure and vaccine for the human immunodeficiency virus (HIV) are not expected for at least several years, prevention of AIDS is the only means of reducing the spread of the disease. Education, information, and persuasion may be changing the HIV-related attitudes and even behaviors of some individuals. However, without a theoretical framework, the reasons why some individuals have changed and why some individuals have not changed are elusive. The present study attempted to provide a comprehensive questionnaire, entitled AIDS-Risk Predictor Scale (AIDS-RPS), which addressed AIDS-

related risk behavior from three major social-psychological models, the Health Belief Model, the Self-Efficacy Model, and the Theory of Reasoned Action. In addition to the AIDS-RPS, a Knowledge Scale and the Risk Behavior Scale were administered to 182 subjects enrolled in a human sexuality class at the University of Dayton. Using factor analysis, bivariate correlational, and multiple regression analyses, results showed that knowledge is indeed a poor predictor of risk behavior as previous research has shown, and that other variables such as self-efficacy, perceived barriers to practicing safe-sex behaviors, and perceived benefits of practicing safe sex behaviors are more important in predicting AIDS-related risk behavior. Self-efficacy was a variable that was found imbedded throughout all the factors, and was shown to have the most predictive ability. The AIDS-Risk Predictor Scale, unlike the Knowledge Scale, was found to have a high correlation with the Risk Factor Scale, thus showing that this newly developed scale is important in predicting risk behavior. Due to the select sample used, it may be beneficial to use a more general, "at risk," sample in the future. It would also be interesting to see how younger adolescents' responses may differ compared to the young adults used in this study.

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CHAPTER I

Introduction

The threat of Acquired Immunodeficiency Syndrome (AIDS) is spreading at an alarming rate and the adolescent and young adult populations appear to be at the greatest risk. While AIDS is not highly visible in the adolescent population – less than 1% of the national AIDS cases are reported to the Centers for Disease Control and Prevention (CDC) are among teenagers—adolescents are among the fastest growing group of people with AIDS (Messina, 1993).

The majority of U.S. teenagers are engaging in sexual behaviors and, therefore, are at risk for Human Immunodeficiency Virus (HIV) infection. According to the CDC's 1990 Youth Risk Behavior Study, 39.6% of ninth graders, 47.6% of tenth graders, 57.3% of eleventh graders and 71.9% of twelfth graders have had sexual intercourse at least once in their lives. More than 19% of all high school students have had four or more sex partners. While latex condom use among teens is on the rise, almost half of adolescents engaging in sexual intercourse do not use them (Messina, 1993).

Although transmission of HIV via the sharing of contaminated needles and syringes by injecting drug users is a significant mode of transmission in some countries, the predominance of sexual transmission of HIV globally suggests that encouraging change in sexual behavior must be the keystone of any program designed to prevent the further spread of HIV. Because HIV tends to be spread mainly through sexual intercourse here in

the U.S., the majority of studies in this area looked at the variable of condom use in helping to predict a person's perceived vulnerability to this deadly disease (Terry, Gallois, & McCamish, 1993).

This study attempts to construct a reliable, valid, and comprehensive psychometric instrument that will effectively predict a person's AIDS-related risk behavior. Items reflect three major theoretical formulations, namely the Health Belief Model, the Theory of Reasoned Action, and Self-Efficacy Theory.

This thesis is composed of three major chapters, each of which examines previous studies that show how different variables affect a person's AIDS-related risk behavior. The first chapter consists of three sections. The first section discusses characteristics of normal adolescents and young adults, such as risk taking and social behavior, which may lead to increased vulnerability to AIDS. The second section reviews theoretical models that have been used to predict AIDS-related risk behavior. These theoretical models include the Health Belief Model, the Theory of Reasoned Action, and Self Efficacy Theory. The third section focuses on this study and what it attempts to achieve. In the second chapter, methods and procedures of the present study are outlined, and in the third chapter the results of the data analysis are explained.

Characteristics of Normal Adolescents and AIDS-Related Risk Behavior

Some characteristics of normal development in adolescence and young adulthood may increase their level of AIDS-related risk behavior. Teens are risk-takers, not because they want to hurt themselves (or their families) but because one of the "tasks" they must accomplish on their way to adulthood is emancipation from their families. They must leave their childhoods and begin to emerge, after some years of exploration and growth,

into young adults. Pushing limits and testing boundaries are ways to accomplish this difficult task (Messina, 1993). Some degree of risk-taking is instrumental in gaining peer acceptance and respect, establishing autonomy from parents, affirming maturity (engaging in behaviors that are sanctioned for adults), and creating distance from conventional authority (Erikson, 1968).

According to Erik Erikson's psychosocial stage of development, adolescents are in conflict between identity and repudiation and identity diffusion. Rapid physiological changes produce a "new" body with unfamiliar sexual urges. These changes, along with social pressure to make occupational and educational decisions, force the youth to consider a variety of roles. The basic task for adolescents and many young adults is to integrate the various identifications they bring from childhood into a more complete identity. If they cannot integrate their identifications, roles, or selves, they face "identity diffusion" (Erikson, 1968).

Adolescents' cognition, however, may hamper their ability to act wisely. Teens in early adolescence (12-14 years old) often possess relatively concrete thought patterns and have difficulty projecting themselves into the future. It is difficult for young people at this developmental age to modify their behavior based on a theoretical threat in the future (Messina, 1993). According to Piaget's (1964) theory of cognitive development, adolescents operating in the concrete operational stage are overcoming many limitations in their reasoning about the social world. They are less egocentric, but they sometimes still have difficulties with role taking and communication. They are, however, beginning to take intentions into account in their moral judgments and are increasingly aware of the subtle social relationships in the family, peer group, and larger society (Kohlberg, 1976).

Adolescents and young adults are two groups who tend to rate their own perceived risk as lower than that of their peers (Brown et al., 1991). They typically cannot distinguish between their unique emotional reactions and those that are common to all people. For example, a teenage girl believes that she is incapable of becoming pregnant from an unplanned intercourse, even though she knows that it happens to others. Sexual experiences are often perceived as happening by chance, and not as the end product of much decision making on the adolescent's part. Their sense of invulnerability makes sexual risk taking likely (Brown et al., 1991).

Young people in middle to late adolescence and even into young adulthood are labeled as what an expert humorously terms "the Armor of Middle Adolescence." The armor consists of "the Helmet of Omniscience" which makes them all-knowing, the "Breast Plate of Omnipotence" which makes them all-powerful and the "Shield of Invincibility" which gives them the ability to defend against and defeat every foe (Messina, 1993). Those "armaments" allow these individuals to participate in all sorts of risky activities in the strong belief that they will not be harmed. In addition to perceiving themselves as "at risk" for acquiring HIV they must also have feelings of self-efficacy in order to make necessary changes in their risk behavior. For many teens and young adults, this feeling of personal power is weak (Messina, 1993).

Predictors of AIDS-Related Risk Behavior

This section will review the three major theoretical models that have been used in attempt to predict health-related behavior: Health Belief Model, Theory of Reasoned Action, and Self-Efficacy Theory.

Health Belief Model

The Health Belief Model (HBM) is one of the most frequently utilized theoretical frameworks in explaining and predicting people's health-related behaviors. According to the HBM, as initially proposed by Rosenstock (1966) and revised by Becker and Maiman (1975), the extent to which an individual practices a particular health behavior depends on the following two general factors: general health values and perceived costs and benefits. The first major factor, general health values, involves the individual's: (a) general interests and concerns; (b) beliefs and perceptions regarding his or her susceptibility to the health problem in question; and (c) beliefs and perceptions about the severity of the health problem(s) or disorder(s) in question. The second major factor, perceived costs and benefits, addresses the following issues: (a) the extent to which health behavior or practice involves any significant "costs"; (b) the degree to which benefits of the health behavior exceed the "costs" of exhibiting the health behavior"; and (c) the extent to which the person believes that the health behavior or practice would reduce the threat. A brief overview of each factor's influence on an individual's health behavior is provided below.

Perceived Susceptibility. According to the HBM, perceived susceptibility is defined as the individual's subjective perception of risk or vulnerability to a health threat. For example, to what degree does the individual believe that risk is likely. As reviewed below, research looking at the susceptibility-behavioral risk association has led to mixed results.

There is tentative evidence that perceived risk predicts preventive health behavior in adolescents. However, perceived risk seems to play a relatively modest role as a

determinant of actual (safe) behavior as opposed to behavioral intentions to change AIDS-risk behaviors (van der Pligt, 1994).

A study by Basen-Engquist (1992) showed susceptibility was significantly related to the intention to use a condom but not with the intention to discuss AIDS and past partners with a sexual partner. Another study (Bengel et al, 1996), based on 468 heterosexual adults, found that people often have an unrealistic optimistic attitude when it comes to assessing their own susceptibility to HIV. The respondents overall rated themselves as having a 24% chance of becoming infected, whereas they rated their peers (same age and sex) as having a 44% chance of becoming infected with HIV. The subjects who deny that they are in danger of becoming infected gave the following reasons for this assessment: monogamous relationship, no risk behavior, and a non-specifiable feeling of safety.

In a longitudinal study, Aspinwall, Kemeny, Taylor, Schneider, and Dudley (1991) examined gay men's AIDS-protective behavior. It was found that decreases in numbers of sexual partners were found chiefly among HIV negative men who had earlier perceived themselves to be at increased risk of contracting HIV. However, another study indicated a weak relationship between perceived risk and AIDS-preventive behavior in a sample of adolescents (Otten & van der Pligt, 1992).

Perceived Severity. This factor refers to the individual's perceptions of the seriousness of the health threat. It includes an evaluation of the potential consequences that may result from encountering a health problem, including physical harm or interference with social functioning. Many measures of AIDS severity focus on the anxiety that AIDS produces when one thinks about the consequences of having AIDS.

Bengel and colleagues (1992) found that more than 75% of the subjects in their study considered AIDS to be a major risk and a threat to human health. Despite this overall belief, it proved to have little predictive value in predicting AIDS related risk behaviors in this study. Hays, Kegeles, and Coates (1990) examined the HIV risk behavior of young men. They found that perceived severity of rejection and of not being loved exceeded the perceived severity of the infection and thus led to unsafe sexual practices.

Perceived Benefits. According to the HBM, perceived benefits refers to the individual's beliefs regarding the effectiveness of strategies designed to decrease vulnerability or reduce the threat of illness. It includes the personal assessments of the feasibility and effectiveness of the recommendations to deal with the health threat. When not taking any other factors into account (i.e. perceived susceptibility and severity), a person will most likely engage in a health behavior when the benefits of the health behavior exceed the "costs" or barriers of exhibiting the health behavior.

Of the possible benefits, "response efficacy," or the perception that adopting and maintaining AIDS-preventive behaviors will reduce AIDS risk, is one of the most commonly researched. Measures of response efficacy have been associated with AIDS-preventive behaviors in cross-sectional and longitudinal studies (DiClemente & Peterson, 1994).

Other benefits of AIDS-preventive behaviors have been examined by Catalina et al. (1991). Positive feelings resulting from condom use and positive regard from the respondent's sex partner for condom use distinguished men who always used condoms from those who did not. The perception that condoms enhanced sexual pleasure also distinguished men who always used condoms from those who did not.

Perceived Barriers. This factor of the HBM refers to personal assessments of the negative aspects of a particular health action. These barriers include physical, psychological, and financial demands. The HBM assumes that individuals will take preventive action in response to a perceived level of threat (susceptibility and severity) if the benefits of the new behavior outweigh the barriers (Mahoney, Thombs, & Ford, 1995).

Results of the study by Catalina and colleagues (1991) showed that condom use is often perceived as a barrier to sexual pleasure. In one cross-sectional study using a sample of predominately inner-city minority adolescents, DiClemente and his colleagues (1992) found that the adolescents who perceived "cost" of condom use to be lowest (low perceived barrier to condom use) were also the ones who were more likely to report being consistent condom users. However, the relationship between perceived barriers and AIDS-preventive behaviors have been mixed across both longitudinal and cross-sectional studies. Research shows that, if the perceptions of AIDS threat and benefits are not high, it is not likely that low perceived barriers would necessarily influence AIDS preventive behavior (DiClemente & Peterson, 1994).

Aspinwall and colleagues (1991) used barrier measures that included other measures...importance, temptation, and difficulty of refraining from sex with numerous partners. This study found that gay men, without primary partners, who reported strong barriers towards remaining monogamous, reported higher numbers of anonymous sexual partners at follow-up.

In Rosenstock and colleagues' (1988) comprehensive review of the HBM as a predictor in AIDS-related risk behaviors, they did not find one study that tested the HBM as a whole. Every study they found treated the constructs separately. They argued that

one should test the HBM model as a whole, not as a collection of equally weighted variables operating simultaneously; "it makes little sense to include all the health belief constructs in a multivariate analysis, select the strongest swimmers and claim that these are the factors on which to intervene" (Rosenstock et al., 1988, p. 20). The general failure to test the whole model may help explain the inconsistencies among studies focused on separate factors. One of the hypothesis' of this proposed study and what it attempts to prove is that collectively, the variables will account for more variance in predicting risk behavior than any one factor used alone.

Fishbein and Ajzen's Theory of Reasoned Action

According to this theory, a health behavior is a direct result of a behavioral intention. Behavioral intentions are made up of two components: (1) attitudes toward the action, which are based on (a) beliefs about the likely outcomes of the action and (b) evaluation of those outcomes; and (2) subjective norms regarding the action, which derive from (a) one's perceptions of what others think one should do and (b) the motivation to comply with those normative references.

A strong element of Fishbein and Ajzen's theory is that behavioral intentions are measured at a very specific rather than at a general level. Inclusion of the normative component in this model is also an important element in the theory, because normative influences are known to have a profound effect on health behaviors (Taylor, 1995).

Differences in the prediction of a range of behaviors have been reported. Terry, Galligan, and Conway (1993) applied the theory of reasoned action to predicting three different behaviors: avoiding casual sex, asking a partner about their sexual and drug using history, and engaging in an exclusive sexual relationship. They reported that both

attitudes and subjective norms predicted intentions for the first two behaviors, but that neither did for the third. In terms of the intention-behavior link, the relationship was weak. Further research is needed to examine the utility of this and related variables in predicting AIDS-related risk behavior.

Bandura's Self-Efficacy Theory of Behavioral Change

Bandura (1977, p. 194) defines self-efficacy as "expectations of personal mastery...conviction that one can successfully execute the behavior required to produce the (desired) outcomes". Self-efficacy refers to one's capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1995, p. 2). Moreover, efficacy beliefs influence how people think, feel, motivate themselves and act. Expectations of self-efficacy are different from response outcome expectations. A response expectation is defined as an individual's estimate that a given behavior will lead to certain outcomes. Hence, a person may believe that a particular action will produce a desired outcome, but if there is self-doubt regarding competence in performing the action, or they perceive the action or outcome as unimportant, then this information will not influence behavior. Bandura argues that precepts of personal mastery have an effect on initiation, strength, and persistence of coping behavior. According to Bandura, expectations of self-efficacy are based on four major sources of information: performance accomplishments, vicarious experience, social persuasion, and physiological arousal. A brief discussion of each informational source is provided below.

Performance Accomplishments. According to Bandura the most effective way of creating a strong sense of efficacy is through mastery experiences, which is the concept from which performance accomplishment is based. It involves acquiring the cognitive,

behavioral, and self-regulatory tools for creating and executing appropriate courses of action to manage ever-changing life circumstances. Successful experiences raise efficacy expectations, while repeated failure lowers them, especially if failures occur before a sense of efficacy is firmly established. According to Bandura (1995) mastery experiences provide the most authentic evidence of whether one can muster whatever it takes to succeed.

Vicarious Experience. According to Bandura (1995), self-efficacy beliefs can be strengthened and created by social models. The impact of modeling on beliefs of personal efficacy is strongly influenced by perceived similarity to the models. If people see the models as very different from themselves, then their beliefs of personal efficacy are not much influenced by the models' behavior and the results it produces. Furthermore, people seek proficient models who possess the competencies to which they aspire. Competent models transmit knowledge and teach observers effective skills and strategies for managing environmental demands. In conclusion, Bandura states: "...exemplification's of success through sustained effort with substantiating comparative information can enhance observers' perception of their own performance capabilities" (1977, p. 198).

Social Persuasion. Research has shown that people who are persuaded verbally that they possess the capabilities to master given activities are more likely to mobilize greater effort and sustain it than if they harbor self-doubts and dwell on personal deficiencies when problems arise (Bandura, 1995). According to Bandura (1995), it is more difficult to instill high beliefs of personal efficacy by social persuasion than it is to undermine it. By constricting activities and undermining motivation, disbelief in one's capabilities creates its own behavioral validation. Bandura (1995) believes that successful efficacy builders do

more than convey positive appraisals, they encourage individuals to measure their success in terms of self-improvement rather than by triumphs over others.

Bandura contends that social persuasion has limitations as a means of creating a lasting sense of personal mastery. Unrealistic verbal persuasion can create a sense of self-efficacy, which is easily disconfirmed by unsuccessful experiences. However, if verbal persuasion is used in conjunction with performance aids in participant modeling the effect may be greater than if performance aids were used alone.

Physiological State. People tend to interpret their stress reactions and tensions as signs of vulnerability to poor performance (Bandura, 1995). Bandura (1995) argues that it is not the sheer intensity of emotional and physical arousal that is important but rather how they are perceived and interpreted. People who have a high sense of efficacy are likely to view their state of affective arousal as an energizing facilitator of performance, whereas those who experience self doubts regard their arousal as a debilitator. Bandura further conceptualizes the informational and motivational aspects of arousal as interdependent rather than as separate effects.

Current research shows that a general belief in personal control appears to foster good health habits; those who believe they can control events in the environment are more likely to practice good health habits than those who do not (Taylor, 1989). Influencing health behaviors that contribute to the prevention of AIDS has become an urgent matter and perceived self-efficacy has been shown to play a role in such behaviors.

Self-efficacy has been a popular area of research in predicting risk behavior over the past several years. Studies have shown this theory to be an important and useful predictor in determining AIDS related risk behaviors as well. Kok, DeVries, Mudde, and

Strecher (1991) analyzed condom use and clean needle use by drug dealers. Perceived self-efficacy correlated with the intention to use clean needles (.35), with the intention to use condoms (.74), and with reported condom use (.67).

Richard and van der Pligt (1991) conducted separate analyses for adolescents with and without a monogamous relationship. Results revealed major gender differences. Self-efficacy was the most powerful predictor of condom use for female adolescents, but for males this factor explained little variance. Anticipated regret and worry, age at first sexual intercourse, and number of sexual partners all explained independent portions of variance for the male respondents, but not for the females. Condom use at first sexual intercourse was found to be a powerful predictor for both groups.

The construct of self-efficacy has become increasingly influential and popular in the literature. In an attempt to improve the Health Belief Model's predictive ability and explanatory power, Rosenstock, Strecher, and Becker (1988) expanded it to include the concept of self-efficacy. The Theory of Reasoned Action has incorporated the self-efficacy theory as well.

It is especially critical to consider all three psychosocial models, HBM, self-efficacy, and theory of reasoned action, when major life-style changes are required. The problems involved in modifying lifelong habits concerning eating, drinking, exercising and sexual practices are far more difficult to surmount than are those for accepting a one-time immunization or screening test. It requires a good deal of confidence that one can, in fact, alter such life-styles before successful change is possible. Contraceptive use is one such behavior which may have been firmly established over a long period of time (Brown, DiClemente, & Reynolds, 1991). A review of diverse studies of health behavior

modification found a strong relationship between self-efficacy and behavior change and maintenance (Brown et al., 1991). For behavior change to succeed, people must feel threatened by their current behavioral pattern (perceived susceptibility and severity), and they must believe that a specific behavioral change will be beneficial by resulting in a valued outcome at an acceptable cost. Moreover, they must also feel themselves competent (self-efficacious) to implement that change (Rosenstock, Strecher, & Becker, 1988).

Currently there has been only one study found, Zimmerman and Olson (1994), that tested the predictive power of all models. Their study looked at the Health Belief Model(HBM), Ajzen-Fishbein attitude-behavior model (AFM), and Self-Regulatory Models (SRM), in predicting AIDS related risk behavior and risk behavior change. Self-efficacy is the major construct associated with the SRM.

The focus of Zimmerman and Olson's (1994) study was the relationships between attitudes and behaviors among individuals who had a sexual experience in the last 5 years, had not been in a monogamous relationship over the last 5 years, were not self-described as gay/bisexual, reported no IV drug use, and did not consider exposure to HIV likely. Several scales were put together to measure each of the subsets of the three models.

Zimmerman and Olson's study indicated that people who felt positively about condom use, had one sexual partner, established a relationship before sexual activity with the partner, and believed that they easily fall prey to sexual impulses were more likely to have decreased their AIDS-related risk behavior, following their awareness of AIDS, relative to those who did not hold these beliefs; the AIDS "awareness" process was a natural one, no interventions were used by the researchers. Furthermore, this study found

that those who felt positive about condom use, and said that they were capable of making changes in their sexual behavior were more likely to have made changes in their risk behavior after becoming aware of AIDS. In addition, those who were members of a "high-risk group," and/or felt there was a long period between infection and getting AIDS were the ones who were more likely to have made AIDS-related behavior change following awareness of AIDS.

The Present Study

As indicated earlier the present study attempted to construct a valid, reliable, and comprehensive psychometric instrument. The instrument is meant to represent the Health Belief Model, the Theory of Reasoned Action, and Self-Efficacy Theory, as these models pertain to predicting AIDS-related risk behavior. Furthermore, the present study will attempt to validate the psychometric instrument by correlating it with the individual's AIDS-related knowledge base and current risk behavior; this is important as research suggests that knowledge is a poor predictor of risk behavior. Specific items comprising the psychometric instrument are derived from various instruments used in the literature. Research needs to identify why people with adequate knowledge continue to place themselves at risk.

The present study, although similar in some respects to Zimmerman and Olson's study, is different in several ways. First, Zimmerman and Olson's study included a very specific, strictly heterosexual sample who reported no drug use and did not consider exposure to HIV likely. The sample to be used in the proposed study is more broad, consisting of a random sample of undergraduate students, regardless of their sexual and drug use history. Furthermore, Zimmerman and Olson's study did not address the issue of

self-efficacy in as detailed a fashion as the assessment approach in this proposed study. Because of the retrospective nature of their study, an individual's perceptions about self-efficacy (how capable you are at making changes in sexual behavior) was derived in part from behavior change already made instead of solely on beliefs about the self.

Another major difference between the two studies is that the present study also examines knowledge of AIDS as a possible predictor of AIDS-related risk behavior, whereas Zimmerman and Olson's study did not consider this variable in predicting risk behavior. Furthermore, by including a well-validated measure of AIDS-related knowledge, it is possible to identify the best predictors of AIDS-related risk behavior among those with adequate knowledge. Finally, the Zimmerman and Olson study, while examining the utility of various theoretical models in predicting AIDS-related risk behavior, did not yield a psychometric instrument that is broadly available for use in research and clinical work.

CHAPTER 2

METHOD

Participants

One hundred and eighty-two men and women were recruited from psychology classes at the University of Dayton. Among the subjects, 107 were female and 75 were male. The subjects ranged in age from 17 to 25 (M = 20.5, SD = .71). Participants were given a seventeen page questionnaire, consisting of 212 questions, and took approximately 30–40 minutes to complete. Participants were provided an informed consent opportunity prior to their participation in the study and debriefing information was distributed subsequent to the study.

Materials

Knowledge about Aids. Knowledge about AIDS was assessed using a self-administered questionnaire (HIV-K-Q) developed by Carey, Morrison-Beedy, and Johnson (1997). This scale consisted of forty five questions, based on a three point scale (1 = true, 2 = false, 3 = don't know). Reliability analyses revealed that the HIV-K-Q is consistent (alpha = .91) and stable over 1-week (r = .83), 2-week (r = .91), and 12-week (r = .90) intervals. It has a high internal consistency of .91. The test-retest correlation for university students was .83. In regard to validity, the HIV-K-Q was compared to two existing measures of HIV-related Knowledge. HIV-K-Q scores correlated with both the

AIDS Risk Behavior Knowledge Test, $r = .42$, $p < ,005$, and the AIDS Knowledge Test, $r=.56$, $p < .0001$.

Health belief model. All of the items in Appendix B and C have superscripts, and in the footnote following the Appendices the source of each item is indicated. Item numbers 46 through 118 of Appendix B are the questions from the scales that were constructed to assess the HBM concepts of perceived susceptibility, seriousness of the consequences of contracting the virus, benefits of changing behavior to reduce the risk of contracting HIV, and barriers affecting behavioral change. A study was not found that looked at the HBM model as a whole when predicting AIDS related risk behavior. As a result the questions used in these scales were derived from a variety of different studies which looked at one or more of the HBM variables (O'Leary et al; Mahoney et al.; Zimmerman & Olson; Basen-Engquist; and Bangel). Regarding validity, Zimmerman and Olson (1994) found that when comparing the HBM variables, the items measuring sexual impulse (a barrier) provided the best predictors of behavioral change. Mahoney and colleagues' (1995) study, which looked at condom use specifically, found the HBM variables were most effective at correctly classifying sporadic condom users (56.4%) whereas the behavioral variables were best at correctly classifying nonusers (47.9%). In terms of validity, Basen-Engquist (1992) found that perceived barriers and perceived susceptibility are associated with intention to use a condom; perceived barriers are inversely related to condom use. For example, those who perceived more negative barriers in regards to condom use, were less likely to use condoms on a regular basis. Regarding reliability, the items derived from O'Leary and colleagues' (1992) study revealed an alpha of .58 for perceived susceptibility and .70 for items measuring perceived barriers.

Regression analyses in this study indicated that expecting fewer negative outcomes of condom use, and less frequency of sex in conjunction with substance use significantly predicted greater condom use.

Theory of reasoned action. Item numbers 119 through 135 of Appendix B attempted to measure aspects of the Theory of Reasoned Action, focusing specifically on perceived social norms and social support in relation to behavioral change. This scale was composed of a combination of items derived from Zimmerman and Olson (1994) and O'Leary and colleagues' (1992) studies. O'Leary and colleagues scale, measuring perceived social norms, consists of six questions with a reliability of .71. Nine items, based on perceived social support and perceived norms, were derived from Zimmerman and Olson's study. Regarding validity, their study found these variables to significantly predict risk behavior change and current risk behavior.

Self-efficacy. Item numbers 136 through 185 of Appendix B were derived from a variety of sources and attempted to measure perceived self-efficacy of participants regarding their ability to engage in safe behaviors under various conditions. In a regression analyses performed by O'Leary and colleagues, results indicated that stronger perceptions of self-efficacy to engage in safer behavior, and less frequency of sex in conjunction with alcohol or other drug use significantly predicted safer sexual behavior. Furthermore, contrary to expectations, enhanced self-efficacy to discuss personal history with a new partner was associated with a greater number of unsafe encounters. Regarding validity, results of Zimmerman and Olson's study indicate that self-efficacy are likely to contribute significantly to explaining variance in current risk behavior and risk behavior change. Moreover, validity results of Denson, Voight, and Eisenman's (1994) study

indicates that married students will report more self-efficacy around the AIDS behaviors than non-married students and as education increases, self-efficacy will increase. Furthermore, results from Mahoney, Thombs, and Ford's (1995) study indicate that sporadic condom users will be less confident in their ability to discuss and insist on condom use with a partner than consistent users.

Behavioral risk factors. Item numbers 186 through 207 of Appendix C attempted to measure the participants behavior risk factors, ranging from various sexual activities to drug use. The majority of the items listed were derived from two studies, Zimmerman and Olson (1994), and Basen-Engquist (1992). The items in Appendix C contain demographic information and interrelationship variables outside the scope of the three models mentioned previously, which are important in determining risk behaviors. The items used in this scale were derived from past studies which used them mainly as control variables. Past research indicates the items used in the proposed study to be potentially important predictors of AIDS-related behavior change or current risk.

Procedure

Following the administration and signing of the informed consent, as found in Appendix E, a comprehensive psychometric instrument consisting of 140 items, representing all of the dimensions of three theoretical models was administered to a large group of undergraduate psychology students. A Knowledge Scale consisting of 45 items, a Risk Behavior Scale consisting of 22 items, and a Demographic Questionnaire consisting of 5 items were also administered. The Knowledge Scale was used as a screening measure to determine why individuals with adequate knowledge continue to put themselves at risk.

After the subjects completed the questionnaire packet, they were thanked and debriefed, using the form found in Appendix E.

CHAPTER 3

RESULTS

Results of the data analysis are presented under four major sections. The first section presents results pertaining to the relationship between AIDS-Related Knowledge and AIDS-Related Risk Behavior. The results of the factor analysis of the AIDS-Risk Predictor Scale (AIDS-RPS) are presented in the second major section. The third section examines the relationship between the AIDS-RPS and Risk Behavior; results of both the multiple regression analyses and bivariate correlational analyses will be presented. The final section will present results pertaining to the relationship between AIDS-Related Knowledge and the AIDS-RPS, along with the results of the multiple regression analyses.

Relationship Between AIDS-Related Knowledge and AIDS-Related Risk Behavior

Based on the findings of past research, it was expected that level of knowledge would not be significantly correlated with level of risk behavior (Basen-Enguist, 1992; Allard, 1989). Consistent with this expectation, the correlation between the Knowledge Scale and the Risk Behavior Scale was not statistically significant ($r = -.18$, $p = .30$). Although the Knowledge Scale was not expected to correlate with risk behavior, the newly developed AIDS-Risk Predictor Scale was expected to predict risk behavior, and results of analyses testing this hypothesis are presented in the following section.

Factor Analysis of AIDS-Risk Predictor Scale

Prior to the presentation of results pertaining to the utility of the AIDS-Risk Predictor Scale (AIDS-RPS) in predicting risk behavior, it is necessary to present the results of the factor analysis of the AIDS-RPS. This is because the underlying factors identified in the AIDS-RPS were utilized in subsequent multiple regression analyses.

Several steps were taken prior to the factor analysis being performed, beginning with data entry. After the data was entered, 89 items from the AIDS-Risk Predictor Scale and Risk Behavior Scale were reversed in order for all of the variables to be based along the same five point scale, where "1" is equal to the least amount of risk behavior and "5" is equal to the most risky behavior. The recoded items are indicated by an asterick and can be found in the appendices' A through C and in Table 1. The items on the Knowledge Scale, item numbers 1 through 45, were coded differently than the rest of the measure. A value label of "1" was given if the answer was correct and a "0" was given if the answer was incorrect. The label "3" or "Don't Know" was given a value of "2" and was coded as missing. After recoding the variables, ten items were dropped due the fact that so few respondents endorsed them. The item numbers of the ten that were dropped are: 91, 161, 164, 167, 186, 187, 188, 202, 203, and 207. These questions dealt primarily with IV drug use and anal and bisexual experiences. Next, the data for item numbers 153 through 166 was eliminated for the seventeen individuals who answered "No" to item number 192, "Have you been sexually active in the past two years." The rationale for excluding their data from these particular items was that the items were tailored specifically to those individuals who were currently sexually active. Items 153 through 166 and items 204-206 were the only items based on a six point scale. The data for those individuals who

answered "Does Not Apply," number 6 on the scale, were counted as missing and the scales were reversed accordingly, based on a five point scale where 5 is equal to the most risky behavior and 1 is equal to the least risky behavior. All items that were left blank were defined by the discrete value 9 and were counted as missing, which was computed by using the "define variable" command in SPSS.

Factor analysis of the inventory yielded six factors. None of the items from the Risk Scale or the Knowledge Scale were included in the analyses, because we wanted to eliminate any overlap between the six factors and the Risk Scale. Item loadings for each of the factors are illustrated in Table 1. Due to the length of the table summarizing these results, it is placed in Appendix F. Eigenvalues and percentage of variance explained are presented in Table 2.

Factor I, which consisted of 42 items with loadings ranging from .32 to .74, was labeled Self-Efficacy and Benefits of Practicing Safe Sex Behaviors because the items centered around practicality and a person's willingness and confidence to use condoms and other safe sex behaviors. Factor II consisted of 20 items with loadings ranging from .34 to .67. It was labeled Barriers to Practicing Safe Sex Behaviors because the majority of the items centered around negative aspects or hindrances encountered when practicing safe sex. Factor III, which consisted of 18 items, was labeled Self-Efficacy for Communication. The items primarily centered around a person's ability and/or confidence to communicate effectively with his or her partner regarding each other's past and present sex life as well as inquired about the person's ability to avoid AIDS-related risk situations. Item loadings for this factor ranged from -.30 to .62. Factor IV consisted of 15 items with loadings ranging from -.31 to -.56 and was labeled Verbal Self-Efficacy for Inquiry and

Table 2

Eigenvalues and Percentage of Variance Accounted

Factor	Eigenvalue	Percentage of Variance	Cum Percent
1	17.6	12.9	13
2	10.7	7.9	21
3	9.0	6.6	27
4	7.6	5.6	33
5	6.0	4.4	37
6	5.2	3.8	41

Information because the majority of the items focused on a person's ability to inquire about their partner(s) previous AIDS-related risk behavior and their perceptions regarding their peer's behavior and attitudes regarding safe sex. There were 13 items listed under Factor V with loadings ranging from -.35 to .50. It was labeled Perceived Vulnerability. Many of the items primarily centered around the individual's belief about their own vulnerability for contracting the AIDS virus. Factor VI consisted of 14 items and was labeled Social Perceptions, because the items largely focused on the person's evaluation of personal risk and their beliefs regarding their peers attitudes and risk behaviors.

Relationship Between the AIDS-Risk Predictor Scale and Risk Behavior

The correlation between the AIDS-RPS and the Risk Behavior Scale was significant ($r = .40$, $p = .03$). As presented below, subsequent analyses were conducted in order to identify which of the factors of the AIDS-RPS have utility in predicting risk behavior. Bivariate correlation between individual items of the new instrument and the Risk Behavior Scale were also examined (see Table 3, listed in Appendix G). The examination of individual items is important for scale development.

Multiple Regression Analyses. Two multiple regression analyses were employed to determine which of the six factors were related to risk behavior. First, a standard forward entry method was employed; variables were entered into the equation one at a time and, at each step, the predictor variables not yet in the equation were examined for entry. At each step, then, the variable with the smallest probability-of-F value was entered (provided that the value was smaller than the .05 entry criterion and that the variable passed the tolerance tests). This method was used because we were most interested in (a) determining the factors with the best predictive utility, and (b) examining the R square

after the entry of another variable that has passed the .05 entry criterion. Secondly, the entry method was employed: all variables that passed the tolerance criterion were entered. Variables were entered one at a time in order of decreasing tolerance but were treated as a single step for the computation of statistics. This method was employed because we were interested in determining the amount of variance accounted for (i.e., the total R square) with all variables in the model. Risk behavior served as the dependent variable, and each of the six factors served as the predictor variables. Factor II, labeled Barriers to Practicing Safe Sex Behaviors, entered at step 1, R = .59, R square = .34, adjusted R square = .33, F (1, 68) = 35.4, p < .001. At step 2, Factor IV (Self-Efficacy for Inquiry and Information) was entered into the model, R = .64, R square = .41, adjusted R square = .39, F (2, 67) = 23.2, p < .001. Factor I (Self-Efficacy and Benefits of Practicing Safe Sex Behaviors) was entered at step 3, R = .68, R square = .46, adjusted R square = .43, F (3, 66) = 18.5, p < .001. Factor III (Self-Efficacy for Communication) was entered at step 4, R = .70, R square = .49, adjusted R square = .46, F (4, 65) = 15.8, p < .001. Factors V and VI did not pass the .05 entry criterion. With forced entry of variables the following results were obtained: R = .70, R square = .50, adjusted R square = .45, F (6, 63) = 10.3, p < .001.

Bivariate Correlational Analyses. Bivariate correlation coefficients between factors of the AIDS-RPS and risk behavior were also examined, and the results were as follows: Factor I (Self-Efficacy and Benefits of Practicing Safe Sex Behavior) was not significantly correlated with the risk measure, r = -.19, p = .11. Factor II (Barriers to Practicing Safe Sex Behavior) was significantly correlated with the risk measure (r = .59, p < .01), suggesting that those who perceive the most barriers to practicing safe sex have a higher tendency to engage in risky behaviors. Factor III (Self-Efficacy for Communication) and

the risk measure were not significantly correlated (r = -.10, p = .42). Factor IV (Self-Efficacy for Inquiry and Information) was found to be significantly correlated with the risk measure (r = .29, p = .02), suggesting that those individuals who are less willing or able to communicate effectively with their partner(s) regarding previous risky situations (i.e. drug use and sexual experiences) are more likely to engage in AIDS-related risk behaviors. Factor V or Perceived Vulnerability was not significantly correlated with the risk measure (r = -.05, p = .69), nor was Factor VI (Social Perceptions), r = -.01, p = .96.

Relationship Between AIDS-Related Knowledge and the AIDS-Risk Predictor Scale

The AIDS-RPS and the Knowledge Scale were not significantly correlated (r = .02, p = .90). Additional analyses were conducted in order to determine which of the factors of the AIDS-RPS are related to the Knowledge Scale, and the results are presented below.

Multiple Regression Analyses. Two multiple regression analyses were employed to examine which of the six factors of the AIDS-RPS were most related to the Knowledge Scale. Results of the standard forward entry method are as follows: Factor IV (Self-Efficacy for Inquiry and Information) entered at step 1, R = .34, R square = .11, adjusted R square = .10, F (1, 67) = 8.6, p < .005. At step 2, Factor I (Self-Efficacy and Benefits of Practicing Safe Sex Behavior) was entered into the model, R = .45, R square = .20, adjusted R square = .18, F (2, 66) = 8.4, p < .001. The other variables did not pass the .05 entry criterion. With forced entry of variables the following results were obtained: R = .53, R square = .29, adjusted R square = .22, F (6, 62) = 4.1, p < .002.

Bivariate Correlational Analyses. Bivariate correlation coefficients between factors of the AIDS-RPS and Knowledge were also examined, and the results were as follows: Factor I (Self-Efficacy and Benefits of Practicing Safe Sex Behavior) was

significantly correlated with the knowledge measure (r = -.31, p = .01), suggesting that those who have a higher level of AIDS knowledge also perceive there to be more benefits to practicing safe sex behaviors. Factor II (Barriers to Practicing Safe Sex Behavior) was not significantly correlated with the AIDS Knowledge measure, r = -.20, p = .10. Factor III (Self-Efficacy for Communication) was not significantly correlated with knowledge (r = -.09, p = .48). Factor IV (Self-Efficacy for Inquiry and Information) was significantly correlated with AIDS knowledge (r = -.34, p < .001), suggesting that those individuals with a higher knowledge base regarding AIDS are more likely to inquire about their partner(s) previous AIDS-related risk behavior. Factor V (Perceived Vulnerability) was not significantly correlated with knowledge, r = -.15, p = .22, nor was Factor VI (Social Perceptions), r = -.17, p = .16.

Gender Differences

Gender differences for variables of interest were also examined. On the Knowledge Scale, there were no significant gender differences between males (M = .92, SD = .06) and females (M = .94, SD = .04), t (80) = 1.32, p = .19. Likewise, males (M = 2.5, SD = .35) and females (M = 2.4, SD = .33) did not differ on the Risk Behavior Scale, t (68) = -1.42, p = .16. Results also showed that males (M = 2.4, SD = .43) did not differ from females (M = 2.2, SD = .28) on the overall score of the AIDS-Risk Predictor Scale as a whole, t (31) = -1.99, p = .06. However, among the six factors on the AIDS-RPS, there were gender differences for three factors. On Factor I (Self-Efficacy and Benefits of Practicing Safe Sex Behavior), males (M = 2.8; SD = .56) did not significantly differ from females (M = 2.3, SD = .89), t (135) = -1.07, p = .29. Males (M = 2.6, SD = .68) also did not significantly differ from females (M = 2.5, SD = .59) on Factor II (Barriers to

Practicing Safe Sex Behaviors), t (135) = .13, p = .90. There was a significant gender difference on Factor III (Self-Efficacy for Communication) between males (M = 3.1, SD = .47) and females (M = 2.1, SD = .74), t (135) = -2.83, p = .01. This may suggest that the males may be less willing and/or able to communicate effectively with their partner(s) regarding their past sexual experiences. Males (M = 2.4, SD = .72) also differed from females (M = 1.8, SD = .72) on Factor IV (Verbal Self-Efficacy for Inquiry and Information), t (135) = -2.12, p = .04, suggesting that males may be less willing or have less confidence in their ability to inquire about their partner(s) past AIDS related risk behaviors. Results for Factor V (Perceived Vulnerability) showed that males (M = 1.8, SD = .79) and females (M = 1.5, SD = .97) did not significantly differ, t (110) = -.58, p = .56. Factor VI (Social Perceptions) showed a significant difference between males (M = 3.1, SD = .85) and females (M = 1.9, SD =.60), t (135) = -11.60, $p < .001$. This result may suggest that the males tend to value their peers' attitudes, behaviors, and beliefs regarding sexual practices and other risk behaviors to a greater degree than do females.

CHAPTER 4

DISCUSSION

Based on the original model, found in Appendix B, it was hypothesized that there would be six factors in the original scale that would significantly predict AIDS-related risk behavior. The six factors hypothesized included: Self-Efficacy Theory, the Theory of Reasoned Action (i.e. social support), and the four factors from the Health Belief Model (i.e. perceived susceptibility, perceived severity, perceived benefits, and perceived barriers). Factor analysis of the inventory yielded six factors, five of which were roughly equivalent to the dimensions of the original scale. The only factor in the original scale that was not represented in the factor analysis results was the perceived severity factor of the Health Belief Model. This was probably due to the fact that there were only two items on the scale that addressed this particular factor.

Subjects' scores taken from the AIDS Knowledge measure were high, with everyone scoring at least 90 percent or better. They scored similar to the HIV/AIDS expert population (those practicing or doing research in the area of HIV/AIDS) used in Carey and colleagues (1996) study. This showed that the subjects taking the inventory had a high AIDS-related knowledge base. The subjects taking the inventory were students of the Human Sexuality class and had received training in AIDS education earlier in the semester. Although all the subjects had a high AIDS knowledge level, some still continued to engage in risky behavior as indicated by the average ($M = 2.41$; $SD=.34$).

For example, on item number 205 ("I have said no to sex without a condom during the past year."), the average risk was 3.34 with a standard deviation of 1.39. Subjects also scored rather highly on item number 195, "In the past two years, I have discussed HIV/AIDS and other sexually transmitted diseases with my partner(s)." (M=3.22; SD=1.38).

Although an assumption underlying many AIDS prevention programs is that knowledge about AIDS will decrease the frequency with which one engages in high-risk behavior, results of the bivariate correlation in the present study showed knowledge to be a fairly poor predictor of risk behavior ($r = -.18$, $p = .30$). This is consistent with much of the previous research which has shown knowledge to be a necessary, but not sufficient variable in predicting whether one will engage in risk versus safe behavior (Basen-Engquist, 1992; Allard, 1989). Because knowledge has been identified as a poor predictor of risk behavior it is important to determine what factors are useful in predicting risk so they can be incorporated into prevention programs in the future, and that is what this study attempted to do.

The data analysis of the AIDS-Risk Predictor Scale found four of the six factors to significantly predict risk behavior, and collectively, the factors accounted for 41 percent of the variance. The strongest predictor of risk behavior was Factor II (Barriers to Practicing Safe Sex Behaviors). Self-Efficacy for Inquiry and Information, Factor IV, was also found to significantly predict risk behavior, followed by Factor I (Self-Efficacy and Benefits of Practicing Safe Sex Behaviors) and Factor III (Self-Efficacy for Communication).

Consistent with past research, the items derived from the Self-Efficacy Theory and the perceived barriers factor of the Health Belief Model were found to be significant predictors of risk behavior (Zimmerman & Olson, 1994). DiClemente and his colleagues (1992) found that among inner-city, predominately minority adolescents, those whose perceived cost of condom use was lowest, were markedly more likely to report being consistent condom users. This is consistent with this current study, which showed that those who perceived there to be more barriers to practicing safe sex were more likely to engage in risk behavior. Studies have shown that if the perception of AIDS threat is not high, strong perceived benefits of AIDS-protective behavior may still influence behavior change (Bandura, 1995). Consistent with the results of this study, past research has shown perceived benefits to be significantly correlated with risk behavior (Aspinwall et al., 1991; Hingson, 1990), especially if they outweigh the barriers.

Data analysis of this study did not find susceptibility to be a good predictor of risk behavior. This is supported by Zimmerman and Olson's (1994) study which showed perceived susceptibility to be a fairly poor predictor of risk behavior, especially when the individual perceived there to be many barriers to engaging in safe practices. Perceived severity of HIV/AIDS was not found to be a significant predictor of risk behavior, perhaps this is because everyone is well aware of the seriousness of the AIDS virus. This is supported by past research which has shown this factor to have little predictive value in predicting AIDS-related risk behaviors (Hays, Kegeles, & Coates, 1990). Hays and colleagues (1990) study showed that fear of rejection and loss of love from a significant other outweighed the fear of infection.

Furthermore, consistent with Terry, Galligan, and Conway's (1993) research, this study showed that those individuals who feel most uncomfortable communicating with their partner(s) about previous risk behaviors will be more likely to engage in risk behavior themselves, this was especially true for males. Moreover, those individuals who see themselves as less vulnerable, have friends who engage in risk behavior, and who also place a great deal of importance on peer popularity will be more likely to engage in AIDS-related risk behaviors than those without these same attitudes and beliefs. The data analyses of this study showed that males tend to place more importance on their peers beliefs and attitudes and on peer popularity, thus putting them more at risk. The males in this study did not, however differ from the females in terms of their overall level of risk behavior.

Forty-three of the 185 items from the AIDS-RPS were significant when correlated with the risk measure. Significant items were spread out fairly evenly throughout the six factors, with Factor I (Self-Efficacy and Benefits of Practicing Safe Sex Behaviors) carrying the greatest amount of significant items with 13, followed by Factor III (Self-Efficacy for Communication) with 12 significant items. Factors V (Perceived Vulnerability) had six significant items, and VI (Social Perceptions) had 5 significant items. Factors II (Barriers to Practicing Safe Sex Behaviors) and IV (Verbal Self-Efficacy for Inquiry and Information) followed with 4 and 3 significant items, respectively. Approximately half of the significant items focused on issues of self-efficacy and an individual's ability to effectively practice safe sex behaviors. Self-Efficacy was a variable that was found imbedded throughout all of the factors and was found to significantly predict risk behavior. The other half of the significant items centered primarily around a

person's perceived vulnerability, perceived benefits, perceived barriers, and a person's belief about the seriousness of the HIV/AIDS virus.

The role of perceived self-efficacy in the adoption and maintenance of self-protective behavior is corroborated in many lines of research, in addition to the one presented in this study. Bandura (1995) stated that people's beliefs that they can motivate themselves and regulate their own behavior plays a crucial role in whether they even consider altering habits detrimental to health. Even though individuals acknowledge that safer sex practices reduce risk of infection, they do not adopt them if they believe they cannot exercise control in sexual relations (Denson, Voight, & Eisenman, 1994). Consistent with this study, past research has also shown that self-efficacy and social support are directly and indirectly related to risk-reducing behavior and intentions (Basen-Engquist, 1992).

The AIDS-Risk Predictor Scale seemed to serve as a mediator between the Knowledge Scale and the Risk Behavior Scale. The two latter scales are not correlated, but the AIDS-Risk Predictor Scale is somewhat related to both the Knowledge and the Risk Behavior Scales. Four of the factors in AIDS-Risk Predictor Scale were correlated with the Risk Behavior Scale and collectively, the factors accounted for 41 percent of the variance. Two of the factors were highly correlated with the Knowledge Scale and when combined, the factors accounted for 53 percent of the variance.

There are a few limitations associated with this study, with the main limitation being the sample used. In the future, it may be beneficial to use a more general sample, with subjects who are more "at risk." It would also be interesting to see how younger adolescent's responses may differ compared to the young adults used in this study. Furthermore, for the purposes of this study, some items (e.g., IV drug use,

homosexual/bisexual experiences) were dropped because few people endorsed them. However, if the instrument is to be validated with other (more at risk) populations, these items should probably be retained in order to determine their utility in predicting risk. Furthermore, in the future when developing the scale to be used with other populations, it may be useful and efficient to use only the forty-three items from the AIDS-Risk Predictor Scale that the analyses found to be significant.

A practical implication of this study is its importance in the development of future intervention programs. Early intervention programs up until this point have been primarily information based, and this study, as well as others, has shown that knowledge is a poor predictor of risk. In addition to suggesting that knowledge is not a good predictor of risk behavior, the results of this study indicate that certain factors should be stressed in intervention programs. The results suggest that Factor IV (Self-Efficacy for Inquiry and Information), Factor I (Self-Efficacy and Benefits of Practicing Safe Sex Behavior), Factor II (Barriers of Practicing Safe Sex), and Factor III (Self-Efficacy for Communication) should be addressed in intervention programs, as these factors were found to be the best at predicting risk behavior. Interventions that increase individuals' self-efficacy about practicing risk reduction should include mastery experiences, such as role-playing situations in which one must negotiate safer sex with a partner would be especially valuable. Assertiveness training, and role modeling, or the opportunity to observe others practice or perform the behavior also increases efficacy.

SUMMARY

The threat of AIDS is spreading at an alarming rate and the adolescent and young adult population appear to be at the greatest risk. In order to prevent the continue spread of AIDS, it will be helpful to predict behaviors that will increase an individual's susceptibility. In addition to developing a valid, reliable, and comprehensive psychometric instrument, which incorporated three theoretical models in attempt to predict risk behavior, this study also attempted to determine which of the factors incorporated in the instrument had the best predictive ability. The new psychometric instrument developed in this study (AIDS-RPS) was highly correlated with the Risk Behavior Scale. Results showed that perceived barriers, a factor of the Health Belief Model, was the best predictor of AIDS-related risk behavior. Items derived from Self-Efficacy and items relating to perceived benefits of practicing safe sex behavior, another factor of the Health Belief Model, were also significant in predicting risk behavior. Early AIDS prevention research was primarily information based. This study, however, as well as many others have showed that knowledge is a poor predictor of risk behavior. Because knowledge is a poor predictor of AIDS-related risk behavior, future intervention programs should incorporate some of these factors which have been found to have better predictive validity. Because a cure for AIDS has not yet been discovered, prevention of AIDS is the only means of reducing the spread of the disease. By focusing on some of these other factors, such as the Self-Efficacy Theory and various factors of the Health Belief Model, we may be able to lower ones susceptibility to the deadly virus.

APPENDIX A
HIV KNOWLEDGE QUESIONNAIRE

For questions 1 through 45 use the following 3 point scale and anchors:

1	2	3
True	**False**	**Don't Know**

1. HIV and AIDS are the same thing.
2. There is a cure for AIDS.
3. A person can get HIV from a toilet seat.
4. Coughing and sneezing DO NOT spread HIV.
5. HIV can be spread by mosquitoes.
6. AIDS is the cause of HIV.
7. A person can get HIV by sharing a glass of water with someone who has HIV.
8. HIV is killed by bleach.
9. It is possible to get HIV when a person gets a tattoo.
10. A pregnant woman with HIV can give the virus to her unborn baby.
11. Pulling out the penis before a man climaxes/cums keeps a woman from getting HIV during sex.
12. A woman can get HIV if she has anal sex with a man.
13. Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV.
14. Eating healthy foods can keep a person from getting HIV.
15. All pregnant women infected with HIV will have babies born with AIDS.

For questions 16 through 45 use the following 3 point scale and anchors:

1	2	3
True	**False**	**Don't Know**

16. Using a latex condom or rubber can lower a person's chance of getting HIV

17. A person with HIV can look and feel healthy.

18. People who have been infected with HIV quickly show serious signs of being infected.

19. A person can be infected with HIV for 5 years or more without getting AIDS.

20. There is a vaccine that can stop adults from getting HIV.

21. Some drugs have been made for the treatment of AIDS.

22. Women are always tested for HIV during their pap smears.

23. A person cannot get HIV by having oral sex, mouth-to-penis, with a man who has HIV.

24. A person can get HIV even if she or he has sex with another person only one time.

25. Using a lambskin condom or rubber is the best protection against HIV.

26. People are likely to get HIV by deep kissing, putting their tongue in their partner's mouth, if their partner has HIV.

27. A person can get HIV by giving blood.

28. A woman cannot get HIV if she has sex during her period.

29. You can usually tell if someone has HIV by looking at them.

30. There is a female condom that can help decrease a woman's chance of getting HIV.

31. A natural skin condom works better against HIV than does a latex condom.

32. A person will NOT get HIV if she or he is taking antibiotics.

33. Having sex with more than one partner can increase a person's chance of becoming infected with HIV.

For questions 34 through 45 use the following 3 point scale and anchors:

1	2	3
True	**False**	**Don't Know**

34. Taking a test for HIV one week after having sex will tell a person if she or he has HIV.

35. A person can get HIV by sitting in a hot tub or a swimming pool with a person who has HIV.

36. A person can get HIV through contact with saliva, tears, sweat, or urine.

37. A person can get HIV from a woman's vaginal secretions/wetness from her vagina.

38. A person can get HIV if having oral sex, mouth on vagina, with a woman.

39. If a person tests positive for HIV, then the test site will have to tell all of his or her partners.

40. Using Vaseline or baby oil with condoms lowers the chance of getting HIV.

41. Washing drug use equipment/"works" with cold water kills HIV.

42. A woman can get HIV if she has vaginal sex with a man who has HIV.

43. Athletes who share needles when using steroids can get HIV from the needles.

44. Douching after sex will keep a woman from getting HIV.

45. Taking vitamins keeps a person from getting HIV.

APPENDIX B
AIDS-RELATED RISK PREDICTOR SCALE

PERCEIVED SUSCEPTIBILITY

For item numbers 46 through 54 use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree nor Disagree	Weakly Agree	Strongly Agree

[b]46. Even if I don't protect myself there is practically no chance I could get HIV/AIDS.

*[b]47. If I don't protect myself, there is a chance I could get HIV/AIDS.

*[c]48. My partner(s) is (are) not the "type" to have HIV/AIDS.

[c]49. I am not concerned about acquiring HIV/AIDS because I am "picky" about partners I have sex with.

[c]50. I do not view myself as being at-risk for acquiring HIV/AIDS.

[c]51. My partner(s) is (are) not the "type" to have a sexually transmitted disease because I am "picky" about the partners I have sex with.

[c]52. I do not view myself at risk for acquiring a sexually transmitted disease.

[c]53. It is possible that I am infected with HIV/AIDS even though I have not been diagnosed with it.

[c]54. It is likely that I will acquire HIV/AIDS within the next five years.

55. Currently, there are medications available that can eliminate the chance of death from HIV/AIDS.

For Items 56 through 58 use the following 5 point scale and anchors:

1	2	3	4	5
No Chance	Very Little Chance	Slight Chance	Strong Chance	Very Strong Chance

[d]56. I think that most of my friends have the following chance of getting HIV/AIDS.

[d]57. I think that I myself have the following chance of getting HIV/AIDS.

*[e]58. If you do not practice safer sex, what chance would you have to catch a sexually transmitted disease other than HIV/AIDS?

PERCEIVED SEVERITY

For items 59 through 126 use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree nor Disagree	Weakly Agree	Strongly Agree

*[f]59. I think that HIV/AIDS is a serious risk and poses a threat to human health.

[f]60. In comparison with other health problems in my opinion HIV/AIDS is only a small one.

PERCEIVED BARRIERS

[b]61. Using a condom would take all the fun out of sex for me.

[b]62. I would be afraid that my sex partner would be angry or upset if I asked him or her to use a condom.

[b]63. I would feel silly asking my partner to use a condom.

[b]64. I would be afraid that my sex partner would think I was infected with HIV/AIDS if I asked him or her to use a condom.

[c]65. A negative aspect of condoms is that they reduce the spontaneity of sex.

[c]66. A negative aspect of condoms is that they are physically uncomfortable.

[c]67. A negative aspect of condoms is that they decrease sensitivity.

[c]68. A negative aspect of condoms is that they make sex feel different.

For items 69 through 126 use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree nor Disagree	Weakly Agree	Strongly Agree

c69. A negative aspect of condoms is that they are embarrassing to purchase.

c70. A negative aspect of condom is that they are time consuming to put on and take off.

c71. A negative aspect of condoms is that they are difficult to dispose of.

c72. A negative aspect of condoms is that they are difficult to use properly.

c73. A negative aspect of condoms is that they do not include clear instructions about how to use properly.

c74. A negative aspect of condoms is that they don't fit properly.

e75. Sometimes when you try to prevent problems like HIV/AIDS and sexually transmitted diseases, it is more trouble than it is worth.

e76. Having condoms with you make it seem that you are planning to have intercourse.

e77. If I wanted to use condoms, I would know where to get them.

e78. I have no religious or moral objections to using condoms.

e79. The use of condoms makes sexual intercourse seem dirty.

e80. The whole idea of safer sex is embarrassing to me.

*e81. Having sex with a condom is just as satisfying as having sex without a condom.

e82. It can sometimes be important to show your love and trust by not using a condom and taking a chance on getting HIV/AIDS or another sexually transmitted disease.

*e83. May partner(s) has no objections to using a condom.

*e84. Sexual activities other than sexual intercourse can be just as satisfying as intercourse.

For items 85 through 126 use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree nor Disagree	Weakly Agree	Strongly Agree

[e]85. Condoms are unpleasant to use.

[d]86. Condoms reduce sexual pleasure.

[d]87. Condoms ruin the fun of the moment, because you have to stop sex to put them on.

[d]88. I don't think about using condoms when I am sexually turned on.

89. I feel that the "cost" of limiting the number of partners I have sexual intercourse with far outweigh the "benefits" of practicing safe sex.

90. It is a great inconvenience and much too troublesome to obtain information regarding a potential partner's sexual background.

Are you an IV Drug User? If you are please answer question number 91; if you are not, you may skip to question number 92.

91. It is not worth it (i.e. too troublesome, expensive) to use clean needles each time I inject.

PERCEIVED BENEFITS

*92. Remaining monogamous reduces the risk of contracting HIV/AIDS.

*93. Sharing needles for IV drugs increases a persons risk for contracting HIV/AIDS.

A benefit to using male latex condoms is that they:

*[c]94. Reduce the risk of contracting HIV/AIDS.

*[c]95. Are reliable.

*[c]96. Are easy to obtain.

*[c]97. Are easy to use.

*[c]98. Are inexpensive.

For the following section, items 99 through 118, use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree nor Disagree	Weakly Agree	Strongly Agree

*c99. Offer protection against pregnancy.

*c100. Reduce the risk of contracting a sexually transmitted disease (STD).

*c101. Reduce the risk of contracting HIV/AIDS.

*c102. Have no side effects like some contraceptive methods do.

*c103. Are available in different varieties (textures, colors, etc.)

*c104. Are not time consuming to use.

*c105. Are easily disposed of.

*c106. Represent sexual responsibility.

*c107. Can be obtained by either men or women.

A benefit to using male latex condoms is that they:

*c108. Are reliable

*c109. Do not require a doctor visit and prescription.

*c110. Can be use as part of foreplay.

*c111. Increase lubrication

*c112. Decrease the fear/nervousness of pregnancy.

*c113. Decrease the fear/nervousness of contracting a sexually transmitted disease (STD).

*c114. Are an option for females who can not use the pill.

For the following section, items 115 through 126, use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree nor Disagree	Weakly Agree	Strongly Agree

*[c]115. Prolong sexual interaction.

*[c]116. Increase stimulation.

*[c]117. Are fun.

*[c]118. Require the male to take on some responsibility, rather than always the female.

THEORY OF REASONED ACTION

Item numbers 119-120 pertain to your perceptions of the University of Dayton student IV drug users.

*119. Many students are trying to protect themselves these days by using clean IV drug needles.

*120. HIV/AIDS has made many students in my school a lot more cautious about sharing IV drug needles.

Item numbers 121-126 pertain to your perceptions of sexually active UD students.

[b]121. Very few students on campus are doing anything differently because of HIV/AIDS.

*[b]122. Many students are trying to protect themselves these days by using condoms.

*[b]123. Many men on campus keep condoms available.

*[b]124. Many of the people I know have made changes in their lives to protect themselves against HIV/AIDS.

*[b]125. HIV/AIDS has made many students on campus a lot more careful about who they have sex with.

*[b]126. Many women on campus keep condoms available.

For Items 127 through 135 use the following 5 point scale and anchors:

1	2	3	4	5
Not at All Important	A little Important	Somewhat Important	Important	Very Important

How important do you think it is for you to do each of the following?

*d127. Have my parents approve of what I do.

d128. Be popular with the opposite sex.

*d129. Make my own decisions without help from others.

d130. Have my friends approve of what I do.

*d131. Do what my parents want me to do.

d132. Talk to my friends before I make decisions about sex, drugs, or alcohol.

d133. Do what my friends want me to do.

d134. Have my friends think that I am experienced sexually.

d135. Be like my friends.

SELF-EFFICACY

For the following section, items 136 through 152, use the following 5 point scale and anchors.

1	2	3	4	5
Very Difficult	Somewhat Difficult	Neither Difficult Nor Easy	Somewhat Easy	Very Easy

How difficult would it be for you to do each of the following with a new sex partner?

*b136. Ask how many sex partners she or he has had.

*b137. Ask if he or she has ever had sex with another person of his/her own gender.

*b138. Ask if he or she has ever shared IV needles.

*b139. Ask if he or she has been exposed to HIV.

*b140. Buy condoms.

For the following section, items 141 through 152, use the following 5 point scale and anchors.

1	2	3	4	5
Very Difficult	Somewhat Difficult	Neither Difficult Nor Easy	Somewhat Easy	Very Easy

How <u>difficult</u> would it be for you to do each of the following with a new sex partner?

*b141. Discuss using a condom before sex.

*b142. Use a condom.

*b143. Refuse to have sex with the person if he or she won't use a condom.

*b144. If no condom is available, find another pleasurable activity (such as mutual masturbation) where a condom isn't needed.

*b145. If no condom is available, stop sexual activity while you or your partner go to get a condom.

*d146. Use a condom every time you had sex.

*d147. Say no to sex without a condom.

*d148. Leave a situation you think may be leading to unsafe sex (such as sex without a condom).

*d149. Discuss using a condom before having sex with someone new.

*d150. Avoid using drugs or alcohol if you think you might be having sex with someone new.

*d151. Find another sexual behavior where a condom isn't needed, if you had sex with someone and you didn't have any condoms.

*d152. Stop while you or your partner gets a condom, if you had sex with someone new and you didn't have any condoms.

For items 153 through 167 use the following 5 point scale and anchors:

1	2	3	4	5	6
Never	Rarely	Sometimes	Often	Always	Does Not Apply

*g153. I ask my partner(s) about the number of prior partners.

*g154. I ask my partner(s) to use a condom.

g155. I drink alcohol to enjoy sex.

*g156. I tell my partner about the number of prior partners I have had.

*g157. I use a condom with a new partner.

g158. I need drugs to enjoy sex.

*g159. I ask my partner(s) if he/she has ever engaged in anal sex.

*g160. I buy or get condoms.

*g161. I use a new needle for IV drugs.

*g162. I carry condoms.

g163. I average more than one partner per week.

*g164. I share needles for IV drugs.

*g165. I ask my partner about prior homosexual events.

*g166. I ask my partner if he/she has ever had sex with a prostitute.

*g167. I tell my partner about any bisexual experience I have had.

For items 168 through 172 use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree Nor Disagree	Weakly Agree	Strongly Agree

*f168. It's easy for me to refuse sexual techniques that I don't want to use.

f169. It's difficult for me to limit sex with someone to safe-sex techniques.

f170. It's difficult for me to think about contraception or protection from HIV/AIDS after I've been drinking.

For items 171 through 172 use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree Nor Disagree	Weakly Agree	Strongly Agree

[f]171. I have difficulties talking with a partner about contraception techniques.

[f]172. I have difficulties conveying my sexual wishes to a partner.

For items 173 through 175, how <u>well</u> you could do these things if you had sex, using the following 5 point scale and anchors:

1	2	3	4	5
very badly	somewhat badly	neither well nor badly	somewhat well	very well

*[d]173. Discuss safer sex (such as always using a condom) with a partner (for example, a boyfriend or girlfriend) before having sex with them.

*[d]174. Convince a partner to use a condom.

*[d]175. Refuse to have sex without a condom.

For items 176 through 185, use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree Nor Disagree	Weakly Agree	Strongly Agree

*[c]176. I feel confident in my ability to put on a condom by myself or my partner.

[c]177. I would feel embarrassed to put a condom on myself or my partner.

*[c]178. I feel confident that I could use a condom successfully.

*[c]179. If I were to suggest using a condom to a partner, I would feel afraid that he or she would reject me.

[c]180. If I were unsure of my partner's feelings about using condoms, I would not suggest using one.

[c]181. I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I've had a homosexual experience.

For items 182 through 185, use the following 5 point scale and anchors:

1	2	3	4	5
Strongly Disagree	Weakly Disagree	Neither Agree Nor Disagree	Weakly Agree	Strongly Agree

[c]182. 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.

*[c]183. I feel confident that I would remember to use a condom even after I have been drinking.

*[c]184. I feel confident that I would remember to use a condom even if I were high.

*[c]185. I feel confident that I could stop to put a condom on myself or my partner even in the heat of passion.

APPENDIX C
BEHAVIORAL RISK FACTORS

Please answer the following questions. Think about your answers carefully and be completely honest. Some of the questions are about sensitive topics, but remember that your answers are completely anonymous and confidential.

e186. Would you say that you are:

1	2	3
Heterosexual	Bisexual	Homosexual

For items 187 through 188, use the following 2 point scale and anchors:

1	2
No	Yes

e187. Have you ever used intravenous drugs?

188. If the answer was Yes to question 2, have you ever shared needles while using intravenous drugs?

e189. How many sexual partner(s) did you know for less than one week when you had sex with them?

1	2	3	4	5
None	one partner	2-4 partners	5-10 partners	More than 10

e190. <u>At this time</u> do you have a monogamous relationship (one in which neither of you have sex with anyone else) with a sexual partner that has lasted for at least one month?

1	2
Yes	No

If you answered No to question 190, please skip question to question 192.

*e191. How many months have you been in a monogamous relationship?

1	2	3	4	5
1-2	3-5	6-12	13-18	more than 18

*e192. Have you been sexually active in the past two years?

1	2
Yes	No

If you answered No to question 192, you may skip to question 200. If you answered Yes, please answer the remaining questions.

e193. How many sexual partner(s) have you had in the past two years?

1	2	3	4	5
None	one partner	2-4 partners	5-10 partners	More than 10

For items 194 through 196 please use the following 5 point scale and anchors:

1	2	3	4	5
Never	Rarely	Occasionally	Fairly Often	Very Often

*e194. In the past two years, my partner(s) and I have discussed our sexual history and past partner(s).

*e195. In the past two years, I have discussed HIV/AIDS and other sexually transmitted diseases with my sexual partner(s).

*e196. In the past two years, my partner(s) and I used a condom when we had sex.

If you answered Never to question 196 then skip to question 200. If you answered yes, stating that you have used a condom in the past two years, then please answer all of the remaining items.

For items 197 through 199 please use the following 5 point scale and anchors:

1	2	3	4	5
Never	Rarely	Almost Every Time	Every Time	Haven't used a condom

e197. When we have used condoms in the past two years, my partner(s) and I put the condom in place before making contact with each other's genital parts.

e198. When we have used a condom in the past two years, my partner(s) and I put the condom on after intercourse has begun but before ejaculation.

e199. When my partner(s) and I have used condoms in the past two years. I/my partner(s) has withdrawn the penis immediately after ejaculation and before the penis becomes soft.

---

*d200. Do you have any condoms (either with you or anywhere else)?

1	2	3	4
No	Yes, I have 1 condom.	Yes, I have 2 or 3	Yes, I have 4 or more

[d]201. How many times in your life have you had a sexual experience with someone of your own sex?

1	2	3	4	5
Never	Once	2-5 times	6-10 times	11 or more times

[d]202. Which of these is true for you? (Mark one answer).

1	2	3
I am sexually attracted only to males	I am sexually attracted both to males and females	I am sexually attracted only to females

203. Which of these is true for you?

1	2
I am a Female	I am a Male

If you have had sex during the past year please answer the remainder of the questions using the following 5 point scale and anchors; if you have not had sex within the past year you do not have to answer the remaining questions.

1	2	3	4	5	6
Never	Rarely	Sometimes	Often	Always	Does Not Apply

[d]204. I drank alcohol before having sex during the past year.

*[d]205. I have said no to sex without a condom during the past year.

*[d]206. I and my partner(s) have used condoms when we have had vaginal sex (the penis is put into the vagina) during the past year.

*[d]207. I and my partner(s) have used condoms when we have had anal sex (the penis is inserted into the rectum) during the past year.

---

[a] Items are taken from Carey, Morrison-Beedy, & Johnson

[b] Items are taken from O'Leary et al.

[c] Items are taken from Mahoney et al.

[d] Items are taken from Zimmerman & Olson

[e] Items are taken from Basen-Engquist

[f] Items are taken from Bengel et al.

[g] Items are taken from Denson et al.

* Indicates that the scales were reversed when scored

APPENDIX D
DEMOGRAPHIC QUESTIONNAIRE

208. Your Age:

1	2	3	4	5
17-18	19-20	21-22	23-24	25 or Older

209. Your Class:

1	2	3	4
First Year Student	Sophomore	Junior	Senior

210. Ethnic group:

1	2	3	4	5	6
Anglo or White	Hispanic	Black	American Indian or Alaskan Native	Asian or Pacific Islander	Other

211. Gender:

1	2
Male	Female

212. Your Religious Affiliation:

1	2	3	4	5	6
Roman Catholic	Protestant	Jewish	Other Christian	Other	None

APPENDIX E

Informed Consent Form

You are being asked to participate in a study that examines AIDS-related risk behavior in college undergraduates. As a participant in the study, you will be asked to fill out a questionnaire that will take approximately 25-30 minutes to complete. The questionnaire will address personal issues regarding past and current sexual and drug history. It is important to the study that you answer these questions as openly and honestly as you can, remembering that all responses will remain completely confidential.

Participation in this study is on a voluntary basis. Therefore, you have the right to withdraw from the study at any time without penalty.

Your identity will be treated with the professional standards of confidentiality. For instance, all information will be stored in a locked filing cabinet and identification numbers will be used rather than names.

If you have further questions or concerns, please contact Rebecca K. Flynn, the investigator (298-4661) or her academic advisor, Roger N. Reeb, Ph.D. (229-2395).

I have read the above information carefully and understand it completely. I am willing to participate in the study.

_____ _____

Subject Signature Date

_____ _____

Witness Signature Date

APPENDIX F

Debriefing Form

Thank you for your participation in this study. In this study, we were attempting to construct a valid questionnaire to assess a person's AIDS-related risk behavior. We were also interested in determining what social-psychological factors affects a persons risk behavior, and whether having an adequate knowledge of AIDS plays a factor in determining AIDS-related risk behavior. If you would like to know more about research that has been done in this area, listed below are the references from which the majority of the items on the questionnaire were derived. If you have any questions or concerns about the study, feel free to call Rebecca Flynn (principal investigator) at 298-4661, or Roger Reeb, Ph.D. (Advisor) at 229-2395. Thank you for your time.

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Basen-Engquist, K. (1992). Psychosocial predictors of "safer sex" behaviors in young adults. AIDS Education and Prevention, 4, 120-134.

Bengel, J., Belz-Merk, M., & Farin, E. (1996). The role of risk perception and efficacy cognition's in the prediction of HIV-related preventive behavior and condom use. Psychology and Health, 11, 505-525.

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Denson, D., Voight, R., & Eisenman, R. (1994). Self-efficacy and aids prevention for university students. International Journal of Adolescence and Youth, 5, 105-113.

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

O'Leary, A., Goodhart, F., Jemmott, L., & Boccher-Lattimore, D. (1992). Predictors of safer sex on the college campus: a social cognitive theory analysis. College Health, 40, 254-262.

APPENDIX G

Table 1

Factor Analysis Results

	Factors					
	1	2	3	4	5	6
*c106. A benefit to using male condoms is that they represent sexual responsibility.	**.74**	-.19	-.19	-.13	-.02	.03
*c107. A benefit to using male condoms is that they can be obtained by either men or women.	**.74**	-.22	-.28	-.05	-.01	-.03
*c105. A benefit to using male condoms is that they are easily disposed of.	**.72**	-.03	-.13	-.11	.05	.04
*c114. A benefit to using male condoms is that they are an option for females who can not use the pill.	**.70**	-.41	-.25	.08	-.01	-.15
*c109. A benefit to using male condoms is that they do not require a doctor visit and prescription.	**.70**	-.44	-.18	-.07	.10	-.17
*c108. A benefit to using male condoms is that they are reliable.	**.69**	-.28	-.19	.19	.01	-.14
*c96. A benefit to using male condoms is that they are easy to obtain.	**.67**	-.34	-.02	.02	-.33	.10
*c112. A benefit to using male condoms is that they decrease the fear/ nervousness of pregnancy.	**.66**	-.35	-.15	-.22	.03	-.10

	Factors					
	1	2	3	4	5	6
*c113. A benefit to using male condoms is that they decrease the fear/ nervousness of contracting a sexually transmitted disease (STD).	**.65**	-.42	-.24	-.17	.01	-.06
*c99. A benefit to using male condoms is that they offer protection against pregnancy.	**.64**	-.38	-.04	-.06	-.34	.04
*c100. A benefit to using male condoms is that they reduce the risk of contracting a sexually transmitted disease (STD).	**.62**	-.33	-.09	-.06	-.37	.04
*c101. A benefit to using male condoms is that they reduce the risk of contracting HIV/AIDS.	**.62**	-.41	-.35	.35	-.02	-.18
*c102. A benefit to using male condoms is that they have no side effects like some contraceptive methods do.	**.62**	-.41	-.09	-.20	-.09	-.01
*c94. A benefit to using male condoms is that they reduce the risk of contracting HIV/AIDS.	**.61**	-.37	-.09	-.00	-.38	.08
*c95. A benefit to using male condoms is that they are reliable.	**.60**	-.36	.01	-.07	-.27	.06
*c104. A benefit to using male condoms is that they are not time consuming to use.	**.60**	.18	-.08	-.31	.17	-.02
*d151. How <u>hard</u> would it be for you to Find another sexual behavior where a condom isn't needed, if you had sex with someone and you didn't have any condoms?	**.59**	.09	.33	-.15	.32	-.05
*c97. A benefit to using male condoms is that they are easy to use.	**.58**	-.26	-.08	-.02	-.35	.06

		Factors					
		1	2	3	4	5	6
*c103.	A benefit to using male condoms is that they are available in different varieties (textures, colors, etc.).	**.56**	-.14	-.13	-.13	.16	.05
*b141.	How hard would it be for you to discuss using a condom before sex?	**.55**	-.07	.01	**.55**	.22	.07
*c118.	A benefit to using male condoms is that they require the male to take on some responsibility, rather than always the female.	**.55**	-.06	-.02	-.22	-.15	-.25
*b142.	How hard would it be for you to use a condom with a new sex partner?	**.54**	.05	-.01	.34	.45	-.02
*f59.	I think that AIDS is a serious risk and poses a threat to human health.	**-.52**	.21	.11	.10	-.06	.08
*b143.	How hard would it be for you to refuse to have sex with the person if he or she won't use a condom?	**.51**	.17	.33	.30	.27	-.07
*c111.	A benefit to using male condoms is that they increase lubrication.	**.50**	-.08	.03	-.30	.03	-.02
*c110.	A benefit to using male condoms is that they can be use as part of foreplay.	**.45**	-.12	-.16	-.25	.05	.08
b63.	I would feel silly asking my partner to use a condom.	**.44**	.24	-.35	.27	-.19	.25
*c115.	A benefit to using male condoms is that they prolong sexual interaction.	**.44**	-.19	-.24	-.15	.07	.04
c72.	A negative aspect of condoms is that they are difficult to use properly.	**.43**	.30	**-.43**	.07	-.14	.40

	Factors					
	1	2	3	4	5	6
*d174. If you had sex, how well could you convince a partner to use a condom?	**.43**	.05	.33	.07	.15	.20
*d173. If you had sex, how well could you discuss safer sex (such as always using a condom) with a partner (for example, a boyfriend or girlfriend) before having sex with them?	**.42**	-.01	.03	.41	.36	-.18
b62. I would be afraid that my sex partner would be angry or upset if I asked him or her to use a condom.	**.41**	.25	-.26	.12	-.16	.21
c98. A benefit to using male condoms is that they are inexpensive.	**.40**	-.15	.13	-.08	.23	-.08
*c183. I feel confident that I would remember to use a condom even after I have been drinking.	**.38**	.17	.17	-.08	.08	-.06
b64. I would be afraid that my sex partner would think I was infected with HIV if I asked him or her to use a condom.	**.37**	.20	-.35	.01	-.29	.28
*e81. Having sex with a condom is just as satisfying as having sex without a condom.	**.37**	.32	-.00	-.25	.07	-.11
*b144. With a new sex partner, how hard would it be for you, if no condom is available, find another pleasurable activity (such as mutual masturbation) where a condom isn't needed?	**.35**	-.04	.13	.22	.30	-.10
*b123. Many of the people I know have made changes in their lives to protect themselves against AIDS.	**.34**	-.29	.04	-.27	.23	.11

	Factors					
	1	2	3	4	5	6
*c178. I feel confident that I could use a condom successfully.	**.34**	-.15	.05	.14	.05	.18
c71. A negative aspect of condoms is that they are difficult to dispose of.	**.33**	.26	-.26	.05	-.22	.27
*e83. May partner(s) has no objections to using a condom.	**.33**	-.04	.12	-.21	.25	-.05
*b120. Many students are trying to protect themselves these days by using condoms.	**.32**	-.20	-.24	-.19	.07	-.22
e85. Condoms are unpleasant to use.	.30	**.67**	.05	-.19	-.17	-.06
c68. A negative aspect of condoms is that they make sex feel different.	.15	**.65**	.18	-.18	-.07	.04
b61. Using a condom would take all the fun out of sex for me.	.32	**.63**	.09	-.23	.00	-.06
d86. Condoms reduce sexual pleasure.	.24	**.62**	-.04	-.20	-.14	-.11
c67. A negative aspect of condoms is that they decrease sensitivity.	.23	**.61**	.16	-.28	-.14	-.03
d88. I don't think about using condoms when I am sexually turned on.	.27	**.59**	.10	-.10	.13	.06
d87. Condoms ruin the fun of the moment, because you have to stop sex to put them on.	.31	**.58**	-.05	-.18	.06	.15
e79. The use of condoms makes sexual intercourse seem dirty.	.29	**.55**	-.14	.14	-.04	.10

		Factors					
		1	2	3	4	5	6
[e]75.	Sometimes when you try to prevent problems like AIDS and sexually transmitted diseases, it is more trouble than it is worth.	.21	**.54**	-.31	.06	-.15	-.06
[c]66.	A negative aspect of condoms is that they are physically uncomfortable.	.23	**.53**	.18	-.27	-.33	.01
[c]70.	A negative aspect of condom is that they are time consuming to put on and take off.	.29	**.52**	-.05	.00	-.08	.17
[c]65.	A negative aspect of condoms is that they reduce the spontaneity of sex.	.29	**.50**	.17	-.26	-.19	.21
*[c]185.	I feel confident that I could stop to put a condom on myself or my partner even in the heat of passion.	.41	**.48**	.23	-.05	.11	-.00
[e]76.	Having condoms with you make it seem that you are planning to have intercourse.	.22	**.43**	.00	-.17	-.13	.12
90.	It is a great inconvenience and much to troublesome to obtain information regarding a potential partners sexual background.	.37	**.40**	.21	.08	-.27	.06
*[b]122.	Many men on campus keep condoms available.	.31	**-.40**	-.04	-.31	.26	.14
[e]82.	It can sometimes be important to show your love and trust by not using a condom and taking a chance on getting AIDS or another sexually transmitted disease.	.33	**.37**	-.27	.13	-.07	.14

		Factors					
		1	2	3	4	5	6
c74.	A negative aspect of condoms is that they don't fit properly.	.21	**.37**	-.16	-.09	-.14	.28
f169.	It's difficult for me to limit sex with someone to safe-sex techniques.	.16	**.36**	.02	.23	-.08	-.22
89.	I feel that the "cost" of limiting the number of partners I have sexual intercourse with far outweigh the "benefits" of practicing safe sex.	.17	**.34**	-.22	-.11	-.10	.06
*g166.	I ask my partner if he/she has ever had sex with a prostitute.	-.05	-.35	**.62**	.14	-.13	-.04
*d152.	How hard would it be for you to stop while you or your partner gets a condom, if you had sex with someone new and you didn't have any condoms?	.39	.15	**.57**	.08	.22	.02
*d148.	How hard would it be for you to leave a situation you think may be leading to unsafe sex (such as sex without a condom).	.35	.29	**.56**	-.11	.04	-.01
*g156.	I tell my partner about the number of prior partners I have had.	.41	-.16	**.56**	.24	-.10	-.04
*d149.	How hard would it be for you to discuss using a condom before having sex with someone new?	.46	.10	**.54**	.25	.06	.20
*g165.	I ask my partner about prior homosexual events.	.05	-.23	**.51**	.22	.06	-.15
*d150.	How hard would it be for you to avoid using drugs or alcohol if you think you might be having sex with someone new?	.22	.07	**.50**	.01	.00	.15

	Factors					
	1	2	3	4	5	6
*d147. How hard would it be for you to say no to sex without a condom?	.39	.36	**.49**	-.06	.20	-.13
*g153. I ask my partner(s) about the number of prior partners.	.37	-.16	**.49**	.41	-.15	-.03
*d146. How hard would it be for you to use a condom every time you had sex with a new partner?	.35	.35	**.43**	-.24	.20	-.10
*g157. I use a condom with a new partner.	.38	.24	**.44**	-.10	.26	-.29
f171. I have difficulties talking with a partner about contraception techniques.	.26	-.08	**.44**	.35	**-.07**	.18
*g159. I ask my partner(s) if he/she has ever engaged in anal sex.	.04	-.22	**.41**	.15	-.12	.38
*f168. It's easy for me to refuse sexual techniques that I don't want to use.	.34	.19	**.39**	.07	-.03	-.28
b46. Even if I don't protect myself there is practically no chance I could get AIDS.	.29	.13	**-.37**	.12	**.37**	.24
55. Currently, there are medications available that can eliminate the chance of death from HIV/AIDS.	.05	.07	**-.36**	-.22	.28	.09
*d131. How important is it for you to do what your parents want you to do?	.12	-.07	**.33**	-.20	-.19	.27
d135. How important is it to you to be like your friends?	.01	.27	**-.30**	.04	.10	-.24
f170. It's difficult for me to think about contraception or protection from AIDS after I've been drinking.	.24	.11	**.30**	-.13	-.02	.06

	Factors					
	1	2	3	4	5	6
*c116. A benefit to using male condoms is that they increase stimulation.	.29	-.00	.01	**-.56**	.05	-.15
*b137. How hard would it be for you to ask if he or she has ever had sex with another person of his/her own gender?	.04	-.19	.41	**.51**	.03	.28
g158. I need drugs to enjoy sex.	.17	.01	-.35	**.51**	.25	-.24
*c117. A benefit to using male condoms is that they are fun.	.29	.09	-.04	**-.48**	.16	-.08
*b138. How hard would it be for you to ask if he or she has ever shared IV needles?	.27	-.09	.26	**.47**	-.01	.22
d133. How important is it to you to do what your friends want you to do?	-.03	.15	-.45	**.46**	.29	-.10
*b136. How hard would it be for you to ask how many sex partners she or he has had?	.25	-.09	.39	**.46**	-.04	.25
c177. I would feel embarrassed to put a condom on myself or my partner.	.32	.06	-.10	**.45**	-.00	.08
d134. How important is it to you to have your friends think that you are experienced sexually?	.23	.23	-.40	**.45**	-.01	-.41
*b139. How hard would it be for you to ask if he or she has been exposed to HIV?	.26	-.19	.34	**.42**	-.01	.32
g163. I average more than one partner per week.	.24	.37	-.39	**.42**	-.08	.02

	Factors					
	1	2	3	4	5	6
[d]132. How important is it to you to to talk to your friends before you make decisions about sex, drugs, or alcohol?	-.24	.04	-.33	**.41**	.21	.13
[g]155. I drink alcohol to enjoy sex.	.15	.18	-.22	**.40**	.00	.06
[c]182. 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.	.30	-.01	-.22	**.39**	.11	-.26
*[b]119. Very few students on campus are doing anything differently because of AIDS.	.32	-.33	-.11	**-.35**	.02	-.19
*[b]126. Many women on campus keep condoms available.	.28	-.04	-.18	**-.31**	-.08	.16
*[g]160. I buy or get condoms.	-.04	.08	.16	-.10	**.50**	.13
*[g]162. I carry condoms.	-.17	.20	.12	-.29	**.46**	.26
*[b]47. If I don't protect myself, there is a chance I could get AIDS.	.16	-.09	-.35	-.05	**.46**	.11
*[d]127. How important is it for you to have your parents approve of what you do?	.25	-.05	.19	.03	**-.45**	-.21
[e]77. If I wanted to use condoms, I would know where to get them.	-.04	.10	.27	.02	**-.42**	.15
*[b]140. How <u>hard</u> would it be for you to buy condoms?	.13	.04	.01	.33	**.42**	**.25**

		Factors					
		1	2	3	4	5	6
*b145.	With a new sex partner, how hard If no condom is available, stop sexual activity while you or your partner go to get a condom?	.33	.14	.31	.27	**.42**	.13
e78.	I have no religious or moral objections to using condoms.	-.24	.17	.12	.16	**-.41**	-.15
*e58.	If you do not practice safer sex, what chance would you have to catch a sexually transmitted disease other than AIDS?	.15	.16	-.29	-.04	**.41**	-.15
*c176.	I feel confident in my ability to put on a condom by myself or my partner.	.21	-.18	.08	.06	**.37**	.12
d56.	I think that I myself have the following chance of getting AIDS.	-.05	.18	.04	-.11	**-.36**	.20
e57.	If you do not practice safer sex, what chance do you feel you would have of becoming infected with the AIDS virus?	.08	-.14	.28	.07	**-.36**	.20
c181.	I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I've had a homosexual experience.	.25	-.02	.00	.27	**-.35**	-.22
c180.	If I were unsure of my partner's feelings about using condoms, I would not suggest using one.	.32	.27	.09	.10	-.12	**-.54**
c69.	A negative aspect of condoms is that they are embarrassing to purchase.	.15	.25	.00	.39	.12	**.48**

	Factors					
	1	2	3	4	5	6
*125. AIDS has made many students in my school a lot more cautious about sharing IV drug needles.	.01	-.06	.03	-.36	.20	**.47**
*[b]124. AIDS has made many students on campus a lot more careful about who they have sex with.	.27	-.18	-.01	-.36	.15	**.44**
[c]51. My partner(s) is (are) not the "type" to have a sexually transmitted disease because I am "picky" about the partners I have sex with.	-.09	.26	.05	.11	.21	**-.40**
*[d]175. If you had sex, how well could you refuse to have sex without a condom?	.31	.09	.25	-.03	.27	**-.40**
[c]52. I do not view myself at risk for acquiring a sexually transmitted disease.	-.09	.20	-.03	.18	-.07	**-.39**
[c]73. A negative aspect of condoms is that they do not include clear instructions about how to use properly.	.25	.34	-.35	.23	-.19	**.39**
*[g]154. I ask my partner(s) to use a condom.	.33	.19	.08	-.03	.24	**-.36**
*[e]84. Sexual activities other than sexual intercourse can be just as satisfying as intercourse.	.25	-.09	-.10	-.13	.06	**-.34**
121. Many students are trying to protect themselves these days by using clean IV drug needles.	.01	.17	-.06	-.18	.06	**.31**

		Factors					
		1	2	3	4	5	6
[d]128.	How important is it for you to be popular with the opposite sex?	-.15	.27	-.13	.22	.08	**.31**
[c]50.	I do not view myself as being at-risk for acquiring HIV/AIDS.	-.05	.27	.01	-.07	-.26	**-.30**

[a] Items are taken from Carey, Morrison-Beedy, & Johnson
[b] Items are taken from O'Leary et al.
[c] Items are taken from Mahoney et al.
[d] Items are taken from Zimmerman & Olson
[e] Items are taken from Basen-Enguist
[f] Items are taken from Bengel et al.
[g] Items are taken from Denson et al.
* Indicates items were reversed when scored

APPENDIX H

Table 3

Bivariate Correlation Results Between the AIDS-Risk Predictor Scale and the Risk Factor Scale

ITEM		Correlation Coefficient	Exact P-Value
106.	A benefit to using male condoms is that they represent sexual responsibility.	-.10	.40
107.	A benefit to using male condoms is that they can be obtained by either men or women.	-.09	.48
105.	A benefit to using male condoms is that they are easily disposed of.	-.07	.58
114.	A benefit to using male condoms is that they are an option for females who can not use the pill.	-.05	.66
109.	A benefit to using male condoms is that they do not require a doctor visit and prescription.	-.14	.26
108.	A benefit to using male condoms is that they are reliable.	.16	.18
96.	**A benefit to using male condoms is that they are easy to obtain.**	**-.23**	**.07**
112.	A benefit to using male condoms is that they decrease the fear/ nervousness of pregnancy.	-.04	.72

ITEM		Correlation Coefficient	Exact P-Value
113.	A benefit to using male condoms is that they decrease the fear/ nervousness of contracting a sexually transmitted disease (STD).	-.18	.15
99.	**A benefit to using male condoms is that they offer protection against pregnancy.**	**-.19**	**.13**
100.	**A benefit to using male condoms is that they reduce the risk of contracting a sexually transmitted disease (STD).**	**-.18**	**.14**
101.	A benefit to using male condoms is that they reduce the risk of contracting HIV/AIDS.	.09	.47
102.	A benefit to using male condoms is that they have no side effects like some contraceptive methods do.	-.14	.23
94.	**A benefit to using male condoms is that they reduce the risk of contracting HIV/AIDS.**	**-.29**	**.00**
95.	A benefit to using male condoms is that they are reliable.	-.09	.44
104.	A benefit to using male condoms is that they are not time consuming to use.	.08	.49
151.	How hard would it be for you to Find another sexual behavior where a condom isn't needed, if you had sex with someone and you didn't have any condoms?	.14	.26
97.	**A benefit to using male condoms is that they are easy to use.**	**-.24**	**.05**

ITEM		Correlation Coefficient	Exact P-Value
103.	A benefit to using male condoms is that they are available in different varieties (textures, colors, etc.).	-.09	.48
141.	**How hard would it be for you to discuss using a condom before sex?**	**.22**	**.07**
118.	A benefit to using male condoms is that they require the male to take on some responsibility, rather than always the female.	.07	.55
142.	**How hard would it be for you to use a condom with a new sex partner?**	**.39**	**.00**
59.	I think that AIDS is a serious risk and poses a threat to human health.	.16	.19
143.	**How hard would it be for you to refuse to have sex with the person if he or she won't use a condom?**	**.60**	**.00**
111.	A benefit to using male condoms is that they increase lubrication.	-.08	.52
110.	A benefit to using male condoms is that they can be use as part of foreplay.	-.04	.73
63.	I would feel silly asking my partner to use a condom.	.11	.36
115.	A benefit to using male condoms is that they prolong sexual interaction.	-.14	.25
72.	A negative aspect of condoms is that they are difficult to use properly.	-.17	.16
174.	If you had sex, how well could you convince a partner to use a condom?	.18	.15

ITEM		Correlation Coefficient	Exact P-Value
173.	**If you had sex, how well could you discuss safer sex (such as always using a condom) with a partner (for example, a boyfriend or girlfriend) before having sex with them?**	**.42**	**.00**
62.	I would be afraid that my sex partner would be angry or upset if I asked him or her to use a condom.	.10	.39
185.	**I feel confident that I could stop to put a condom on myself or my partner even in the heat of passion.**	**.31**	**.01**
98.	A benefit to using male condoms is that they are inexpensive.	.01	.96
183.	I feel confident that I would remember to use a condom even after I have been drinking.	-.11	.35
64.	I would be afraid that my sex partner would think I was infected with HIV if I asked him or her to use a condom.	-.16	.18
81.	Having sex with a condom is just as satisfying as having sex without a condom.	-.11	.38
144.	**With a new sex partner, how hard would it be for you, if no condom is available, find another pleasurable activity (such as mutual masturbation) where a condom isn't needed?**	**.30**	**.01**
123.	Many of the people I know have made changes in their lives to protect themselves against AIDS.	-.04	.72

ITEM		Correlation Coefficient	Exact P-Value
178.	I feel confident that I could use a condom successfully.	-.13	.29
71.	**A negative aspect of condoms is that they are difficult to dispose of.**	**-.21**	**.08**
83.	**May partner(s) has no objections to using a condom.**	**.47**	**.00**
120.	Many students are trying to protect themselves these days by using condoms.	-.15	.24
184.	I feel confident that I would remember to use a condom even if I were high.	.11	.35
53.	It is possible that I am infected with HIV/AIDS even though I have not been diagnosed with it.	-.03	.80
85.	**Condoms are unpleasant to use.**	**.20**	**.10**
68.	A negative aspect of condoms is that they make sex feel different.	.04	.71
61.	**Using a condom would take all the fun out of sex for me.**	**.22**	**.07**
86.	Condoms reduce sexual pleasure.	.11	.37
67.	A negative aspect of condoms is that they decrease sensitivity.	.03	.80
88.	**I don't think about using condoms when I am sexually turned on.**	**.42**	**.00**
87.	Condoms ruin the fun of the moment, because you have to stop sex to put them on.	.08	.50
79.	The use of condoms makes sexual intercourse seem dirty.	.09	.45

ITEM		Correlation Coefficient	Exact P-Value
75.	Sometimes when you try to prevent problems like AIDS and sexually transmitted diseases, it is more trouble than it is worth.	-.09	.47
66.	A negative aspect of condoms is that they are physically uncomfortable.	.01	.91
70.	A negative aspect of condom is that they are time consuming to put on and take off.	-.01	.96
65.	A negative aspect of condoms is that they reduce the spontaneity of sex.	.04	.75
76.	Having condoms with you make it seem that you are planning to have intercourse.	.01	.91
90.	It is a great inconvenience and much to troublesome to obtain information regarding a potential partners sexual background.	.02	.85
122.	Many men on campus keep condoms available.	-.03	.82
82.	**It can sometimes be important to show your love and trust by not using a condom and taking a chance on getting AIDS or another sexually transmitted disease.**	**.25**	**.03**
74.	A negative aspect of condoms is that they don't fit properly.	-.03	.79
169.	It's difficult for me to limit sex with someone to safe-sex techniques.	.13	.30

ITEM		Correlation Coefficient	Exact P-Value
89.	I feel that the "cost" of limiting the number of partners I have sexual intercourse with far outweigh the "benefits" of practicing safe sex.	.09	.45
48.	My partner(s) is (are) not the "type" to have HIV/AIDS.	.04	.77
49.	I am not concerned about acquiring HIV/AIDS because I am "picky" about partners I have sex with.	-.07	.57
130.	How important is it for you to have your friends approve of what you do?	-.07	.54
93.	Sharing needles for IV drugs increases a persons risk for contracting HIV/AIDS.	-.12	.34
60.	In comparison with other health problems in my opinion AIDS is only a small one.	.01	.93
92.	**Remaining monogamous reduces the risk of contracting HIV/AIDS.**	**-.19**	**.13**
166.	I ask my partner if he/she has ever had sex with a prostitute.	.07	.63
152.	**How hard would it be for you to stop while you or your partner gets a condom, if you had sex with someone new and you didn't have any condoms?**	**.28**	**.02**
148.	**How hard would it be for you to leave a situation you think may be leading to unsafe sex (such as sex without a condom).**	**.40**	**.00**

ITEM		Correlation Coefficient	Exact P-Value
156.	**I tell my partner about the number of prior partners I have had.**	**.19**	**.12**
149.	**How hard would it be for you to discuss using a condom before having sex with someone new?**	**.23**	**.06**
165.	**I ask my partner about prior homosexual events.**	**.21**	**.12**
150.	How hard would it be for you to avoid using drugs or alcohol if you think you might be having sex with someone new?	.04	.71
147.	**How hard would it be for you to say no to sex without a condom?**	**.57**	**.00**
153.	I ask my partner(s) about the number of prior partners.	.00	.98
146.	**How hard would it be for you to use a condom every time you had sex with a new partner?**	**.43**	**.00**
157.	**I use a condom with a new partner.**	**.48**	**.00**
171.	I have difficulties talking with a partner about contraception techniques.	.08	.51
159.	I ask my partner(s) if he/she has ever engaged in anal sex.	-.02	.88
168.	**It's easy for me to refuse sexual techniques that I don't want to use.**	**.24**	**.04**
46.	**Even if I don't protect myself there is practically no chance I could get AIDS.**	**.31**	**.01**

ITEM		Correlation Coefficient	Exact P-Value
55.	Currently, there are medications available that can eliminate the chance of death from HIV/AIDS.	.01	.92
131.	How important is it for you to do what your parents want you to do?	.01	.94
135.	How important is it to you to be like your friends?	-.07	.56
170.	It's difficult for me to think about contraception or protection from AIDS after I've been drinking.	.17	.17
129.	How important is it to you to make your own decisions without help from others?	.05	.69
172.	**I have difficulties conveying my sexual wishes to a partner.**	**-.25**	**.04**
54.	It is likely that I will acquire HIV or AIDS within the next 5 years.	-.13	.30
116.	A benefit to using male condoms is that they increase stimulation.	-.00	.98
137.	How hard would it be for you to ask if he or she has ever had sex with another person of his/her own gender?	.01	.93
158.	**I need drugs to enjoy sex.**	**.21**	**.10**
117.	A benefit to using male condoms is that they are fun.	.07	.59
138.	How hard would it be for you to ask if he or she has ever shared IV needles?	.14	.27

ITEM		Correlation Coefficient	Exact P-Value
133.	How important is it to you to do what your friends want you to do?	.17	.15
136.	How hard would it be for you to ask how many sex partners she or he has had?	.05	.68
177.	I would feel embarrassed to put a condom on myself or my partner.	.06	.60
163.	How hard would it be for you to ask if he or she has been exposed to HIV?	.10	.41
177.	**I average more than one partner per week.**	**.27**	**.03**
132.	How important is it to you to to talk to your friends before you make decisions about sex, drugs, or alcohol?	.02	.86
155.	I drink alcohol to enjoy sex.	.03	.79
182.	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.	.06	.63
119.	**Very few students on campus are doing anything differently because of AIDS.**	**-.26**	**.04**
126.	Many women on campus keep condoms available.	.01	.94
160.	**I buy or get condoms.**	**.39**	**.00**
162.	I carry condoms.	.16	.19

ITEM		Correlation Coefficient	Exact P-Value
47.	**If I don't protect myself, there is a chance I could get AIDS.**	**.23**	**.06**
127.	How important is it for you to have your parents approve of what you do?	-.13	.29
77.	If I wanted to use condoms, I would know where to get them.	-.06	.60
140.	How hard would it be for you to buy condoms?	.08	.54
145.	**With a new sex partner, how hard If no condom is available, stop sexual activity while you or your partner go to get a condom?**	**.35**	**.00**
78.	I have no religious or moral objections to using condoms.	-.05	.66
58.	**If you do not practice safer sex, what chance would you have to catch a sexually transmitted disease other than AIDS?**	**.18**	**.13**
176.	I feel confident in my ability to put on a condom by myself or my partner.	-.09	.46
56.	**I think that I myself have the following chance of getting AIDS.**	**-.34**	**.00**
57.	**If you do not practice safer sex, what chance do you feel you would have of becoming infected with the AIDS virus?**	**-.18**	**.14**

ITEM		Correlation Coefficient	Exact P-Value
181.	I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I've had a homosexual experience.	-.12	.33
179.	If I were to suggest using a condom to a partner, I would feel afraid that he or she would reject me.	.08	.50
180.	**If I were unsure of my partner's feelings about using condoms, I would not suggest using one.**	**.18**	**.14**
69.	**A negative aspect of condoms is that they are embarrassing to purchase.**	**-.18**	**.13**
125.	AIDS has made many students in my school a lot more cautious about sharing IV drug needles.	-.15	.22
125.	AIDS has made many students on campus a lot more careful about who they have sex with.	-.15	.22
124.	How important is it to you to have your friends think that you are experienced sexuallv?	-.11	.38
51.	**My partner(s) is (are) not the "type" to have a sexually transmitted disease because I am "picky" about the partners I have sex with.**	**.22**	**.07**
175.	If you had sex, how well could you refuse to have sex without a condom?	.14	.26

ITEM		Correlation Coefficient	Exact P-Value
52.	I do not view myself at risk for acquiring a sexually transmitted disease.	.18	.15
73.	A negative aspect of condoms is that they do not include clear instructions about how to use properly.	-.10	.42
154.	**I ask my partner(s) to use a condom.**	**.39**	**.00**
84.	Sexual activities other than sexual intercourse can be just as satisfying as intercourse.	-.05	.70
121.	Many students are trying to protect themselves these days by using clean IV drug needles.	-.02	.90
128.	**How important is it for you to be popular with the opposite sex?**	**.26**	**.06**
50.	I do not view myself as being at-risk for acquiring HIV/AIDS.	-.13	.27

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