

HIV/AIDS Education and Intent for
Behavior Change of the College Student

by

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Chapter I

Introduction

Acquired immunodeficiency syndrome (AIDS) has been described in the popular media as a mysterious and deadly disease, the public health disease threat of the century. Since the first identified cases in 1981, the number of people with AIDS has grown exponentially. The number of Americans diagnosed with the disease is just over 128,000 and the Center for Disease Control (CDC) (1986) predicted that this will reach 270,000 by the end of 1991.

The fact that there is no immunization or cure for AIDS makes it a mysterious disease. The mystery is compounded because many people can carry the human immunodeficiency virus (HIV) and not know they are infected or infectious. AIDS is also a deadly disease. In 1986 the CDC predicted 30% to 50% of those infected with HIV will eventually develop AIDS which is at the present time considered fatal.

Today AIDS is the number one public health threat because of its rapid spread and fatality. The CDC (1986) reports that AIDS is transmitted through sexual contact, from mother to infant, or by injection with or contamination from infected blood. At this time homosexual/bisexual males and intravenous drug users are at highest risk for contracting HIV. But the CDC and the American College Health Association (ACHA) have become increasingly concerned with the spread of this virus in the heterosexual population on the college campus.

There are several reasons for this increased concern for the college population. On the college campus many students experience a new found independence. They also are often confronted with strong peer pressures to adopt particular behaviors, some of which may not be in their best health interests. For example, Keeling (1986) states that college students may often engage in risky sexual behaviors or drug use which can put them at a greater risk for contracting HIV. For many adolescents these behaviors are coupled with a feeling of invincibility. This invincible behavior itself, is a reason for increased concern about the spread of HIV on the college campus. To prevent infection and the spread of HIV on the college campus there is a need for accurate information about the disease and the behavior changes necessary to decrease risk.

A joint study by the CDC and the ACHA measuring the prevalence of HIV infection among the nation's college students was conducted in 1988. From 16,861 blood samples collected from 19 large colleges and universities across the United States 30 were positive. This is a raw seroprevalence rate of 0.2% or two students per one thousand of those tested. The study was conducted as a blind serosurvey using only residual blood specimens collected from students having blood drawn as part of

routine care they received from their college health services (Action, 1989). The two per one thousand seroprevalence rate establishes that HIV infection is a current problem on college campuses.

At this point in time, the only way to stop the spread of HIV infection is for individuals to engage in specific behaviors that prevent exposure to infected body substances. The ACHA (1989) states that the primary response of college and university administrators to the HIV epidemic must be education of students about the disease and risk behaviors associated with it. There are two aspects to preventative education for college students: providing accurate, factual information about the disease and presenting material to students that will facilitate development of skills necessary for behavior change.

Review of Literature

This two prong approach to education is supported in the literature which indicates that college students have little or inaccurate information about HIV/AIDS and what they do know often contains misinformation and misconceptions about the disease. For example, when Goodwin & Roscoe (1988) investigated 495 college students' knowledge and attitudes concerning HIV/AIDS, they found that these students had only a minimal to moderate amount

of accurate information. They also pointed out that many students had misconceptions about the transmission of HIV. Less than 40% of the students surveyed were knowledgeable about the incidence of AIDS in the United States and about 65% of these students believed there is a high risk of contracting HIV from blood transfusions.

In another study, McDermott, Hawkins, Moore & Cittadino (1987) questioned 161 students at a selected university regarding their knowledge about HIV/AIDS and their primary sources of information about HIV/AIDS. They reported that overall, the students had a high level of knowledge about HIV/AIDS, but many of them lacked understanding about AIDS warning signs, its relationship to opportunistic diseases, its ultimate lethal potential and its sexual transmission. Students in this study reported television, newspapers, and magazines as their major sources of knowledge about HIV/AIDS. The authors suggested that colleges should assume a greater role in HIV/AIDS prevention by developing educational programs to supplement and/or replace the media as college student's primary source of HIV/AIDS information.

A preliminary report of a study by Carson, Bertran, and McMullen (1987) also indicated the same lack of factual knowledge about AIDS reported elsewhere. In this study, 350 Syracuse University students were interviewed on a

one-to-one basis, in a bar near campus by members of the campus peer sexuality program. Many of the students interviewed believed that HIV could be transmitted through casual contact. The researchers concluded that education is needed that would provide factual information directed toward influencing the behaviors that place students at risk.

Most researchers conclude that a high knowledge level alone does not always mean that behavior will also change. Results of a study conducted by Tulane University and the Louisiana Department of Health and Human Services (Atkinson, Ktsanes, & Hassig, 1987) indicated that students surveyed in the Southern United States were knowledgeable about HIV/AIDS. They did find some misconceptions about the risk of casual contact and donating blood but more than 95% of the students surveyed correctly identified the routes of transmission of the disease. The unfortunate finding was that only 59% of the students surveyed said that their knowledge about HIV/AIDS had influenced their choice of or the number of sexual partners they have.

Another survey of more than 450 students conducted at the University of Oregon had similar findings (Gray and Saracino 1988). Although students were able to accurately answer more than 50% of the HIV/AIDS knowledge questions, covering how HIV is transmitted and the risk behaviors

associated with the disease, 81% were sexually active, and more than 60% of the sexually active reported having intercourse in the past year without using a condom. Despite these "at risk" behaviors, as a group, these students believed they were not at risk.

It is apparent from the previously discussed research findings, that there is a need for programs that promote awareness of the behaviors that place people at risk for HIV infection and promote strategies and support for behavior change. A more difficult issue is the college students' perception of invincibility. The literature supports the importance of education programs providing knowledge about HIV/AIDS, giving direct and clear information about the students' vulnerability, and the specific behaviors to prevent the spread of HIV. Kolbe (1982) believes that adequate health education programs should provide scientific knowledge and the philosophical foundations necessary for individuals to make positive behavior changes that will influence their health and the health of those around them.

Other educators and health professionals agree that knowledge alone is insufficient to prevent the risk behaviors of college students. Yarber (1988) suggests providing risk avoiding knowledge and communication skills in HIV/AIDS education programs. He states education will

be most effective if three levels of learning are addressed in prevention programs: knowledge, attitudes, and behaviors. Keeling (1987) states that clear, explicit, and easily accessible education is the best response to the HIV/AIDS crisis. To be effective in promoting risk education this information must be direct. Specific behaviors and their risks or non-risks must be discussed along with how to use and to talk about these behaviors comfortably with peers.

Conceptual Framework

The health belief model (HBM) developed in the 1950's by a group of social psychologists working for the Public Health Service will serve as the conceptual framework for this study. This model, developed to explain why people seek preventive medical care, indicates that preventive behavior occurs when: a.) people process knowledge and motivation; b.) people believe they are susceptible to a particular disease; c.) people believe the condition will have at least moderate severity on some component of their life; d.) people believe that choosing a particular behavior will in fact be beneficial by reducing their susceptibility to the disease; e.) the behavior will not be outweighed by certain barriers to action such as cost, convenience, pain, embarrassment, and lack of social support.

A number of researchers have found that providing populations at risk with health education increases the participant's perceived susceptibility which, in turn, increases preventive behavior as predicted by the HBM. For example, according to Hafner and Kirscht (1970) subjects had positive changes in health behavior after being presented with written and verbal messages about selected health problems intended to increase their perceived susceptibility. In this study significantly more persons in the experimental group who were exposed to such messages visited a physician for a check up in the eight months following the experimental treatment than persons in a control group not exposed to the messages.

Another study by Becker, Kaliack, Rosenstock, and Ruth (1975) found that people who perceived themselves as susceptible to being a carrier of Tay-Sachs disease were more likely to come to a clinic for screening than those with a low perceived susceptibility. These same researchers found that the Jewish couples planning to have children and receiving information about Tay-Sachs disease had a higher perceived susceptibility and came in for screening.

A study by Manning, Barenberg, Gallese, and Rice (1989) used a questionnaire designed to measure the application of the HBM to AIDS prevention and the practice of safer sex at

a private research university in the South. The questionnaire was completed by 139 undergraduates under 22 years of age. The researchers found some students with little knowledge of AIDS, although the majority had adequate knowledge about AIDS. Students with low knowledge also perceived barriers to practicing safer sex, whereas the students with a higher level of knowledge were more apt to report practicing safer sex. In conclusion, the researchers recommend programs to increase knowledge about AIDS for all college students since subjects with higher knowledge tend to practice preventive behaviors. Also, they recommend that a program should include identification of and discussion about barriers to AIDS prevention and ways to overcome these barriers. This study also had students indicate their preferred method of receiving AIDS education. Movies, small group discussions, and panel discussions were found to be the preferred methods.

This study implemented an HIV/AIDS education program based on the HBM as a means of increasing student's knowledge of HIV/AIDS and increasing the student's perceived susceptibility. The program also attempted to reduce the barriers students faced in regard to lowering their risk factors for contracting HIV. The tool developed for this study measured outcomes of this HIV/AIDS education program on student's knowledge, perceived susceptibility,

and intent of behavior change. Using the results the current program was evaluated and new plans for future programs have begun.

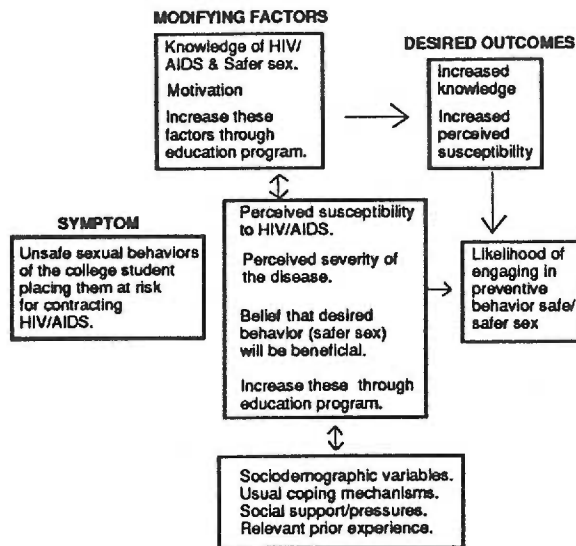


Figure 1. Conceptual Framework.

Chapter II

Methods

To test the effectiveness of a prescribed AIDS education program in increasing college student's knowledge and preventive behaviors, an experimental group received the education program. The knowledge levels and intent for behavior change in this group were compared to a control group who did not receive the education program.

It was hypothesized that students receiving the prescribed AIDS education program would score higher on an AIDS knowledge and intent for behavior change questionnaire than students who did not receive the program.

Design

This was a pretest/posttest study. An experimental group received the prescribed program and their pretest and posttest scores were compared to scores of a control group who did not receive the program. The design of the study was as follows:

O X O

O O

X was the independent variable, the prescribed AIDS education program.

O was the pretest measuring the dependent variable, scores on an AIDS knowledge and intent for behavior change questionnaire.

O was the posttest measuring the dependent variable, scores on an AIDS knowledge and intent for behavior change questionnaire.

Setting and Sample

This study took place at a four year technical college in the Pacific Northwest. The college is located in a town

of 17,000 in Southern Oregon and has 2,792 students. The ratio of men to women is approximately 2 to 1, with the average age 22 years. The minority population is about 10% of the total, the largest group being the Asian population (4%), followed by Hispanic (2%), Black (2%), American Indian (1%), and 1% other.

All students at this college, except those enrolled in the nursing program, are required to take a health education class. Approximately six sections of health education are offered each term. Four sections of approximately 15-20 students each were selected at random to participate in this study. The sections were randomly assigned to either the control or experimental group. The sample consisted of consenting students from these class sections. While it may be representative of the "average" student, the sample was one of convenience.

Procedure

A pretest was given to all participating students in the control group and the experimental group. This was given during week five of winter term. The tests were coded using the last four digits of the student's Social Security Number to protect anonymity and to assure proper matching of each individual's pretest scores with their posttest scores. The tests were handed out at the beginning of the class period and students handed them in

as they were completed. They were then placed in an envelope by the researcher.

The treatment, a prescribed HIV/AIDS education program, was the independent variable. The program, approximately 50 minutes long, was presented to the experimental group during a regularly scheduled class period. The presentation included the following information:

Facts about HIV/AIDS: epidemiology, transmission, symptoms, and clinical aspects.

College students' vulnerability to HIV/AIDS.

Prevention and risk reduction: safer sex guidelines and guidelines for drug use, and the importance of communicating with potential sex partners.

Testing and counseling available.

Psychosocial issues: the experience of a person diagnosed with HIV and AIDS and the economic and socio-political aspects of the disease.

Information about campus and community services for people with HIV/AIDS.

Questions and answers.

This information was delivered by the researcher, a staff nurse from the Student Health Service in a lecture/discussion format. To increase perceived vulnerability and to show the experience of someone with HIV, an 18 minute video "AIDS a Decision for Life", produced by ACHA was used. The video described a true story of a female college student who contracted HIV. This intervention was presented to the experimental group during week eight of the term.

A posttest was given week ten of the term. It was handed out at the beginning of the class period and students turned them in as they were completed. Once again they were collected by the researcher and placed in an envelope.

Instrument

The dependent variables were the student's knowledge of HIV/AIDS, their perceived vulnerability to HIV, and their intent for behavior change. The questionnaire that was used to measure the dependent variables and to help plan for future services/programs was developed by the researcher. Some of the questions were inspired by Quakenbush and Clark (1988). The questionnaire began with 13 closed ended questions measuring general knowledge about

HIV/AIDS including questions related to transmission, prevention, and symptoms of AIDS. For this section correct responses were scored as a one and incorrect responses as a zero. Next, two open ended questions regarding perceived vulnerability and behavior changes were asked. Information obtained from the open ended questions was categorized to aid analysis. The next section asked demographic and personal questions, including sex, race, age, year in school, and sexual activity and communication skills. Lastly, an evaluation section was included on the posttest.

Content validity was established by asking a health education instructor and staff at the health service to review the instrument for inclusivity and understandability. A pilot test was conducted to establish clarity of the tool using a smaller group of students at the student health service.

Chapter III

Results and Discussion

This study implemented an HIV/AIDS education program based on the HBM as a means of increasing students' knowledge of the HIV/AIDS and increasing their perceived susceptibility. This was done to increase students' likelihood of engaging in preventive behavior, safe/safer sex (Figure 1). The tool developed for the study measured the outcomes of the HIV/AIDS education program on students'

knowledge, perceived susceptibility, and intent of behavior change. It also evaluated the current program and will assist in planning for future programs. The results obtained from this tool will be presented and discussed according to the following categories: sample, sexual activity/practices, HIV/AIDS knowledge, susceptibility and behavior change, implications for practice and recommendations for further research.

Sample

From a total of 84 students who signed consents to participate in this study, 63 students in four general health education classes completed the study for a response rate of 75%. The experimental group consisted of two classes: group one, with 24 students and group two, with nine, for a total of 33 participants. The control group, also drawn from two classes, consisted of group three, with 13 students and group four, with 17 students, for a total of 30 participants.

Eleven students, five from group one, and six from group two, were lost from the experimental group because they were not present for the treatment and/or posttest. Ten students were lost from the control group because they were not present for the posttest. Pretest data from this group was analyzed and will be referred to as group five.

More than half of the subjects classified themselves as

white, male, and single. A little over half of the total subjects classified themselves as freshmen. The mean age for the total group was 24 (Table 1).

A few differences between groups should be noted. Group five contained more females than males and the combined control group was older and contained more upper classmen (Tables 1 and 2).

Sexual Activity/Practices

Of the students participating in the study, 55 (87%) had been sexually active in the last ten years. Fourteen (25%) of the sexually active students reported having had only one sex partner. Eighteen (33%) claimed to have 2-5 partners, 11 (22%) have had 6-10 partners, seven (13%) had 11-15 partners and 5 (9%) indicated having had 15 or more sexual partners.

The largest percentage of the sexually active students (17) claimed to be using condoms as their sole method of birth control. Twelve students used both condoms and oral contraceptives, and six other students report using condoms with other methods of contraception (i.e. diaphragm and/or spermicides). Oral contraceptives were the sole choice of birth control of four students. Five students claimed to use no method, one student used the diaphragm, and two used sterilization.

Of the students using condoms, less than half (16)

reported using them each time they had intercourse and 19 reported that they did not use them with each sexual encounter. Just over half of the subjects (54%) indicated that they negotiate for safer sex and discuss past sexual history with their partner(s). Only 30% claimed that they query their partner(s) about IV drug use. A majority (60%) of the students indicated it is difficult to negotiate for safer sex.

Group five had a similar percentage of students reporting to be sexually active (86%). But this group reported having a lower number of sexual partners. Four of the sexually active students reported having had one sex partner, 12 (63%) reported having had 2-5 partners, and three claimed to have had 6-10. No students from this group reported having greater than ten sexual partners.

On the pretest, the majority of subjects (7) in group five reported using condoms as their sole method of birth control. Six students reported using no method, four claimed to be using both condoms and oral contraceptives, and one reported using a combination of oral contraceptives, condoms, and spermicide.

Of the sexually active students using condoms (11), nine of these students use them with each intercourse. This is a much higher rate than found for those in the group that continued with the study. Over half of the

subjects (54%) from group five claimed to discuss past sexual history and negotiate for safer sex with their partners. This is the same percentage reported for the combined experimental and control groups. About 41% of these students discuss their sexual partners' past drug use. It is interesting to note that only 27% of this group found it difficult to negotiate for safer sex compared to 60% of those who continued in the study. This could lead one to conclude that some of the students in group five may feel more confident in their skills for negotiating safer sex and, therefore, use condoms more regularly and possibly did not feel the need to participate in the education program.

The high rate of sexual activity and the lack of regular condom use in this study compares to that found by Gray and Saracino (1988) at the University of Oregon. Eighty-one percent of the students surveyed on that campus claimed to be sexually active. They also found that less than half of the sexually active students surveyed had used condoms in the past year.

Results like these remind one that a majority of college students have risky behaviors that need to change in order to prevent the spread of HIV/AIDS.

HIV/AIDS Knowledge

To measure change in knowledge a pretest was given week

five of winter term and a posttest was given during week ten. The experimental group received the HIV/AIDS education program week eight of the term. The control group received the program after the posttest.

All of the students scored at least 9 points out of a possible 13 points on the pretest and posttest. On the pretest all group mean scores were very close and had similar ranges (Table 2). The F statistic was chosen to measure differences between groups because there were five groups, the four individual classes and the fifth group who did not complete the study. The F value for comparing pretest scores was $F = 0.95$ ($p < 0.05$). As expected, there was no significant difference between pretest scores.

A slight increase was found from pretest to posttest mean scores for all groups. Groups one and two (the experimental groups) had the largest increase (Table 2). However, this was not a statistically significant difference, $F = 1.452$ ($p < 0.05$). Therefore, the hypothesis that students receiving the HIV/AIDS education program would score higher on an HIV/AIDS knowledge test was not supported.

It is important to note that there were four questions on the HIV/AIDS knowledge test that were missed most frequently. These questions included three questions regarding transmission and one regarding HIV's effect on

the nervous system (Table 3). Students in the groups receiving the HIV/AIDS education program showed a greater improvement on all but the question regarding the risk of HIV transmission through a blood transfusion when compared to those in the control group (Table 4).

The fact that these question were missed by any students indicates that there are still some common misconceptions. This implies the need to continue to include a section on facts about HIV/AIDS in education programs for college students.

Since all students scored high on the pretest and posttest, it appears that these students are knowledgeable about HIV/AIDS. Though earlier researchers found low knowledge, more recent researchers like Katzman, Mulholland, and Sutherland (1988) have reported similar findings. They found 88% of the students surveyed by telephone at Arizona State University answered questions about HIV transmission correctly, 98.5% of the students indicated condoms were effective in preventing transmission of HIV and 98.8% knew that AIDS was a life threatening condition.

Another study by Manning, Barenberg, Gallese and Rise (1989) found a majority of students to be knowledgeable about HIV/AIDS. They reported that half of the students questioned scored above 78% on an AIDS factual

questionnaire. Results such as these, indicate that a lack of knowledge is probably not the reason college students continue to engage in risky behaviors.

Susceptibility and Behavior Change

On the pretest when asked, "Do you feel at risk for contracting HIV?", only seven students (11%) felt at risk for contracting HIV, two from group one, one each from group two and three, and three from group four. There was no change on this question on the posttest. Five (23%) students in group five reported that they felt to be at risk for contracting HIV.

The scores on the pretest and posttest indicate that these students are knowledgeable about HIV/AIDS. However, this knowledge was not sufficient to cause them to feel at risk for the disease even though many (67%) of them reported having multiple sexual partners and over half of the currently sexually active students reported not to be using condoms with each intercourse. This lack of perceived susceptibility could be related to the fact that many young people have a strong sense of invincibility. Koop (1986) stated that many young people do not see themselves as susceptible to disease in any form.

Twenty-two students from groups one through four, and 12 from group five indicated that they had made behavioral changes due to HIV/AIDS (Table 5). All groups completing

the study had an increase in the number of students who stated they had made changes due to HIV/AIDS on the posttest (Table 6). The majority of students reported altering sexual behavior and avoiding drug use (Table 6). Since all groups showed behavior change, it is difficult to relate this change to the HIV/AIDS education program.

It is interesting to note that even though many students made changes due to HIV/AIDS, very few students reported discussing sexual history. In practice as a college health service nurse I have found many students shocked to learn that their partner has named them as a contact to be treated for a sexually transmitted disease. They often verbalize that they thought their partner was safe, that their partner told them that he/she was safe, or that they did not talk about sexual history at all. Also, many students indicate that they don't talk to their partners about past sexual history because they would not trust them to be truthful.

A similar lack of communication was noted at the University of Oregon. Gray and Saracino (1988) found that the majority of students surveyed were not likely to communicate with one another about risks for HIV/AIDS prior to sexual activity with a new partner.

In this study the HBM was used as a guide to change the symptom of unsafe sexual behaviors into the desired outcome

of safer sexual behavior (Figure 1). This was to be done by two means. One was to increase students' knowledge of HIV/AIDS and safer sex. The other was to motivate them so that they feel more susceptible to this serious disease and believe that safer sex will benefit them. There was also some attempt to reduce, through education, the barriers students face in regard to lowering their risk factors for contracting HIV.

It is possible that the HBM was not to be an appropriate model to use with this age group. The HBM assumes that knowledge should lead to perceived susceptibility. No allowances are made for the fact that this older adolescent population has a strong sense of invulnerability. This study demonstrated that students are knowledgeable but that they do not see themselves at risk for contracting HIV/AIDS and therefore do not practice safer sex. Perhaps a different model that takes into account this sense of invulnerability would be more appropriate. Such a model is described in the implications for practice section.

Evaluation

The HIV/AIDS education program implemented in this study was evaluated by thirty-five students. These students were asked to evaluate the videotape, lecture material, question/answer session, and the presenter by

indicating their rating on a Likert scale ranging from 1 (poor) to 4 (excellent). All of the students rated the videotape either as 3 (good) or 4 (excellent), the mean rating was 3.46. Twenty-two of the students rated the lecture material as 3 (good) and six of the students rated it as 4 (excellent), the mean rating was 3.03. The question and answer session received the lowest rating with a mean of 2.74. The presenter was rated as excellent by almost half of the students (49%). She received a mean rating of 3.43.

As part of this evaluation, students were asked what they felt to be the best way to educate college students about HIV/AIDS. Programs given by health professionals and peer educators (specially trained students), group discussions, and videos were the most popular selections (Table 7).

Summary of Research Methods

One needs to be careful in generalizing these results. At the study institution the current HIV/AIDS education program has targeted general health classes, the residence hall, and students visiting the student health service. The subjects in this sample significantly overlap those three groups because the majority of general health education classes are composed of freshmen, who most often live in the residence hall and are required to have contact

with the student health service at least once for an immunization update. Therefore, one can only generalize the results to this target population.

The pretest alerted the researcher to ascertain other limitations of this study. Using the classroom for the study was the first limitation noted. Students in these classes were seated close together and could easily see each other's questionnaires which may have had some influence on their answers.

The instrument itself presented a few limitations. Many students answered the open ended questions with only one or two words, and some chose to leave those questions blank. With an interview format, the shorter answers could have been clarified and information may have been obtained from those who left the questions blank.

The personal information section of the questionnaire may have been more informative had the researcher asked the subjects if they were currently in a mutually monogamous relationship. This could have given some insight as to why many of the students denied being at risk for HIV at this time. Also, collecting information about alcohol and drug use would have been helpful since these have both been noted in the literature (Keeling 1987) and in the researcher's practice to be associated with unwanted sexual activity which is very often unsafe sexual activity.

Implications for Practice

Results of this study are important in planning HIV/AIDS education for the target population. Changes in the HIV/AIDS education program for fall term are already underway. Including changes in lecture material and planning for a peer educator program that can assist health professionals in presenting information, motivating change, and leading small group discussions.

A peer education program utilizes students specially trained by health professionals to help promote health awareness and personal responsibility. Gates and Kennedy (1989) explain that the peer education approach is based on two assumptions: students are more responsive to the influence of peers who share similar values and interests, and individual or group discussions with trained peer educators will facilitate understanding of health information and encourage subsequent behavior change.

Changes in lecture material will be made since many students demonstrated a high knowledge level on the pretest. Perhaps the basic information needs only to be reviewed with more emphasis being placed on the importance of practicing safer sex with each partner and with each intercourse and the practical and communication skills needed to accomplish this.

Recommendations for Further Research

There are a number of ideas for future research. First, research could be repeated on this campus and others to strengthen its results and generalizability. Also, research to find out why some sexually active students don't use condoms with each intercourse and why they find it difficult to practice safe/safer sex would be helpful for education program planning. Research to find out if invincibility is why students don't feel at risk for contracting HIV or if there are other factors involved could help health educators develop better means to increase perceived susceptibility.

The importance of frequent ongoing pretest/posttest research can also serve as a valuable program evaluation tool. Especially when new programs and/or program changes are implemented.

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OREGON HEALTH SCIENCES UNIVERSITY
Consent Form

TITLE

AIDS Knowledge and Intent of Behavior Change of the College Student.

PRINCIPAL INVESTIGATOR

Kelly Freeland, R.N., Oregon Institute of Technology Student Health Service and graduate student at OHSU. Dr. Marie Berger is faculty advisor for this project.

PURPOSE

The objective of this research study is to determine the effects of an AIDS education program on college students' knowledge of AIDS and intent to change behavior. Your participation in this study will include filling out a questionnaire weeks four and nine of the term and participating in an AIDS education program week seven of the term (experimental group) and week nine (comparison group). All activities will take place during your regularly scheduled class time.

BENEFITS

The potential benefit to you for your participation in this study is an increase in your knowledge of HIV/AIDS. Your participation in this study will also help the Student Health Service and the health education instructors better plan future AIDS education programs.

CONFIDENTIALITY

The information that you give will be kept strictly confidential. Only your four digit code number will be used to compare your pretest scores with your posttest scores. At no time will your name or identify be attached to any information you give.

COSTS

There are no costs to you as a participating subject.

LIABILITIES

The Oregon Health Sciences University, as an agency of the State, is covered by the State Liability Fund. If you suffer any injury from the research project, compensation would be available to you only if you establish that the injury occurred through the fault of the University, its officers or employees. If you have further questions, please call Dr. Michael Baird at (503) 279-8014.

OTHER INFORMATION

Your participation in this study is voluntary. You may refuse to participate or withdraw from this study at any time without affecting your relationship with the Student Health Service and or your standing in this class. If you are under 18 years old we ask that you do not participate.

Kelly Freeland has offered to answer any questions you might have. She may be reached at 882-4456. Dr. Marie Berger may be reached at OHSU at 279-8014.

Your signature below indicates that you have read the foregoing and agree to participate in this study.

_____ Date _____

You may keep the first page of this consent for your records.

AIDS Knowledge and Intent of Behavior Change of the College Student.

Researched by: Kelly Freeland, R.N.
Faculty Advisor: Dr. Marie Berger

Instrument

Code Number _____
(Last four digits of Social Security #)

All information received from this questionnaire is considered confidential. The code numbers will be used to match pretest with posttest only. Results of this survey will be used to help evaluate and plan AIDS education programs for OIT and to help the Student Health Service and health education instructors identify health education needs.

I. AIDS INFORMATION

The following statements are designed to assess your knowledge of AIDS. Please indicate with a check the appropriate answer.

- A. AIDS is found only in bisexual and homosexual males.
1. yes _____ 2. no _____
- B. Someone can be infected with HIV without knowing it.
1. yes _____ 2. no _____
- C. An exchange of saliva is a way to transmit HIV/AIDS.
1. yes _____ 2. no _____
- D. Vaginal intercourse can transmit HIV/AIDS.
1. yes _____ 2. no _____
- E. Exchange of blood through IV drug needle sharing can spread HIV/AIDS.
1. yes _____ 2. no _____
- F. Women can spread HIV/AIDS.
1. yes _____ 2. no _____

- G. HIV is spread in hot tubs.
1. yes _____ 2. no _____
- H. There is a high risk of getting HIV/AIDS from a blood transfusion.
1. yes _____ 2. no _____
- I. People with AIDS are easily infected by opportunistic diseases.
1. yes _____ 2. no _____
- J. HIV can infect the nervous system.
1. yes _____ 2. no _____
- K. A person with HIV can spread the virus even before she/he knows she/he has it.
1. yes _____ 2. no _____
- L. You can tell a person has HIV by looking at them.
1. yes _____ 2. no _____
- M. People with HIV/AIDS should not work in food service.
1. yes _____ 2. no _____

II. PERSONAL INFORMATION

- N. Do you feel you may be at risk for getting HIV?
1. yes _____ 2. no _____

Why or Why not?

- O. Please describe any behavioral changes you have made because of HIV/AIDS?
- P. Number of sexual partners you have had in the past 10 years? (If the answer to this question is 1, skip to V.)
- | | |
|--------|-----------------|
| 1. 0 | 4. 6-10 |
| 2. 1 | 5. 11-15 |
| 3. 2-5 | 6. more than 15 |
- Q. When you are together, do you or your partner(s) use: (you may circle more than one)
- | | |
|------------------------|----------------|
| 1. condoms | 4. IUD |
| 2. birth control pills | 5. spermicide |
| 3. diaphragm | 6. other _____ |
- R. If you or your current partner(s) are using condoms, do you use them every time you have sex?
1. yes
 2. no
- S. Have you and your current sexual partner(s) discussed previous sexual behaviors and experiences?
1. yes
 2. no
- T. Do you ask potential sexual partner(s) about their use of drugs and steroids, especially their use of needles?
1. yes
 2. no
- U. Do you negotiate with sexual partner(s) for safer sex practices?
1. yes
 2. no

V. Do you find it difficult to negotiate with your sexual partner(s) for safer sexual practices?

1. yes
2. no

W. What is your sex?

1. male
2. female

X. What is your race-or ethnic group?

- | | |
|-------------|---------------------------|
| 1. White | 4. Asian/Pacific Islander |
| 2. Black | 5. American Indian |
| 3. Hispanic | 6. Other |

Y. What is your class standing?

- | | |
|--------------|-----------|
| 1. Freshman | 3. Junior |
| 2. Sophomore | 4. Senior |

Z. What is your major?

- | | |
|------------------------------|------------------------------|
| 1. Laser Technology | 7. Computer Engineering |
| 2. Dental Hygiene | 8. Electronics Engineering |
| 3. Accounting | 9. Manufacturing Engineering |
| 4. Industrial Management | 10. Mechanical Engineering |
| 5. Office Automation | 11. Diesel Power Technology |
| 6. Civil Engineering | 12. Allied Health |
| 13. Non-declared or transfer | |

AA. What is your age to the nearest year? _____

BB. What do you feel is the best way to educate college students about HIV/AIDS? (You may circle more than one)

1. Programs given by health educators/professionals
2. Videos
3. Pamphlets
4. Programs given by other students
5. School newspaper articles
6. Small group discussions
7. Role playing to help develop communication skills
8. Other _____

III. EVALUATION

Please evaluate the following components of the HIV/AIDS education program you received by circling the appropriate numbers.

	Poor	Average	Good	Excellent
A. Video	1	2	3	4
B. Lecture Material	1	2	3	4
C. Question/Answer Session	1	2	3	4
D. Presenter	1	2	3	4

Please make any suggestions that you feel might improve this program.

Table 1

Comparison of background variables by groups

	Experimental Group (n=33)				Control Group (n=30)				Group5 (n=22)	
	Group1 (n=24)		Group2 (n=9)		Group3 (n=13)		Group4 (n=17)		n	%
	n	n	n	%	n	n	n	%		
Gender										
Female	13	2	15	45%	6	6	12	40%	12	55%
Male	11	7	18	55%	7	11	18	60%	10	46%
Marital Status										
Single	22	7	29	88%	12	10	22	73%	17	77%
Married	1	2	3	09%	0	5	5	17%	3	14%
Divorced	0	0	0	00%	1	2	3	10%	2	09%
Seperated	1	0	1	03%	0	0	0	00%	0	00%
Race										
Black	1	0	1	03%	0	2	2	07%	0	00%
White	22	7	29	88%	11	15	26	87%	18	82%
Hispanic	1	1	1	03%	2	0	2	07%	2	09%
Asian/ Pacific Islander	0	1	1	03%	0	0	0	00%	2	09%
American Indian	0	1	1	03%	0	0	0	00%	0	00%
Class										
Freshman	19	8	27	82%	3	8	11	37%	15	68%
Sophomore	3	1	4	11%	2	3	5	17%	4	18%
Junior	2	0	2	06%	3	3	6	20%	3	14%
Senior	0	0	0	00%	5	3	8	27%	0	00%

Table 2

Descriptive Statistics Pretest and Posttest HIV/AIDS Knowledge Scores by group

	Pretest			Posttest		
	Mean	Standard Deviation	Range	Mean	Standard Deviation	Range
Experimental Group						
Group 1	11.7	± 1.1	9-13	12	± 0.6	11-13
Group 2	11.5	± 1.0	10-13	12.2	± 0.7	11-13
Control Group						
Group 3	11.6	± 0.9	10-13	11.8	± 0.9	10-13
Group 4	11.2	± 1.1	9-13	11.7	± 1.1	9-13
Group 5	11.5	± 1.2	9-13			

TABLE 3

Student's Knowledge About HIV/AIDS: Correct Answers by Group on the Pretest.

Question	Experimental Group			Control Group		
	Grp1 n=24	Grp2 n=9	Total n=33	Grp3 n=13	Grp4 n=17	Total n=30
A. AIDS is found only in bisexual and homosexual males.	23	9	32(97%)	13	17	30(100%)
B. Someone can be infected with HIV without knowing it.	24	9	33(100%)	13	16	29(97%)
C. An exchange of saliva is a way to transmit HIV.	19	5	24(73%)	13	11	24(80%)
D. Vaginal intercourse can transmit HIV.	24	9	33(100%)	11	17	28(93%)
E. Exchange of blood through IV drug needle sharing can spread HIV.	24	9	33(100%)	13	17	30(100%)
F. Women can spread HIV.	24	9	33(100%)	13	17	30(100%)
G. HIV is spread in hot tubs.	24	8	32(97%)	13	16	29(97%)
H. There is a high risk of getting HIV from a blood transfusion.	10	6	16(48%)	13	12	25(83%)
I. People with AIDS are easily infected by opportunistic diseases.	23	9	26(87%)	10	16	26(87%)
J. HIV can infect the nervous system.	18	4	22(67%)	12	9	21(70%)
K. A person with HIV can spread the virus before he/she knows she/he is infected.	24	9	33(100%)	7	17	24(80%)
L. You can tell a person has HIV by looking at them.	24	9	33(100%)	13	17	30(100%)
M. People with HIV/AIDS should not work in food service.	17	5	22(67%)	12	8	20(67%)

TABLE 4

Student's Knowledge About HIV/AIDS: Correct Answers by Group on the Posttest.

Question	Experimental Group			Control Group		
	Grp1 n=24	Grp2 n=9	Total n=33	Grp3 n=13	Grp4 n=17	Total n=30
A. AIDS is found only in bisexual and homosexual males.	24	9	33(100%)	13	17	30(100%)
B. Someone can be infected with HIV without knowing it.	24	9	33(100%)	13	17	30(100%)
C. An exchange of saliva is a way to transmit HIV.	23	6	29(88%)	12	11	23(77%)
D. Vaginal intercourse can transmit HIV.	24	9	33(100%)	13	17	30(100%)
E. Exchange of blood through IV drug needle sharing can spread HIV.	24	9	33(100%)	13	17	30(100%)
F. Women can spread HIV.	24	9	33(100%)	13	17	30(100%)
G. HIV is spread in hot tubs.	24	9	33(100%)	13	17	30(100%)
H. There is a high risk of getting HIV from a blood transfusion.	12	9	21(64%)	10	13	23(77%)
I. People with AIDS are easily infected by opportunistic diseases.	24	9	33(100%)	13	17	30(100%)
J. HIV can infect the nervous system.	21	7	28(85%)	12	14	26(87%)
K. A person with HIV can spread the virus before he/she knows she/he is infected.	24	6	30(91%)	13	17	30(100%)
L. You can tell a person has HIV by looking at them.	24	9	33(100%)	13	17	30(100%)
M. People with HIV/AIDS should not work in food service.	24	9	33(100%)	9	10	19(63%)

TABLE 5

Pretest Behavior Changes Made by Students due to HIV/AIDS.

<u>Change</u>	<u>Experimental Group</u>			<u>Control Group</u>		
	Grp1 n=24	Grp2 n=9	Total n=33	Grp3 n=13	Grp4 n=17	Total n=30
No change made	9	5	14 (42%)	2	8	10 (33%)
No answer given	8	3	11 (33%)	3	3	6 (20%)
Practice safer sex	4	0	4 (12%)	3	3	6 (20%)
Abstinence	1	0	1 (03%)	2	2	4 (13%)
No drugs and safer sex	0	0	0	0	1	1 (03%)
Avoid blood	0	0	0	1	0	1 (03%)
Avoid fast girls	0	0	0	1	0	1 (03%)
Careful in restroom	1	0	1 (03%)	0	0	0
Increased awareness	1	0	1 (03%)	0	0	0
Educate family	0	1	1 (03%)	0	0	0

TABLE 6

Posttest Behavior Changes Made by Students due to HIV/AIDS.

<u>Change</u>	Experimental Group			Control Group		
	Grp1 n=24	Grp2 n=9	Total n=33	Grp3 n=13	Grp4 n=17	Total n=30
No change made	6	1	7(21%)	2	1	3(10%)
No answer given	1	1	2(06%)	0	0	0
Practice safer sex	4	2	6(18%)	1	3	4(13%)
Abstinence	3	0	3(18%)	2	1	3(10%)
No drugs and safer sex	7	3	10(30%)	4	7	11(37%)
Avoid drug use	0	0	0	0	1	1(03%)
Avoid blood	0	0	0	2	0	2(06%)
Avoid fast girls/ prostitutes	0	2	2(06%)	1	2	3(10%)
Careful in restroom	0	0	0	0	0	0
Increased awareness	1	0	1(03%)	0	0	0
No risky lifestyle	1	0	1(03%)	1	1	2(06%)
Been tested for HIV and practice safer sex	1	0	1(03%)	0	0	0
Discuss sexual history with potential partner	0	0	0	0	1	1(03%)

TABLE 7

What Students Indicated to be the Best Ways to Educate
College Students About HIV/AIDS.

(N=35)

<u>Method</u>	<u>%</u>	<u>n</u>
Video tapes	77	27
Programs by health educators/professionals	71	25
Pamphlets	29	10
Peer educators	51	18
School newspaper articles	24	6
Small group discussions	57	20
Role playing	12	3

AN ABSTRACT OF THE
MASTERS RESEARCH PROJECT OF
KELLY McDERMOTT FREELAND

For the MASTER OF SCIENCE

Title: HIV/AIDS EDUCATION AND INTENT FOR BEHAVIOR CHANGE
OF THE COLLEGE STUDENT

Approved: _____

Marie Berger, R.N., Ph.D., Professor,
Master Research Project Advisor

This study implemented an HIV/AIDS education program based on the Health Belief Model (HBM) as a means of increasing students' knowledge of HIV/AIDS and increasing students' perceived susceptibility. The program also attempted to reduce the barriers students faced in regard to lowering their risk factors for contracting HIV. The tool developed for this study measured outcomes of this HIV/AIDS education program on students' knowledge, perceived susceptibility, and intent of behavior change.

This was a pretest posttest study conducted at a four year technical college in the Pacific Northwest. The pretest was given week five of the term, the education program was presented week eight of the term, and the posttest was given week ten of the term.

A high rate of sexual activity (87%) was found. A majority of students claimed to have had multiple partners over the past 10 years. Though many students claimed to use condoms less than half reported using them with each intercourse. Only about half of the students surveyed indicated that they discuss past sexual history with potential partners, less than half reported discussing previous drug use, and a majority found it difficult to discuss safer sex with their partners.

Students were found to be knowledgeable on the pretest with no significant increase in knowledge on the posttest. Less than 25% of the students indicated feeling at risk for contracting HIV/AIDS on the pretest. This number did not change on the posttest.

Many students indicated making behavior changes due to HIV/AIDS on the pretest. All groups had an increase in behavior changes made on the posttest.

It is possible that the HBM may not be an appropriate model to use with this age group. The HBM assumes that knowledge should lead to perceived susceptibility. No allowances are made for the strong sense of invulnerability that this older adolescent population possesses. This study demonstrated that students are knowledgeable about HIV/AIDS but they do not see themselves at risk for