THE EFFECTS OF PRETESTING AND GROUP DISCUSSION ON REACTIONS TO AN AIDS EDUCATION VIDEOTAPE

SHELLEY ANNE KEILTY

THE EFFECTS OF PRETESTING AND GROUP DISCUSSION ON REACTIONS TO AN AIDS EDUCATION VIDEOTAPE

BY

© Shelley Anne Keilty

A thesis submitted to the School of Graduate
Studies in partial fulfilment of the
requirements for the degree of
Master of Science

Department of Psychology
Memorial University of Newfoundland

September 1993

St. John's Newfoundland

ISBN 0-315-86684-5

Canada

Abstract

The present study examined the effects of pretesting and group discussion on reactions to an AIDS educational videotape. One hundred and twenty undergraduates participated in 3-person groups of friends. Before viewing the 20-minute videotape, half of the subjects were given a pretest of their knowledge of AIDS, their attitudes about AIDS, and their estimates of risk and the importance of preventive measures for target persons in various categories. After viewing the videotape, half of the pretested and half of the non-pretested subjects engaged in discussion with their friends. Finally, all subjects completed a post-test, identical to the pretest completed earlier by half the subjects, with the exception of a videotape knowledge questionnaire.

Group discussion, especially when it followed pretesting, made subjects more willing to accept the threat that AIDS poses to heterosexuals as well as to homosexuals. Although pretest and discussion combined to enhance subjects' perceived understanding of the videotape material, no similar effects were found with regard to actual knowledge scores.

Males and females expressed similar sympathy for a person with AIDS but males expressed less willingness to have such a person in their home. On the latter measure, group discussion made females more

accepting of a person with AIDS but had little effect on the attitudes of males. Male and female groups were less likely to agree that AIDS is a gay disease and more likely to agree that a heterosexual can catch AIDS, during and after a group discussion than on their pretest.

Ratings of the risk of AIDS and the need for preventive measures were influenced by the target person's sex, sexual orientation, and number of sex partners. Ratings for all categories of target increased from pretest to post-test. On the post-test, differential ratings across target categories became less evident.

Several recommendations are offered concerning the most effective use of instructional materials in AIDS education programs.

ACKNOWLEDGEMENTS

The author would like to acknowledge the Memorial University of Newfoundland, for their financial and academic support. Sincere thanks are extended to my committee members, Dr. Abraham Ross and Dr. Russell Harpur, for their knowledgeable advice and recommendations. A heartfelt thankyou is expressed to Marilyn Hill for her endless compassion and encouragement. Finally, a special thankyou to my advisor, Malcolm Grant, for his constant guidance, expertise and patience throughout this journey.

CONTENTS

FIGURES

CHAPTER 1

INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) has proved to be a fast growing health emergency. As of April, 1993 there were 289,320 known cases of AIDS in the United States and 7,770 in Canada (Federal Centre for AIDS, 1993). The initial reaction to the AIDS epidemic involved an examination of treatment methods for persons with AIDS (PWAs) and a call for education. So far, these efforts have met with little success. Devising an effective treatment against HIV infection has become a challenging goal. Although there have been promising leads in the area of drug therapy, the development of a vaccine or cure remains in the distant future (Eisenberg, 1989). Education about AIDS remains the most effective strategy in AIDS prevention (Porter, 1993).

Many attempts have been made to educate the public about the safe-sex practices that are necessary to avoid HIV infection, but, unfortunately, these attempts have not produced significant changes. Although public knowledge about AIDS seems to be increasing (Ornstein, 1989; Westerman & Davidson, 1993), involvement in high risk behaviours is not significantly decreasing (Brown, Fritz, & Barone, 1989; Phillips, 1988). The number of heterosexual cases of AIDS is growing every year (Federal Centre for AIDS, 1993; Seigel & Gibson, 1988). At

least in this domain, knowledge does not appear to be affecting behaviour.

Presently, many schools are adding information about AIDS to their curriculum (Baker & Fish, 1991; Brown et al., 1989; Carter & Carter, 1993). Educational videotapes have recently become a common means of providing information to large groups of students (e.g., AIDS: What Every Student Should Know, Maryland Instructional Television, 1987; AIDS: What Everyone Needs To Know, Churchill Films, 1986; AIDS: Acquired Immune Deficiency Syndrome, Disney Productions, 1986). Although these educational efforts are effective in conveying the facts about AIDS, they are much less effective in changing attitudes and behaviour (Cohen, MacKinnon, Dent, Mason, & Sullivan, 1992; MacNair, Elliott, & Yoder, 1991; Rhodes & Wolitski, 1989).

1.1 Increasing the Effectiveness of AIDS Education

Rhodes & Wolitski (1989) examined the effects of AIDS-education videotapes on university students and found that although there were increases in knowledge, there was little change in attitudes. One reason may be that, especially among young people, there is a lack of perceived personal vulnerability (Westerman & Davidson, 1993). It is imperative that the population being addressed be aware that AIDS is a result of behaviour (e.g., unprotected sex) and that risk is not limited to persons in particular categories (e.g., homosexuals). This is most important

because any individual can contract AIDS. Regardless of age, sex, or sexual orientation, accurate appraisal of the risk associated with one's own behaviour is vital.

The tendency for people to minimize their own personal risk and vulnerability to disease (Mickler, 1993; Phillips, 1988) is not unique to AIDS. For example, many cigarette smokers also believe they are invulnerable to the diseases associated with smoking (Kelly & St. Lawrence, 1988). If a smoker knows that smoking cigarettes may result in cancer but feels that he or she will never develop the disease, that person will be unlikely to change his or her smoking behaviour. Any information received may be disregarded if it is perceived as irrelevant. Although knowledge may be gained, that knowledge will not likely be incorporated into attitudes and behaviour (Ashworth, Durant, Newman, & Gaillard, 1992). Students' perceptions of personal vulnerability to AIDS will be an important focus of the present study.

Another reason for minimal attitude change in response to AIDS-education videotapes may be that the beliefs which underlie our social and health-related behaviours frequently have their origin in and are sustained by the social groups to which we belong (Romer & Hornik, 1992). For example, Abrams and Abraham (1988) have shown that whether or not a heroin-user shares needles depends upon the practices

that were initially introduced to the drug user by those in his/her current social group.

The concept of reference groups is relevant here. The term reference group simply means any group to which a person's attitudes are related or anchored (Kelley, 1965). There are two major functions which reference groups may play in the determination of one's attitudes. The first function is a normative one. To be accepted by a group, an individual may need to adjust his or her attitudes to make them conform more closely to the group norms. The second function of reference groups is an informational one. The individual uses the group as a source of information about reality. In the case of the normative function, the group is in a position to reward conformity and punish deviance, but in the case of the informational function, the group is merely a standard or checkpoint for making judgments (Kelley, 1965). Family and friendship groups often serve both normative and information functions and thus are often very influential.

If attitudes are rooted in people's reference groups, this needs to be taken into account when campaigns to change attitudes are designed. Winslow, Franzini, and Hwang (1992) found "perceived peer norms" to be a major predictor in AIDS risk behaviour. The effectiveness of educational attempts might be greatly enhanced if such efforts were

directed at groups of friends. The present study explored this possibility.

1.2 Effects of Group Discussion on the Education Process

According to Moore (1988), the most effective way of educating people about AIDS is through some combination of videotapes and group discussion. Group discussion can be triggered by the use of audiovisual materials. In turn, discussion may influence many aspects of the education process. People who participate in discussion will likely be more attentive, interested, and involved in the subject matter than will persons who approach the material in a more passive manner. MacNair et al. (1991) discovered that participation within an AIDS-prevention group significantly increased knowledge about AIDS and HIV transmission.

In addition, discussion may facilitate the exploration of attitudes and feelings concerning the topic (Moore, 1988). Group discussion has been applied in many kinds of educational campaigns in the past. Such efforts have been successful in increasing knowledge and changing attitudes about alcohol consumption (Kunkle-Miller & Blane, 1977), cautious driving (Clark & Powell, 1984), sexual behaviour (Wanlass, Kilmann, Bella, & Tarnowski, 1983), and contraceptives (Owie, 1983). In the following sections some of the theoretical reasons for expecting group discussion to affect attitude change will be considered.

1.3 Effects of Discussion on Attitude Change

McGuire (1985) analyzed how the presentation of information might eventually result in attitude change. He believed there are successive steps that a recipient must be induced to take if the communication is to have its intended persuasive impact. According to McGuire (1985), if the communication is to have an effect, the recipient must be exposed to the material, attend to the communication, and be interested in the message. The individual must also comprehend the material and be able to generate and retrieve from memory any related cognitive content. In addition, it is necessary that the person acquire the skills necessary to engage in the advocated behaviour. If the person's attitude changes, the new position and the information on which it is based must be stored in memory and later retrieved when relevant decisions are made. Actions in accordance with the decision will, according to McGuire, lead to an intrapersonal cognitive reorganization that links the compliant act with the person's overall belief system.

It seems likely that group discussion could affect many of the processes to which McGuire refers. For example, comprehension may be increased because discussion with others provides the opportunity for every member to ask questions and clear up misconceptions. An individual, for instance, may not understand some of the terminology

used, but it is likely that at least one member of the group will be able to provide the necessary information.

Group discussion may also enhance the retention of information. The process of exchanging ideas and information should help the group members to remember the material discussed. Discussing a topic with others can enhance the salience of the material and thereby increase the likelihood that it will be effectively encoded in memory (Yager, Johnson, Johnson, & Snider, 1986).

Discussion may also provide an opportunity for members to recall previous information or experiences of their own. This will not only add to the knowledge and understanding of other group members, but it will also elicit cognitive processing which may enhance the comprehension and retention of the material (Yager et al., 1986; Gerrard & Reis, 1989; Phillips, 1988).

All of the processes discussed so far may facilitate changes in attitudes concerning AIDS. The actual discussion about the issues raised in an AIDS educational videotape will undoubtedly cause particular points (e.g., means of disease transmission) to be brought up again and again. Different members will speak on the topic in various ways. Thus, group discussion may encourage a reiteration of material which, in turn, may enhance comprehension and retention, and result in attitude change.

1.4 Group polarization

Group discussion has frequently been shown to result in what is called group polarization. Group polarization refers to the tendency for people, whose attitudes are inclined in a particular direction, to advocate a more extreme position after group discussion (Myers & Lamm, 1976). The two theories most commonly used to explain the occurrence of group polarization are social comparison theory (Sanders & Baron, 1977; Brown, 1986; Whyte, 1989; Myers & Lamm, 1975; Myers & Lamm, 1976) and persuasive-arguments theory (Vinokur, Trope, & Burnstein, 1975; Brown, 1986; Whyte, 1989; Myers & Lamm, 1975; Myers & Lamm, 1976; Hinz & Davis, 1984).

Group polarization research grew out of earlier studies of the risky-shift phenomenon (Myers & Lamm, 1976). These earlier studies showed that, in their responses to choice-dilemma items, groups were usually more risky than the average individual member. It was later discovered (Myers & Lamm, 1975) that a shift to greater caution could also be demonstrated. Researchers then began to examine how the dominant attitudes (risky or cautious) expressed by subjects before discussion were related to the direction in which attitudes shifted after discussion (Myers & Lamm, 1976).

Because group polarization studies have frequently involved attitudes of risk or caution, such studies seem especially relevant to

research concerning attitudes about AIDS. Specifically, attitudes about AIDS involve positions that may lie on a risky-to-cautious continuum. For example, if a group discusses techniques for avoiding AIDS infection and initially dismisses the importance of such precautions (e.g., as a result of perceived AIDS risk), further discussion may result in a shift toward an even more risky attitude. This could be detrimental to the entire educational effort. On the other hand, if the group members initially express concern and fear of the disease, more cautious attitudes may develop as the result of group discussion. Such attitudes may be associated with the kinds of changes in behaviour that AIDS educators are typically trying to bring about. Therefore, a consideration of group polarization appears relevant to the present study.

1.5 Summary

On the basis of the research discussed above, it is reasonable to expect that group discussion will influence attitude change, and therefore that it can play an important role in the education process. The present research examined this possibility in connection with students' responses to an AIDS education videotape.

CHAPTER 2

OVERVIEW

The importance of group discussion among friends was the main focus of this research. An AIDS educational videotape was used to provide information to small groups of friends. Before watching the tape, half of the subjects received a pretest measure of attitudes and knowledge about AIDS. The other subjects did not receive a pretest measure. After watching the AIDS videotape, half of the subjects in the pretest condition and half in the no-pretest condition engaged in group discussion. The remaining subjects were asked to complete a word puzzle. Finally, all subjects received post-test measures of attitudes toward AIDS, perceived AIDS risk and prevention importance, general knowledge about AIDS, and comprehension of the material on the videotape.

The pretest factor was included in order to examine the possibility that being exposed to a pretest before an informational presentation increases knowledge and comprehension of that material (Pressley, Tanenbaum, McDaniel, & Wood, 1990). For example, the knowledge quiz to be used in the present study contains true or false questions which may by themselves provide information to the reader (e.g., A person can reduce the risk of contracting the AIDS virus by not having sexual contact with any person whose past history and current health

status are not known). Manipulating the presence or absence of a pretest may help answer the practical question of whether or not AIDS educators should include pretests when videotape presentations are given.

Discussions took place among friends who came to the laboratory in groups of three. Although laboratory groups in most social psychological studies are made up of strangers, there are at least two good reasons to study groups of friends. First, discussions among friends, compared to those among strangers, are more likely to be conducted in a spontaneous and honest fashion. Second, and perhaps more important, discussion among friends is what commonly occurs outside the laboratory. If AIDS education is presented in school classrooms, it is very likely that friends will discuss the material afterward and formulate an opinion together. In the real world, attitudes develop and change through this kind of interaction (Abrams & Abraham, 1988; Newcomb, 1965). Thus, the use of friendship groups should enhance the external validity of the present procedure.

2.1 Design

A 2 x 2 x 2 factorial design was employed, with sex of subject, pretest (present or absent), and group discussion (present or absent) as between- subject factors. All subjects viewed an AIDS educational videotape. The Solomon four-group design was chosen because it can

provide evidence concerning pretest, treatment, and pretest sensitization effects. Although not often used in the past, this design has been shown to exhibit considerable statistical power (Walton-Braver & Braver, 1988).

2.2 Dependent Measures

The dependent measures consisted of a pretest attitude questionnaire measuring perceived AIDS risk and prevention importance, attitudes about AIDS, and a short version of the AIDS Knowledge Quiz (AIDQ) (Fish, Rye, Bell, & Keilty, 1990). The condensed AIDQ has a standardized alpha coefficient of .72. The attitude questionnaire was also administered to subjects during group discussion, as a group consensus measure. Post-tests included the attitude and knowledge questionnaires used in the pretest, and a comprehension quiz on the material presented in the AIDS videotape. Finally, subjects were asked how much of the material on the videotape they felt they had understood.

2.3 Hypotheses

1. Males will express more negative attitudes about AIDS than will females. In past studies (e.g., Young & Whertvine, 1982; Keilty, 1989; Fish & Rye, 1991;) males have generally expressed more negative attitudes toward homosexuals as well as toward persons with AIDS.

2. Individuals who engage in group discussion after viewing the AIDS videotape will, on the post-test measures, have more knowledge of the tape contents and general knowledge about AIDS than will individuals who do not engage in group discussion. This hypothesis is based on research which has shown that groups engaged in discussion remember more material than do groups not engaged in discussion (Yager, Johnson, & Johnson, 1985).

3. On the post-test, individuals exposed to a pretest will exhibit greater knowledge about AIDS than will those not exposed to a pretest. This hypothesis is based simply on the reasoning that increased exposure to information increases knowledge (Pressley et al., 1990).

4. The effect of group discussion, described in Hypothesis 2, will be greater among subjects who have been exposed to pretest measures. This hypothesis is based on the assumption that the pretest will start subjects thinking about the topic and this in turn will increase their involvement in the discussion.

5. A group polarization effect will be observed in discussion groups. That is, the attitudes expressed prior to discussion will become more extreme during and following group discussion. This prediction is based on findings in the literature on group polarization (Myers & Lamm, 1975; Myers & Lamm; 1976; Lamm, 1988).

6. The final hypothesis is that, on the post-test, subjects who engage in group discussion will rate their risk of AIDS contraction and AIDS prevention importance higher than will subjects who do not engage in group discussion. This hypothesis is based on the assumption that discussion will allow subjects to reveal personal knowledge and experiences of AIDS transmission which in turn will increase subjects' interest in and concern about the topic.

CHAPTER 3

METHOD

3.1 Subjects

Twenty females and twenty males were recruited from the student population of Memorial University of Newfoundland. Each of these subjects was asked to bring along two other same-sex friends to the experiment. Thus, in total, 60 females and 60 males were tested. Each subject was paid $4.25 for each hour of participation.

3.2 Materials

An AIDS educational videotape titled, "AIDS: The New Facts of Life (1989)" was purchased from the Canadian Public Health Association. Test materials included a 21-item Likert attitude questionnaire. Sixteen of these items asked subjects to estimate the risk of AIDS and the importance of preventive measures for eight different categories of target person. Each target person was described as either male or female, homosexual or heterosexual, and having had either one or five sexual partners in the past year. For example, subjects were asked to "Imagine that X is a homosexual male and has had one sexual partner in the past year." Two questions followed this description: "What chance do you think X has of contracting AIDS?" and "How important do you think it is for X to use AIDS prevention methods during sex?" Subjects responded to the first question using a scale that ranged from 1 (very low chance)

to 7 (very high chance). They responded to the second question using a scale that ranged from 1 (not important) to 7 (very important).

The remaining five items on the attitude questionnaire assessed subjects' responses to the following statements: "AIDS is a gay disease"; "A heterosexual can catch AIDS"; "AIDS prevention is not important for heterosexuals"; "I would feel sympathy for a person with AIDS"; and "I would not want a person with AIDS in my home." Each of these statements was followed by a scale that ranged from 1 (strongly disagree) to 7 (strongly agree). The attitude questionnaire can be found in Appendix A.

Also included in the test materials was the short version of the AIDS Knowledge Quiz (AIDQ) (Fish et al., 1990) (see Appendix B) and an 8-item questionnaire to measure knowledge and comprehension of the issues dealt with in the videotape (see Appendix C).

3.3 Procedure

Five male and five female three-person groups were randomly assigned to each of the four experimental conditions. When subjects, in groups of three, arrived at the laboratory, they were told that the study had to do with AIDS education.[1] They were assured that their questionnaire responses would be anonymous.

If the group had been assigned to the pretest condition, each of the three subjects was taken to a separate cubicle where he or she first

completed the attitude questionnaire and then the AIDQ. This order was followed because it seemed less likely that the attitude questionnaire would affect knowledge than that the knowledge questionnaire would affect attitudes. When subjects had completed the questionnaires, they were brought together in a larger room to view the videotape. If the group had been assigned to the no-pretest condition, subjects proceeded immediately to the videotape viewing room.

The room where subjects watched the AIDS videotape was equipped with an audio recording system and a one-way window. The experimenter unobtrusively observed the group through this window.

When the videotape ended, the experimenter rejoined the group. If the group had been assigned to the discussion condition, subjects were asked to engage in a discussion for approximately 20 minutes, during which time they were to reach a group consensus concerning each of the items on the AIDS attitude questionnaire. The group was informed that their discussion would be recorded on audio tape. The experimenter randomly selected one of the three subjects and asked this person to record the group's decision on each item. If the group had been assigned to the no-discussion condition, subjects spent approximately 20 minutes working independently on a filler task that involved finding words in a letter matrix.

In the final phase of the procedure, each subject returned to a separate cubicle and completed the AIDS attitude questionnaire, the AIDQ, and a questionnaire containing some questions about the content of the videotape. In the case of subjects who engaged in group discussion, the experimenter made it clear that the positions they took now on the attitude questionnaire, "may or may not be the same as the group position."

After all subjects had finished filling out the questionnaires, the experiment was over. Subjects who had engaged in group discussion were asked to sign a release form (Appendix D) giving the experimenter permission to retain and use the recording.[2] To ensure anonymity, each subject's questionnaires were coded to identify the participant's group and then sealed in an envelope until time of analysis. All subjects received a verbal debriefing and some written material concerning the study (Appendix E).

CHAPTER 4

RESULTS

4.1 Design and Method of Analysis

Analyses of variance were carried out in which groups, comprised of three subjects, were the units of analysis. For each of the dependent variables, the scores of the three members in each group were totalled to give a single group score.

Two types of analysis were undertaken:

1. Analyses of variance were conducted on the post-test data of all subjects. In these analyses, the presence or absence of a pretest, the presence or absence of discussion, and sex of subject were between-subject factors.

2. Analyses of variance were conducted on the pretest and post-test data of the subjects in the two pretest-present conditions. In these analyses, the presence or absence of discussion and sex of subject were between-subject factors and pretest-post-test was a within-subject factor.

Each of these types of analysis was applied to all of the dependent variables for which it was appropriate. In the case of the two dependent variables that involved assessing the risk of AIDS and the importance of prevention methods for target persons in different categories, the

analyses were extended to include sex of target, sexual orientation of target, and number of sex partners as within-subject factors.[3]

4.2 Analyses of Post-test Scores

4.2.1 AIDS Attitude Items. Group attitude scores on each item could range from 3 to 21. Significant effects were found in the analyses of three of the five attitude items. On the item, "AIDS is a gay disease," there was a triple interaction among the pretest, discussion, and sex-of-subject factors, $F(1, 32) = 4.21$, $p < .05$ (see Figure 1). Females in discussion groups agreed with the statement somewhat less than did females in non-discussion groups, $t(18) = 1.88$, $p < .10$. This was true regardless of the presence or absence of a pretest. Among males, a similar effect of discussion was found, but only among subjects who had been pretested, $t(8) = 2.12$, $p < .10$. When no pretest was given, the effect of discussion was in the opposite direction. Males in discussion groups agreed with the statement more than did males in non-discussion groups, although the difference was not significant.

On the item, "A heterosexual can catch AIDS", a significant main effect of discussion was found, $F(1, 32) = 4.90$, $p < .05$. Subjects who had engaged in group discussion agreed with this statement more than did those who had not engaged in a discussion, ($M = 21.00$ vs $M = 20.65$).

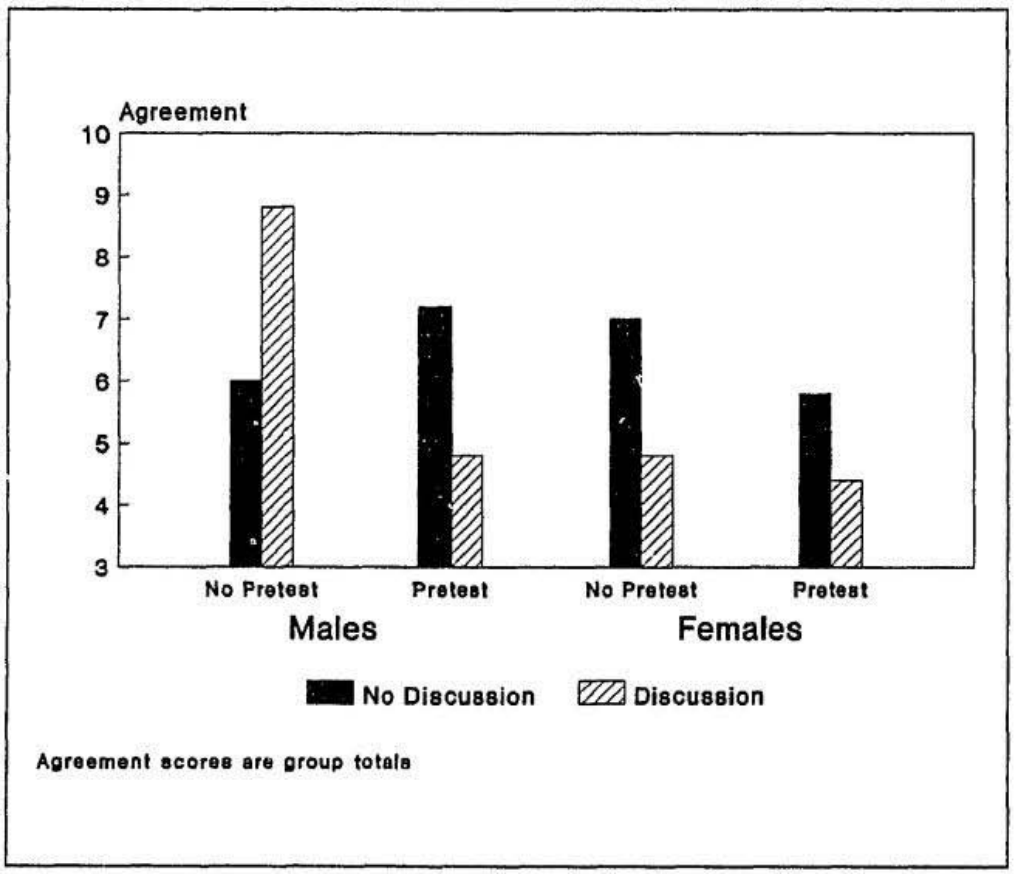

Figure 1. Post-test agreement with the statement, "AIDS is a gay disease" as a function of pretest, discussion, and sex of subject.

Finally, consistent with the first hypothesis, males were more likely than females to strongly agree that they would not want a person with AIDS in their home (M = 8.95 vs M = 5.40), $F(1, 32) = 23.12$, $p < .01$.

No significant effects were found on the item dealing with the importance of AIDS prevention for heterosexuals or the one that assessed sympathy for a person with AIDS.

4.2.2 Risk Ratings. A significant interaction between the pretest and sex of target factors was found on subjects' risk ratings, $F(1, 32) = 9.35$, $p < .01$ (see Figure 2). Subjects who had a pretest rated male and female targets at similar risk; those who had no pretest rated a male target at greater risk than a female target, $t(19) = 4.06$, $p < .01$.

An interaction was found between sexual orientation of target and sex of target, $F(1, 32) = 65.92$, $p < .01$ (see Figure 3). In the case of male targets, subjects thought the risk was considerably higher for a homosexual than for a heterosexual, $t(39) = 10.29$, $p < .01$. In the case of female targets, however, homosexual and heterosexual targets were rated similarly for AIDS risk.

Not surprisingly, there was a strongly significant main effect for number of partners, $F(1, 32) = 481.05$, $p < .01$. Subjects rated targets with five partners much higher for risk of AIDS than targets with only one partner (M = 17.59 vs M = 10.90). The strength of this main

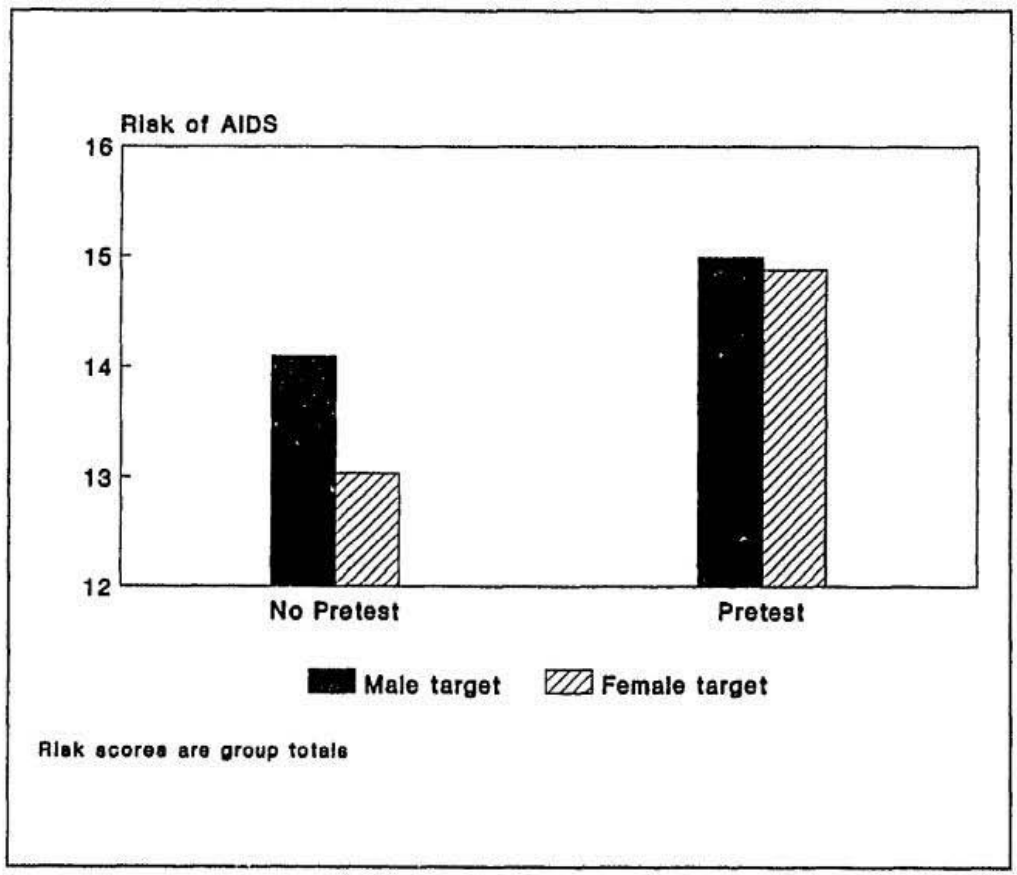

Figure 2. Post-test ratings of AIDS risk as a function of pretest and sex of target.

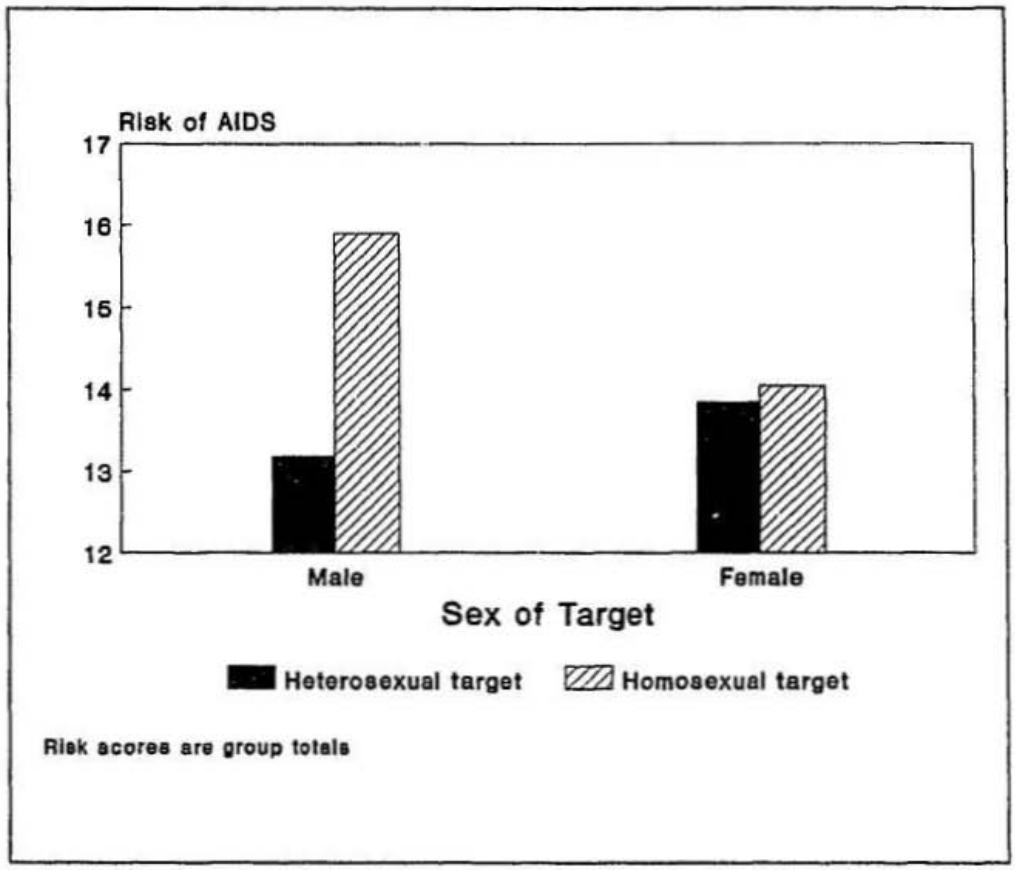

Figure 3. Post-test ratings of AIDS risk as a function of sexual orientation and sex of target.

effect, although not its direction, depended on three other factors. The number-of-partners effect was stronger for a heterosexual target than for a homosexual one, $F(1, 32) = 32.70$, $p < .01$, stronger for a male target than for a female, $F(1, 32) = 5.40$, $p < .05$, and stronger among subjects who had not engaged in group discussion than among those who had, $F(1, 32) = 5.08$, $p < .05$. Concerning the latter finding, it is important to note that the effect of discussion seems mainly to have been to increase subjects' estimates of risk for targets with only one partner. Discussion and non-discussion subjects differed very little in the high ratings of risk they assigned to targets with five partners.

4.2.3 Prevention Importance Ratings. A three-way interaction among the pretest, sex-of-target, and sexual orientation factors was found, $F(1, 32) = 8.00$, $p < .01$ (see Figure 4). Subjects who had a pretest gave similarly high ratings of prevention importance to male and female targets, regardless of their sexual orientation. Subjects who did not have a pretest rated prevention importance lower overall, but differentiated among the targets. These subjects rated prevention importance higher for male homosexuals than for either male heterosexuals, $t(19) = 2.27$, $p < .05$, or female heterosexuals, $t(19) = 2.77$, $p < .05$. Ratings of importance for female homosexuals, however, were significantly lower than for either male heterosexuals, $t(19) = 3.45$, $p < .01$, or female heterosexuals, $t(19) = 3.22$, $p < .01$.

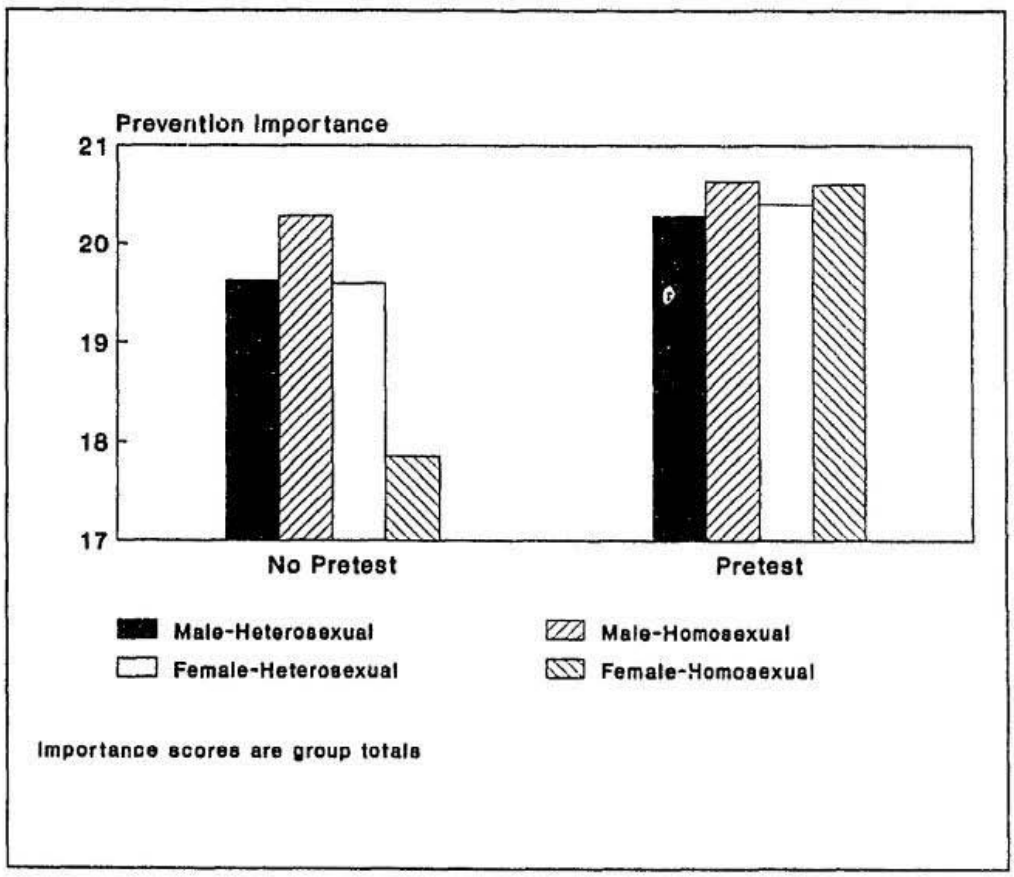

Figure 4. Post-test ratings of the importance of AIDS prevention as a function of pretest, sexual orientation, and sex of target.

An interaction between sex of subject and number of partners was also found, $F(1, 32) = 4.74$, $p < .05$ (see Figure 5). Prevention importance for targets with five partners was rated equally high by male and female subjects. For a target with only one partner, however, there was a tendency for males to rate the importance of prevention somewhat lower than did females, $t(19) = 1.79$, $p < .10$.

4.2.4 AIDS Knowledge Scores. The range of possible scores on the AIDS knowledge quiz for the three-member groups was from 0 to 105. No significant effects on post-test scores were found.

4.2.5 Videotape Knowledge Scores. The range of possible scores on videotape knowledge for the three-member groups was from 0 to 21. There were no significant differences in videotape knowledge scores across conditions.

4.2.6 Perceived Understanding of Videotape. On the question that asked subjects how much of the videotape material they understood, the range of possible group scores was from 3 to 21. A significant interaction was found between the pretest and discussion factors, $F(1, 32) = 4.59$, $p < .05$ (see Figure 6). Among subjects who had been pretested, perceived understanding was higher in the discussion condition than in the no-discussion condition, $t(19) = 2.06$, $p < .06$. Among subjects who had not been pretested, there was a slight difference in the opposite direction.

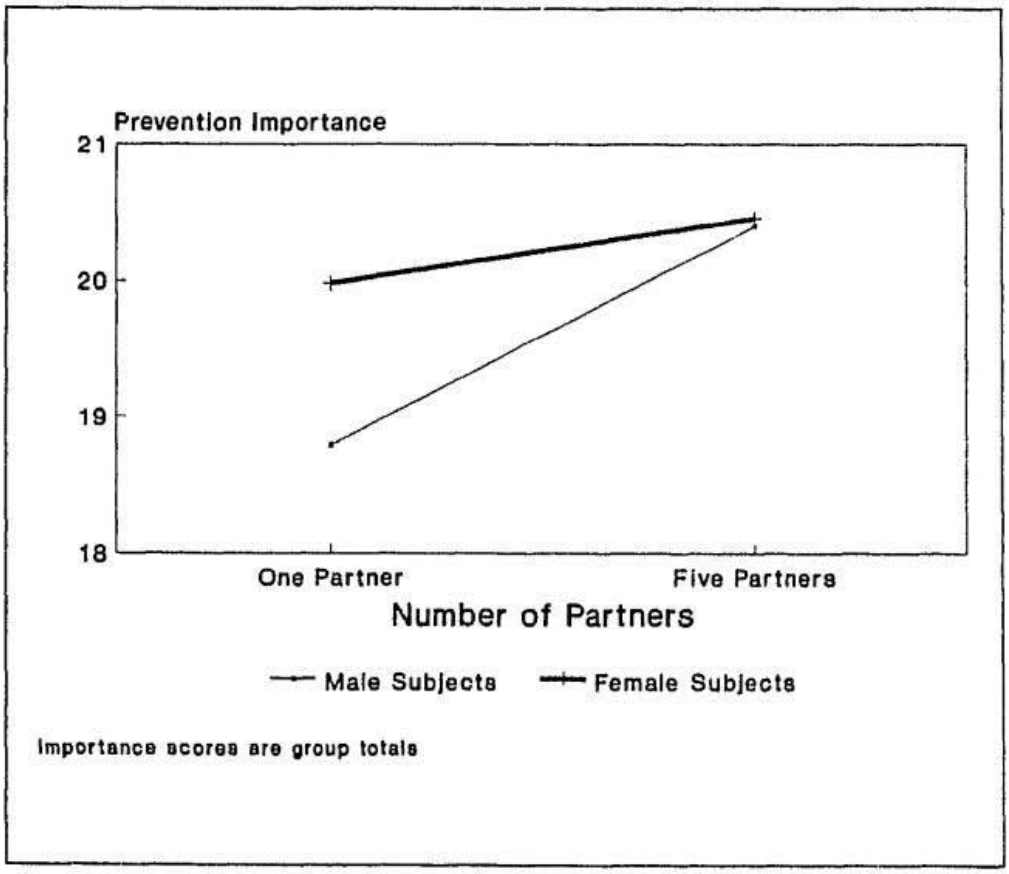

Figure 5. Post-test ratings of the importance of AIDS prevention as a function of sex of subject and number of partners.

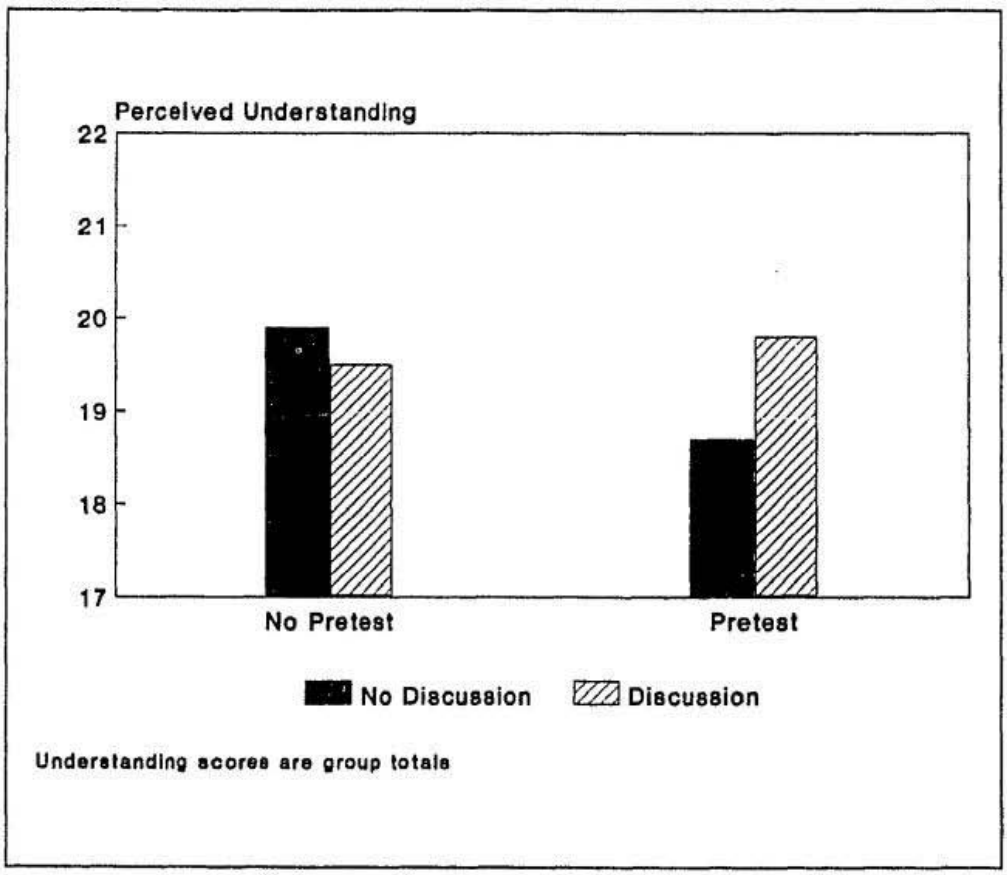

Figure 6. Perceived understanding of AIDS videotape material as a function of pretest and discussion.

4.2.7 Summary. The findings concerning AIDS attitudes indicate that group discussion, especially when it followed pretesting, made subjects more willing to accept the threat that AIDS poses to heterosexuals as well as to homosexuals. Interestingly, this effect does not appear to have been mediated by increases in knowledge of specific facts. Although pretest and discussion apparently combined to enhance subjects' perceived understanding of the videotape material, no such effect was found with regard to their actual scores on either the general AIDS knowledge quiz or on the items that assessed their specific knowledge of the videotape material.

Compared to female subjects, male subjects were relatively negative in their attitudes toward a person with AIDS, as indicated by their greater wish to avoid having such a person in their homes. However, no sex difference was found on the item dealing with compassion for a person with AIDS.

Finally, with regard to risk and prevention importance ratings, subjects showed clear awareness of the danger associated with multiple sex partners. In contrast, the danger for a person with only one partner was perceived to be much less, especially by male subjects and by subjects, both male and female, who had not engaged in group discussion. Subjects were inclined to think that the danger of AIDS was greater for a male target than for a female target, particularly if the target

was homosexual. These differential perceptions of risk were, however, less evident among subjects who had been pretested earlier.

4.3 Analyses Comparing Pretest and Post-test Data

The analyses reported in this section involved only those subjects who were given a pretest. As would be expected, many of the findings that reached significance in these analyses duplicated findings already reported for the entire sample. To avoid repetition, only findings that involve the time-of-testing factor will be reported here.

4.3.1 AIDS Attitude Items. As in the case of the post-test analyses, significant effects were found on three of the five attitude items. Compared to their pretest attitudes, on the post-test, subjects were less likely to agree that AIDS is a gay disease, (Pretest $\underline{M}$ = 7.35; Post-test $\underline{M}$ = 5.55), $\underline{F}(1, 16) = 14.40$, $\underline{p} < .01$, and more likely to agree that a heterosexual can catch AIDS, (Pretest $\underline{M}$ = 20.30; Post-test $\underline{M}$ = 20.80), $\underline{F}(1, 16) = 6.67$, $\underline{p} < .05$. It is clear that on these items subjects were becoming more extreme in the direction in which they were initially inclined. There is, however, no evidence that this polarization was any greater in the groups that engaged in group discussion than in the groups that did not.

On the statement "I would not want a person with AIDS in my home," there was a three-way interaction among discussion, sex of subject, and time of testing, $\underline{F}(1, 32) = 9.11$, $\underline{p} < .01$ (see Figure 7).

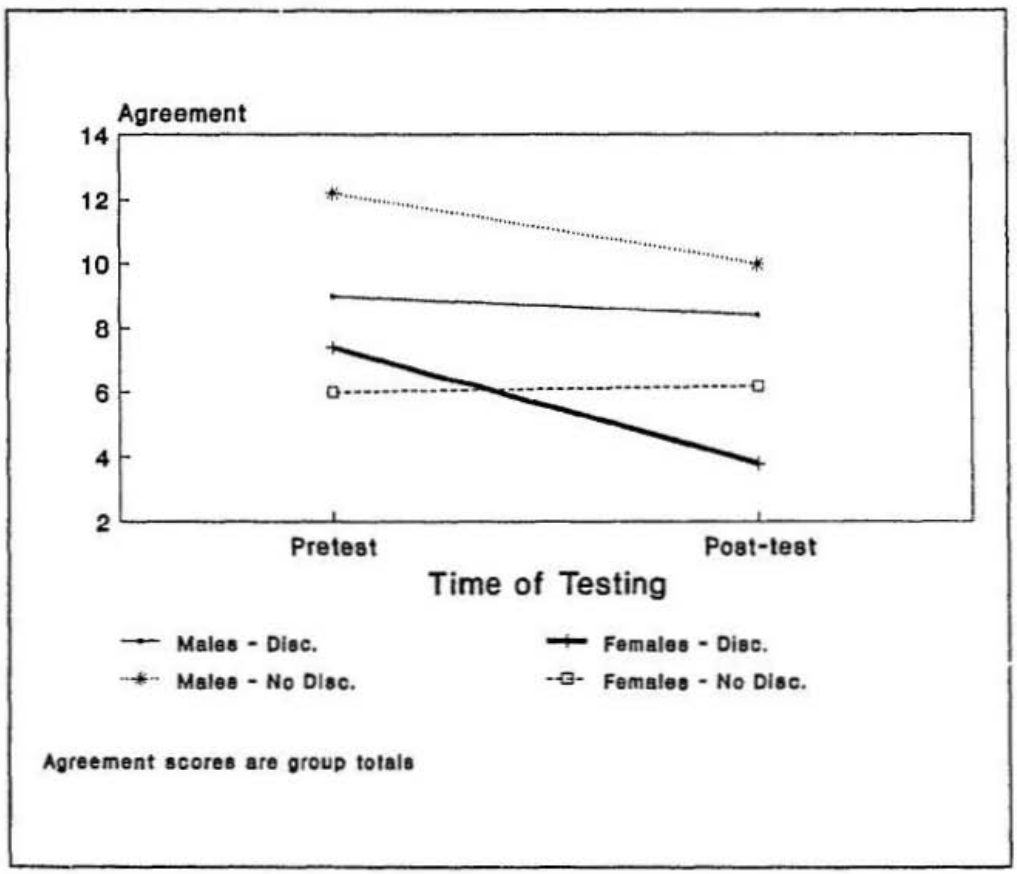

Figure 7. Agreement with the statement, "I would not want a person with AIDS in my home" as a function of time of testing, discussion, and sex of subject.

Discussion appears to have had a polarizing effect in female groups. Agreement with the statement was relatively low among females on the pretest and decreased still further after group discussion, $t(4) = 2.98$, $p < .05$. In the absence of group discussion, no such decrease occurred. In the case of male groups, pretest attitudes on this item were close to the middle of the scale and, perhaps for this reason, group discussion produced little change. In fact, as can be seen in Figure 7, for males the greatest decrease in agreement with the statement occurred in groups that did *not* engage in discussion, $t(4) = 2.99$, $p < .05$. The results are typical of a group polarization effect. That is, a person's attitudes which are initially inclined in a particular direction, polarize to a more extreme position after group discussion. Thus, group polarization was only evident for groups that had a definite agreement at the pretest level.

4.3.1.1 Group Discussion Data. In addition to pretest and post-test data, analyses were performed on the group discussion data to investigate for group polarization effects. This set of analyses included only the data of subjects who engaged in a group discussion. Repeated measures analyses of variance were performed with sex as a between-group factor and sequence as a within-group factor. The sequence factor represents variations in the three points of attitude testing (i.e., pre-discussion, discussion, and post-discussion).

There was a significant main effect for the sequence factor on the attitude, "AIDS is a gay disease," $F(2, 16) = 18.54$, $p < .01$. Subjects were less inclined to agree with this statement during and after discussion than before discussion (Pre-discussion: $M = 2.43$; Discussion: $M = 1.40$; Post-discussion: $M = 1.53$). Both the discussion and post-discussion means differed significantly from the pre-discussion mean, $t(8) = 4.89$ and 4.86, respectively, $p < .01$. Thus, subjects' average post-group responses were more extreme than, and in the same direction as, the average of their pre-group responses.

A significant main effect for the sequence factor was also found on the attitude, "A heterosexual can catch AIDS," $F(2, 16) = 5.75$, $p < .05$. Before discussion, subjects chose either 6 or 7 on this item ($M = 6.74$). During and after discussion, all subjects chose 7.

4.3.2 Risk Ratings for Different Targets. There was a significant interaction between time of testing and sex of target, $F(1, 16) = 20.68$, $p < .01$ (see Figure 8). Subjects' risk ratings increased from pretest to post-test but this increase was especially marked for female targets. On the pretest, the risk for female targets was thought to be much less than the risk for male targets. This difference disappeared on the post-test.

4.3.3 Prevention Importance Ratings. An analysis of variance on the prevention importance ratings revealed one two-way and two three-way interactions, all of which involved the time-of-testing factor. First,

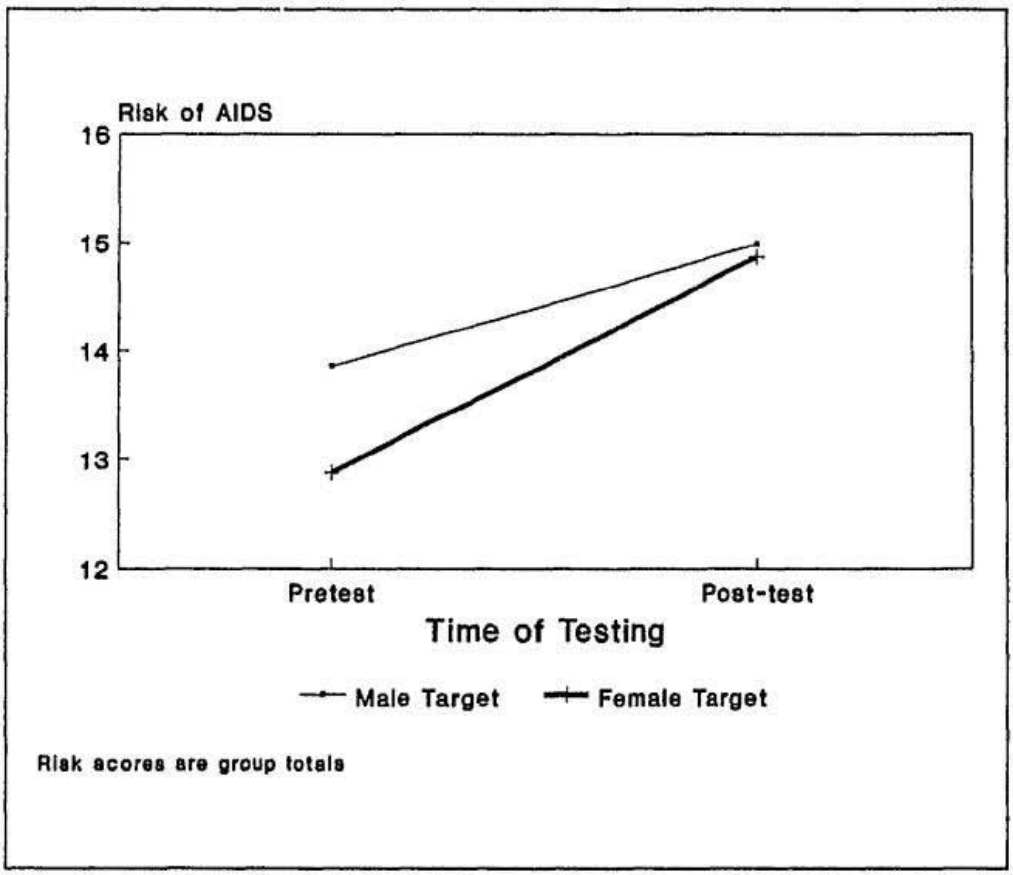

Figure 8. Ratings of AIDS risk as a function of time of testing and sex of target.

there was a significant interaction between time of testing and number of partners, $F(1, 16) = 17.83$, $p < .01$ (see Figure 9). Subjects rated AIDS prevention more important for targets with five partners than for targets with only one, but this was more true on the pretest, $t(19) = 5.99$, $p < .01$, than on the post-test, $t(19) = 2.37$, $p < .05$. Prevention importance ratings increased more steeply for a target with one partner, $t(19) = 4.56$, $p < .01$, than for one with five, $t(19) = 2.95$, $p < .01$.

Second, there was a three-way interaction among time of testing, sex of target, and sexual orientation, $F(1, 16) = 9.95$, $p < .01$ (see Figure 10). On the pretest, prevention importance was rated highest for a male homosexual and lowest for a female homosexual. On the post-test, ratings were generally higher and the differences among the target categories had largely disappeared.

Finally, there was a three-way interaction among the discussion, time-of-testing, and sex-of-target factors, $F(1, 16) = 6.18$, $p < .05$ (see Figure 11). As noted above, ratings of prevention importance increased from pretest to post-test. For female targets, this increase was especially marked among subjects who engaged in discussion. For male targets, the increase from pretest to post-test was only slightly stronger for discussion subjects.

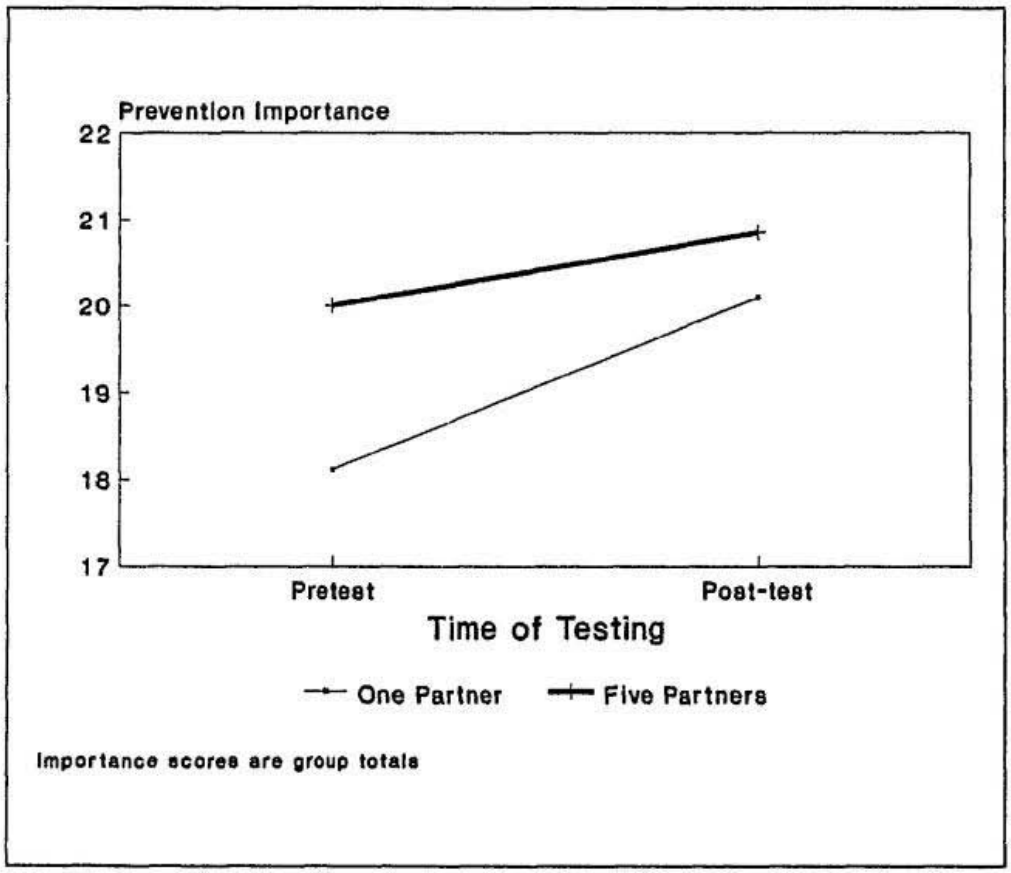

Figure 9. Ratings of the importance of AIDS prevention as a function of time of testing and number of partners.

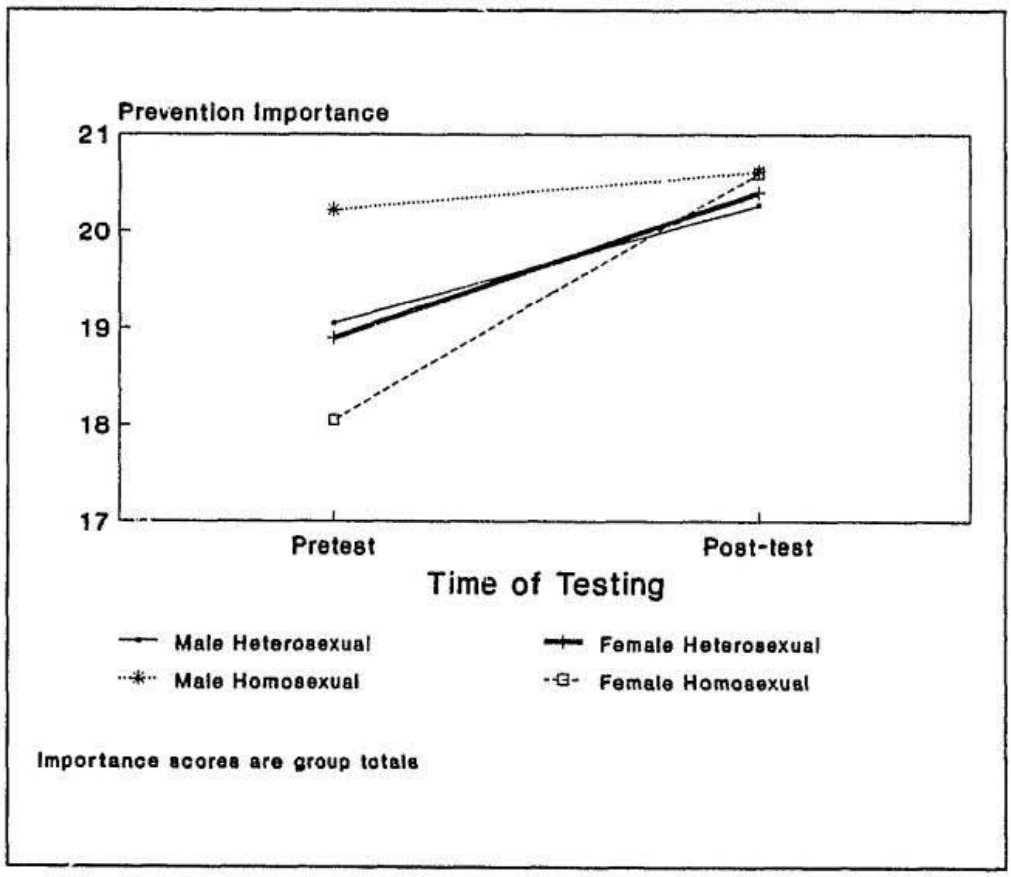

Figure 10. Ratings of the importance of AIDS prevention as a function of time of testing, sexual orientation, and sex of target.

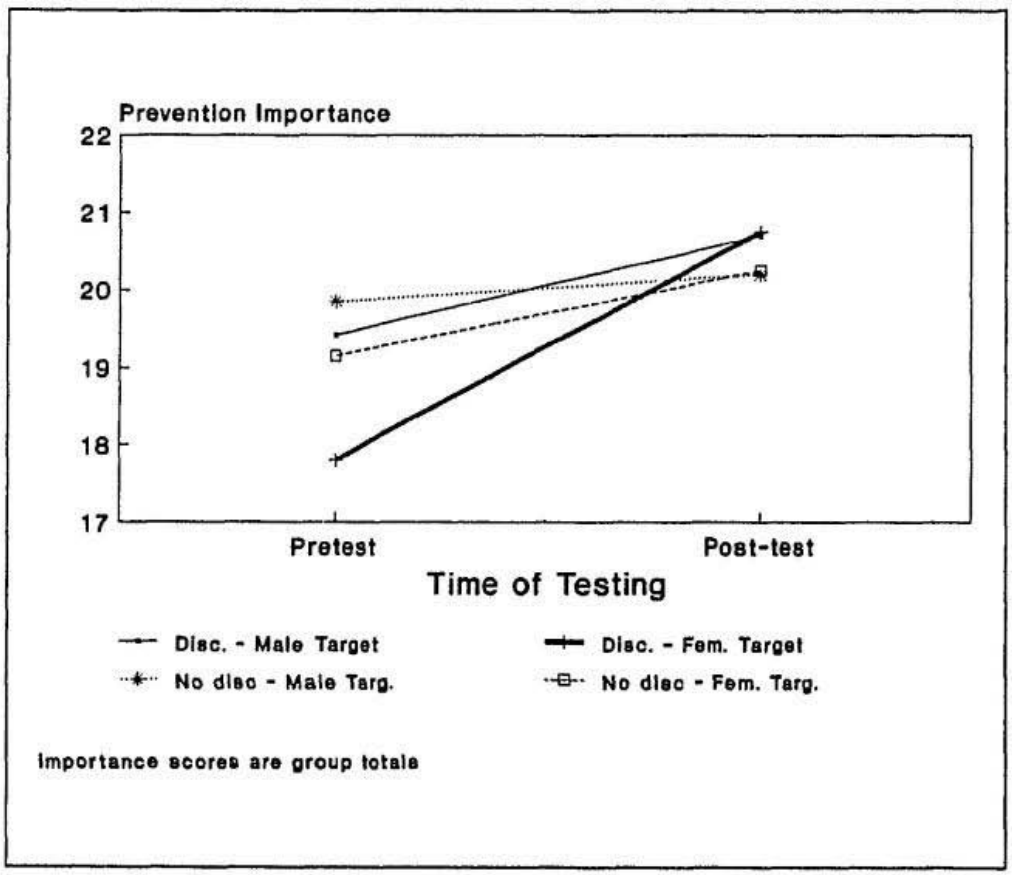

Figure 11. Ratings of the importance of AIDS prevention as a function of discussion, time of testing, and sex of target.

4.3.4 AIDS Knowledge Scores. Knowledge scores showed a marked increase from pretest ($M = 86.8$) to post-test ($M = 95.4$), $F(1, 16) = 64.17$, $p < .01$. The strength of this main effect, but not its direction, was qualified by a three-way interaction among the discussion, sex-of-subject, and time-of-testing factors, $F(1, 40) = 5.42$, $p < .05$ (see Figure 12). In male groups, knowledge scores increased more in discussion than in non-discussion groups, mainly because the discussion groups had relatively low pretest scores. In female groups, knowledge scores increased less in groups that engaged in discussion, perhaps because these groups started out with relatively high pretest scores.

4.3.5 Summary. The analyses reported in this section show several changes in subjects' responses from pretest to post-test. In general, subjects' post-test responses showed greater knowledge about AIDS, greater appreciation of the fact that the disease is not limited to homosexuals, higher ratings of the risk of AIDS, especially for female targets, and higher ratings of the importance of taking preventive measures. Among both male and female subjects, the increase in ratings of prevention importance from pretest to post-test was more marked when the target was described as having only one sex partner.

When subjects were able to engage in discussion with their friends, ratings of prevention importance, especially for female targets, showed a strong increase from pretest to post-test. The effects of group

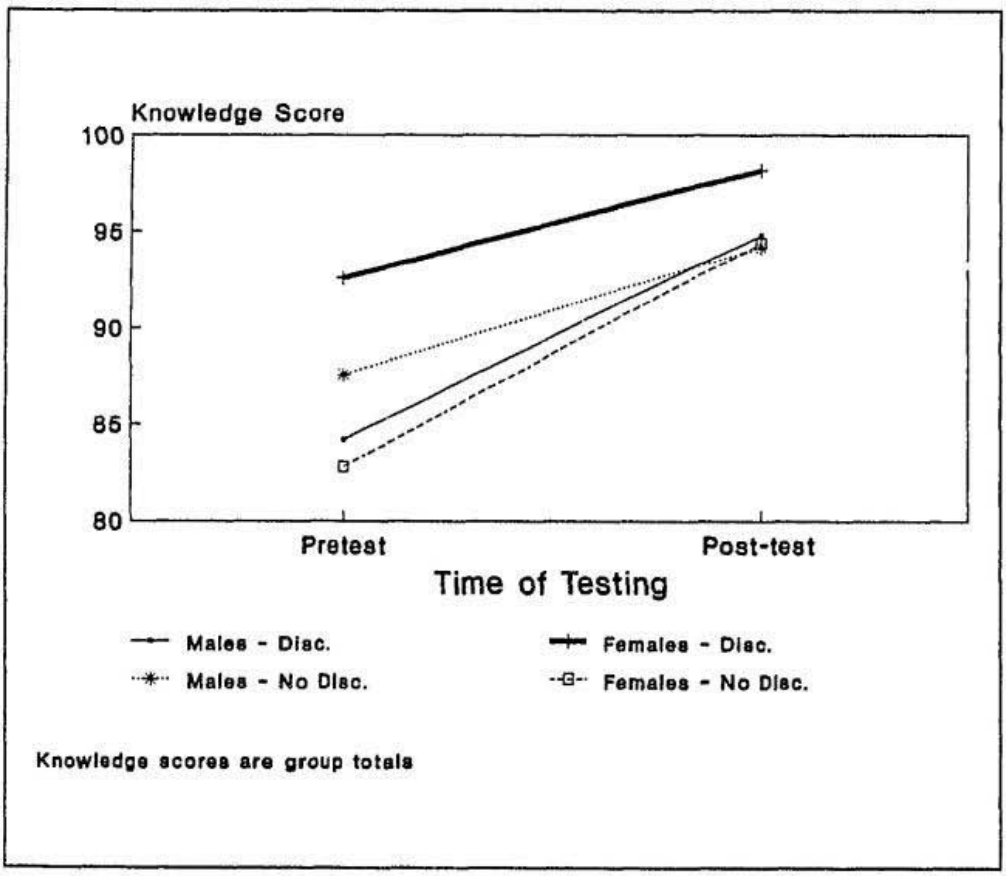

Figure 12. Knowledge scores as a function of discussion, time of testing, and sex of subject.

discussion on subjects' knowledge about AIDS and their attitudes toward a person with AIDS were somewhat different in male and female groups. In male groups, discussion was associated with greater increases in overall knowledge but in female groups, greater gains in knowledge occurred in groups that did not engage in discussion.

Compared to females, males were more likely to want to avoid contact with a person with AIDS and group discussion did little to change this attitude, In contrast, females felt more positively toward a person with AIDS from the beginning and became even more positive after group discussion.

Further support for a group polarization effect was revealed through results which suggested that group discussion produced a response shift toward a more extreme position on the items, "AIDS is a gay disease" and "A heterosexual can catch AIDS."

CHAPTER 5

DISCUSSION

The purpose of this study was to test several hypotheses concerning the effects of a pretest and group discussion on people's reactions to an AIDS educational videotape. Hypotheses related to sex differences and group polarization processes were also tested.

5.1 Knowledge About AIDS

In the present study, pretesting and group discussion had little effect on people's knowledge of AIDS. Although knowledge scores increased considerably from the pretest to the post-test, the expected enhancing effects of pretest and group discussion failed to materialize. This is surprising in view of the several studies in the literature (e.g., Baker & Fish, 1991; MacNair, 1991) that would lead one to expect such effects.

One possible explanation centres on the content of the group discussions in the present experiment. Subjects were asked to discuss the videotape and answer, as a group, the items on the attitude questionnaire. As it turned out, groups spent much more time on the second part of this task than they did on the first. As a result, although subjects may have gained new information from the discussion session, this information may not have been particularly helpful to them in answering the questions on the AIDS Knowledge Quiz.

Another possible explanation for the lack of a consistent effects of pretest and discussion on knowledge scores may have to do with the nature of the AIDS Knowledge Quiz itself. This particular measure of AIDS knowledge may not have been extensive enough for the level of students used and the year in which it was administered. Although the test proved very useful with first year university students in 1988-1989 (Fish & Rye, 1991; Keilty, 1989), the majority of the present subjects had an unexpectedly good knowledge of AIDS, especially after viewing the videotape. Had a more difficult and up-to-date measure been used, differences across the experimental conditions might have emerged.

Despite the lack of evidence for pretest and discussion effects on knowledge scores, perceived understanding of the material on the AIDS videotape was enhanced by both of these factors in interaction with each other. The connection between knowledge and perceptions of understanding is apparently not a simple one and needs to be studied further.

5.2 Attitudes Toward AIDS

The present study found males to agree more than females that AIDS is a gay disease. Males were also less willing to have a person with AIDS in their home. These findings are consistent with those of past research in which male subjects have expressed more negative attitudes towards homosexual behaviour (Bouton et al., 1987; Marsiglio,

1993; Young & Whertvine, 1982), have rated persons with AIDS more negatively (Keilty, 1989; Fish & Rye, 1991), and have been less willing to interact with a person with AIDS (e.g., in a classroom setting), (Fish & Rye, 1991). Males have also scored higher on a homophobia scale than have females (Bouton et al., 1987; Keilty, 1989).

Research indicates that attitudes toward homosexuals are correlated with attitudes towards persons with AIDS. Because the first reported cases of AIDS involved gay men, initial research was focused on gay and bisexual male behaviour (Batchelor, 1984). This in turn led to an immediate association between AIDS and homosexuality (Saha & Pilkinton, 1993). Fish and Rye (1991) found that most people, especially males, were more willing to interact with a target described as being heterosexual than homosexual. However, subjects were also less likely to interact with both heterosexual and homosexual targets when they were described as having AIDS. The authors suggested that, because of the continuous pairing of AIDS and homosexuality, responses toward a person with AIDS might be influenced by the assumption that the person is a homosexual.

Group discussion appears to have made subjects less likely to dismiss AIDS as a gay disease, although among males, this was true only for subjects who had received a pretest. In addition, after talking to their friends, both males and females were more accepting of the fact that

heterosexuals can catch AIDS. These results are encouraging and seem especially important when one takes into account that virtually all AIDS education programs strive to induce cautious attitudes and behaviour. Assuming that most of the subjects in the present experiment were heterosexual, the above results may also indicate that appropriate changes were occurring in subjects' feelings of their own personal vulnerability.

5.3 Group Polarization

Evidence for a group polarization effect (Lamm, 1988; Myers & Lamm, 1975; 1976) was indicated on the attitude item involving a person with AIDS staying in one's home. Female subjects tended to have more positive and accepting attitudes toward a person with AIDS. These attitudes were strengthened by group discussion. The attitudes of male subjects were, on average, closer to the scale midpoint on this issue and group discussion with other males produced little change.

As polarization theory predicts, subjects' attitudes polarize only if they express a strong opinion on one end of the scale. After a discussion, subjects' attitudes polarize to the extreme end of the scale. Subjects who express a weak or moderate opinion have little chance of polarizing to an extreme end of the scale due to the difference of opinion between the three friends or to their indecisiveness regarding the statement.

This was also the case when subjects were discussing whether AIDS was a gay disease and whether a heterosexual could catch AIDS. Initially, the groups disagreed that AIDS was a gay disease and agreed that a heterosexual could catch AIDS. However, their opinions became much stronger when they got together to discuss the statements and again when they completed their post-tests.

It should be noted that subjects' attitudes polarized toward a more cautious and positive position. It is encouraging to AIDS educational efforts that having friends discuss attitudes about AIDS can instill safer and more realistic views.

5.4 Ratings of AIDS Risk and Prevention Importance

Subjects' ratings of the risk of AIDS and the importance of preventive measures for persons in different categories showed a number of interesting effects. Subjects ratings on these measures tended to increase (i.e., they became more cautious) from the pretest to the post-test. This was particularly true when subjects rated female targets and targets with one sex partner. It appears that subjects came to believe that unprotected sex with even one partner could be risky, thus stimulating a more cautious rating.

It was found that after subjects discussed AIDS prevention importance with their friends, they felt much more favorable toward AIDS prevention. Friends who were not given the opportunity to discuss

the topic became only slightly more favorable toward AIDS prevention. From an educational perspective this finding is encouraging. If a group discussion is part of an AIDS education program, it is possible that this technique will aid in the struggle to increase the use of AIDS prevention measures among individuals.

In addition to the items intended to measure subjects' risk of AIDS (i.e., risk of AIDS and importance of AIDS prevention), three items contained in the AIDS attitude questionnaire may also be considered as AIDS risk measures. The attitudes "AIDS is a gay disease" and "AIDS prevention is not important for heterosexuals" indicate no risk of AIDS contraction for heterosexuals, whereas the attitude "A heterosexual can catch AIDS" indicates risk for heterosexuals. Assuming that most of the subjects were heterosexual, the above attitudes would be good measures of the subjects' perceptions of AIDS risk.

Subjects who discussed whether a heterosexual could catch AIDS expressed more agreement with the statement than did subjects who did not have a group discussion. In addition, it was found that subjects disagreed more that AIDS is a gay disease and agreed more that a heterosexual can catch AIDS, on the post-test than on the pretest.

Friends who discussed the attitudes agreed more than did those not involved in discussion, that AIDS prevention is not important for heterosexuals. This finding contradicted those described above. This

may be due to the questions which referred to heterosexuals and homosexuals contracting AIDS. Groups involved in a discussion may have shared the belief that AIDS prevention is important for heterosexuals but is more important for homosexuals. This belief may be based on the fact that more homosexuals than heterosexuals have contracted the AIDS virus (Federal Centre for AIDS, 1993).

5.5 Other Findings

Throughout the above analyses other findings were discovered that although important, were not directly related to the main purposes of the study.

5.5.1 Ratings of AIDS Risk. Subjects who had a pretest believed that males and females have a similar risk of contracting AIDS. Subjects without a pretest believed males have a higher risk of contracting AIDS than females. It appears that repeated exposure to the AIDS topic may have reinforced beliefs that anyone can be at risk.

Groups were found to believe that the risk of contracting AIDS would be much higher for a male homosexual than a male heterosexual. They also thought the risk of contracting AIDS for a female homosexual would be slightly higher than for a female heterosexual.

Targets described as having five sexual partners were believed to be at a very high risk for AIDS. Subjects felt a person who had only one

partner was at much less risk. This held true for both male and female targets, although males were thought to be at a slightly higher risk.

Risk of AIDS was thought to be higher for homosexuals than heterosexuals, especially if the individual was described as having five partners rather than one. In addition, a homosexual with one sexual partner was believed to have a much higher AIDS risk than a heterosexual with one partner. This indicates that homosexual behaviour is perceived as risky even in a monogamous relationship.

5.5.2 Ratings of AIDS Prevention Importance. Overall, female subjects in this study felt AIDS prevention was very important. Male subjects agreed but not as strongly. This finding may be related to the fact that females exhibit more positive attitudes towards a person with AIDS than do males. Females have also been found to be more knowledgable about AIDS than males (Chliaoutakis, Socrataki, Darviri, Gousgounis, & Trakas, 1993; Goodwin & Roscoe, 1988; Keilty, 1989).

On the whole, subjects gave higher ratings of AIDS prevention importance for males and females on their post-test than on their pretest. They believed AIDS prevention to be more important for a homosexual male than for a heterosexual male. However, they felt prevention was less important for a homosexual female than for a heterosexual female. This finding may indicate subject's knowledge of the differing risks between sexual practices. Female homosexuals are in a low-risk

category and male homosexuals are in a high-risk category (Federal Centre for AIDS, 1993). Based on the high knowledge scores of the subjects, it is likely that most groups were aware of these differences.

Subjects agreed more strongly on the post-test that AIDS prevention was important for both male and female heterosexuals. The same was true for male and female homosexuals. Initially, subjects indicated that prevention importance was highest for male homosexuals, lower for male and female heterosexuals, and lowest for female homosexuals. However, on the post-test, subjects believed AIDS prevention was equally important for all groups. This suggests that repeated exposure to the issue may have instilled a belief that AIDS protection is important for everyone.

Subjects who were not exposed to a pretest believed prevention importance to be very high for male homosexual targets, slightly lower for male and female heterosexual targets, and lowest for female homosexual targets.

A homosexual described as having one sexual partner was given higher ratings of AIDS prevention importance than a heterosexual with one partner. When described as having five partners, subjects gave both heterosexual and homosexual targets very high ratings.

Male and female subjects agreed that AIDS prevention was very important for targets with five sexual partners. Males rated prevention

importance much lower for one partner, whereas females were more cautious about a one-partner relationship.

It should be noted that all ratings were high on the scale of 3-21. The above findings demonstrate that subjects were relatively well-informed about the risks of AIDS.

CHAPTER 6

CONCLUSIONS

The present study discovered that, compared to females, males continue to express more negative attitudes toward AIDS issues and persons with AIDS. It was also found that subjects believed their knowledge regarding the AIDS education videotape to be highest when they completed a pretest and engaged in group discussion. It was concluded that a discussion more focused on AIDS information and a more extensive knowledge questionnaire might reveal changes in subjects' AIDS knowledge scores that were obscured in the present study.

Evidence for group polarization was revealed on three of the five questionnaire items dealing with attitudes toward AIDS. Females who were relatively accepting of a person with AIDS became even more positive in their attitudes after group discussion. Males were less accepting of such a person and showed little change as a result of group discussion. Male and female groups who initially disagreed that AIDS is a gay disease and that a heterosexual cannot catch AIDS, expressed even stronger disagreement during and after a group discussion.

Finally, it was found that, especially for discussion groups, AIDS prevention importance was rated higher on the post-test than on the pretest. Discussion groups also agreed more that a heterosexual can

catch AIDS and disagreed more that AIDS is a gay disease than did groups not involved in a discussion.

In addition to findings related to the hypotheses, males were perceived to be at greater risk of contracting AIDS than females, homosexuals were rated at greater risk than heterosexuals and having five sexual partners was perceived as being very risky when compared to one sexual partner.

Overall, females gave higher ratings of AIDS prevention importance than male subjects. This reinforces the suggestion that females are more cautious and in some cases, more knowledgable about AIDS than males, and that homosexuality is more frequently associated with AIDS than is heterosexuality. The findings also suggested that males are believed to be more at risk for AIDS, possibly because they are perceived as more promiscuous. Subjects ratings very strongly indicated the belief that having a sexual relationship with multiple partners is very risky for AIDS contraction.

6.1 Recommendations

The following recommendations are offered to those who are trying to develop an effective AIDS education program.

1. Along with the implementation of factual knowledge about AIDS and HIV transmission, group participation and group discussion among friends should be encouraged. Groups should consist of a

relatively few persons in order to ensure participation by all individuals. This will also allow for any group polarization effects that may be encountered, which will in turn help to form stronger and hopefully more cautious attitudes about AIDS.

2. A more extensive measure of AIDS knowledge should be devised to cope with the growing changes in the AIDS knowledge among persons in the general population.

3. Because females were found to rate AIDS prevention importance higher and to have more positive attitudes towards AIDS than males, it seems logical to ensure the inclusion of at least one or more females in each discussion group.

4. According to Moore (1988), the combination of videotapes and group discussion is the most effective way of educating people about AIDS. The present study did not control for the separate effects of the AIDS education videotape. Therefore, it would be beneficial to include some form of visual presentation of AIDS information in any future educational efforts.

REFERENCES

Abrams, D., & Abraham, C. (1988). Social psychology and the spread of AIDS. The Psychologist, 2, 47.

Ashworth, C., Durant, R., Newman, C., & Gaillard, G. (1992). An evaluation of a school-based AIDS/HIV education-program for high-school students. Journal of Adolescent Health, 13(7), 582-588.

Baker, A., & Fish, T. (1991). Evaluation of AIDS education in two New Brunswick junior high schools. Unpublished manuscript.

Batchelor, W. (1984). AIDS: A public health and psychological emergency. American Psychologist, 39(11), 1279-1284.

Brown, R. (1986). Social psychology, Second Edition. New York: The Free Press.

Brown, L., Fritz, G., & Barone, V. (1989). The impact of AIDS education on junior and senior high school students. Journal of Adolescent Health Care, 10, 386-392.

Bouton, R., Gallaher, R., Garlinghouse, P., Leal, T., Rosenstein, L., & Young, R. (1987). Scales for measuring fear of AIDS and homophobia. Journal of Personality Assessment, 51(4), 606-614.

Carter, S., & Carter, D. (1993). Gender differentiated receptivity to sexuality education curricula by adolescents. Health Education Research, 8(2), 233-243.

Chliaoutakis, J., Socrataki, F., Darviri, C., Gousgounis, N., & Trakas, D. (1993). Knowledge and attitudes about AIDS of residents of greater Athens. Social Science & Medicine, 37(1), 77-83.

Clark, A., & Powell, R. (1984). Changing drivers' attitudes through peer group decision. Human Relations, 37(2), 155-162.

Cohen, D., MacKinnon, D., Dent, C., Mason, H., & Sullivan, E. (1992). Group-counseling at STD clinics to promote use of condoms. Public Health Reports, 107(6), 727-731.

Eisenberg, L. (1989). Health education and the AIDS epidemic. British Journal of Psychiatry, 154, 754-767.

Federal Centre for AIDS. (April, 1993). Surveillance update: AIDS in Canada. Ottawa: Health and Welfare Canada.

Fish, T., & Rye, B. (1991). Attitudes toward a homosexual or a heterosexual person with AIDS. Journal of Applied Social Psychology, 21(8), 651-667.

Fish, T., Rye, B., Bell, L., Keilty, S. (1990, June). Reliability and validity data for a test of AIDS knowledge. Poster presented at a meeting of the Canadian Psychological Association, Ottawa, Ontario, Canada.

Gerrard, M., & Reis, T. (1989). Retention of contraceptive and AIDS information in the classroom. The Journal of Sex Research, 26(3), 315-323.

Goodwin, M. & Roscoe, B. (1988). AIDS: Students' knowledge and attitudes at a midwestern university. Journal of American College Health, 36(4), 214-222.

Hinz, V., & Davis, J. (1984). Persuasive arguments theory, group polarization, and choice shifts. Personality and Social Psychology Bulletin, 10(2), 260-268.

Keilty, S. (1989). Attitudes toward male and female heterosexual and homosexual persons with AIDS. Unpublished honours thesis, St. Thomas University, Fredericton, NB.

Kelley, H. (1965). Two functions of reference groups. In H. Proshansky & B. Seidenberg (Eds.), Basic Studies in Social Psychology (pp. 210-214). Toronto: Holt, Rinehart and Winston.

Kelly, J., & St. Lawrence, J. (1988). AIDS prevention and treatment: Psychology's role in the health crisis. Clinical Psychology Review, 8, 255-284.

Kunkle-Miller, C., & Blane, H. (1977). A small group approach to youth education about alcohol. Journal of Drug Education, 7(4), 381-386.

Lamm, H. (1988). A review of our research on group polarization: Eleven experiments on the effects of group discussion on risk acceptance, probability estimation, and negotiation positions. Psychological Reports, 62, 807-813.

MacNair, R., Elliott, T., & Yoder, B. (1991). AIDS prevention groups as persuasive appeals. Precautionary behaviors among persons in substance abuse treatment. Small Group Research, 22(3), 301-319.

Marsiglio, W. (1993). Attitudes toward homosexual activity and gays as friends - A national survey of heterosexual 15-year-old to 19-year-old males. Journal of Sex Research, 30(1), 12-17.

McGuire, W. (1985). Attitude and attitude change. In G. Lindzey & E. Aronson (Eds.), The Handbook of Social Psychology, Third Edition. New York: Random House.

Mickler, S. (1993). Perceptions of vulnerability - Impact on AIDS-preventive behavior among college adolescents. AIDS Education and Prevention, 5(1), 43-53.

Moore, J. (1988). Learning about the psychosocial impact of sexually transmitted diseases: Teaching strategies. Special Issue: Sociopsychological aspects of sexually transmitted diseases. Journal of Social Work and Human Sexuality, 6(2), 121-133.

Myers, D., & Lamm, H. (1975). The polarizing effect of group discussion. American Scientist, 63(3), 297-303.

Myers, D., & Lamm, H. (1976). The group polarization phenomenon. Psychological Bulletin, 83(4), 602-627.

Newcomb, T. M. (1965). Attitude development as a function of reference groups: The Bennington study. In H. Proshansky & B. Seidenberg (Eds.), Basic studies in social psychology. New York: Holt, Rinehart and Winston.

Ornstein, M. (1989). AIDS in Canada. Knowledge, Behaviour, and Attitudes of Adults. Toronto: Institute for Social Research, York University.

Owie, I. (1983). Changes in attitudes toward contraceptives concomitant with instructional activities in physiology. Journal of Research in Science Teaching, 20(6), 571-575.

Phillips, K. (1988). Strategies against AIDS. The Psychologist, 2, 46-47.

Porter, S. (1993). Public knowledge and attitudes about AIDS among adults in Calcutta, India. AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV, 5(2), 169-176.

Pressley, M., Tanenbaum, R., McDaniel, M., & Wood, E. (1990). What happens when university students try to answer prequestions that accompany textbook material? Contemporary Educational Psychology, 15, 27-35.

Rhodes, F., Wolitski, R. (1989). Effect of instructional videotapes on AIDS knowledge and attitudes. Journal of American College Health, 37, 266-271.

Romer, D., & Hornik, R. (1992). HIV education for youth - The importance of social consensus in behavior-change. AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV, 4(3), 285-303.

Saha, L., & Pilkinton, N. (1993). AIDS knowledge and attitudes among Canberra secondary-school students. Australian Journal of Social Issues, 28(2), 158-177.

Sanders, G., & Baron, R. (1977). Is social comparison irrelevant for producing choice shifts? Journal of Experimental Social Psychology, 13, 303-314.

Seigel, K., & Gibson, W. (1988). Barriers to the modification of sexual behaviour among heterosexuals at risk for acquired immune deficiency syndrome. New York State Journal of Medicine, 88, 66-70.

Vinokur, A., Trope, Y., & Burnstein, E. (1975). A decision-making analysis of persuasive argumentation and the choice-shift effect. Journal of Experimental Social Psychology, 11, 127-148.

Walton-Braver, M. & Braver, S. (1988). Statistical treatment of the Solomon four-group design: A meta-analytic approach. Psychological Bulletin, 104(1), 150-154.

Wanlass, R., Kilmann, P., Bella, B., & Tarnowski, K. (1983). Effects of sex education on sexual guilt, anxiety, and attitudes: A comparison of instruction formats. Archives of Sexual Behaviour, 12(6), 487-502.

Westerman, P., & Davidson, P. (1993). Homophobic attitudes and AIDS risk behavior of adolescents. Journal of Adolescent Health, 14(3), 208-213.

Whyte, G. (1989). Groupthink reconsidered. Academy of Management Review, 14(1), 40-56.

Winslow, R., Franzini, L., & Hwang, J. (1992). Perceived peer norms, casual sex, and AIDS risk prevention. Journal of Applied Social Psychology, 22(23), 1809-1827.

Yager, S., Johnson, R., Johnson, D., & Snider, B. (1986). The impact of group processing on achievement in cooperative learning groups. Journal of Social Psychology, 126(3), 389-397.

Young, M., & Whertvine, J. (1982). Attitudes of heterosexual students toward homosexual behaviour. Psychological Reports, 51, 673-674.

Footnotes

[1]If only one or two subjects arrived to participate, subjects were rescheduled for a convenient time for all three participants.

[2]Each discussion was recorded on an audio cassette for possible analyses later. It was retained only if each participant in the group independently gave permission. A total of 43 groups were tested. At least one member of 3 groups wished to have the recording of their discussion erased and this was done. Content analyses of the discussions will not be reported in this thesis.

[3]The relatively large number of factors in these analyses made higher-order interactions inevitable. In this thesis, no attempt was made to interpret interactions that involved more than three factors.

APPENDIX A

Attitude Measurement

Please carefully read the descriptions below and answer the following questions by circling the number that best represents your attitude.

X is 19 years old, and in first year at Memorial University. X is an Arts student and has maintained a B average.

Imagine that X is a heterosexual male and has had one sexual partner in the past year.

1. What chance do you think X has of contracting AIDS?

very low chance			in between			very high chance
1	2	3	4	5	6	7

2. How important do you think it is for X to use AIDS prevention methods during sex?

not important			in between			very important
1	2	3	4	5	6	7

Imagine that X is a heterosexual male and has had five sexual partners in the past year.

3. What chance do you think X has of contracting AIDS?

very low chance			in between			very high chance
1	2	3	4	5	6	7

4. How important do you think it is for X to use AIDS prevention methods during sex?

not important			in between			very important
1	2	3	4	5	6	7

Imagine that X is a homosexual male and has had one sexual partner in the past year.

5. What chance do you think X has of contracting AIDS?

very low chance			in between			very high chance
1	2	3	4	5	6	7

6. How important do you think it is for X to use AIDS prevention methods during sex?

not important			in between			very important
1	2	3	4	5	6	7

Imagine that X is a homosexual male and has had five sexual partners in the past year.

7. What chance do you think X has of contracting AIDS?

very low chance			in between			very high chance
1	2	3	4	5	6	7

8. How important do you think it is for X to use AIDS prevention methods during sex?

not important			in between			very important
1	2	3	4	5	6	7

Imagine that X is a heterosexual female and has had one sexual partner in the past year.

9. What chance do you think X has of contracting AIDS?

very low chance			in between			very high chance
1	2	3	4	5	6	7

10. How important do you think it is for X to use AIDS prevention methods during sex?

not important			in between			very important
1	2	3	4	5	6	7

Imagine that X is a heterosexual female and has had five sexual partners in the past year.

11. What chance do you think X has of contracting AIDS?

very low chance			in between			very high chance
1	2	3	4	5	6	7

12. How important do you think it is for X to use AIDS prevention methods during sex?

not important			in between			very important
1	2	3	4	5	6	7

Imagine that X is a homosexual female and has had one sexual partners in the past year.

13. What chance do you think X has of contracting AIDS?

very low chance			in between			very high chance
1	2	3	4	5	6	7

14. How important do you think it is for X to use AIDS prevention methods during sex?

not important			in between			very important
1	2	3	4	5	6	7

Imagine that X is a homosexual female and has had five sexual partners in the past year.

15. What chance do you think X has of contracting AIDS?

very low chance			in between			very high chance
1	2	3	4	5	6	7

16. How important do you think it is for X to use AIDS prevention methods during sex?

not important			in between			very important
1	2	3	4	5	6	7

Please answer the following questions by circling the number between 1 and 7 which best represents your attitude.

1. AIDS is a gay disease.

strongly disagree			in between			strongly agree
1	2	3	4	5	6	7

2. A heterosexual can catch AIDS.

strongly disagree			in between			strongly agree
1	2	3	4	5	6	7

3. AIDS prevention is not important for heterosexuals.

strongly disagree			in between			strongly agree
1	2	3	4	5	6	7

4. I would feel sympathy for a person with AIDS.

strongly disagree			in between			strongly agree
1	2	3	4	5	6	7

5. I would not want a person with AIDS in my home.

strongly disagree			in between			strongly agree
1	2	3	4	5	6	7

APPENDIX B

The AIDS Quiz

Parts A

True of false questions. Indicate whether the statement presented is True (T) or False (F) in the space provided.

Example

__T__ It is important to educate people about AIDS.

Statements

_____ 1. If one person in the family contracts AIDS, it is likely that the other family members will also get AIDS.

_____ 2. Children can contract the AIDS virus from an infected mother before or at birth.

_____ 3. A person can contract the AIDS virus from the water in public swimming pools, saunas, or whirlpools.

_____ 4. Natural membrane (i.e. sheep intestine) condoms are more effective than latex condoms in reducing the risk of contracting the AIDS virus.

_____ 5. There are drugs available that can prolong the lives of some persons with AIDS.

_____ 6. People with the AIDS virus may not show symptoms for as many as nine years.

_____ 7. The AIDS virus can be spread through the air by coughs and sneezes.

_____ 8. The AIDS virus attacks the body's immune system.

_____ 9. The most common means of transmission of the AIDS virus is through blood transfusions.

_____ 10. Persistent diarrhea could be a symptom of infection with the AIDS virus.

_____ 11. Unexplained, persistent fatigue could be a symptom of infection with the AIDS virus.

_____ 12. One can reduce the risk of spreading the AIDS virus by washing dishes used by persons with AIDS separately from dishes used by noninfected individuals.

_____ 13. A person is likely to contract the AIDS virus from contact with saliva of an infected person.

_____ 14. Everyone who is infected with the AIDS virus, whether they have symptoms or not, can transmit the infection to others.

_____ 15. A person can reduce the risk of contracting the AIDS virus by not having sexual contact with any person whose past history and current health status are not known.

_____ 16. The symptoms for mononucleosis are similar to some of the symptoms of infection with the AIDS virus.

_____ 17. A vaccine for the AIDS virus has recently been made available to the general public.

_____ 18. Insects such as mosquitos can transmit the AIDS virus.

_____ 19. Blood transfusions are now almost 100% safe.

_____ 20. Teachers with the AIDS virus are likely to transmit the virus to their students.

_____ 21. The AIDS virus can be contracted by sharing the same drinking glass with a person with AIDS.

_____ 22. There is a possibility of contracting the AIDS virus from the needle used when you donate blood.

_____ 23. Employers who hire persons who admit they have the AIDS virus are putting their other employees at risk.

_____ 24. Swollen glands could be a symptom of infection with the AIDS virus.

_____ 25. Most persons with AIDS develop a rare type of pneumonia or skin cancer.

_____ 26. Children are at risk if they engage in casual contact with children infected with the AIDS virus.

_____ 27. A person can catch the AIDS virus from public toilet seats.

_____ 28. The AIDS virus is also known as the HIV virus.

_____ 29. A person can reduce the risk of contracting the AIDS virus by not sharing needles used for drug injection.

_____ 30. Unexplained fever, shaking chills or night sweats could be symptoms of infection with the AIDS virus.

Part B

Risk ratings. Rate the following activities according to the risk of contracting AIDS associated with each behaviour. Use number codes as follows for your ratings:

No Risk (0) Low Risk (1) High Risk (2)

Example

__0__ Reading a book about AIDS.

RISK RATINGS

_____ 1. Vaginal sex using a latex condom

_____ 2. Dry kissing

_____ 3. Deep wet kissing

_____ 4. Oral sex with a male - no semen entering the mouth

_____ 5. Body to body rubbing

APPENDIX C

VIDEOTAPE QUESTIONNAIRE

Please circle the number that best represents your answer.

1. How much of the material in the AIDS videotape do you feel you understood?

none of the material			half of the material			all of the material
1	2	3	4	5	6	7

Indicate whether the following statements are true or false.

2. AIDS can be spread by dry kissing. _____

3. You can get AIDS from giving blood. _____

4. A person with HIV can pass it on even though he or she has no symptoms of AIDS. _____

5. HIV has been found in breastmilk. _____

6. Latex condoms are the best type of condom for AIDS protection. _____

7. The AIDS virus destroys the cells which are responsible for alerting other cells of an incoming virus. _____

8. A water-based lubricant containing nonoxynol-9 is the best lubricant to use with a condom. _____

APPENDIX D

RELEASE FORM

Research Participant:

As you know, the discussion in which you participated was recorded on audiotape. I would like to retain this recording for possible research purposes. The recording will be listened to by a small number of researchers who will not know the identities of the people they are listening to. Remember your participation in this study has been completely anonymous.

To use the recording of your discussion I need your permission. Please indicate below if you are willing to allow the recording to be used for research purposes. If, for any reason, you or any member of your group would like to have the recording erased, this will be done immediately.

Whatever your decision, I would like to thank you for your participation.

Please check one of the following:

_____ I give my permission for the recording to be used for research purposes.

_____ I would like the recording to be erased.

Signature_____

Date _____

APPENDIX E

FEEDBACK SHEET

THE EFFECTS OF GROUP DISCUSSION ON AIDS EDUCATION

The intent of this study was to develop an AIDS educational procedure that would result in not only increasing participants' knowledge about AIDS but promoting knowledge to be incorporated into attitudes about AIDS.

The experimenter has adequate knowledge of the area of AIDS and will gladly answer any questions that may arise concerning the contents of the AIDS videotape or AIDS in general. All conversations will be kept confidential. Additionally, more AIDS information is available from the experimenter. If you have any further questions about AIDS please contact the experimenter (Shelley Keilty) at S1055, 737-4763.

Please do not discuss the procedures of this experiment with any prospective participants.

Thank you for your valuable participation!