

EFFECTIVE AIDS EDUCATION:
IS CANDID DISCUSSION
THE ANSWER?

By

JONATHAN M. LIPSON

Bachelor of Arts (Honours)
York University
North York (Toronto), Ontario, Canada
1986

Master of Science
Oklahoma State University
Stillwater, Oklahoma
1988

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirement for
the degree of
DOCTOR OF PHILOSOPHY
May, 1993

EFFECTIVE AIDS EDUCATION:

IS CANDID DISCUSSION

THE ANSWER?

Thesis Approved:

Larry T. Bunn

Thesis Advisor

Michael S. [unclear]

[unclear]

J. H. 7

Thomas C. Collins

Dean of the Graduate College

ACKNOWLEDGEMENTS

It's been a long road to get to where I am today. I'd like to express my gratitude to those who have helped me along the way.

First, to my doctoral committee: My chair, Dr. Larry Brown, has given me years of support, direction, and friendship. Thanks for seeing me through, despite your "new" life out-of-state. A special thanks to Dr. Bob Schlottmann for providing both statistical assistance on this project as well as humor to help me through a life of ABD. I'd also like to thank Dr. Frank Collins and Dr. Jim Hughey for enthusiastically providing resources, helpful suggestions, and encouragement.

This project could not have been completed without the hours and hours of technical assistance by Jolene Gordon, Joni Mihura, Lisa Goulden (for leading discussion groups), Mary Ann Francis (for transcribing videotapes), Janet Lipson, Kathy Miley, and Deborah Stoffel (for scoring all those thoughts). I'd also like to acknowledge a long-time friend, Arlene Horowitz, who first alerted me to the problem of AIDS back in 1983. (Who would have thought that 10 years later I'd be completing a dissertation in this area?!)

Certainly, achieving my goals would not have been

possible without the support of my family. My warmest thoughts and appreciation to my parents (Sheldon, Joan, and Peggy) who have always believed in me and encouraged me to follow my own path. Without the influence of my brother, Dave, I never would have found two all-important outlets for making it through this program: cabin-living and storm-chasing. (I'll find that elusive tornado, yet!) Along with her enthusiasm for this project, my sister, Janet, has always managed to remind me of the lighter side of life during these long years.

Too numerous to name are the friends who have been there with me through the ups and downs along the way. A special note for Dave and Laura Brunetti with whom I have shared both outrageous fun and personal growth over the past five years.

Finally, I'd like to re-acknowledge Deborah, my Shining Glow in life. Words cannot express what I have received from you. Thanks for putting up with our many months apart so that I could see this through. Your loving spirit is with me.

TABLE OF CONTENTS

	Page
Abstract.	2
Introduction and Literature Review.	3
AIDS: Current Status	3
Medical Aspects	3
Epidemiology.	6
Adolescents and College Students	7
AIDS-Related Fear, Stigma, and Discrimination.	9
Models of Persuasion and Health Promotion.	14
Theories of Persuasion.	15
A General Model of Persuasion	18
A Model of Health Promotion	22
Linking the Persuasion and Health Promotion Models.	23
AIDS Education for Adolescents and College Students.	23
Problems.	25
An Instrumental Approach.	27
Group Discussion.	29
Summary.	35
Statement of Purpose and Hypotheses	38
Purpose and Design	38
Hypotheses	40
Method.	43
Subjects	43
Materials.	44
Vocabulary Lists.	44
Scripts	45
Discussion Questions.	47
Attitude Scales	47
Thought-Listings.	48
Recording and Playback Equipment.	48
Discussion Leaders.	48
Procedure.	49
Active Discussion Groups.	49
Passive Discussion Groups	51
Posttest Sessions	51

	Page
Results	53
Attitude Changes	54
Cognitive Responses.	58
Discussion.	65
People With AIDS	66
Sex-Partner Communication.	69
Condom Use	75
Concluding Remarks	81
References.	90
Appendix A - Vocabulary Lists	99
Appendix B - Presentations.	107
Appendix C - Discussion Questions	113
Appendix D - Attitude Scales.	114
Appendix E - Thought-Listing Instructions	116
Appendix F - Consent Forms.	118
Appendix G - Thought-List Scoring Instructions.	124

LIST OF TABLES

Table	Page
1. Mean Attitude Change Scores Over a Two-Week Period	126
2. Summary of Wilks' MANOVA Test Criteria: Attitude Changes	128
3. Attitudes About People With AIDS: Pretest and Change Scores.	129
4. Summary of Wilks' MANOVA Test Criteria: Cognitive Responses Related to Sex-Partner Communication.	130
5. Communication With a Sex-Partner: Significant Effects for Attitude Change and Cognitive Responses.	131
6. Summary of Wilks' MANOVA Test Criteria: Cognitive Responses Related to Condom Use. . . .	132
7. Condom Use: Significant Effects for Attitude Change and Cognitive Responses	133
8. Summary of Wilks' MANOVA Test Criteria: Cognitive Responses Related to People With AIDS	134

Effective AIDS Education:
Is Candid Discussion the Answer?

Jonathan M. Lipson
Oklahoma State University

Running head: EFFECTIVE AIDS EDUCATION

Abstract

The efficacy of many AIDS education programs has come into question. These programs are often moralistic and vague. The present study compared an explicit, interactive AIDS education approach with a nonexplicit, non-interactive approach. The topics included people with AIDS, communication and sexual behavior with a partner, and condom use. Attitude changes and cognitive responses were used to measure the effectiveness of the various approaches. Presenting explicit sexually-oriented material was found to be more effective than nonexplicit material. However, students were more receptive to sexually-oriented material on videotape than within an interaction group. Only students who initially held unfavorable attitudes toward people with AIDS were positively affected by the treatments on this dimension. It was concluded that AIDS education should be presented in an explicit, yet sensitive, manner that provides the necessary skills to implement appropriate preventive behaviors. Utilizing principles of persuasion and health belief models to meet this end is discussed.

Introduction And Literature Review

AIDS: current status

Medical aspects. Acquired Immune Deficiency Syndrome (AIDS) is the eventual outcome of infection with Human Immunodeficiency Virus (HIV). Infection by HIV leads to greater susceptibility to, and a lowered ability to fight off, other viral infections. HIV works by infecting and killing the T-4 "helper-inducer" lymphocyte, or CD-4 cell, a particular white blood cell that is involved in attacking viruses. An individual's natural immune system cannot fight off HIV because this virus incorporates itself into the CD-4 cell's DNA where it can remain unharmed. When infected CD-4 cells become activated by some other virus, the HIV replicates itself during CD-4 cell division until the cell bursts and dies (Batchelor, 1988). Volberding and Cohen (cited in Winiarski, 1991) note that HIV may also infect and destroy glial cells, uterine cervical cells, and certain cells of the gastrointestinal tract in a similar manner.

✓ HIV transmission can occur when blood-to-blood, semen-to-blood, or vaginal/cervical secretion-to-blood contact is made between individuals. Because the concentration of CD-4 cells, and hence HIV when present, is extremely low in the other body fluids, transmission is limited to these three routes (Batchelor, 1988). Behaviors

conducive to HIV transmission include vaginal, anal, and oral intercourse involving exchange of semen or vaginal and cervical secretions; needle sharing during intravenous (IV) drug use; and transfusion of infected blood or blood products, generally prior to 1985 (Winiarski, 1991). Unlike many viruses, HIV is not transmitted through airborne particles or casual contact. The knowledge that many viral diseases, such as the common cold, can be transmitted in this manner may confuse people as to how HIV is transmitted. This confusion can lead to unfounded fears concerning the transmission of AIDS.

Initially, HIV lies dormant after transmission. At this stage, the individual is asymptomatic but is capable of transmitting HIV to others (Hall, 1988). The most common initial symptom of HIV infection is chronically swollen lymph nodes. Sometimes a self-limited illness resembling mononucleosis occurs (Phair & Steinberg, 1987). With continued HIV replication, antibodies develop. These antibodies can be detected with the Enzyme-Linked Immunosorbent Assay (ELISA) and the more sensitive Western blot assay. It usually takes between a few weeks and a few months for antibodies to develop. Some reports have indicated a window period of up to several years between HIV infection and antibody development (American Red Cross, 1988a). Until antibodies do develop, HIV remains undetected.

In time, an HIV-infected individual reaches a symptomatic stage that may include unexplained weight loss, night sweats, chronic diarrhea, fatigue, fevers, and/or viral and yeast infections (Hall, 1988). A diagnosis of AIDS is made for those who test positive for HIV once one or more of 23 opportunistic infections or cancers develop, such as Pneumocystis carinii Pneumonia (PCP), Kaposi's sarcoma, or cytomegalovirus ("AIDS Infections," 1992). The Centers for Disease Control (CDC) may soon revise the definition of AIDS to also include those who test HIV positive and have CD-4 counts of 200 per cubic millimeter of blood or below (Chavez, 1992). Symptoms and disorders associated with AIDS that may develop include, but are not limited to, chronic diarrhea and extreme weight loss, meningitis, encephalitis, tuberculosis, blindness, dementia, and a variety of cancers such as lymphoma (Hall, 1988; Redfield & Burke, 1988).

Zidovudine (AZT), dideoxyinosine (ddI), and dideoxycytidine (ddC) are the Food and Drug Administration's approved antiretrovirals currently on the United States market which can extend the lifespan of people with AIDS (PWAs) by slowing down HIV reproduction (Hultz, 1992). Other common medications for PWAs include Bactrim and Pentamidine for PCP treatment and alpha interferon for the treatment of Kaposi's sarcoma (Winiarski, 1991). Presently, no vaccines or curative treatments for HIV infection or AIDS are available (Hayward & Curran, 1988; Osborn & Brandt,

1987), and none are expected to become marketable before the end of the 1990s according to former Surgeon General C. Everett Koop (cited in Matthews & Bolognesi, 1988).

Epidemiology. As of December, 1992, the United States reports 253,448 cases of AIDS since the disease was first identified in 1981 (Centers for Disease Control [CDC], 1993). The cumulative total is expected to reach 450,000 by the end of 1993 and includes over 300,000 AIDS-related deaths (Fineberg, 1988; Winiarski, 1992). The CDC, however, believes that under-reporting occurs to the extent that the total actual number of cases is estimated to be 10% higher than official reports reveal (United States Department of Education, 1988).

The changing distribution of AIDS cases among different populations during the 1980s gives support for the case of referring to "risk behaviors" rather than "risk groups." Through 1984, homosexuals and bisexuals who are not intravenous drug users (IVDUs) accounted for 63% of all AIDS cases, whereas heterosexual non-IVDUs accounted for 1% of cases (Selwyn, 1986). By 1992, however, whereas the distribution of AIDS cases fell to 55% for non-IVDU homosexuals and bisexuals, the distribution had risen to 6% for non-IVDU heterosexuals (CDC, 1993).

Accounting for part of the increase in AIDS cases among heterosexuals is the finding that, although presently a small percentage of total cases, women and teenagers are

becoming infected with HIV at a rate greater than any other population within the United States (New York Times Service, 1989). At present, 19% of reported AIDS cases are in the 20-29 year-old age group (CDC, 1993). Since the incubation period from time of HIV infection to a diagnosis of AIDS can be up to six or more years, most of these cases can be attributable to behaviors that occurred during adolescence or young adulthood.

Adolescents and college students

Because adolescents and young adults often engage in the two most risky behaviors for AIDS -- sexual activity and drug use -- AIDS is a serious health threat for these people (Siegel, 1988; Strunin & Hingson, 1987a, 1987b). An April, 1990 report in the Journal of the American Medical Association found that, over a 42-month period, teenagers who applied for the military had an HIV-positive prevalence rate of 1 in 3,000. More alarmingly, during the period between April, 1988 and February, 1989, a survey of 19 college campuses revealed an HIV-positive prevalence rate of 1 in 500 ("Study: AIDS spreads," 1990).

Results of a sample of 19 year-olds (Strunin & Hingson, 1987b) indicated that misinformation about AIDS and HIV transmission is common among adolescents. For instance, many adolescents, as do adults, mistakenly associate AIDS with risk groups rather than with risk behaviors (Myers et al., 1989). If one engages only occasionally or even rarely

in a behavior risky for contracting HIV (e.g., IV drug use), the individual may perceive him- or herself as not in that risk group (e.g., IV drug user) and, hence, not at risk for AIDS. Further, many do not know the proper precautions to take when engaging in sexual or drug use behavior to protect against HIV (Strunin & Hingson, 1987a).

Even when knowledgeable about AIDS risk factors and precautionary measures, adolescents often discount their potential for HIV infection (Kelly & St. Lawrence, 1988). This is due, in part, to the omnipotence and invulnerability often felt by adolescents, a group who frequently encourages and rewards risk-taking behavior (Siegel, 1988).

Ironically, Rogers (cited in Gladwell, 1992b) notes that when adolescents do consider the potential risks involved with sexual activity, they may regard the possibility of a parent finding condoms at home a greater risk than the possibility of becoming infected with HIV, and hence, forgo condom use. Therefore, within an AIDS education program for adolescents, it may be prudent to make the consequences of HIV-related risk behavior more salient.

College students, a population generally still in adolescence, often become increasingly active in the risk behaviors of sexual activity and drug/alcohol use. Sexual activity within this population often includes a variety of practices and multiple partners. The use of alcohol or other drugs prior to engaging in sexual activity is common,

and this can impair judgement regarding responsible sexual behavior, including precautions against HIV infection (Kodama & O'Donnell, 1987; McDermott, Hawkins, Moore, & Cittadino, 1987; Cline, Freeman, & Johnson, 1990). Many misconceptions about AIDS are still held among college students, and radical changes in sexual habits have not occurred (Baker, 1990; Butcher, Manning, & O'Neal, 1991).

Kantrowitz (cited in Cline, Engel, Freeman, Johnson, & Gudaitis, 1989) notes that only 75 college students have been diagnosed with AIDS, and this low number may mislead students to believe that AIDS is not of great concern (Hayward & Curran, 1988). However, in just California alone, of those currently attending college, between 9,000 and 45,000 students are expected to eventually develop AIDS or AIDS-related complex (Kodama & O'Dennell, 1987). Because of the increasing HIV-positive prevalence rate among adolescents and young adults, their misperceptions about AIDS, a common sense of invulnerability, and their frequent drug use and sexual activity, college students should be vigorously targeted for AIDS education (McDermott et al., 1987).

AIDS-related fear, stigma, and discrimination

Ironically, while fear of contracting HIV through high-risk behavior does not appear to seriously affect many people, fear of persons with AIDS or HIV is prevalent. In addition to the AIDS epidemic as a disease, Fettner and

Check (cited in Royse & Birge, 1987) note that, because AIDS leads to fatality and can be spread by asymptomatic carriers, a secondary epidemic of public fear has been produced. While fear is natural in the face of an epidemic (Morin, 1988), it has reached irrational and excessive dimensions for some who do not even engage in behavior at risk for AIDS (Singh, Unnithan, & Jones, 1988; Moynihan, 1991). For the case of AIDS, Meisenhelder and LaCharite (1989) propose that the fear of contagion is related more to perceived than actual threat to viral exposure. The authors contend that this perceived threat seems to be based more on the symbolic meaning of AIDS, particularly the fears of death, homosexuality, and/or of uncertain knowledge within the medical community, as well as AIDS misinformation, rather than on the statistical chance of actually acquiring infection through casual contact.

When this fear is converted into action, consequences such as stigmatization and discrimination result, as well as direct avoidance of those perceived to be infected and the taking of extreme barrier precautions when avoidance is not possible (Meisenhelder & LaCharite, 1989; Morin, 1988). Further, those who overestimate the likelihood of HIV transmission because of inaccurate knowledge or negative attitudes may endorse public policies such as quarantine (Herek & Glunt, 1988) and mandatory testing (Morin, 1988). Policies of this nature may be motivated by a desire to

separate the afflicted from the unafflicted without explicit acknowledgement of any discriminatory intentions.

Stigmatization and discrimination have occurred toward those with AIDS and those who test positive for HIV. This has led to loss of jobs, homes, and friendships (Fineberg, 1988; Morin, 1988; Royse & Birge, 1987). Even those perceived to be HIV carriers irrespective of their actual status, such as male homosexuals, become stigmatized and discriminated against (Gerberding & Sande, 1987). Herek and Glunt (1988) refer to such broad perceptions as "AIDS-related stigma." These authors favor this descriptive label over "fear of AIDS" or "AIDS-phobia" because such fear transcends the disease itself and leads to negative social consequences.

As the term AIDS-related stigma suggests, misperceptions about HIV transmission may be secondary to anxieties concerning issues associated with AIDS, most notably mortality, homosexuality (Gerberding & Sande, 1987), and drug use (Fineberg, 1988). Homosexuals and IVDUs are stigmatized groups who have experienced the consequences of deep-seated prejudice by others (Herek & Glunt, 1988; Triplet & Sugarman, 1987). Herek and Glunt explain that through historical coincidence, AIDS has generally been a disease that affects stigmatized groups in the United States. Thus, attitudes towards homosexuals may create a cognitive schema that PWAs may also be assigned to.

Negative experiences and/or feelings about homosexuals may, therefore, become associated with PWAs.

Fisher (1988) cites several studies demonstrating that those who hold negative attitudes toward homosexuals are less likely to be informed about AIDS and are more likely to stigmatize PWAs than are those who hold more positive attitudes toward homosexuals. Pleck, O'Donnell, O'Donnell, and Snarey (1988) found a correlation coefficient as high as .60 to exist between fear of AIDS and homophobia. In addition, Royse and Birge (1987) found students within the health profession to show an inverse relationship between homophobia and empathy for AIDS patients.

Herek and Glunt (1988) point out that those who become HIV-infected are often blamed for their affliction because of their presumed high-risk behaviors. Triplet and Sugarman (1987), for instance, had subjects rate the degree of personal responsibility and interactional desirability of hypothetical disease victims. It was found that homosexual victims were rated as more personally responsible for acquiring either AIDS, genital herpes, serum hepatitis, or Legionnaire's disease than were heterosexual victims. Further, victims with AIDS were rated as less desirable to interact with than victims with these other diseases. In another study, Kelly, St. Lawrence, and Hood (cited in Meisenhelder & LaCharite, 1989) examined the reactions of nurses to hypothetical homosexual and heterosexual leukemia

and AIDS patients. AIDS patients were perceived as "significantly more responsible for their condition, . . . deserving of their illness, . . . having less value to society, . . . deserving of quarantine, . . . and deserving of firing from their jobs" compared with leukemia patients (p. 35). Similar attitudes held for homosexual as compared with heterosexual patients.

Repercussions of AIDS-related stigma may also include interference with preventive behaviors. Out of fear of being labeled homosexual, promiscuous, or a "druggie," Avis (cited in Cline, Johnson, & Freeman, 1989) found that college students may refrain from discussing AIDS with their sexual partners or from initiating condom use.

It appears, then, that AIDS education should address not only factual information about this disease and its transmission, but should also include both training in skills to implement preventive behaviors and modification of attitudes that discourage stigmatization and discrimination of persons with HIV/AIDS and of people thought to be so afflicted. To be most effective, it would seem that such educational programs should be grounded in the principles of health education (Cleary, 1988) and the psychology of persuasion (Fisher, 1988). Fetter (1989) notes that the Health Information Network did, in fact, make such a recommendation to the National Education Association in 1987. The recommendation included a statement that

effective AIDS education, resulting in health-related behavioral change, requires more than simply providing information: "Successfully persuading individuals to alter their behavior requires. . . strategies based on specific, research-based principles" (emphasis added; Baur, cited in Fetter, p. 151).

Models of persuasion and health promotion

Public health programs initially relied upon basic persuasive communication research to guide their curricula. Such research implied that behavior change would follow from a message that was well developed, caught the intended audience's attention, and was delivered by a competent and credible speaker (Cleary, 1988). In addition, the message needed to be comprehended and accepted by the audience for behavior change to occur.

Research began to indicate, however, that health-education programs based upon such basic persuasion principles resulted in short-lived attitude changes that did not necessarily lead to behavior change (Bettinghaus, 1986; Cleary, 1988). More appeared to be needed. In order to fully appreciate how the persuasion and health promotion arenas can be used to facilitate AIDS education programs, a review of the principal theories of persuasion is provided below. A comprehensive persuasion model will then be presented in detail. This will be followed by a description of a prominent model of health beliefs and behavior.

Finally, the two models will be compared and shown how they might positively influence AIDS education programs.

Theories of persuasion. Borrowing from learning theory, McGuire's (1972) information-processing theory proposes that persuasive techniques would more effectively change behavior if the audience was actively involved, as this would enhance processing and retention of the message. Working from the information-processing model, Rimer and Glassman (1984) concludes that to aid retention, health-promotion messages should effectively link with the audience members' experiential world and the environment in which the desired behavior would occur. The authors suggest that this could be accomplished by clarifying the psychological and operational components of the message so that the presented information would relate to the recipient's life and a change in behavior could be effected. If the recipient comes to understand these components of the message, then s/he is said to have comprehended it in such a way as to retain and utilize the information for long-term behavior change. However, for those who do not respond to health promotion messages, Rimer and Glassman suggest that personal barriers need to be identified on an individual basis and meaningful, effective means of overcoming these barriers be found.

The cognitive-response approach assumes that the message recipient generates unique thoughts or cognitive

responses when anticipating, receiving, or reflecting upon persuasive communications (Greenwald, 1968). In contrast to earlier information-processing models of persuasion, this approach holds that it is the set of cognitive responses generated by the recipient, rather than the learning of message content, that primarily determines the nature of the persuasive effect of that message. Persuasion is thought to be enhanced if one's cognitive responses to a message are generally favorable but inhibited if the responses are generally unfavorable. In addition, persuasion is assumed to be related to the number of cognitive responses. Thus, a greater number of cognitive responses would increase persuasion for a message that promotes favorable thinking and would decrease persuasion for a message that promotes unfavorable thinking. Finally, motivation for message-relevant thinking is thought to increase with greater involvement with the communication and to decrease with greater distraction from the communication.

Other theories of persuasion suggest that individuals react to persuasive messages in ways that involve very little or no information processing. In contrast to information-processing and cognitive-response theories of persuasion, the heuristic approach of Chaiken and Eagly (cited in Eagly & Chaiken, 1984) asserts that persuasion cues are processed utilizing basic schemes or decision rules that have been previously learned regarding judgement of a

message's probable validity. Individuals who do not have the cognitive ability or desire to carefully process the presented information are most likely to apply simple cognitive heuristics, such as "statements by experts can be trusted" or "more arguments are better arguments" to evaluate a message (p. 297). The authors suggest that deliberate attempts by the communicator to create more salient message content may enhance the potential for an individual to systematically process the content itself rather than to rely upon simple cognitive heuristics that might otherwise lead to inaccurate conclusions.

For Bem (1968) attitudes are seen as self-descriptions that are based, in part, on an individual's belief system and his or her emotional responses to that belief system. Bem also describes attitudes as composed of one's self-description of attractions and repulsions to distinguishable features of the environment. Attitude and behavior change, then, are seen as heavily based upon how an individual perceives or describes him- or herself in relation to a persuasive message rather than having a basis germane to the content itself.

Many other theories of attitude change exist including those of attribution, balance, social judgement, inoculation, and mere exposure. While common threads run through some of the theories noted here, such orientations are also fraught with conflicting research findings

concerning the dynamics of persuasion (Petty & Cacioppo, 1986). Perhaps a more consolidated approach to attitude change would remedy this problem (Eagly & Chaiken, 1984; Petty & Cacioppo).

A general model of persuasion. Eagly and Chaiken (1984) propose that a more general model of persuasion could be elaborated by connecting the various theoretical perspectives into an overall framework. They suggest, for instance, that the cognitive response, attribution, and heuristic processes can be placed on a continuum "with issue-relevant thinking as the most demanding processing mode and simple schemes and decision rules the least effortful mode" (p. 306). The authors further suggest that the differing strategies for processing persuasive communications act in parallel rather than in mutually exclusive fashion. The extent to which each processing mode operates would depend upon a variety of factors related to the persuasion process.

Building upon the overall framework suggested by Eagly and Chaiken (1984), Petty and Cacioppo (1986) describe an Elaboration Likelihood Model (ELM) of persuasion that postulates that individuals will consider, or elaborate upon, issue-relevant arguments within a persuasive message to different extents. The extent of elaboration of a persuasive message is seen as a continuum from an absence of thought about issue-relevant information to full

consideration of all issue-relevant information and total integration of such considerations into the person's attitude schema.

The "higher" end of the elaboration continuum, termed the central route of persuasion, is seen as encompassing strategies from theoretical orientations which assume that people generally try to conscientiously appraise the content of a message, and incorporate the information into a rational point of view. Information-processing and cognitive response theories of attitude formation are included at this end of the continuum.

At the "lower" end of the elaboration continuum, termed the peripheral route of persuasion, lie theoretical orientations that concentrate on how basic emotions modify attitudes or on how people utilize rules or assumptions to consider the validity of a persuasive message. Heuristic, mere exposure, conditioning, and self-perception theories fall within this end of the continuum.

The likelihood, or extent, of elaboration is thought to be dependent upon the person's ability and motivation to evaluate the persuasive communication. According to Petty and Cacioppo (1986), research has found the central route of persuasion to lead to more enduring attitude change relative to the peripheral route. Thus, for people who are able and motivated to produce their own thoughts in response to a communication (i.e., elaborate), the resulting attitude

changes are particularly enduring.

The elaboration of persuasive messages can occur either objectively or in a biased manner. Elaboration will proceed in a rather objective manner when the individual is able to focus solely on the issue-relevant arguments presented. Alternatively, if the person's initial issue-relevant attitude influences the manner of argument consideration, then the elaboration will proceed in a biased direction. In doing so, biased elaboration is guided by a relevant attitude schema such that that schema is maintained or strengthened. Cacioppo, Petty, and Sidera (1982) found that biased elaboration easily occurred, resulting in more issue-relevant thought and greater persuasion, when the presented message was consistent with the recipient's issue-relevant attitude schema than when the message was inconsistent with the schema. Petty and Cacioppo (1986) proposed that one's affect can also bias elaboration such that an emotion elicited by a persuasive message increases access to other information linked to that emotion.

Finally, the personal relevance of an issue has a significant effect upon the elaboration of a persuasive message. Personal relevance is defined by Petty and Cacioppo (1986) as "the extent to which an advocacy has intrinsic importance or personal meaning" (p. 145). People will consider an issue personally relevant when they believe the issue will greatly affect their lives. The number,

magnitude, and duration of these expected consequences can affect the degree of personal relevance. The greater the personal relevance of an issue, the more likely an individual is to elaborate upon the issue, since the consequences of forming incorrect conclusions are greater. Since greater elaboration of an argument leads to more enduring attitudes, the authors suggest that increasing the personal relevance of an issue should help to promote greater attitude change in the desired direction.

Relating the principle of personal relevance, or issue involvement, to AIDS education, Flora and Maibach (1990) investigated the effects of rational and emotional public service announcements about AIDS upon viewers' memory for message content. Consistent with the principles of central and peripheral routes of persuasion, it was found that college students of low-issue involvement with AIDS exhibited better memory for emotional announcements than for rational announcements. However, high-issue involvement students recalled both types of announcements equally well.

In another study, Dendato (1990) failed to find any changes in attitudes toward PWAs after exposing students to written or audiotaped AIDS scenarios that were designed to elicit either low-, medium-, or high-issue involvement. While Lipson and Brown (1991) found a significant relationship to exist between knowledge gained about AIDS and enhanced positive attitudes toward PWAs, the results of

Flora and Maibach (1990) and Dendato (1990) suggest that factors in addition to personal relevance affect the AIDS education experience.

A model of health promotion. Relating communications theory to health beliefs and behavior, the Dual Process Model (Leventhal, Safer, & Panagis, 1983) asserts that people actively process information on both cognitive and emotional levels to create a plan of action. Specifically, this model asserts that two information-processing systems operate, one to produce objective-cognitive reactions and the other to produce subjective-emotional reactions to health communications. The objective-cognitive response system generates both a representation of the threat to one's health as well as active coping plans that are based on this representation. This representation is based upon both past history and current experience. The subjective-emotional response to health communications is created by a processing system consisting of concrete perceptions of illness consequences which can elicit fear, anger, depression, and/or disgust. A plan of action is then taken based upon the resulting emotional response. Action plans generated by the objective-cognitive response system may be independent of, or interact with, the action plans generated by the subjective-emotional response system.

With respect to application of the Dual Process Model, Leventhal et al., (1983) suggest that health educators

should turn away from presentations that solely persuade in a threatening manner, such as the use of scare tactics, since this influences only the subjective-emotional processing system. The authors propose instead that educators should "focus on how individuals represent and cope with health problems" (p. 26). Doing so would place emphasis on both the cognitive and emotional processing systems which should, therefore, yield a more effective behavioral response to the health communication. Additional recommendations by Leventhal et al. include relating the illness representation and coping plans to the individual's environment and life-style as well as promoting means for the individual to evaluate behavior so that long-term coping efforts may occur.

Linking the persuasion and health promotion models. It appears that the Dual Process Model of health beliefs is quite similar in approach to the Elaboration Likelihood Model (ELM) of persuasion on several points. Both models propose that cognitive and emotional aspects of a message work to effect a change in a belief. As well, both models suggest that the cognitive and emotional components are involved to differing degrees on an individual basis. Finally, both models imply that differing degrees of personal relevance for, and active participation of, message recipients will affect the audience's response to the persuasive message.

With respect to AIDS education, the Dual Process Model and the ELM may play an invaluable role in guiding the curricula of AIDS education. As will be elucidated below, many AIDS education programs are currently factually oriented and provide only general guidance in promoting preventive behaviors (Miller & Downer, 1988). Most do little to address the social consequences of AIDS (Fisher, 1988). Both the Dual Process Model and the ELM propose that cognitive and emotional features of a message cause a listener to create an attitude change. With these models as guiding tools, future AIDS education programs could become more descriptive, explicit, and engaging in order to affect both the cognitive and emotional processing systems of audience members. In doing so, greater issue-relevant thought may arise from centrally routed persuasive messages (Petty and Cacioppo, 1986). By relating one's experiential world and environment to this disease in a salient, explicit manner, the personal relevance of AIDS and resultant cognitive elaborations may be enhanced. This could result in an expanded representation of the health threat that AIDS presents, as well as production of more effective coping plans to confront this threat.

AIDS education for adolescents and college students

The need for AIDS education directed at teenagers and young adults is great. Over half of all 17 year-old males and one quarter of all 17 year-old females have already

engaged in heterosexual intercourse (United States Department of Education, 1988). Although women and teenagers are becoming HIV-infected at a rate greater than any other population within the United States, most teenagers do not use condoms (Frost, McCluskey-Fawcett, & Sharp, 1989).

Problems. Despite the need for AIDS education, a report prepared by the Citizens Commission on AIDS found that, while many effective programs do exist, most have generally been "underfunded, erratic, uncoordinated, confusing, and timid" (New York Times Service, 1989, p. 20). In addition, most AIDS education programs have not been evaluated for their effectiveness (Miller & Downer, 1988), particularly those taught to sexually active heterosexuals (McDermott et al., 1987). Research that has been conducted on AIDS education programs reveals that a change from a moralistic, factual approach to one that is reality-oriented, explicit, and facilitative of discussing various sensitive issues, and which provides specific skills with which to implement preventive behaviors would increase their effectiveness (cf. Brown, Gregory, & Fritz, 1988).

It is clear that more than just knowledge about AIDS needs to be provided within the educational programs (Frost et al., 1989; Siegel, 1988). Cline, Johnson, and Freeman (1989) did find knowledge about AIDS transmission to be high among college students. The authors cite other studies with

similar findings. However, this knowledge is not influencing students to engage in more AIDS-preventive behaviors (Cline, Engel, Freeman, Johnson, & Gudaitis, 1989). Further, acquiring knowledge about AIDS has not necessarily led to changes in attitudes about AIDS or toward either those with, or those perceived to have, HIV or AIDS (Brown et al., 1988). Huszti, Clopton, and Mason (1989), for instance, found a one-hour AIDS education program, consisting of factual information, to increase compassionate attitudes toward persons with AIDS, but did little to effect attitude change toward practicing preventive behaviors.

Explicit information about AIDS and its prevention is generally lacking both in the media and in the public school system (Myers, et al., 1989; New York Times Service, 1989). Often, themes of "play it safe" and "know your partner" are promoted without providing explicit means for carrying out such measures (Blum, 1989; Cline, Engel, Freeman, Johnson & Gudaitis, 1989; Cline et al., 1990). In a national survey of 80 AIDS educators, Freudenberg and Lee (1987) found community opposition to frank discussion about sex and drugs to be a common obstacle to providing effective education. In March, 1992, for example, the CDC launched a multimillion-dollar national AIDS education advertisement campaign which totally excluded the words "sex" and "condoms" (Gladwell, 1992b). This lack of explicit information is largely due to public policy based on federal

guidelines that health education should "place sexuality within the context of marriage" (United States Department of Education, 1988, p. i).

AIDS education programs of this non-explicit nature follow the moralist approach (Brandt, 1988). The moralist approach teaches that it is wrong to have sexual relations outside the context of marriage (Cleary, 1988). Proponents of this approach believe that it would, thus, be morally wrong to teach people how to reduce their risk while engaging in extra-marital sexual relations. Doing so, they contend, would be to condone such sexual behavior.

An instrumental approach. While public policy generally follows a moralist approach, research on AIDS education programs bears out a need for an instrumental approach in which AIDS information should be taught in "clear, explicit language" (Gallo & Montagnier, 1988, p. 48) and incorporate "explicit sexual education" (Eisenberg, 1986, p. 247) in the process. Proponents of the instrumental approach assume that sexual behavior in its various forms will inevitably occur (Cleary, 1988; Frost et al., 1989). Rather than providing "just say no" messages, this approach encourages responsible sexual behavior through informed decision-making that reduces the risk of sexually transmitted diseases (STDs). It has been argued by those advocating the moral approach that the instrumental approach fosters transmission of STDs by promoting sexual behavior.

Those of the instrumental persuasion, on the other hand, argue that the moralist approach promotes infection by limiting access to means of prevention (Brandt, 1988).

Support for the instrumental approach comes from a study conducted by Quadland, Shattles, Schuman, Jacobs, and D'Eramo (1987) that examined the ability of an explicitly presented educational program to effect AIDS preventive behavior. The authors compared four different approaches to AIDS prevention education and measured changes in sexual activity and attitudes about AIDS prior to, and two months following, the program. The approaches included:

- (1) informing people about safer sex guidelines; (2) informing people about AIDS, its transmission, its devastating effects, in addition to guidelines for safer sex; (3) a program which presented the idea of alternative safer sexual activity in a positive and appealing manner; and (4) a program which presented the idea of safer sexual activity in an appealing manner using explicit visuals. (p. 1)

These educational programs were presented to mostly white, well-educated, middle-class homosexual and bisexual males. The study found that the program that presented alternative sexual behaviors in an explicit manner, thusly eroticizing the material, was the most effective of the four approaches in motivating people to engage in no-risk behaviors such as mutual masturbation. It was concluded that effective,

long-term change in sexual behavior necessarily involves successfully exchanging unsafe sexual practices for safer sexual practices. More recently, Garfield and Hammond (1989) have recommended eroticizing condom use among heterosexuals as a means of encouraging safer sex practices.

By presenting other than merely factual information, the instrumental approach can go beyond the concern of HIV transmission to cover other issues as well. For instance, people with negatively biased perceptions of stigmatized groups, such as homosexuals and IV drug users, may also have negatively biased attitudes about AIDS. Such people would not likely be affected by educational programs that present only facts about this disease (Herek & Glunt, 1988).

Meisenhelder and LaCharite (1989) propose that the perceived threat by PWAs can be decreased by "diminishing the symbolic power of mystery, death, punishment, and sexuality" (p. 36). To diminish this symbolic power, the authors suggest providing clear and accurate information and increasing people's comfortableness with their own sexuality. Teaching and discussing sexual matters in a frank and open manner may be helpful toward this end. Such an approach might lead to a decrease in the sexually related stigma involved in attitudes about AIDS.

Group discussion. Another necessary component of an effective AIDS education program may involve exposure to relevant social norms through peer group discussion of

AIDS-related issues. It has been well established that attitudinal and behavioral norms of one's social network are an important source of social influence (Fisher, 1988). Group influence has a very powerful effect upon one's behavior because of the motivation to be liked and accepted by the group. Acting inconsistently with group norms may result in rejection. Merely the anticipation of being rejected, even if inaccurately perceived, may cause avoidance of a particular behavior. Since adolescents hold peer acceptance in high regard, this is especially relevant for this age group. Social influence could thus either increase or decrease AIDS-preventive behavior.

For instance, Fishbein and Ajzen (cited in Fisher, 1988) found social influence to be an important determinant in one's decision to use contraceptives. It is possible, then, that if one's social network rejects condom use, individuals within that network may be more likely to disregard the use of condoms. If group norms do not even include discussion of STDs prior to sexual activity, one may fear sanctions, such as being labeled a worry-wart on the one hand, or a promiscuous HIV-carrier on the other for initiating such discussion (Cline, Johnson, & Freeman, 1989). In such cases, AIDS-preventive behavior would fail to occur.

To prevent STDs, communication between partners concerning past sexual history and willingness to engage in

safer sex practices is essential (Frost et al., 1989). Yet, Cline, Engel, Freeman, Johnson, and Gudaitis (1989) point out that little is known about how people discuss AIDS with their partners or how often such discussion takes place. Chervin and Martinez (cited in Cline, Engel, Freeman, Johnson, & Gudaitis, 1989) did find that 74% of college students surveyed indicated that they do not discuss their sexual health with their partners prior to sexual activity. A more recent study (Cline, Engel, Freeman, Johnson, & Guadaitis) revealed that, while two-thirds of college students surveyed talked to their partners about AIDS, only 20% talked about safe sex. Of the "safe-sex talkers," 30% admittedly did not initially talk to their partners about AIDS because of embarrassment. It is possible that the inclusion of peer-group discussion within an AIDS education program might increase comfortableness with the topics of AIDS and sex and lead to a greater likelihood for such relevant communication to occur between sexual partners.

It has been proposed that enhancing skills, such as assertiveness and decision-making, within the context of sexual behavior would yield more effective AIDS-related communication between sexual partners (Frost et al., 1989; Lawrance, Levy, & Robinson, 1990; Cline, Johnson, and Freeman, 1989). To date, however, little research has focused on how to facilitate communication between partners regarding AIDS prevention (Cline, Engel, Freeman, Johnson, &

Gudaitis, 1989). While research is beginning to focus on communication skills through modeling and role-play, the use of group discussion as a variable within an AIDS education program is virtually nonexistent.

Rhodes and Wolitski (1989) did include presence or absence of a post-presentation discussion as a covariate while examining the effectiveness of four AIDS education videotapes. Changes in AIDS knowledge and attitudes at posttest and 4-6 week follow-up were found to be significant, but small, and were not associated with presence or absence of discussion. The authors acknowledged that their discussion sessions merely involved questions and answers without extended elaboration. They concluded that had the format been set up to "reinforce, elaborate upon, and increase the personal relevance of material presented in the video" (p. 270), knowledge and attitude changes might have been affected by such discussion.

Because of the sensitive nature of sex and sexuality, the discussion of AIDS in groups may be inhibited (Quackenbush & Sargent, 1986). Should this appear to be the case, educators should first address the discomfort associated with discussing sex with their audience (Frost et al., 1989).

The sexual behavior sequence model (Byrne, 1977) helps to understand the nature of sexual feelings. Byrne proposes that through one's developmental history, associations to

sexual stimuli come to elicit affective responses along both positive and negative dimensions. Fisher, Byrne, and White (cited in Frost et al., 1989) elaborate upon this attitudinal system to describe an erotophobia/erotophilia continuum. Individuals may be considered erotophobic, erotophilic, or somewhere in-between these poles who have mostly negative, positive, or mixed feelings, respectively, regarding sexual issues (Fisher, Grenier, et al., 1988).

The degree to which one feels positive or negative with regard to sexual issues can greatly affect behavior within this realm. Those who are more erotophilic hold a greater acceptance of sexuality, experience greater ease in discussing sexual topics, are more sexually active, communicate more easily with their partners about contraception, and are more likely to acquire contraceptive information and products. In contrast, those who are erotophobic tend to repress sexual expressiveness, experience greater difficulty in discussing sexual topics, avoid sexual behavior, and hold misperceptions about sexual matters (Byrne, 1977; Fisher, Grenier, et al., 1988). Erotophobics who are sexually active are likely to communicate minimally with their partners about contraception (Byrne) and either avoid acquiring contraceptive information and products or experience great discomfort while doing so (Fisher, Byrne, et al., 1979).

Frank, openly taught sexual content has been shown to

lower discomfort about sexuality. Serdehely and Ziemba (1984) found that a human sexuality course at the college level that included content on homosexuality reduced the level of homophobia for those who were initially high on this dimension. At the high school level, Hoch (1971) found that a two-week sex education unit of instruction and discussion that included students' intimate problems and concerns resulted in greater acceptance of sexual variations and greater confidence with respect to sexual decision-making. Contrary to what educators of the moralist approach would expect, students' attitudes toward sexual permissiveness did not change.

The teacher's degree of comfortableness with talking about sexually related material can also play a role in the effectiveness of sex education. Yarber and McCabe (cited in Fisher, Bryne, White, & Kelley, 1989), for example, found that teachers who were more erotophobic were less likely to teach about methods of birth control and alternative sexual behaviors to intercourse within a sex-education course than were their erotophilic counterparts.

Fisher, Grenier, et al. (1988) conclude that for individuals to benefit optimally from sex education, a "threshold level of sexual tolerance" should be created (p. 385). To accomplish this, these authors suggest beginning with the least explicit material first and then following with more explicit material later. They also emphasize the

importance of acknowledging students' rights to personal feelings regarding sexual issues throughout the program. Since AIDS education often includes material from the area of sex education, these recommendations are certain to be appropriate for discussing AIDS and HIV as well.

Summary

Over the past decade, AIDS has become a major health threat through transmission of HIV. Not only has a health-related epidemic arisen from AIDS, but also a stigmatic one as well in which those with, or perceived to have, HIV or AIDS are discriminated against and feared (Herek & Glunt, 1988). While AIDS used to be associated generally with homosexual and IV drug use behaviors in the United States, HIV transmission through heterosexual behavior is on the rise, particularly for adolescents and young adults.

Adolescents and those of college age often perceive themselves as invulnerable and, thus, are likely to engage in risk behavior, including that which is associated with HIV transmission. Further, people within these age groups are often grappling with sexual issues and peer acceptance. These issues, if unresolved, can lead to an increase in AIDS-related discriminatory behavior.

Until recently, AIDS education programs targeted for adolescents and college students have consisted of mostly nonexplicit, factual information and have done little in

helping people to apply this information to their behavior. In addition, such educational programs have often been brief and involved only minimal interaction between the educator and the audience. More recently instituted AIDS education programs have begun to utilize modeling and role-playing to help implement risk-reducing skills. Still, these programs are generally limited to risk reduction, and do little to address the issues of AIDS-related discrimination and stigmatization.

The position taken here is that AIDS education programs should take more advantage of theory so as to more effectively reach the goals of reducing both HIV transmission and AIDS-related stigmatization and discrimination. The Elaboration Likelihood Model of attitude change (Petty & Cacioppo, 1986) and the Dual Process Model of health beliefs (Leventhal et al., 1983) could both be utilized as theoretical orientations. Utilizing these approaches, educational programs would involve audience interaction to stimulate both cognitive and emotional processing systems. This could be carried out using an instrumental approach to AIDS education and providing material in a salient, explicit manner that promotes issue-relevant thinking as well as active discussion.

Presentation and discussion of AIDS-related material can be problematic as they involve sensitive issues,

particularly those pertaining to sexual behavior.

Individuals may respond either negatively or positively to such material, as well as possess differing abilities or levels of motivation to retain and utilize the material. These dynamics need to be taken into account while developing AIDS education programs.

Statement of Purpose and Hypotheses

Purpose and design

The purpose of the present study was to examine the effectiveness of a more explicit, interactive approach to AIDS education relative to a less explicit, passive approach. The educational format consisted of small groups in which students were presented with various scripts, each one followed by a discussion of the presented material. The study utilized a 2 (Explicitness) x 2 (Involvement) x 3 (Presenter) factorial design in which all three independent variables were between-subjects factors.

In the active involvement conditions, students were presented with scripts and given an opportunity to discuss each of them. In the passive involvement (yoked-control) conditions, students watched a videotape of script presentations and discussions.

Students in the nonexplicit conditions were exposed to three script/discussion sessions. The first included information about AIDS and about people with AIDS, written from an impersonal point of view (i.e., a person for whom the effects of AIDS has no personal relevance). The second stressed the importance of communicating with a sex partner and offered alternative behaviors to intercourse. The third stressed the importance of proper condom use.

Students in the explicit conditions were also exposed to three script/discussion sessions. Consistent with recommendations by Garfield and Hammond (1989), the first included information about AIDS and about people with AIDS, written from a personal point of view (i.e., a family member of a person who died of AIDS). The second gave specific guidance for communicating with a sex partner and for engaging in alternative behaviors to intercourse. The third gave specific guidance for initiating and maintaining condom use.

The effectiveness of these educational approaches was examined on the basis of students' attitude changes and mediating cognitive responses. This study was concerned with three attitudes, specifically those concerned with compassion for people with AIDS, communication between sex partners, and condom use. Change scores for each of these attitudes comprised the dependent variables for attitude change.

Cognitive responses were obtained using Cacioppo and Petty's (1981) thought-listing technique within each of the script/discussion sessions. Responses were scored as either favorable, unfavorable, or neutral thoughts and as either externally originated (e.g., restatements of script or discussion content), modified externally originated (e.g., elaborations of script or discussion content), or internally originated (all other) thoughts. Since ELM theory is

concerned with elaborative thought, two principal dependent variables of cognitive response were examined: the total number of favorable modified externally originated, and unfavorable modified externally originated thoughts. Separate sets of these two measures were distinguished for each of the three script/discussion sessions, resulting in 6 cognitive response dependent variables (e.g., number of favorable modified externally originated thoughts about condom use).

Hypotheses

In formulating hypotheses, relevant components of Petty and Cacioppo's (1986) ELM concerning cognitive elaboration and attitude change should be noted:

- 1) An emotion elicited by a persuasive message increases access to other information linked to that emotion. This, in turn, leads to more elaboration and, hence, to greater attitude change.
- 2) More elaboration and greater attitude change occur as the personal relevance of a message increases.
- 3) More cognitive elaboration and greater attitude change occur as a person's motivation to evaluate a persuasive communication increases.

Additionally, aspects of Leventhal et al's (1983) Dual Process Model of health beliefs and behavior should also be noted:

- 1) People actively process information on both

cognitive and emotional levels to create a plan of action.

- 2) Relating the illness representation and coping plans to the individual's environment and life-style should enhance long-term coping efforts to confront the health threat.

Using the propositions put forth by the two models, the following hypotheses were made for the present study:

- 1) With respect to compassion for people with AIDS, the explicit script will elicit more empathy, relative to the nonexplicit script, and thus increase access to other information linked to empathy (e.g., having empathy for someone entails putting oneself in the other's place and not causing that person discomfort). This, in turn, will result in more elaboration and, hence, greater attitude change relative to the nonexplicit script.
- 2) More elaboration and, hence, greater attitude change will occur for the explicit, relative to the nonexplicit, conditions concerning communication with a sex partner and condom use due to the increased personal relevance within the explicit scripts.
- 3) More cognitive elaboration and, hence, greater attitude change will occur within the active discussion groups relative to the passive

discussion groups, as the motivation to think about the script will be greater in order to better prepare for active participation in the discussion.

In terms of dependent variables, it was hypothesized that:

- 1) Attitude change scores should be significantly greater for explicit, compared with nonexplicit, discussion groups.
- 2) Attitude change scores should be significantly greater for active, compared with passive, discussion groups.
- 3) The ELM predicts that more cognitive elaboration leads to greater attitude change. Based on this prediction, the number of favorable modified externally originated thoughts about topic presentations and discussions should positively correlate with attitude change scores for that topic. Unfavorable thoughts should negatively correlate with positive attitude change.

Method

Subjects

The subjects were 99 undergraduates, 41 men and 58 women, enrolled in introductory psychology classes at Oklahoma State University. The study began with 118 participants; 17 failed to return for the 2-week posttest, and 1 yielded unscorable data. The mean age of the students was 20.3 years, with a range of 18 to 44 years. Prior to this study, the students had received an average of 6.5 hours of AIDS education.

During recruitment, all potential subjects were told that they would be involved in a 90-minute AIDS education group in which they would complete a questionnaire, listen to information about AIDS and sex, and possibly be involved in a group discussion about these issues. They were also told that they would be returning two weeks later to complete a survey. They were informed that some of the material might be of an explicit nature, and that the group they attended might be videotaped and shown to others within the study.

The students were assured confidentiality regarding questionnaire responses and would not be asked to reveal any personal information. They were informed, however, that the burden of confidentiality regarding discussion material

would need to be borne by the students. The students were assured that they could withhold permission to have the videotape shown to others at their discretion. Students received three extra-credit points toward their final grade as compensation.

Materials

Vocabulary lists. Since people may possess varying degrees of knowledge about AIDS, Garfield and Hammond (1989) recommend that basic information about AIDS be given to the participants prior to leading a discussion on this topic. For this reason, nonexplicit and explicit vocabulary lists were utilized as an icebreaking exercise that would prime participants for later discussion (see Appendix A). The proper terms and definitions were culled from AIDS and sex resource materials (Herek & Glunt, 1988; Johnson, 1988, pp. 164-176; Oklahoma State Department of Education, 1987, pp. 37-42; Oklahoma State Department of Health, 1990, pp. 1-10).

Sample items within these lists included, "HIV," "heterosexual," "genitals," "sexual intercourse," and "condoms." The nonexplicit and explicit lists had 38 and 43 terms, respectively. The two lists shared 36 terms in common. In most cases, definitions retained identical wording. Exceptions included those for "sexual intercourse" and "ejaculation." Terms found exclusively within the explicit version included "testicles," "scrotum," "clitoris," "vulva," "masturbation," "cunnilingus," and

"fellatio." Terms found exclusively within the nonexplicit version included "counseling" and "birth control." The explicit list also contained slang words and expressions for some of the terms. These included "gay," "cum," "playing with oneself," "hard-on," "rubber," "going down on a woman/man," and "coming."

Scripts. Nonexplicit and explicit presentations were developed for each of the three topics covered in the AIDS education groups (see Appendix B). These topics included "People With AIDS," "Communication/Behavior With a Partner," and "Condom Use." Each of the six scripts had a reading time of approximately three minutes.

The nonexplicit "People With AIDS" script was written from an impersonal point of view (i.e., for someone whom the effects of AIDS has no personal relevance). The content of this script was culled from AIDS education videotapes and television productions (Archibald, 1987; Brown & Wismar, 1988; Dickoff, 1987; Getchell, Hoffman, & Fontana, 1987).

The explicit version of the "People With AIDS" script was written from a personal point of view (i.e., for a family member of a person who died of AIDS). The content of this script was also culled from AIDS education videotapes and television productions (Dickoff, 1987; Getchell et al., 1987; KOCO-TV, 1987). The two scripts were matched as closely as possible for topic themes.

The nonexplicit "Communication/Behavior With a Partner"

script stressed the importance of communication between sex partners and offered alternative behaviors to sexual intercourse. Material in this script was culled from AIDS education pamphlets and fact sheets (American College Health Association, 1989; American Red Cross, 1988a; American Red Cross, 1988b; Berlex Laboratories, Inc., 1989; United States Department of Health and Human Services, Public Health Service, & Centers for Disease Control, 1989).

The explicit version of the "Communication/Behavior With a Partner" script gave specific guidance for communicating with a sex partner and for engaging in alternative behaviors to sexual intercourse. Material in this script was culled from texts concerned with sex and communication (Betcher, 1988, pp. 138-139, 151-154; Johnson, 1988, p. 81) as well as from AIDS education pamphlets (American Red Cross, 1988a; Berlex Laboratories, Inc.)

The nonexplicit "Condom Use" script stressed the importance of using condoms to reduce the risk of HIV infection. The content of this script was culled from AIDS education pamphlets (American Red Cross, 1988a; American Red Cross, 1988b) and videotape (Brown & Wismar, 1988).

The explicit version of the "Condom Use" script gave specific guidance for initiating and maintaining condom use. The content of this script was derived from AIDS education pamphlets (American Red Cross, 1988a; Berlex Laboratories, Inc., 1989) as well as from original material.

Discussion questions. For each of the topics covered in the groups, three discussion questions were developed (see Appendix C). These questions were designed to focus group discussions upon the previously read script and to promote elaboration of the material. The discussion questions were identical for both nonexplicit and explicit groups. The questions were derived from MacMurchy and Tross (1987, pp. 7-8) and from original material.

Attitude scales. To measure the effects of the various approaches to AIDS education, three attitude scales -- people with AIDS, communicating with a partner about AIDS and sex, and condom use -- were developed (see Appendix D). Each scale consisted of four items. Two of the items from the first of these scales were derived from MacMurchy and Tross (1987, p. 6); all remaining items were developed by the author. Half of the items in each scale were written in a positive tone and half were written in a negative tone. Sample items included, "People with AIDS are not at fault for having their disease", "Asking a partner about his/her sexual history is an invasion of privacy," and "Any man who refuses to use a condom is being selfish".

To quantify these attitudes, a seven-point Likert-type response scale, ranging from 1 -- "I strongly agree" to 7 -- "I strongly disagree" was utilized. (Responses were reverse-scored as appropriate.) Each scale had a range of 4 - 28 points, where a higher score corresponds to more

compassion for people with AIDS, greater tolerance for open communication with a sex partner, and greater tolerance for condom use. The twelve items were presented to students in random order as a single survey instrument.

Thought-listings. The thought-listing technique, as developed by Cacioppo and Petty (1981), was utilized to measure cognitive responses to the scripts and discussions. Instructions to subjects and dimensions for response sheets were slightly modified for present use (Cacioppo & Petty, 1981, p. 318; see Appendix E).

Recording and playback equipment. A Panasonic OmniMovie VHS HQ videocamera was utilized to record the active discussion groups. The videocamera rested on a tripod 4 m from the midst of these groups. To enhance the recording quality, a Realistic PZM microphone was centrally mounted on the ceiling above the participants. Each of the six active discussion groups (see below) was recorded on a separate videotape and shown to a yoked-control, passive discussion group on a 48 cm color television set. To enhance sound reproduction, audio signals were sent from the videocassette recorder to a JVC RX-300 stereo receiver wherein tape hiss was reduced by cancelling the 250 Hz, 1 kHz, and 16 kHz equalizer bands. Audio output was then received by a pair of Sansui S-M99 stereo speakers.

Discussion leaders. Three female graduate students each led one explicit and one nonexplicit discussion group.

All three women had at least one semester of teaching experience at the college level. They were trained for this study using material from MacMurchy and Tross (1987) and from Quackenbush and Sargent (1986). The training material included suggestions regarding effectively leading a group discussion, teaching AIDS prevention, and talking about sexuality with students. Each leader obtained further training by running one explicit and one nonexplicit pilot discussion group.

Procedure

The study involved two levels of explicitness, two levels of discussion involvement, and three presenters, making for a total of 12 groups. Students were randomly assigned to one of the 12 groups, balancing for gender as much as the subject pool allowed.

Active discussion groups. The students were seated at one of two opposing tables in a 5 x 9 m classroom so that an equal number of participants faced each other. The discussion leader stood 1 m from the end of the tables, toward the front of the room, with a desk and podium. The author operated the videocamera from 2.5 m beyond the other end of the tables at the back of the room.

Each student received a packet which included a student information form, an attitude survey, a vocabulary list, discussion questions, and six thought-listing response sheets with instructions. Once informed consent was

obtained (see Appendix F), the students completed the student information form, indicating their sex, age, year in school, number of hours of previous AIDS education received, and the number of participants in the group known to the respondent. The 12-item attitude survey was then administered. After the surveys were returned, the students introduced themselves to the group. The videocamera was then turned on and filming commenced.

The discussion leader read the vocabulary exercise instructions, and the students then took turns reading the terms and definitions. During this time, the videocamera panned across the room, following the students as they read from the list. As with all filming in this study, the camera was focused on the person speaking, but always maintained at least three people in view. (The exception to this involved filming the leader close-up while the scripts were read.)

Once the vocabulary exercise was completed, the leader previewed the three discussion questions concerning "People With AIDS". The leader asked the students to be prepared to discuss these questions after a short passage had been read. The leader then read aloud the appropriate (i.e., explicit or nonexplicit) "People with AIDS" script.

After the reading, filming was suspended, and the students were instructed to reflect on the script for 30 seconds. Thought-listing instructions were then read aloud,

after which the students spent 2-1/2 minutes completing the thought-listing task. During this time, students wrote down what they were thinking about during the script reading.

Upon completion of the thought-listing task filming resumed. The leader conducted a group discussion for 15 minutes using the questions as a guide. Five minutes were allotted to discuss each question. Following the discussion, filming was again suspended, and the students took 30 seconds to reflect on the discussion. The thought-listing task was then completed a second time. During this period (2-1/2 minutes), students wrote down what they were thinking about during the discussion.

This procedure was repeated in a similar manner for script presentations and discussions concerning "Communication/Behavior With a Partner" and "Condom Use." During the discussions, students who started to volunteer personal information were interrupted, reminded of the videotaping, and given the option to abandon that particular line of thought. Identifiable information concerning people outside the group was not allowed to be discussed.

Passive discussion groups. Students were seated at one of two tables in the classroom facing toward the video playback equipment. The television screen was centrally positioned in front of the tables, and rested 1.3 m above the floor to provide ample viewing from all seats. The stereo speakers were placed at obtuse angles to the audience

and rested 1 m from the floor. To reduce experimental bias regarding survey and thought-list responding, the videocamera remained at the back of the room.

Each student received a packet identical to that received by students in the active condition. Once informed consent was obtained, the students completed the student information form and the attitude survey. After the surveys were completed and returned, the appropriate corresponding (i.e., explicit or nonexplicit) videotape was started. The students watched the vocabulary exercise and followed along with the lists in front of them. The procedure continued as described for the active discussion groups, with videotaped presentations and discussions shown in lieu of live script readings and discussions.

Posttest sessions. The students returned two weeks after their initial session to complete a posttest administration of the attitude survey. The original groups of students returned together as was feasible and at about the same time of day as they did for the pretest survey.

Results

Briefly, explicit material about sex-partner communication brought about more attitude change than did nonexplicit material. As well, watching a videotape of a presentation and discussion about this topic led to more attitude change and a greater proportion of favorable elaborative thought than did interactive group involvement. Irrespective of active or passive involvement, students involved with groups led by Presenter B listed a greater proportion of discussion-based, unfavorable elaborative thought than did other students.

Nonexplicit material about condom use brought about a negative attitude change for students involved with groups led by Presenter B. Attitude change was positive for all other students. Explicit material generated a greater proportion of presentation-based, unfavorable elaborative thought than did nonexplicit material. Students involved with Presenter A listed a greater proportion of discussion-based, favorable elaborative thought than did other students.

Regarding the topic of people with AIDS, students who initially scored low on this dimension obtained a greater attitude change than did other students, irrespective of the experimental conditions. Students' cognitive response

ratios did not differ across the various groups.

Overall, cognitive response ratios were not found to correlate with attitude change. Results pertaining to attitude change are presented below in detail, followed by the results concerning cognitive responses.

Attitude Changes

Test-retest reliabilities of the three attitude scales were established over a two-week interval using a separate sample of 58 students from introduction to psychology classes. The People With AIDS attitude scale was found to have a test-retest reliability coefficient of .68. Reliability coefficients of .66 and .80 were found for the Sex-Partner Communication and Condom Use attitude scales, respectively. The reliability sample was tested during the two-week period immediately preceding the 1992 Presidential election. During that time, five topics concerning AIDS were prominent in the local and national news media. At posttest, students recorded the number of magazine, newspaper, television, and radio news items related to these five topics that they had seen or heard over the two-week period. The relationships between the total numbers of news items for each of the five topics and each of the three attitude change scores were examined. Exposure to these news events was not found to correlate with students' attitude change scores. However, the relatively high pretest attitude scores for the Sex-Partner Communication

scale (\bar{M} = 25.81) and for the Condom Use scale (\bar{M} = 25.03) suggest the presence of ceiling effects for these two measures. In contrast, the People With AIDS attitude scale elicited a much lower mean pretest score of 17.64

Across the AIDS education groups, the mean pretest People With AIDS attitude score was 17.23 (\bar{SD} = 4.01). (Recall that scores for each of the attitude scales could range from 4 to 28.) Mean pretest scores for the Sex-Partner Communication and Condom Use attitude scales were 25.87 (\bar{SD} = 2.05) and 23.94 (\bar{SD} = 3.30), respectively. Controlling for overall error rate, a $2 \times 2 \times 3$ (Explicitness \times Involvement \times Presenter) multivariate analysis of variance (MANOVA) on the pretest attitude variables did not reveal significant differences among the groups.

Attitude change scores were derived by subtracting pretest from posttest scores. Mean change scores for the 12 groups are summarized in Table 1. Male and female change scores were compared with three two-tailed t -tests, one for each attitude. No significant gender differences were found.

A $2 \times 2 \times 3$ MANOVA on the three attitude change variables was carried out. MANOVA test criteria are summarized in Table 2. The MANOVA suggested significant main effects for the degree of explicitness and for the level of discussion involvement. The MANOVA also revealed

interaction effects for Explicitness x Presenter and for Involvement x Presenter.

 Insert Tables 1 and 2 about here

Univariate 2 x 2 x 3 analyses of variance (ANOVAs) were then carried out, one for each of the three attitude change variables. Main effects for the degree of explicitness ($F(1,87) = 15.28, p < .0002$) and for the level of involvement ($F(1,87) = 5.30, p < .024$) were found only for Sex-Partner Communication attitude change scores. For this attitude variable, students exposed to explicit material obtained a significantly greater mean change score ($M = 1.36$) than students exposed to nonexplicit material ($M = -0.51$). In addition, students who watched videotapes obtained a significantly greater mean change score ($M = 1.07$) compared with those involved in group participation ($M = -0.09$). No interaction effects were found for this attitude variable.

For attitude change scores related to Condom Use, no main effects were found. A 2 x 2 x 3 ANOVA did reveal significant interaction effects between level of explicitness and the person presenting ($F(2,87) = 4.50, p < .014$), as well as between the level of involvement and the person presenting ($F(2,87) = 3.26, p < .043$). However, post-hoc analyses with Tukey's studentized range test

revealed significant differences among mean change scores only for the Explicitness x Presenter interaction. Nonexplicit material brought about a negative attitude change ($\bar{M} = -1.23$) for students involved with groups led by Presenter B; this score significantly differed from that obtained by students involved with Presenter B's explicit material ($\bar{M} = 1.73$) and by students involved with Presenter A's nonexplicit material ($\bar{M} = 1.81$).

No main effects were found for attitude change scores concerning People With AIDS. A $2 \times 2 \times 3$ ANOVA did reveal interaction effects between explicitness and presenter ($F(2,87) = 3.27, p < .043$) and between involvement and presenter ($F(2,87) = 3.10, p < .050$). However, post-hoc analyses with Tukey's studentized range test failed to find any significant differences among mean change scores for either of these interactions.

In the absence of any significant effects, the data were examined to determine whether pretest score values were related to score changes. Table 3 clearly shows that a nonlinear inverse relationship was present between pretest scores and change scores. For instance, students whose pretest scores were greater than one standard deviation

 Insert Table 3 about here

below the sample mean obtained a mean change score of 2.93.

Examination of item responses revealed that at posttest, these students were somewhat less blaming of PWAs. They were also a little more lenient regarding the issues of employment and quarantining of those with AIDS. However, all of these students continued to strongly agree that HIV testing should be mandatory for certain people. In contrast, students whose pretest scores were greater than one standard deviation above the sample mean obtained a mean change score of -0.29. These results are in contrast to the reliability sample in which posttest scores generally regressed toward the mean pretest score.

Cognitive Responses

Students' thought-lists were first checked for total number of thoughts. Using scoring rules suggested by Cacioppo and Petty (1981), each phrase or simple sentence was counted as a separate thought. Compound and run-on sentences were broken down into simple sentences that were then counted as separate thoughts. Rescoring half of the thought-lists for total thoughts one year later produced a .98 test-retest reliability coefficient for obtaining the same scores.

Three laypersons (two advertising copywriters and a foreign language teacher) were trained on pilot data to score the thought-lists using rules by Cacioppo and Petty (1981). Thoughts were scored for polarity and origin. For the polarity dimension, thoughts were scored as either

favorable, unfavorable, or neutral to the messages presented or discussed. For the origin dimension, thoughts were scored as either externally originated (restatements of presentation or discussion content), modified externally originated (elaborations of presentation or discussion content), or internally originated (all other) thoughts. (See Appendix G for thought-list scoring rules.) The thoughts were given to raters in typed form in order to avoid possible recognition of students' gender-based handwriting styles. For thoughts based upon presentation material, raters referred to the scripts and discussion questions in making their scoring decisions. For thoughts based upon discussion material, raters referred to scripts while scoring the polarity dimension and to typed transcriptions of discussions while scoring the origin dimension. Each rater scored thoughts particular to one of the three attitude variables.

The author independently scored all thoughts in like manner and served as the reliability rater. Inter-rater reliabilities among the scoring dimensions for the various attitude-related cognitive responses ranged from .69 to .84. Raters' scoring decisions were checked by the author for adherence to scoring rules and then used as the basis for the dependent variables.

For each of the three attitude-related topics, two dependent variables were formed by summing the numbers of

favorable and unfavorable modified externally originated (MEO) thoughts. This yielded a total of six cognitive response variables. A preliminary analysis revealed differences among the groups for the total number of thoughts listed by each student. To control for total number of thoughts, the dependent variables were converted to ratios by dividing the numbers of favorable and unfavorable MEO thoughts by the total number of thoughts listed.

In reporting the results of the cognitive response analyses, it should be recalled that students had listed their thoughts on six separate occasions: after each of the three presentations and after each of the three discussions. It is noted that the assumption of independence of scores was probably violated for analyses of discussion-based cognitive responses, because one student's thoughts may have been influenced by another student's participation within the discussion -- at least within the interactive groups. Violation of such an assumption may cause statistical analyses to be based on an improper distribution. In light of this, analyses concerning presentation-based cognitive responses may be considered as primary. Analyses concerning discussion-based cognitive responses should be considered as secondary and interpreted with caution.

No significant correlations between attitude change scores and corresponding cognitive response ratios were

found when the data were examined from an overall perspective. With no theoretical basis for examining these correlations on a factorial level, no further analysis was conducted.

In the absence of any significant correlations, cognitive responses were analyzed to determine whether group differences existed among the cognitive response variables and, if so, to what extent these differences coincided with group differences in attitude change scores. A $2 \times 2 \times 3$ (Explicitness \times Involvement \times Presenter) MANOVA was carried out on the two cognitive response variables related to Sex-Partner Communication. MANOVA test criteria are summarized in Table 4. The MANOVA revealed overall main effects for the level of discussion involvement, ($F(4,83) = 3.46, p < .012$) and for the person presenting ($F(8,166) = 2.21, p < .029$).

 Insert Table 4 about here

Univariate $2 \times 2 \times 3$ ANOVAs were carried out for favorable and unfavorable MEO thoughts, first for presentation-based thoughts and then for discussion-based responses. Based on Sex-Partner Communication presentations, a main effect for the level of involvement was found for favorable MEO thoughts, $F(1,86) = 6.77, p < .011$. Students who watched a videotaped presentation

about this topic listed a greater proportion of favorable MEO thoughts ($\bar{M} = 36\%$) than did students who listened to a live presentation ($\bar{M} = 24\%$).

Based on Sex-Partner Communication discussions, a main effect for the level of involvement was found for favorable MEO thoughts, $F(1,86) = 5.33, p < .023$. Students who viewed a discussion about sex-partner communication on videotape listed a significantly greater proportion of favorable MEO thoughts ($\bar{M} = 33\%$) than did students who participated in such discussions ($\bar{M} = 23\%$). In addition, a main effect for the person presenting was found for unfavorable MEO thoughts, $F(2,86) = 4.43, p < .015$. A post-hoc analysis with Tukey's studentized range test revealed that students involved with groups led by Presenter B listed a significantly greater proportion of unfavorable MEO thoughts ($\bar{M} = 16\%$) than did students involved with groups led by Presenter A ($\bar{M} = 4\%$) or by Presenter C ($\bar{M} = 4\%$). The reader may refer to Table 5 to compare cognitive response effects alongside attitude change effects for the topic of Sex-Partner Communication.

 Insert Tables 5 and 6 about here

A $2 \times 2 \times 3$ MANOVA was carried out next on the cognitive response variables related to Condom Use. MANOVA test criteria are summarized in Table 6. The MANOVA

revealed overall main effects for the degree of explicitness ($F(4,84) = 2.469, p < .0509$) and for the person presenting ($F(8,168) = 2.166, p < .0325$). Concerning presentation-based responses, a $2 \times 2 \times 3$ ANOVA revealed a main effect for the degree of explicitness for unfavorable MEO thoughts, $F(1,87) = 8.36, p < .005$. Students exposed to explicit Condom Use material expressed a significantly greater proportion of unfavorable MEO thoughts ($M = 29\%$) than did students who were exposed to nonexplicit material ($M = 14\%$).

Based on the Condom Use discussions, a main effect for the person presenting was found for favorable MEO thoughts, $F(2,87) = 7.22, p < .001$. A post-hoc analysis with Tukey's studentized range test found that students who were involved with groups led by Presenter A listed a significantly greater proportion of favorable MEO thoughts ($M = 52\%$) than did students involved with groups led by Presenter B ($M = 32\%$) or by Presenter C ($M = 30\%$). The reader may refer to Table 7 to compare significant cognitive response effects alongside significant attitude change effects for Condom Use.

 Insert Tables 7, and 8 about here

A $2 \times 2 \times 3$ MANOVA on the cognitive response variables related to People With AIDS was also carried out. The

MANOVA test criteria, summarized in Table 8, revealed no significant effects. This suggests that students did not differ on any of the cognitive response variables related to this topic.

Discussion

This study examined the effectiveness of a more explicit, interactive approach to AIDS education relative to a less explicit, passive approach. Three topics were covered within each session: people with AIDS, communication with a sex-partner, and condom use. For the topic of sex-partner communication, support was found for the hypothesis that attitude change would be greater for students exposed to explicit, rather than nonexplicit, material. However, this effect did not occur for either of the other two topics. Unexpectedly, nonexplicit material about condom use led to a negative attitude change for students involved with one of the presenters, while a small positive attitude change occurred for all other students. No support was found for the hypothesis that interactive group involvement would lead to greater attitude change than would watching a videotape. In fact, for the topic of sex-partner communication, the reverse was found. Watching a videotape led to greater attitude change than did interactive group involvement. While differences in attitude change between groups were sometimes accompanied by differences in elaborative thought, these variables failed to correlate overall. Hence, the hypothesis that the amount of elaborative thought would correlate with attitude change

was rejected.

People with AIDS

Explicit and nonexplicit material, made available either through live or videotaped presentations and discussions, appeared to be equally effective in augmenting positive attitudes toward PWAs for students who initially scored low on this dimension. This finding is in partial agreement with that of Huszti et al. (1989) in which either a lecture or a film about AIDS was found to be equally effective in enhancing high school students' positive attitudes toward PWAs. In another study, Dendato (1990) found that students' attitudes toward contact with PWAs did not change after exposure to low, medium, or high issue-involvement AIDS scenarios presented in either written or audiotaped format. The present study is, thus, in partial agreement with Dendato's findings as well. Students who initially scored moderate or high on the PWA attitude measure did not exhibit a change of attitude under any of the experimental conditions. This might have been due to a real upper limit of favorable attitudes one would hold toward PWAs. Alternatively, a ceiling effect might have occurred with this measure to prevent initially higher scores from rising. However, since the distribution of pretest scores followed a normal rather than a positively skewed distribution, this alternative explanation is given less weight.

It appears that augmenting compassionate attitudes toward PWAs can be accomplished just as effectively through the media as with direct personal contact. Certainly, the former route would be more cost-effective and less time-demanding than the latter route in reaching the largest possible audience. However, this conclusion may not be valid for audiences who already have a moderate to high degree of compassion for PWAs.

There may be a limit to just how much AIDS education can enhance compassion for PWAs, however. For example, through his teaching and clinical work, Gonzales (1990) found that people often fail to change their at-risk behaviors for AIDS until someone close becomes HIV-infected. Perhaps this applies to having compassion for PWAs as well. Unfortunate as this may be, family members or close friends who become HIV-infected may do more for enhancing compassion among those around them than most AIDS education programs might accomplish alone. One's life would be greatly affected by interacting with someone close who has AIDS. According to Petty and Cacioppo's (1986) model of persuasion, the consequent personal relevance of the AIDS issue would lead to an attitude shift toward more compassion for PWAs in general.

It must be kept in mind, however, that people with AIDS often lose close friends upon disclosure of their diagnosis (Fineberg, 1988). AIDS has generally been a disease that

affects stigmatized groups, such as homosexuals and drug users. Attitudes about homosexuals, for instance, may create a cognitive schema that PWAs may also be assigned to. Negative experiences and/or feelings about homosexuals may, therefore, become associated with PWAs (Herek & Glunt, 1988). In the present study, the explicit PWA script related how Peter dealt with having AIDS. In the script, Peter's aunt believed that "those people deserve what they get." Presumably based on this statement, some students assumed Peter to be a homosexual and expressed little compassion for him: "(Peter was) just asking for it by being gay". While this phenomenon occurred for only a minority of students, it does raise an eyebrow. Would these students feel likewise toward a pack-a-day smoker stricken with lung cancer, or a head-injured person who had failed to wear a seatbelt? Or is such a response particular to AIDS because of uncomfortable feelings about homosexuality, or even sexuality in general?

Future research in this area should explore college students' attitudes and cognitive schemas regarding perceived responsibility for incurred harm. For instance, would having a PWA guest speaker affect students more than merely portraying such a person through a reading? How would people react to various PWA speakers who had each contracted HIV through a different mode of transmission? Would an audience feel differently toward a PWA speaker than

a speaker with tobacco-induced lung cancer? Such investigations are important in order to better understand the health-threat representations held by college students.

Sex-Partner Communication

As expected, exposure to explicit material was more effective than nonexplicit material in augmenting positive attitudes. However, the mean attitude change for explicit groups was small. This was probably due to a ceiling effect on this scale. Recall that the mean pretest score for all students was nearly 26 out of 28 possible points. A mean change score of 1.3 for students in the explicit groups is actually near the upper limit of positive change that could have been achieved.

The finding that exposure to explicit material was more efficacious than nonexplicit exposure is harmonious with the Elaboration Likelihood Model (ELM). The ELM predicts that the greater the personal relevance of a message, the more likely the listener will actively process that message and, consequently, obtain an attitude shift in the desired direction. The explicit script was designed to give students specific ideas on how to communicate about sex. In addition, specific ideas were presented concerning sexual communication (e.g., making love over the phone) and sexual touch (e.g., mutual masturbation). The rationale was to give students specific, albeit explicit, low-risk alternatives to sexual intercourse which could be

communicated to, and implemented with, a partner. In doing so, the explicit script was expected to be more personally relevant than the "just say no" and nonsexual-touch messages within the nonexplicit script and, therefore, elicit a greater shift in positive attitude.

Despite the efficacy of explicit material about sex-partner communication, it is often difficult to implement such a program on a broad scale. Federal guidelines state that AIDS education programs must be "locally determined, consistent with community values, and appropriate to community needs" (Reed, 1988, p. 10). Indeed, Ostrow (1988) notes that community support is necessary for AIDS prevention programs to be effective. Explicitly providing alternative sexual behaviors to intercourse gets into the area of sexual technique and is considered taboo in most public school sex education programs (McCormick, 1987). Perhaps the university community could benefit from such explicitly presented material, however. Many students in the present study freely acknowledged being sexually active, a finding corroborated by Morakinyo (1992) for a similar student sample at the same university. In addition, the students often volunteered that nothing is as satisfying as intercourse. As one female noted, "You don't get goo-goo inside just by doing other things. . . . When you try to find an alternative to intercourse, it just doesn't work."

Perhaps a more explicitly presented program on communication and behavior with a sex partner could lead to alternatives to intercourse that are just as satisfying while also placing the individual at a lower risk for HIV infection.

The medium in which sexually related material is made available to students is also an important consideration for AIDS education. In the present study, irrespective of the level of explicitness involved, attitude change was more pronounced for students exposed to videotaped, rather than live, presentations and discussions. This effect was unexpected. It was anticipated that students in the interactive groups would be under a greater instructional demand to elaborate on the material in order to prepare for the discussion than would students who watched videotapes. While this demand may have been present, those who watched the videotapes expressed a greater proportion of presentation-based favorable elaborative thought than did students in the interactive groups by a 3:2 margin (see Table 5). A similar effect occurred for discussion-based favorable elaborative thought by a 4:3 margin. However, with no significant correlations present, one must conclude that these cognitive response effects occurred without mediating attitude change.

Greenwald's (1968) cognitive response model of persuasion predicts that motivation for message-relevant thinking should increase with greater involvement with the

communication and decrease with greater distraction from the communication. Why, then, would students within a less involved task (watching a videotape) exhibit a greater proportion of favorable elaborative thought than students within the more involved task of interactive participation? It may be that interactive participants actually became distracted from the message by the anticipation of a group discussion pertaining to sex. Indeed, several students expressed their embarrassment about discussing sexual topics or wondered how other people in the group would react to their points of view. The implication is that "involvement" with a message may have just as much to do with the communication modality as with the ability and motivation to process the information.

Little can be made of the differences between presenters for eliciting discussion-based, unfavorable elaborative thought. While the differences were significant, Table 5 reveals that the ratio values were small and had no effect upon attitude response. In addition, findings regarding discussion-based thoughts, especially in isolation from other variable effects, must be viewed with caution due to the non-independence of scores for this subset of variables. (The reader is reminded that discussion-based thoughts could have been influenced by the verbalizations of co-participants.) This said, one might speculate that Presenter B generally had more difficulty

leading discussions about sex. Yarber and McCabe (cited in Fisher, Byrne, White, and Kelley, 1989) found that a teacher's degree of sexual comfort directly affects the manner in which sex education is taught. Perhaps if sexual comfort ratings had been obtained from the presenters in this study, such as with the Sexual Opinion Survey (Fisher, Byrne, White, & Kelly, 1989), this speculation could have been more adequately addressed. Alternatively, some unidentified group dynamic may have been present to produce these differences.

The upshot of these results is that explicit material about sex-partner communication may enhance positive attitudes on this dimension to a limited degree; nonexplicit information appears to have little effect. Irrespective of the degree of explicitness, students appear to be more receptive to, and less threatened by, videotapes about sexual behavior as compared with interactive groups. However, in the absence of an interaction effect between degree of explicitness and level of involvement, one cannot conclude that explicit videotapes would be the most effective manner of encouraging open sex-partner communication. These findings suggest that promoting open communication between sex-partners may best be accomplished over several sessions utilizing a variety of instructional techniques.

Effective AIDS prevention necessarily involves personal

"struggles with the meaning of sex" (Silin, 1987, p. 12), particularly for people whose sexual behavior places them at risk for HIV infection. If these struggles are not resolved, negative feelings about sex may remain and, consequently, inhibit communication about sexual matters (Byrne, Miller, Fisher, and White cited in Bryne, 1977). To help with this difficulty, Fisher, Grenier, et al (1988) suggest that a "threshold level of sexual tolerance" be created in the classroom (p. 385). This is important because students are likely to vary along the erotophobia/erotophilia continuum. Students with erotophobic tendencies can be expected to have greater difficulty discussing sexual topics and may hold more misperceptions about sexual matters than students who are erotophilic (Fisher, Grenier, et al, 1988).

To provide effective guidance regarding sex-partner communication, classmates might first watch a videotape of other students discussing sexual behavior. During the next prevention session, students could be guided through a similar discussion using the videotape as a model. This would give students time between sessions for introspection regarding sex before discussing sexual matters with others. Additional sessions could be devoted to role-playing and other skill-building techniques as appropriate for the group. Ultimately, talking about sex amongst peers in a learning situation should carry over to actual discussions

about sex with a partner. Until sexually active partners are able to talk about sex in a comfortable manner, the likelihood of discussing and implementing HIV-preventive behaviors will probably be low, or moderate at best.

Condom Use

Neither the degree of explicitness nor the level of involvement affected students' scores on the Condom Use attitude scale. However, students involved with nonexplicit groups led by Presenter B exhibited a negative attitude change regarding condom use at 2-week posttest. In contrast, all other students revealed a small to moderate positive attitude change. Cognitive responses by Presenter B's students did not influence the negative attitude change. It is possible that Presenter B again had some difficulty presenting material and/or leading a discussion concerning sexual behavior. However, if this was so, why did students in Presenter B's explicit groups raise their attitude score ($\bar{M} = 1.75$) while students in the nonexplicit groups lowered their score ($\bar{M} = -1.23$)? This significant difference in scores would have been expected in the reverse direction if this explanation were correct.

Looking at the demographic data does offer a clue. Students in Presenter B's nonexplicit group received less AIDS education prior to this study ($\bar{M} = 3.7$ hours) than did students in Presenter B's explicit groups ($\bar{M} = 10.1$ hours). AIDS education has generally been concerned with prevention

through promotion of abstinence or condom use. Thus, it can be speculated that students in Presenter B's explicit groups had more elaborate cognitive schemas about condom use than their nonexplicit counterparts. In the present study, these students may have utilized these schemas in conjunction with the material at hand to raise their Condom Use attitude scores.

Another explanation for this interaction effect involves group dynamics. Each student in Presenter B's interactive nonexplicit group knew more co-participants ($\bar{M} = 1.33$, $n = 6$) than did students in Presenter B's interactive explicit group ($\bar{M} = 0.25$, $n = 8$). It is probably fair to say that one's membership within a group (acquaintance or stranger) could affect the interaction during a discussion. This, in turn, could result in differences in attitude change.

The foregoing discussion of presenter qualities and group dynamics as potential confounds is not new to the AIDS education literature. For example, upon review of the Talking Sex Project (Toronto), Tudiver, Kurtz, Jackson, Orr, and Rowe (cited in Norton, 1990) concluded that the differences found between two approaches to providing AIDS education in small groups might have been due to some unknown group dynamic and/or the qualities of the group leaders. Such "nuisance" variables are often inherent in studies involving group interaction and should be controlled

for as much as possible. The present study could have minimized the effects of these variables by controlling for the presenters' degree of sexual comfort (see above) and by creating interactive groups in which students were all strangers to one another.

Aside from postulations about the observed interaction effect, there is the more pressing issue of whether sexually active students are motivated to use condoms as a means of HIV/AIDS prevention. While the students scored highly on the Condom Use attitude scale (65 percent of the sample scored 24 or better out of a possible 28 at pretest), there is some question as to how well these students may convert their attitudes into actual behaviors. A review of the discussion transcriptions and thought-listings revealed a potential gender difference regarding condom-use intentions. Females appeared to be more concerned about HIV transmission than males and less willing to have intercourse unless the partner used a condom. However, females generally expressed greater embarrassment and reluctance than males regarding discussion of condom use with their partner. For example, one female expressed, "A partner may not want to use a condom. TOO BAD, make them use one. (But) I don't think talking about condoms is a nice thing, so it would be hard for me to talk about the use of them."

Males, on the other hand, were generally less concerned than females about HIV transmission. Instead, many were

concerned about their partner's risk of becoming pregnant. Males often expressed a willingness to use a condom if the partner was not already using an oral contraceptive. In such a situation, some males assumed that the female would eventually begin using an oral contraceptive, after which condom use would no longer be necessary. During a discussion, for instance, one male related, "Unless the girl's on the pill, the guy should definitely use a condom." Another male agreed, "The question is if you are on the pill. If you're not, condoms are really the only immediate solution." Other males, however, did recognize the importance of condom use. During another discussion, one male expressed, "Wearing a condom (should be) like wearing a seatbelt. It's not the seatbelt that's fun. It's to drive that counts." Another male volunteered on a thought-list, "Condoms could save your life. Maybe I wouldn't be infected if I started using them earlier."

These comments about condom use point to the seriousness of the problem: In general, many of these students have poor or incomplete health-threat representations about HIV/AIDS. While they acknowledged the risk involved with unprotected intercourse, many regarded AIDS as a disease of the "Other" (Silin, 1987); it would not happen to them. This was especially true for the male students. Even when students believed that they should use condoms, they often acknowledged the hardships involved in

discussing the issue with a partner. Males and females alike did not want to appear promiscuous. Some expressed distrust toward the potential partner. One female even expressed the possibility of being assaulted or raped by a partner if he desired intercourse without a condom despite her objection to unprotected sex.

Almost all of the students, regardless of their intent to use condoms, acknowledged negative aspects to condom use. They described embarrassment about buying condoms, an interruption of the romantic mood and the awkwardness of putting on a condom, a reduced sensation for both males and females, and a dislike for the way condoms feel, smell, and taste. Such negativism about condoms is not uncommon in the general population. In fact, during an HIV/AIDS delegation tour of Eastern Europe in 1992, of which this author was a member, an official from the Institute of Health Promotion in Budapest noted reasons given by young Hungarians for their reluctance to use condoms that were almost identical to those found in the present study.

In this study, some students expressed the knowledge that they should use condoms but nevertheless did not like to do so: "Condoms should be worn. . . but I don't like it." Others expressed being at ease while talking about condoms, but had mixed feelings about using them: "I have no trouble talking about condoms or using them. (But) I hate condoms, because they take all the feeling away."

Still other students acknowledged the negative aspects of condom use, but agreed that there are ways to make them more enjoyable: "Putting on a condom is like a commercial in the middle of a really good scene of a movie, (but) they are a fact of life and a necessity. Different types of condoms could be fun."

The bottom line appears to be that while HIV/AIDS prevention material can be made available to students in groups, each individual must acquire a plan of action that is tailored to his or her own needs and is based upon an accurate assessment of the degree to which that person is at risk for infection. Leventhal et al. (1983) recommend that this be accomplished by relating one's health-threat representation and coping plans to the individual's environment and life style as well as by promoting means for the individual to evaluate his/her behavior so that long-term coping efforts may occur. In doing so, clearly an instrumental, rather than a moralist, approach to AIDS education is necessary in which responsible sexual behavior through informed decision-making is taught (Cleary, 1988).

Recent efforts in instrumental approaches to AIDS prevention are promising. For example, Love (1992) provides a checklist to adolescents and young adults as an aid for self-assessment of HIV risk factors. To help implement coping efforts, educators should incorporate modeling and role-play into the prevention program. For instance, Lipson

and Brown (1991) found the 19-minute videotape, "Sex, Drugs, and AIDS," to be particularly effective in enhancing college students' attitudes toward practicing safer sex immediately after watching the film. This was felt to be due, in part, to the film's authentic use of discussion and decision-making among young adults regarding condom use. At the University of Minnesota, Peters (1990) reports that role-playing of HIV-preventive behaviors, among other methods, led to a 6 percent reduction in the incidence of sexually transmitted diseases on that campus.

Of course, determining whether preventive measures are actually taken by students has always been problematic due to the personal nature of the question, the potential for obtaining socially desirable responses, and public policy issues (Lipson & Brown, 1991; Ostrow, 1989). As mentioned above, education efforts may, unfortunately, still fall short of the prevention goal until someone close to the individual becomes HIV-infected; at that point, AIDS ceases to be a disease of the "Other."

Concluding Remarks

Overall, attitude change was not found to correlate with elaborative thought about the presentations or discussions. At first glance, this finding appears to be in contrast to what the ELM would expect. However, it is recalled that Petty and Cacioppo (1986) propose that cognitive elaboration is dependent, in part, upon the

person's motivation to evaluate the persuasive message. With regard to AIDS, many of the students appeared to see this problem as a disease of the "Other." While acknowledging that AIDS exists, many students believed it unlikely that they would be directly affected by this disease. Further, some students failed to see personal responsibility for their actions if they were to get AIDS; it would be the other person's fault. In short, the students may have been less than adequately motivated to elaborate upon the messages to the extent necessary to mediate attitude change.

Where attitude change did occur, it is possible that peripheral persuasion cues (e.g., attractiveness of the group leader, apparent credibility of the message or of the group leader) were dominant over central avenues of persuasion (e.g., critical evaluation of the message). The ELM proposes that peripheral persuasion cues are more likely to influence attitude change when knowledge about a topic is low (Petty and Cacioppo, 1986). In the present study, it may be that despite a mean 6.5 hours of previous AIDS education, the students could be lacking in "functional" knowledge about AIDS. If this were indeed to be the case, the implication is that the AIDS educator must first make students aware that they are indeed potentially at risk for HIV infection (at least to the extent that their behavior shows this to be true) before persuading students to take

appropriate measures. To accomplish this necessitates restructuring the students' health-threat representations as a first priority.

In terms of the ELM itself, the lack of correlational findings in this study does not necessarily negate the theory. On the one hand, it may be that attitude change leads to further cognitive elaboration rather than the other way around. If such were the case, the present study merely did not measure elaborative thought at a later time. On the other hand, in addition to the aforementioned possibility of inadequate student motivation to critically evaluate the messages, it may be that the stimuli material (i.e., scripts) in this study were not sufficient to evoke adequate levels of elaborative thought. If this were the case, then the ELM remains intact. Unfortunately, the issue of whether cognitive elaboration leads to greater attitude change or the other way around is hard to resolve since much of the research involving ELM theory is correlational in nature. As is well known, correlation does not imply causation, and the design of the present study attempted to address this by looking for both correlational and causal effects.

With regard to the design of this study, several limitations bear discussion. Future AIDS education research must examine more closely the effect the group leader has upon the audience. In this study, several non-hypothesized interaction effects involving the presenter and either the

degree of explicitness or the level of involvement were close to statistical levels of significance. That these effects failed to occur at statistically significant levels, however, does not imply their nonexistence for the population at large. Questions regarding group-leader characteristics remain. For example, would students react more or less favorably to a male or a female leader? Would audience reaction depend on whether participants were of the same gender as the leader? Are female leaders any more or less effective than male leaders in presenting and discussing certain issues about AIDS or sexuality?

Also problematic to this study was the small number of groups within the experimental design. Each presenter led only one explicit and one nonexplicit group. While the videotapes of these groups served well as a yoked-control, the design could be improved upon by replicating the explicit and nonexplicit groups for each presenter. In doing so, within each experimental condition the group dynamics between discussion participants could be better understood. For instance, would participants interact in a similar fashion across groups led by the same leader who presented material at a particular level of explicitness? How would this change for different group compositions with respect to age, gender, level of knowledge about AIDS, or degree of erotophobia/erotophilia?

Another limitation of this study concerns the narrow

sample of students involved. First, there is the concern about self-selection of students into the study. Saunders, Fisher, Hewitt, and Clayton (1985) found that volunteer selection can result in a biased sample when the topic of the experiment, such as erotica, might interact with a person's desire to participate. In this study, it is possible that some students failed to participate or to return for posttest due to the explicit nature of some of the material. Should this be the case, generalizing the results to the population (here, the general student body) is made difficult (Bauman, 1973).

Second, there is the issue of the locale in which this study took place. As noted in a preliminary report of this study (Lipson, 1992), the students primarily came from Oklahoma, a state in which AIDS education, but not sex education, is government-mandated within the public school system. Having been deprived of a mandated sex education program may account for a portion of the uneasiness and embarrassment felt by some of the students while discussing sexual issues. In addition, Oklahoma is within a region of the country known for its religious and political conservatism. As such, many Oklahomans believe that talking about sex is taboo. (Apparently, participating in sexual activities outside of marriage is an entirely different matter! It seems as if it is okay to have sex; just do not talk about it.) It would be revealing to replicate this

study in a more liberal area of the country where both AIDS and sex education are mandated in the public school system. For example, how would the present results differ from a similar study conducted in AIDS epicenters such as San Francisco or New York City? Would results differ between a state university and a small liberal arts college?

Another factor ripe for further investigation is the order in which topics within an AIDS education program are presented. This study utilized a fixed order of topic presentation: people with AIDS, sex-partner communication, and condom use. The topics were presented in this order to match that found in many AIDS education videotapes. One must ask, "Would changing the topic order have an effect upon the audience?" Future research should investigate different topic orders such as that used in the videotape, "AIDS: The Facts of Life" (Froman, 1988). This adult-oriented tape opens with a group discussion about communicating with a partner about AIDS and condoms, interspersed with cuts to various professionals talking about HIV transmission. Medical aspects of AIDS are not encountered until the last third of the 27-minute tape.

✓ Finally, the measures on which the data were collected should be reconsidered for future research. Regarding the attitude measures, were the scales adequately sensitive and reliable? A review of the literature did not produce desirable attitude measures for this study; all would have

required extensive revision to fit the current need. The present study utilized a relatively small sample of 58 students to assess the reliabilities of the scales that were constructed. Only the Condom Use scale attained an adequate test-retest reliability coefficient, although the reliabilities of the other two scales were close to the suggested cut-off value of .70 (Bruning & Kintz, 1977). In addition, use of both the Sex-Partner Communication and Condom Use attitude scales resulted in a ceiling effect. Thus, only the People With AIDS attitude scale can be considered a sufficiently sensitive measure. Obviously, the scales need reworking for future use.

With regard to students' cognitive responses, the collection and scoring of these data were not without problems. The thought-listing instructions asked students to list what they were thinking about during the presentations and discussions. However, some students appeared to have listed what they were thinking about during the thought-listing task, itself. Also, while adequate inter-rater reliability coefficients were obtained for scoring the cognitive responses, gray areas of categorizing the responses existed. Further refinement of thought-listing instructions and cognitive response scoring rules are necessary. In addition, future research of this nature should involve a greater emphasis on a content analysis of the cognitive responses. For instance, this

could include categorizing and evaluating the reasons given for not communicating with a partner about sex and/or condoms. Cline et al. (1990) has found such examination quite valuable in differentiating the characteristics of those who do talk with their partners about AIDS from those who do not. In the present study, for instance, in-depth content analysis might reveal a greater understanding of the barriers to implementing safer sex practices as well as the difficulties in acquiring more compassion for PWAs.

In sum, an AIDS education videotape, consisting of presentations and small-group discussions, was found to be more effective in changing college students' attitudes regarding sex-partner communication than actual participation in these sessions. Additionally, sexually related material presented in an explicit fashion was more effective in changing these attitudes than presenting this material in a nonexplicit fashion. However, whether such attitude changes would carry over to discussion and implementation of condom use with a partner is unclear. All four approaches to AIDS education in this study appeared to be equally effective in increasing compassion toward PWAs for students initially low on this dimension. More research is necessary with diverse student populations in order to make sound, generalizable conclusions regarding all of the present findings.

As noted by Koop (1986), until a medical cure is found

for AIDS, education and prevention are the only means to curb this illness. It is imperative that AIDS education programs be not only informative, but also effective in producing the desired behavioral changes related to HIV transmission as well as promotion of a compassionate world for people who are living with AIDS.

References

- AIDS infections. (1992, Spring). Positively Aware, p.30.
- American College Health Association. (1989). What are sexually transmitted diseases? Rockville, MD: Author.
- American Red Cross (1988a). Men, sex, and AIDS (Stock No. 329535). Washington, DC: Author.
- American Red Cross (1988b). Teenagers, and AIDS (Stock No. 329536). Washington, DC: Author.
- Archibald, N. (Producer, Director). (1987). The nature of things: AIDS - A report [Television production]. Toronto: Canadian Broadcasting Company.
- Baker, P. (1990, March 26). Universities add classes on AIDS. The Washington Post, pp. A1, A5.
- Batchelor, W. F. (1988). AIDS 1988: The science and limits of science. American Psychologist, 43(11), 853-858.
- Bauman, K. E. (1973, February). Volunteer bias in a study of sexual knowledge, attitudes, and behavior. Journal of Marriage and the Family, 27-31.
- Bem, D. J. (1968). Attitudes as self-descriptions: Another look at the attitude-behavior link. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), Psychological Foundations of Attitudes (pp. 197-215). New York: Academic Press.
- Berlex Laboratories, Inc. (1989). Positive health decisions: Sexually transmitted diseases (STDs). USA: Author.
- Betcher, W. (1988). Intimate play: Playful secrets for falling and staying in love. New York: Penguin Books.
- Bettinghaus, E. P. (1986). Health promotion and the knowledge-attitude-behavior continuum. Preventive Medicine, 15, 475-491.
- Blum, D. (1989, December 5). Tulsa raps 'sporadic' AIDS education in schools. Tulsa World, p. A-5.
- Brandt, A. M. (1988). The syphilis epidemic and its relation to AIDS. Science, 239, 375-380.

- Brown, J. (Producer), & Wismar, C. B. (Writer). (1988). Why should I care? [Videotape]. US Department of Health and Human Services.
- Brown, L. K., Gregory, K., & Fritz, G. K. (1988). AIDS education in the schools: A literature review as a guide for curriculum planning. Clinical Pediatrics, 27(7), 311-316.
- Bruning, J. L., & Kintz, B. L. (1977). Computational handbook of statistics. Glenview, IL: Scott, Foresman, and Company.
- Butcher, A. H., Manning, T., and O'Neal, E. C. (1991). HIV-related sexual behavior of college students. Journal of American College Health, 40, 115-118.
- Byrne, D. (1977). Social psychology and the study of sexual behavior. Personality and Social Psychology Bulletin, 3, 3-30.
- Cacioppo, J. T., & Petty, R. E. (1981). Social psychological procedures for cognitive response assessment: The thought-listing technique. In T. V. Merluzzi, C. R. Glass, & M. Genest (Eds.). Cognitive Assessment (pp. 309-342). New York: The Guilford Press.
- Cacioppo, J. T., Petty, R. E., & Sidera, J. (1982). The effects of a salient self-schema on the evaluation of proattitudinal editorials: Top-down versus bottom-up message processing. Journal of Experimental Social Psychology, 18, 324-338.
- Centers for Disease Control. (1993, February). HIV/AIDS surveillance report. Atlanta, GA: Author.
- Chavez, C. (1992, Spring). Will AIDS be redefined? Positively Aware, p. 23.
- Cleary, P. D. (1988). Education and the prevention of AIDS. Law, Medicine & Health Care, 16(3-4), 267-273.
- Cline, R. J. W., Engel, J., Freeman, K. E., Johnson, S. J., & Gudaitis, T. (1989, May). Practicing sexual roulette versus practicing safe sex: Differentiating characteristics. Paper presented at the International Communication Association meeting. San Francisco, CA.
- Cline, R. J. W., Freeman, K. E., & Johnson, S. J. (1990). Talk among sexual partners about AIDS: Facts differentiating those who talk from those who do not. Communication Research, 17(6), 792-808.

- Cline, R. J. W., Johnson, S. J., Freeman, K. E. (1989, May). Talk among sexual partners about AIDS: Interpersonal communication as an AIDS-preventive strategy. Paper presented at the International Communication Association meeting. San Francisco, CA.
- Dendato, K. M. (1990). Attitudes as a function of involvement and use of audiotape versus printed messages regarding AIDS information. Unpublished doctoral dissertation. Oklahoma State University, Stillwater.
- Dickoff, M. (Producer, Director). (1987). Too little, too late [Videotape]. Boston, MA: Fanlight Productions.
- Eagly, A. H., & Chaiken, S. (1984). Cognitive theories of persuasion. Advances in Experimental Social Psychology, 17, 267-359.
- Eisenberg, L. (1986). The genesis of fear: AIDS and the public's response to science. Law, Medicine & Health Care, 14(5/6) 243-249.
- Fetter, M. P. (1989, Spring). Aids education: Every teacher's responsibility. Childhood Education, 65, 150-152.
- Fineberg, H. V. (1988). The social dimensions of AIDS. Scientific American, 259(4), 128-134.
- Fisher, J. D. (1988). Possible effects of reference group-based social influence on AIDS-risk behavior and AIDS prevention. American Psychologist, 43(11), 914-920.
- Fisher, W. A., Byrne, D., Edmunds, M., Miller, C. T., Kelley, K., & White, L. A. (1979). Psychological and situation-specific correlates of contraceptive behavior among university women. The Journal of Sex Research, 15(1), 38-55.
- Fisher, W. A., Bryne, D., White, L. A., & Kelley, K. (1989). Erotophobia-erotophilia as a dimension of personality. The Journal of Sex Research, 25(1), 123-151
- Fisher, W. A., Grenier, G., Watters, W. W., Lamont, J., Cohen, M., & Askwith, J. (1988). Student's sexual knowledge, attitudes toward sex, and willingness to treat sexual concerns. Journal of Medical Education, 63, 379-385.
- Flora, J. A., & Maibach, E. W. (1990). Cognitive responses to AIDS information: The effects of issue involvement and message appeal. Communication Research, 17(6), 759-774.

- Freudenberg, N., & Lee, J. (1987). AIDS educators' perceptions of barriers to effective health education: Report on a national survey [Abstract]. III International Conference on Acquired Immunodeficiency Syndrome (AIDS), 1, 39. (Abstract No. MP.176)
- Froman, L. (Executive Producer). (1988). AIDS: The facts of life [Videotape]. Evanston, IL: Spectrum Films.
- Frost, H. L., McCluskey-Fawcett, K., & Sharp, J. A. (1989). Adolescent sexual behavior: A model for behavioral strategies. Behavior Therapist, 12(10), 239-242.
- Gallo, R. C., & Montagnier (1988). AIDS in 1988. Scientific American, 259(4), 41-48.
- Garfield, N. J. & Hammond, J. (1989). AIDS education and prevention. In C. D. Kain (Ed.), No Longer Immune: A Counselor's Guide to AIDS (pp. 231-249). Alexandria, Virginia: American Association for Counseling and Development.
- Gerberding, J. L., & Sande, M. A. (1987). Real and perceived risks of AIDS in the health care and work environment. Information on AIDS for the Practicing Physician, 3, 11-14.
- Getchell, F., Hoffman, J. (Producers), & Fontana, L. A. (Director). (1987). AIDS - Changing the rules [Videotape]. Little Falls, NJ: Schmid Laboratories, Inc.
- Gladwell, M. (1992a, March 27). AIDS education effort called short on facts. The Washington Post, p. A19.
- Gladwell, M. (1992b, May 16). 'Safe sex' campaign said to be missing the mark. The Washington Post, pp. A1, A11.
- Gonzales, M. (1990). Education and behavior change [Abstract]. In C. B. Wofsy (Delegation Leader), Journal of the Citizen Ambassador Program: Management of HIV Disease Delegation to the People's Republic of China. (Available from Citizen Ambassador Program, Dwight D. Eisenhower Building, Spokane, WA 99202.)
- Greenwald, A. G. (1968). Cognitive learning, cognitive response to persuasion, and attitude change. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), Psychological Foundations of Attitudes (pp. 147-170). New York: Academic Press.
- Hall, N. R. S. (1988). The virology of AIDS. American Psychologist, 43(11), 907-913.

- Hayward, W. L., & Curran, J. W. (1988). The epidemiology of AIDS in the U.S. Scientific American, 259(4), 72-81.
- Herek, G. M., & Glunt, E. K. (1988). An epidemic of stigma: Public reactions to AIDS. American Psychologist, 43(11), 886-891.
- Hoch, L. L. (1971). Attitude change as a result of sex education. Journal of Research in Science Teaching, 8(4), 363-367.
- Hultz, B. (1992, Spring). The anti-HIV team. Positively Aware, pp. 8-9.
- Husztai, H. C., Clopton, J. R., & Mason, B. J. (1989). Acquired Immunodeficiency Syndrome education program: Effects on adolescents' knowledge and attitudes. Pediatrics, 84(6), 986-994.
- Johnson, E. W. (1988). Love & sex in plain language. New York: Bantam Books.
- Kelly, J. A., & St. Lawrence, J. S. (1988). AIDS prevention and treatment: Psychology's role in the health crisis. Clinical Psychology Review, 8, 255-284.
- KOCO-TV (Producer). (1987, March). Death's artillery: The AIDS epidemic [Television production]. Oklahoma City, OK: KOCO-TV.
- Kodama, C., & O'Donnell, M. (1987, June). AIDS and the college campus: A model prevention program. [Abstract]. III International Conference on Acquired Immunodeficiency Syndrome (AIDS), 1, 91. (Abstract No. TP.172)
- Koop, C. E. (1986). Surgeon general's report on AIDS. Washington, DC: U.S. Public Health Service
- Lawrance, L., Levy, S. R., & Robinson, L. (1990). Self-efficacy and AIDS prevention for pregnant teens. Journal of School Health, 60(1), 19-24.
- Leventhal, H., Safer, M. A., & Panagis, D. M. (1983). The impact of communications on the self-regulation of health beliefs, decisions, and behavior. Health Education Quarterly, 10(1), 3-29.
- Lipson, J. M. (1992). Approaches to AIDS education for university students: A work in progress [Abstract]. In A. B. Williams (Delegation Leader), Journal of the Citizen Ambassador Program: HIV Disease Delegation to Poland, Czechoslovakia, and Hungary. (Available from Citizen

Ambassador Program, Dwight D. Eisenhower Building,
Spokane, WA 99202)

- Lipson, J. M., & Brown, L. T. (1991). Do videotapes improve knowledge and attitudes about AIDS? Journal of American College Health, 39, 235-243.
- Love, D. (1992). AIDS education with adolescents and young adults [Abstract]. In A. B. Williams (Delegation Leader), Journal of the Citizen Ambassador Program: HIV Disease Delegation to Poland, Czechoslovakia, and Hungary. (Available from Citizen Ambassador Program, Dwight D. Eisenhower Building, Spokane, WA 99202)
- MacMurchy, S., & Tross, S. (1987). AIDS - Changing the rules: Discussion guide. Little Falls, NJ: Schmid Laboratories, Inc.
- Matthews, T. J., & Bolognesi, D. P. (1988). AIDS vaccines. Scientific American, 259(4), 120-127.
- McCormick, K. (1987). AIDS instruction becomes a troubling test of courage for local school boards. The American School Board Journal, 174(3), 25-30.
- McDermott, R. J., Hawkins, M. J., Moore, J. R., & Cittadino, S. K. (1987). AIDS awareness and information sources among selected university students. Journal of American College Health, 35, 222-226.
- McGuire, W. J. (1972). Attitude change: The information processing paradigm. In C. G. McClintock (Ed.), Experimental Social Psychology. New York: Holt, Rinehart and Winston.
- Meisenhelder, J. B., & La Charite, C. L. (1989). Fear of contagion: A stress response to acquired immunodeficiency syndrome. Advances in Nursing Science, 11(2), 29-38.
- Miller, L., & Downer, A. (1988). AIDS: What you and your friends need to know -- A lesson plan for adolescents. Journal of School Health, 58(4), 137-141.
- Morakinyo, S. E. L. (1992). Miscommunications in sexual interactions: A closer look. Unpublished doctoral dissertation, Oklahoma State University, Stillwater.
- Morin, S. F. (1988). AIDS: The challenge to psychology. American Psychologist, 43(11), 838-842.
- Myers, S. L., Campos, P. E., Geraty, S., Patten, D., Jelaso, A., & Preston, T. (1989, November). General versus

specific knowledge of AIDS among heterosexual college students. Paper presented at the 23rd annual meeting of the Association for Advancement of Behavior Therapy. Washington, DC.

New York Times Service. (1989, November 27). Campaigns to stop AIDS fail. Stillwater News Press, p. 20.

Norton, R. (1990). The communication scholar in the AIDS crisis. Communication Research, 17(6), 733-742.

Oklahoma State Department of Education (1987). Acquired Immune Deficiency Syndrome (AIDS) prevention education: Curriculum guide for teachers. Oklahoma City, OK: Oklahoma State Department of Vocational and Technical Information.

Oklahoma State Department of Health (1990). HIV educator skills resource manual. (Available from Oklahoma State Department of Health, P.O. Box 53551, 1000 N.E. 10th, Oklahoma City, OK 73152)

Osborn, J. E., & Brandt, E. N. (1987, June). III international conference on AIDS: Summary report. (Available from: Office of Communications, National Institutes of Health, Building 31, Room 2B10, Bethesda, MD 20892)

Ostrow, D. G. (1989). AIDS prevention through effective education. Daedalus, 118(3), 229-254.

Peters, D. C. (1990). HIV education and testing: The University of Minnesota experience [Abstract]. In C. B. Wofsy (Delegation Leader), Journal of the Citizen Ambassador Program: Management of HIV Disease Delegation to the People's Republic of China. (Available from Citizen Ambassador Program, Dwight D. Eisenhower Building, Spokane, WA 99202)

Petty, R. E., & Cacioppo, J. T. (1986). The Elaboration Likelihood Model of persuasion. Advances in Experimental Social Psychology, 19, 123-205.

Phaair, J. P., & Steinberg, J. P. (1987). Epidemiology of acquired immunodeficiency syndrome: A brief overview. AIDS: Information on AIDS for the Practicing Physician, 3, 9-10.

Pleck, J. H., O'Donnell, L., O'Donnell, C., & Snarey, J. (1988). AIDS-phobia, contact with AIDS, and AIDS-related job stress in hospital workers. Journal of Homosexuality, 15(3/4), 41-54.

- Quackenbush, M., & Sargent, P. (1986). Teaching AIDS: A Resource Guide on Acquired Immune Deficiency Syndrome. Santa Cruz, CA: Network Publications.
- Quadland, M. C., Shattls, W., Schman, R., Jacobs, R., & D'Eramo, J. (1987, October). The 800 men study: A systematic evaluation of AIDS prevention programs. Poster presented at the III International Conference on Acquired Immunodeficiency Syndrome (AIDS). Washington, DC.
- Redfield, R. R., Burke, D. S. (1988). HIV infection: The clinical picture. Scientific American, 259(4), 90-100.
- Reed, S. (1988). Children with AIDS: How schools are handling the crisis. Phi Delta Kappan, 69(5), K1-K12.
- Rhodes, F., & Wolitski, R. (1989). Effect of instructional videotapes on AIDS knowledge and attitudes. Journal of American College Health, 37, 266-271.
- Rimer, B., & Glassman, B. (1984, Fall). How do persuasive health messages work? A health education field study. Health Quarterly, 313-321.
- Royse, D., & Birge, B. (1987). Homophobia and attitudes towards AIDS patients among medical, nursing, and paramedical students. Psychological Reports, 61, 867-870.
- Saunders, D. M., Fisher, W. A., Hewitt, E. C., & Clayton, J. P. (1985). A method for empirically assessing volunteer selection effects: Recruitment procedures and responses to erotica. Journal of Personality and Social Psychology, 49(6), 1703-1712.
- Selwyn, P. A. (1986). AIDS: What is now known, I. History and immunovirology. Hospital Practice, pp. 67-82.
- Serdehely, W. J., & Zaiemba, G. J. (1984). Changing homophobic attitudes through college sexuality education. Journal of Homosexuality, 10, 109-116.
- Siegel, K. (1988, December). Public education to prevent the spread of HIV infection. New York State Journal of Medicine, 642-646.
- Silin, J. G. (1987). The language of AIDS: Public fears, pedagogical responsibilities. Teachers College Record, 89(1), 3-19.
- Singh, R. N., Unnithan, N. P., & Jones, J. D. (1988). Behavioral impacts of the fear of AIDS: A sociological model. Journal of Sociology & Social Welfare, 15(3),

29-45.

Strunin, L., & Hingson, R. (1987a). Acquired Immunodeficiency Syndrome and adolescents: Knowledge, beliefs, attitudes, and behaviors. Pediatrics, 79(5), 825-828.

Strunin, L., & Hingson, R. (1987b). AIDS and adolescents: Knowledge, beliefs, attitudes, and behaviors. [Abstract]. III International Conference on Acquired Immunodeficiency Syndrome (AIDS), 1, 56. (Abstract No. T.6.6)

Study: AIDS spreads among teens. (1990, April 30). The Daily O'Collegian, p. 5.

Triplet, R. G., & Sugarman, D. B. (1987). Reactions to AIDS victims: Ambiguity breeds contempt. Personality and Social Psychology Bulletin, 13(2), 265-274.

United States Department of Education (1988). AIDS and the Education of our children: A guide for parents and teachers (USDE Publication No. 1988-206-767). Washington, DC: U.S. Government Printing Office.

United States Department of Health and Human Services, Public Health Service, & Centers for Disease Control. (1989). AIDS Prevention guide (Available from National AIDS Information Clearinghouse, P.O. Box 6003, Rockville, MD 20850)

Winiarski, M. (1991). AIDS-related psychotherapy. New York: Pergamon Press.

Appendix A

1

Vocabulary Lists

Words Used in Discussions About AIDS and Sex -- Nonexplicit

In the next hour, we will be discussing various aspects of AIDS and sexual behavior. Often, such topics are hard to talk about, especially with people we don't know very well. Below is a list of terms and definitions that we may come across in our discussions. You probably know many of them. Some of them may be new to you. To help you feel comfortable talking about AIDS and sex today, we will first take turns reading aloud the following terms and definitions. You may find that you are unclear about the pronunciation of some of these words. That's okay. Try to sound them out or ask for help. This is a learning experience. You may also find some of the following to be embarrassing or otherwise uncomfortable for you. This is normal, expected, and acceptable. To help you, and those around you, feel comfortable with these topics, please try to use these terms by name during discussions.

- STD: Sexually transmitted disease, any of a number of diseases which can be transmitted through various forms of sexual contact. AIDS is an STD.
- AIDS: Acquired Immune Deficiency Syndrome. A complex disease, caused by a virus, characterized by severe damage to the body's immune system. When people have AIDS they become susceptible to unusual and often life-threatening opportunistic diseases and cancers that are not normally a threat to a person with a normal immune system.
- HIV: Human Immunodeficiency Virus. The accepted and most commonly used scientific name for the virus that causes AIDS.

1

Portions from Love and Sex in Plain Language (pp. 164-165, 167-168, 170, 172-176) by E. W. Johnson, 1988, New York: Bantam Books. Copyright 1988 by Eric W. Johnson. Adapted by permission of Harpercollins Publishers, Inc.

ARC:	AIDS-Related Complex. People with ARC have some symptoms of damage to the immune system but do not have any of the opportunistic or indicator diseases which are required for diagnosis of AIDS.
asymptomatic:	Having an infectious organism within the body but showing or causing no outward symptoms. People infected with the AIDS virus are usually asymptomatic at first.
stigma:	A mark of shame or discredit.
AIDS-related stigma:	All stigma directed at persons perceived to be infected with HIV, regardless of whether they actually are infected and of whether they manifest symptoms of AIDS or AIDS related complex (ARC).
PWA:	Persons with AIDS. Many people with AIDS prefer this term to others like "AIDS victim" or "AIDS patient".
PWARC:	Persons with AIDS Related Complex.
counseling:	To help an individual better understand a situation or problem so that he or she can make decisions and take appropriate action
sexuality:	Our sexual nature, the part of our lives that has to do with our being male or female.
heterosexual:	A person who is sexually attracted to members of the opposite sex.
bisexual:	A person who is sexually attracted to people of both sexes.
homosexual:	A person who is sexually attracted to members of the same sex.
homophobia:	A strong, unreasoning fear of homosexuality and homosexual people.
genitals:	The external sex organs.
penis:	The principal male sex organ.
semen:	The fluid produced by the male that contains sperm and is ejaculated through the penis.

vagina:	The soft, muscular passageway between the uterus and the outside of a woman's body.
vaginal secretions:	Fluids produced by the female which lubricate the vagina.
anus:	The rear opening of the digestive tract. Bulk waste (feces, stool) passes out of the body through this opening.
multiple sexual partners:	Frequent change of sexual partners. Includes serial monogamy, one single-partner relationship right after another.
monogamy:	Sexual relationship in which two people are not sexually active outside their relationship.
safer sex:	Sexual activity in which there is no sharing of body fluids.
abstinence:	(Sexual abstinence) Refraining from all types of intercourse: oral, anal, vaginal
birth control:	A substance or material used to prevent pregnancy, such as condoms, spermicides, and oral contraceptives ("the pill").
condom:	A sheath made out of latex worn over a man's penis to reduce the risk of pregnancy or the risk of any sexually transmitted infections, including HIV.
spermicide:	A substance which kills sperm. Some spermicides kill viruses and bacteria. Certain spermicides, such as nonoxynol-9, may also kill the HIV.
lubricant:	In this context, a substance applied to condoms or sexual organs which makes contact between condom and skin slippery. Only water-based lubricants should be used with condoms as any oil-based products will break down the latex in the condom.
casual contact:	Nonsexual body contact including touching, hugging, handshaking, and sitting closely together.
making out:	Physical contact beyond hand-holding and light kissing. May include petting.

petting:	Deep kissing and caressing the most sensitive parts of the body.
foreplay:	The beginning stages of sexual intercourse during which the couple sexually stimulate each other before intercourse.
erection:	The hardening and enlarging of the penis that occurs when a man is sexually stimulated, and at other times.
sexual intercourse:	Sexual union involving penetration of the penis into the vagina (vaginal intercourse) the rectum (anal intercourse), or the mouth (oral intercourse).
orgasm:	The climax of sexual pleasure.
ejaculation:	The discharge of semen from the penis.
withdrawal:	A method in which a man withdraws his penis from a person's vagina, anus, or mouth before he ejaculates.

Words Used in Discussions About AIDS and Sex -- Explicit

In the next hour, we will be discussing various aspects of AIDS and sexual behavior. Often, such topics are hard to talk about, especially with people we don't know very well. Below is a list of terms and definitions that we may come across in our discussions. You probably know many of them. Some of them may be new to you. To help you feel comfortable talking about AIDS and sex today, we will first take turns reading aloud the following terms and definitions. You may find that you are unclear about the pronunciation of some of these words. That's okay. Try to sound them out or ask for help. This is a learning experience. You may also find some of the following to be embarrassing or otherwise uncomfortable for you. This is normal, expected, and acceptable. To help you, and those around you, feel comfortable with these topics, please try to use these terms by name during discussions. If you know any of these terms by other names, please use good judgement in using them during discussions so as not to offend others.

- STD: Sexually transmitted disease, any of a number of diseases which can be transmitted through various forms of sexual contact. AIDS is an STD.
- AIDS: Acquired Immune Deficiency Syndrome. A complex disease, caused by a virus, characterized by severe damage to the body's immune system. When a person has AIDS they become susceptible to unusual and often life-threatening opportunistic diseases and cancers that are not normally a threat to a person with a normal immune system.
- HIV: Human Immunodeficiency Virus. The accepted and most commonly used scientific name for the virus that causes AIDS.
- ARC: AIDS-Related Complex. People with ARC have some symptoms of damage to the immune system but do not have any of the opportunistic or indicator diseases which are required for diagnosis of AIDS.
- asymptomatic: Having an infectious organism within the body but showing or causing no outward symptoms. People infected with the AIDS virus are usually asymptomatic at first.

stigma:	A mark of shame or discredit.
AIDS-related stigma:	All stigma directed at persons perceived to be infected with HIV, regardless whether they actually are infected and of whether they manifest symptoms of AIDS or AIDS related complex (ARC).
PWA:	Persons with AIDS. Many people with AIDS prefer this term to others like "AIDS victim" or "AIDS patient". They would rather see themselves as active participants in their treatment and healing, not helpless victims who passively wait to die.
PWARC:	Persons with AIDS Related Complex.
sexuality:	Our sexual nature, the part of our lives that has to do with our being male or female.
heterosexual: ("straight")	A person who is sexually attracted to members of the opposite sex.
bisexual:	A person who is sexually attracted to people of both sexes.
homosexual: ("gay/lesbian")	A person who is sexually attracted to members of the same sex.
homophobia:	A strong, unreasoning fear of homosexuality and homosexual people.
genitals:	The external sex organs.
penis:	The principal male sex organ.
testicles: ("nuts")	Two oval-shaped glands that manufacture sperm. The testicles are contained in the scrotum.
scrotum:	The sac of loose crinkly skin that hangs under a man's penis and contains the testicles.
semen: ("cum")	The fluid produced by the male that contains sperm and is ejaculated through the penis.
vagina:	The soft, muscular passageway between the uterus and the outside of a woman's body.

clitoris:	A small, very sexually sensitive female organ located just above a woman's urethra and covered by a hood called the labia.
vulva:	The area of the external female sex organs, including the labia enfolding the clitoris.
vaginal secretions:	Fluids produced by the female which lubricate the vagina.
anus:	The rear opening of the digestive tract. Bulk waste (feces, stool) passes out of the body through this opening.
multiple sexual partners:	Frequent change of sexual partners. Includes serial monogamy, one single-partner relationship right after another.
monogamy:	Sexual relationship in which two people are not sexually active outside their relationship.
safer sex:	Sexual activity in which there is no sharing of body fluids.
abstinence:	(Sexual abstinence) Refraining from all types of intercourse: oral, anal, vaginal.
masturbation: ("playing with" yourself)	Manual stimulation of the sex organs for pleasure. Done alone or with a partner.
condom: "rubber"	A sheath made out of latex worn over a man's penis to reduce the risk of pregnancy or the risk of any sexually transmitted infections, including HIV.
spermicide:	A substance which kills sperm. Some spermicides kill viruses and bacteria. Certain spermicides, such as nonoxynol-9, may also kill the HIV.
lubricant:	In this context, a substance applied to condoms or sexual organs which makes contact between condom and skin slippery. Only water-based lubricants should be used with condoms as any oil-based products will break down the latex in the condom.

casual contact:	Nonsexual body contact including touching hugging, handshaking, and sitting closely together.
making out:	Physical contact beyond hand-holding and light kissing. May include petting.
petting:	Deep kissing and caressing the most sensitive parts of the body.
foreplay:	The beginning stages of sexual intercourse during which the couple sexually stimulate each other before intercourse.
erection: ("hard-on")	The hardening and enlarging of the penis that occurs when a man is sexually stimulated, and at other times.
cunnilingus: ("going down" on a woman)	The use of the tongue or mouth to stimulate a woman's genitals.
fellatio: ("going down" on a man)	The use of the tongue or mouth to stimulate a man's penis.
sexual intercourse:	Sexual union with the penis in the vagina (vaginal intercourse), penis in the rectum (anal intercourse), or penis in the mouth (oral intercourse).
orgasm: ("come, coming")	The climax of sexual pleasure.
ejaculation:	The spurting out of semen from the penis.
withdrawal:	A method in which a man withdraws his penis from a person's vagina, anus, or mouth before he ejaculates.

Appendix B

Presentations

2

People with AIDS -- Nonexplicit

AIDS can waste you slowly and painfully. Because AIDS is not a disease as much as it is an invitation to disease, it leaves the person open to any manner of infections and medical problems. This means that people with AIDS have a tendency to be very sick for periods of time in which the well periods and the sick periods come and go. This renders people very uncomfortable because they are always on the edge, wondering what's going to happen next. The infections of AIDS can cause fever, night sweats, hacking cough, diarrhea, fatigue, and blindness. AIDS can attack the brain. In the final stages, one may lose the ability to walk, speak, or remember the names of significant others.

AIDS does not discriminate. Anyone can get AIDS. Men, women, and children; people of all colors; homosexuals and heterosexuals; senior citizens and college students. But being safe, avoiding AIDS, does not mean that one can or should avoid those who are infected with the AIDS virus. It's probably far more dangerous for a person with AIDS to be in contact with other people than it is for others to be in contact with them.

AIDS is stigmatized because many people feel it's a self-inflicted wound. They say, "Well, you got yourself into this. If you hadn't done such-and-such, you wouldn't have it." It's stigmatized because it's associated with a very fast-track lifestyle, drug addicts, and homosexual activities. There are people who are so uncomfortable, either with their own sexuality or sexuality in general, that this epidemic has become an excuse for them to refocus their anger, hostility, and anxiety on homosexuality.

People with AIDS work hard just at living despite having AIDS. There are problems of housing. There are problems with jobs and insurance. There's problems of family and reactions of friends. People with AIDS have the same human needs as anyone else. They hurt when they're neglected or lonely, just like anyone else.

2

Portions from AIDS - Changing the Rules [Videotape] by H. F. Getchell, J. Hoffman (Producers) and L. A. Fontana (Director), 1987, Little Falls, NJ: Schmid Laboratories, Inc. Copyright 1987 by Greater Washington Educational Telecommunications. Adapted by permission of AIDS FILMS, INC.

People with AIDS -- Explicit

In June of '84 they tested him, and they said he probably would not last 'till that Christmas. So it was a real shock. And it was real devastating. But he lasted almost another year. The thing was, Peter would wake up every morning wondering, "Am I going to be okay today or what's going to hit me?" And we'd gone through maybe eight or nine different illnesses with him.

The particular virus that really killed Peter was one which is very common in AIDS patients. And when it started affecting his brain, it was very hard to watch. With him, they think it caused the dementia and the hallucinating. Peter would get very frustrated with his poor coordination. He finally lost his sight in both eyes. It caused his final pneumonia. At night he wouldn't sleep because of constant, hard, racking coughs, and throwing up constantly. The extreme diarrhea that he had. He was so thin. He looked like a concentration camp survivor. He was in such pain.

Peter's death was one with a social stigma attached to it. I never thought that he wasn't beautiful because he had lesions on his face. Now I know how awful that must have been for him to be marked on the outside as well as on the inside. When my aunt found out that he had died of AIDS, she told my cousin that those people deserve what they get. They deserve to die. It was just real tragic for me to have a woman who I respected all my life have that kind of feeling for another human being.

Peter lived in a small, rural Oklahoma town. He had felt the sharp sting of discrimination. With any other disease that he could have died of, he would've gotten help instantly. One of the hardest parts was going to work and living the lie, being dishonest. He hated hiding the true nature of his illness. Saying he just had cancer. He did have a job to protect. A couple of families, one that was very close to us found out all the information we could give them and still they said, "We love you, and we support you. We just can't have our family around your family."

But it's probably more dangerous for a person with AIDS to be in contact with other people, far more than it is for others to be in contact with them. And our family is living testimony to the fact that you cannot get this disease casually. What do friends mean any more? I didn't know how long Peter would live. I didn't know when he would die. And I didn't want Peter to die alone.

Portions from Too Little, Too Late [Videotape], by M. Dickoff (Producer, Director), 1987, Boston, MA: Fanlight Productions. Copyright 1987 by Fanlight Productions. Adapted by permission.

Communication/Behavior With a Partner -- Nonexplicit

The AIDS virus, HIV, can be spread sexually through high risk activities. High risk activities include unprotected intercourse, oral sex, and anal sex. Any activity involving exchange of body fluids can be considered high risk. To eliminate risk completely, abstain from sex. Avoiding sex before marriage or a long-term love relationship is the best protection against the sexual spread of the AIDS virus. You can get the AIDS virus from even one sexual experience, so you have a right to say NO to sex. It takes courage to say NO in some situations, but remember: You're worth it. Saying NO now doesn't mean NO forever. When you say NO, you are postponing sex, rather than making a lifelong decision.

If you are going to have sex with someone, you should be able to discuss protection with that person. Talk about AIDS before you have sex. No matter how difficult it may be, talk with prospective new sexual partners about STDs and protection before you become sexually involved. Do not wait until you have already had sex with the person -- by then it may be too late. Communicate openly with your partner. You have a right to ask questions about your partner's past. If you do not like the answers, you may decide not to have sex with that person.

You may decide that low risk sexual activities, not involving sexual intercourse of any kind, is right for you. A low risk activity is generally described as one in which partners are not exposed to body fluids. Some intimate activities, such as hugging, touching, cuddling, and massage, do not spread the AIDS virus. Deep or "French" kissing is also considered to be a low-risk activity. The AIDS virus occasionally can be found in saliva, but in very low concentrations -- so low that scientists believe it is virtually impossible to transmit infection in this way.

Communication/Behavior With a Partner -- Explicit

The AIDS virus, HIV, can be spread sexually through high risk activities including unprotected vaginal, anal, or oral intercourse. Any activity in which semen, vaginal secretions, or blood could enter the bloodstream of another person can be considered high risk. If you are going to have sex with someone, you should discuss protection with that person. Talk about AIDS before you have sex. You have a right to ask questions about your partner's past. If you are not satisfied with the answers, you may decide not to have sex with that person. Talking with your partner about sex is not always easy. Communication works best when we can say "I want" and "I don't want" in no uncertain terms and to ask for clarification when needed.

If your decision is not to have intercourse with your partner, that does not mean that you cannot communicate sensually or sexually with each other. There are many ways of expressing these feelings without the risk of spreading the AIDS virus. One way is to give each other massages while staying away from sexually specific areas. Keep sensual enjoyment and not orgasm as the final goal. Let yourself feel everything as fully as possible. Over time you may want to improvise a little. Instead of hand massage, give your partner a sponge bath. You could also try experimenting with body sensations, such as with a fan, a vibrator, a warm object, or a piece of ice.

Sexually playful communication and sexual touch are other behaviors not at risk for HIV infection. Sexually playful communication can include sending erotic letters or tape recordings to each other, or making love over the phone. Such activities create sexual arousal which may be relieved through masturbation. Masturbation does have its advantages. Masturbation can release sexual tension which otherwise might push people into having sexual intercourse before they are ready. For a man, masturbation can help him learn to delay ejaculation and prolong erection. For a woman, masturbation can help her discover or enhance sexual responsiveness and learn how to best become aroused to the point of orgasm. Mutual masturbation can allow partners to show or tell each other what feels good while relieving sexual tension. Fantasies can be shared and variations can be found through such activities in which sexuality and intimacy can be expressed without the fear of AIDS.

Portions from Intimate Play: Playful Secrets for Falling and Staying in Love (pp. 138-139, 151-152, 154), by W. Betcher, 1988, New York: Penguin Books. Copyright 1987 by William Betcher. Adapted with permission of Viking Penguin, Inc.

Condom Use -- Nonexplicit

If you have sexual intercourse outside of a mutually faithful, long-term relationship with an uninfected partner, use a condom. Using condoms can reduce your fear about getting the AIDS virus and other sexually transmitted diseases. Using condoms doesn't mean you don't trust your partner. It means that you care about your health and the health of your partner. That's all. Condoms are made to protect both partners from many serious diseases. So don't let anyone tell you that condoms are about trust.

Some people may find that using condoms feels different at first. Don't give up too soon. With a little practice, it is possible to adapt quickly to this new sensation, particularly with an accepting partner. It only takes a little imagination to make putting on a condom a part of lovemaking.

Know that artificial means of birth control such as condoms and spermicides are not a certain means of preventing the spread of the HIV and reliance on such methods puts a person at risk for exposure to the disease. Condoms can break, tear, or slip off. You must use them properly. Use only condoms made of latex rubber. Latex serves as a barrier to the virus. "Lambskin" or "natural membrane" condoms are not safe because of the pores or tiny holes in the material. Latex condoms may provide greater protection when used with a spermicide, such as nonoxynol-9 (a substance that has been shown to kill the AIDS virus in laboratory tests).

Remember that AIDS is not something to be taken lightly or ignored. It is a deadly, very real problem that with good sense, with respect for yourself and the people around you, can be controlled and avoided.

Condom Use -- Explicit

Should you and your partner desire intercourse, it is very important to use a condom and a spermicide containing nonoxynol-9 to reduce the risk of HIV infection. This is especially important if you are not in a mutually faithful, long-term relationship of several years.

You may complain that using condoms kills the romance or breaks the mood. It doesn't have to. Instead, make condom use a part of sexual play. Let both partners become involved with putting one on. Have fun with your condoms! Make a special shopping trip to buy condoms with your partner, and share an erotic fantasy along the way. Buy condoms in different colors and call them pet names like "jelly beans." Try the flavored ones, or get the ones with raised spirals or ribs on them.

You may find that condoms reduce sensation. Masturbation, whether solo or mutual, may help with this. You can practice manually stimulating yourself or your partner, getting a condom out and putting it on, and then continuing masturbation to orgasm. By doing this, you will find that intensely pleasurable feelings can occur while wearing a condom. You may also discover interesting problems and creative solutions to putting a condom on without interrupting spontaneity. Finally, this can reduce your concern about what to do with what "cums" with orgasm! Women can also practice using condoms while masturbating by slipping one over a couple of their fingers (or over their partner's) so that they may become used to the feeling of latex-covered flesh while engaging in an erotic activity.

It is important to remember that while not 100% guaranteed, using condoms correctly can greatly reduce the risk of HIV infection during intercourse, whether it be vaginal, anal, or oral.

Appendix C

Discussion Questions

People with AIDS

- 1) Having heard this passage, how do you feel about people with AIDS?
- 2) Imagine that you have AIDS. How would you want to be treated?
- 3) Imagine that you have the test for the AIDS virus (HIV), and the results come back positive. How do you feel? What do you do?

Communication/Behavior with a Sex Partner

- 1) What kinds of problems might there be when trying to talk with a partner about sex?
- 2) How can talking about sex be made easier?
- 3) Many people choose not to have intercourse during certain times of their lives. What kinds of things can people do instead of having intercourse that are equally satisfying?

Condom Use

- 1) What kinds of problems might there be when trying to talk with a partner about condoms?
- 2) How can talking about condoms be made easier?
- 3) Many people are hesitant about using condoms. What kinds of things can people do to make condoms more appealing and fun to use?

Appendix D

Attitude Scales

Attitudes Toward People With AIDS

- 1) I think the blood test for AIDS should be mandatory for certain people.
- I strongly agree |__|__|__|__|__|__|__| I strongly disagree
- 2) I think people with AIDS should be allowed to go on working at their jobs.
- I strongly agree |__|__|__|__|__|__|__| I strongly disagree
- 3) I believe it would be better for everyone if people with AIDS were quarantined.
- I strongly agree |__|__|__|__|__|__|__| I strongly disagree
- 4) People with AIDS are not at fault for having their disease.
- I strongly agree |__|__|__|__|__|__|__| I strongly disagree

Attitudes Toward Communication About AIDS and sex

- 1) People who find out that they have the AIDS virus should always tell their sex partner.

I strongly agree |__|__|__|__|__|__|__| I strongly disagree

- 2) Asking a partner about his/her sexual history is an invasion of privacy.

I strongly agree |__|__|__|__|__|__|__| I strongly disagree

- 3) Talking with a partner about no- or low-risk sexual activity is a waste of time.

I strongly agree |__|__|__|__|__|__|__| I strongly disagree

- 4) It's okay if you say "No" to a particular sexual activity, even when your partner wants to do it real badly.

I strongly agree |__|__|__|__|__|__|__| I strongly disagree

Attitudes Toward Condom Use

- 1) Condoms are not worth the hassle.

I strongly agree |__|__|__|__|__|__|__| I strongly disagree

- 2) It's okay for both men and women to carry condoms with them.

I strongly agree |__|__|__|__|__|__|__| I strongly disagree

- 3) Any man who refuses to use a condom is being selfish.

I strongly agree |__|__|__|__|__|__|__| I strongly disagree

- 4) I don't believe it's possible that partners can make using a condom sexy and appealing.

I strongly agree |__|__|__|__|__|__|__| I strongly disagree

Appendix E

Thought-Listing Instructions

I am now interested in what you were thinking about while you were listening to the passage / involved with the discussion. You might have had ideas all favorable to the material in the passage / discussion, all opposed, all irrelevant to the material, or maybe a mixture of the three. Any case is fine; simply list what it was that you were thinking about during the passage / discussion. The next page contains the form I have prepared for you to use to record your thoughts and ideas. Simply write down the first idea you had in the first box, the second idea in the second box, and so on. Please put only one idea or thought in a box. You should try to record only those ideas that you were thinking during the passage / discussion. Please state your thoughts and ideas as concisely as possible . . . a phrase is sufficient. IGNORE SPELLING, GRAMMAR, AND PUNCTUATION. You will have 2-1/2 minutes to write your thoughts. I have deliberately provided more space than I think most people will need to insure that everyone would have plenty of room to write the ideas they had during the passage / discussion. So don't worry if you don't fill every space. Just write down whatever your thoughts were during the passage / discussion. Please be completely honest and list all of the thoughts that you had.

Appendix F

Consent FormsInformed Consent Statement for Participation
in AIDS-related Discussions

Project Title: Discussing AIDS and Safer Sex

Experimenter: Jonathan M. Lipson, M.S.

I, (print name) _____ hereby
authorize and direct Jonathan M. Lipson, M.S., or assistants
of his choosing, to perform the procedures listed here.

A. Purpose: This study is designed to investigate thoughts
and feelings about AIDS and safer sex.

B. Procedure: While participating in this study, you will
be asked to do the following things:

1. Complete a brief survey pertaining to your thoughts
and feelings about AIDS and safer sex.
2. Participate in a series of small-group discussions
about AIDS-related topics. This will include
reading aloud from a vocabulary list, listening to
various passages, and discussing questions
pertaining to these passages. You will also be
asked to write down what you were thinking about
during the study.
3. During this procedure, the group will be videotaped.
This videotape will be shown to another group of
students within this project. Those who will watch
the videotape will be completing the same materials
as you will. You will not be evaluated by them;
these students will be attending to the passages and
discussions just as you will be. (Remember that
while you are encouraged to participate in
discussions, you will not be asked to reveal any
personal information during these interactions.)
4. Return in two weeks to complete a brief survey.
5. Participate in a debriefing at the end of the study
in which the purposes of this experiment will be
discussed. Questions will be answered and resources
for additional information will be made available.

C. Duration of participation: Your participation will
require about 90 minutes of your time today and 15
minutes upon two week's return.

- D. Confidentiality: Questionnaires will be coded; no identifying information will be on them. A list with your name and corresponding code (to ensure that material completed two weeks later matches with the correct person) will be kept in a secure place along with questionnaires and videotapes. You will be asked on the following page to sign a statement that you will keep confidential the opinions shared by others in today's discussions. You will be responsible for keeping such information confidential. In doing so, realize that such confidentiality cannot be 100% guaranteed by this experimenter; you will be following an honor system by signing this statement. (Those watching the videotapes will sign a similar statement.) Results from this study may be presented at professional meetings or in publications. Your anonymity, however, will be preserved. Videotapes will be destroyed upon final acceptance of publication or presentation.
- E. Risks: The risks in this study are minimal and are not greater than those encountered in daily life. The topic of AIDS and/or sex may be upsetting or embarrassing for some; this is normal. You may consider some of the material to be of an explicit nature. Available resources are listed below if you have a personal issue regarding AIDS or sex that you would like to discuss further in private.
- F. Benefits: By participating in this project, you will see how psychological research may be conducted. You may also gain insight into how the issues of AIDS and sex affect you. Research such as this can help develop effective programs designed to educate people about AIDS and how to reduce their risk of HIV infection.
- G. Compensation for participation: You will receive one extra credit point in your Introductory Psychology class (PSYCH 1113) for each hour or fraction thereof in return for your participation in this study. Regardless of whether you choose to participate in this study or not, other ways to get extra credit in that class exist. You can participate in other studies or complete a project. Your instructor can explain this to you further.

I have been fully informed about the procedures listed above. I am aware of what I will be asked to do and of the risks and benefits in this study. I also understand the following:

I certify that I am 18 years of age or older.
My participation is part of a study entitled "Discussing AIDS and Safer Sex".

The purpose of these procedures is to examine thoughts and feelings about AIDS and sex. I understand that my participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this study at any time without penalty.

I have the right to withdraw my permission for later showing of the videotaped discussion to others after first relating my concern to the principal investigator. This withdrawal of permission would be in writing and signed by both parties. I understand that I lose my right to withdraw permission for future use of this videotape as described above if I have not initiated contact with the principal investigator by midnight of the day after my participation.

I understand that I may contact the experimenter at the following address and telephone number should I desire to discuss my participation in this study and/or to request information concerning the outcome of this study:

215 North Murray, Department of Psychology, Oklahoma State University, Stillwater, OK 74078, (405) 744-6027. (If after hours, call the experimenter at 377-7425.) I may also contact Terry Maciula, University Research Services, 001 Life Sciences East, Oklahoma State University, Stillwater, OK 74078, (405) 744-5700.

I understand that the following resources are available to me should I desire personal attention concerning AIDS and/or safer sex:

Health Resource Center
147 Hospital and Clinic
Oklahoma State University
Stillwater, OK 74078
(405) 744-7020

Counseling Services
310 Student Union
Oklahoma State Univ.
Stillwater, OK 74078
(405) 744-5472

Psychological Services Center
118 North Murray
Oklahoma State University
Stillwater, OK 74078
(405) 744-6028

The National AIDS
Hotline
1-800-342-7514

I have read and fully understand this consent form and am signing it voluntarily. A copy of this form has been given to me. I hereby give permission for my participation in this study and for the use of the videotape within this study as explained to me above.

Signature of Participant
Date _____

Signature of Witness
Date _____

Informed Consent Statement for Watching
AIDS-Related Discussions on Videotape

Project Title: Discussing AIDS and Safer Sex

Experimenter: Jonathan M. Lipson, M.S.

I, (print name) _____

hereby authorize and direct Jonathan M. Lipson, M.S., or assistants of his choosing, to perform the procedures listed here.

- A. Purpose: This study is designed to investigate thoughts and feelings about AIDS and safer sex.
- B. Procedure: While participating in this study, you will be asked to do the following things:
 - 1. Complete a brief survey pertaining to your thoughts and feelings about AIDS and safer sex.
 - 2. Watch a videotape of people participating in a series of small-group discussions about AIDS-related topics. This videotape consists of people reading aloud from a vocabulary list, listening to various passages, and discussing questions pertaining to these passages. You will also be asked to write down what you were thinking about during this study.
 - 3. The people in this videotape are students like yourselves and are also participating as subjects within this project. They will be completing the same materials as you will. You will not be evaluating them; you will be attending to the passages and discussions just as they will be. (While they have been encouraged to participate in discussions, they have not been asked to reveal any personal information during these interactions.)
 - 4. Return in two weeks to complete a brief survey.
 - 5. Participate in a debriefing at the end of the study in which the purposes of this experiment will be discussed. Questions will be answered and resources for additional information will be made available.
- C. Duration of participation: Your participation will require about 90 minutes of your time today and 15 minutes upon two week's return.
- D. Confidentiality: Questionnaires will be coded; no identifying information will be on them. A list with your name and corresponding code (to ensure that material completed two weeks later matches with the correct person) will be kept in a secure place along with questionnaires and videotapes. You will be asked on the following page to sign a statement that you will

keep confidential information shared by others in the videotape you will watch today. You will be responsible for keeping such information confidential. In doing so, realize that such confidentiality cannot be 100% guaranteed by this experimenter; you will be following an honor system by signing this statement. (Those participating in the videotape have signed a similar statement.) Results from this study may be presented at professional meetings or in publications. Your anonymity, however, will be preserved.

- E. Risks: The risks in this study are minimal and are not greater than those encountered in daily life. The topic of AIDS and/or sex may be upsetting or embarrassing for some; this is normal. You may consider some of the material to be of an explicit nature. Available resources are listed below if you have a personal issue regarding AIDS or sex that you would like to discuss further in private.
- F. Benefits: By participating in this project, you will see how psychological research may be conducted. You may also gain insight into how the issues of AIDS and sex affect you. Research such as this can help develop effective programs designed to educate people about AIDS and how to reduce their risk of HIV infection.
- G. Compensation for participation: You will receive one extra credit point in your Introductory Psychology class (PSYCH 1113) for each hour or fraction thereof in return for your participation in this study. Regardless of whether you choose to participate in this study or not, other ways to get extra credit in that class exist. You can participate in other studies or complete a project. Your instructor can explain this to you further.

I have been fully informed about the procedures listed above. I am aware of what I will be asked to do and of the risks and benefits in this study. I also understand the following:

I certify that I am 18 years of age or older.

My participation is part of a study entitled "Discussing AIDS and Safer Sex".

The purpose of these procedures is to examine thoughts and feelings about AIDS and sex.

I agree that I will keep confidential the opinions of those participating in the group discussions; I will not share these opinions with others.

I understand that my participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this study at any time without penalty.

I understand that I may contact the experimenter at the following address and telephone number should I desire to discuss my participation in this study and/or to request information concerning the outcome of this study:

215 North Murray, Department of Psychology, Oklahoma State University, Stillwater, OK 74078, (405) 744-6027. I may also contact Terry Maciula, University Research Services, 001 Life Sciences East, Oklahoma State University, Stillwater, OK 74078, (405) 744-5700.

I understand that the following resources are available to me should I desire personal attention concerning AIDS and/or safer sex:

Health Resource Center
147 Hospital and Clinic
Oklahoma State University
Stillwater, Oklahoma 74078
(405) 744-7020

Counseling Services
310 Student Union
Oklahoma State Univ.
Stillwater, OK 74078
(405) 744-5472

Psychological Services Center
118 North Murray
Oklahoma State University
Stillwater, OK 74078
(405) 744-6028

The National AIDS
Hotline
1-800-342-7514

I have read and fully understand this consent form and am signing it voluntarily. A copy of this form has been given to me. I hereby give permission for my participation.

Signature of Participant
Date _____

Signature of Witness
Date _____

Appendix G

Thought-List Scoring Instructions

I. Polarity Dimension

A. The polarity dimension comprises:

1. Favorable Thoughts - statements that are positive toward of supportive of a message
2. Neutral/Irrelevant Thoughts - statements that neither favor nor oppose the message
3. Unfavorable Thoughts - statements that are negative toward or in opposition to the message

B. Scoring the reported thoughts along the polarity dimension is done as follows:

1. Favorable Thoughts - statements in favor of the message mention:
 - a. specific desirable attributes or positive associations
 - b. support the validity or value of the message
 - c. positive affect about the message
 - d. example: "Using condoms is very important."
2. Unfavorable Thoughts - statements not in favor of the message that mention:
 - a. specific undesirable attributes or negative associations
 - b. challenges to the validity of the message
 - c. negative affect about the message
 - d. examples:
 - i. "I was uncomfortable talking about it."
 - ii. "Condoms suck."
3. Neutral/Irrelevant Thoughts - all remaining statements without affect toward the message
 - a. examples:
 - i. "Every point of view was covered."
 - ii. "It's hot in here."

C. Rules of thumb to follow:

1. Each statement is scored as one and only one of the preceding three categories.
2. Categorization of thoughts requires interpretation. This can best be accomplished by reading all of the thoughts listed by a subject prior to scoring.

II. Origin Dimension

A. The origin dimension comprises:

1. Externally Originated Thoughts - statements or paraphrases of information provided in the message
2. Modified Externally Originated Thoughts - statements that are reactions to the information provided in the message
3. Internally Originated Thoughts - statements not traceable directly to the information provided in the message

B. Scoring the reported thoughts along the origin dimension is done as follows:

1. Externally Originated Thoughts - statements that are:
 - a. direct quotes from information in the message
 - b. paraphrases of information in the message
 - c. restatements of information in the message
2. Modified Externally Originated Thoughts - statements that are:
 - a. elaborations of information in the message
 - b. examples of information in the message, but not actually part of the message itself
 - c. specific replies to instructions given to subjects
3. Internally Originated Thoughts - all remaining statements not directly traceable to something heard in the message (e.g., statements pertinent to the message, but not to a specific element in the message)

C. Rules of thumb to follow:

1. Each statement is scored as one and only one of the preceding three categories.
2. The categorization of a thought requires making a distinction between what was actually presented in the message and what the subject added to the message on his or her own. This can best be accomplished by reviewing the appropriate script or discussion transcription prior to scoring any of the thoughts listed by a subject.

Table 1

Mean Attitude Change Scores Over a Two-Week Period

Explicitness	Involvement	Presenter	^a <u>n</u>	^b Mean	<u>SD</u>
People With AIDS					
Explicit	Interactive	A	8	1.000	3.74
		B	8	2.625	3.20
		C	9	-0.333	1.50
Explicit	Videotape	A	10	0.200	1.75
		B	11	0.636	3.23
		C	10	0.500	3.14
Nonexplicit	Interactive	A	8	1.125	1.36
		B	6	2.000	4.43
		C	6	1.833	4.54
Nonexplicit	Videotape	A	8	-1.000	2.00
		B	7	-1.429	1.99
		C	8	2.625	1.92
Sex-Partner Communication					
Explicit	Interactive	A	8	1.375	1.30
		B	8	0.000	0.76
		C	9	0.889	2.93
Explicit	Videotape	A	10	1.700	2.58
		B	11	1.450	2.38
		C	10	2.400	2.01
Nonexplicit	Interactive	A	8	-1.500	2.27
		B	6	-1.500	1.97
		C	6	-0.333	3.83
Nonexplicit	Videotape	A	8	2.125	2.23
		B	7	-1.286	2.36
		C	8	-0.875	2.36

(Table continues)

Table 1 (Continued)

Explicitness	Involvement	Presenter	<u>n</u>	Mean	<u>SD</u>
Condom Use					
Explicit	Interactive	A	8	0.000	1.69
		B	8	1.250	2.96
		C	9	-0.333	3.12
Explicit	Videotape	A	10	1.400	1.43
		B	11	2.091	3.08
		C	10	1.300	2.71
Nonexplicit	Interactive	A	8	2.250	2.87
		B	6	0.167	1.94
		C	6	-1.333	3.39
Nonexplicit	Videotape	A	8	1.375	3.07
		B	7	-2.429	2.51
		C	8	2.000	2.20

a

The ns are unequal due to subject attrition.

b

Scores on each of the attitude scales could range from 4 to 28.

Table 2

Summary of Wilks' MANOVA Test Criteria: Attitude Changes

Effect	<u>F</u>	<u>df</u>	Pr > <u>F</u>
Explicitness	5.02	(3, 85)	0.003
Involvement	3.35	(3, 85)	0.03
Presenter	1.40	(6,170)	0.22
Explicitness x Involvement	0.65	(3, 85)	0.58
Explicitness x Presenter	2.52	(6,170)	0.02
Involvement x Presenter	2.25	(6,170)	0.04
Explicitness x Involvement x Presenter	2.06	(6,170)	0.06

Table 3

Attitudes About People With AIDS: Pretest and Change Scores

<u>SD</u> About The Mean	Pretest Score	<u>n</u>	Mean Change Score
> 1 Below	08 - 12	13	2.934
< 1 Below	13 - 16	32	1.405
0	17	7	0.000
< 1 Above	18 - 21	32	0.114
> 1 Above	22 - 28	15	-0.292

Table 4

Summary of Wilks' MANOVA Test Criteria: Cognitive Responses
Related to Sex-Partner Communication

Effect	<u>F</u>	<u>df</u>	Pr > <u>F</u>
Explicitness	1.29	(4, 83)	0.28
Involvement	3.46	(4, 83)	0.01
Presenter	2.21	(8, 166)	0.03
Explicitness x Involvement	1.25	(4, 83)	0.29
Explicitness x Presenter	0.70	(8, 166)	0.69
Involvement x Presenter	0.72	(8, 166)	0.67
Explicitness x Involvement x Presenter	0.97	(8, 166)	0.46

Table 5

Communication With A Sex-Partner: Significant Effects for
Attitude Change and Cognitive Responses

Design Factor	Mean Attitude Change Score	Cognitive Response	Mean Cognitive Response Ratio	
Explicitness				
Explicit	1.36 ^a			
Nonexplicit	-0.51 ^a			
Involvement				
Interactive	-0.09 ^b	Presentation	c	
		Favorable	.24	
		Discussion	d	
		Favorable	.23	
Videotape	1.07 ^b	Presentation	c	
		Favorable	.36	
		Discussion	d	
		Favorable	.33	
Presenter				
A		Discussion	e	
		Unfavorable	.04	
B		Discussion	e	
		Unfavorable	.16	
C		Discussion	e	
		Unfavorable	.04	
<hr/>				
a	b	c	d	e
p < .002	p < .024	p < .011	p < .023	p < .015

Table 6

Summary of Wilks' MANOVA Test Criteria: Cognitive Responses
Related to Condom Use

Effect	<u>F</u>	<u>df</u>	Pr > <u>F</u>
Explicitness	2.47	(4, 84)	0.0509
Involvement	2.15	(4, 84)	0.08
Presenter	2.17	(8,168)	0.03
Explicitness x Involvement	0.82	(4, 84)	0.52
Explicitness x Presenter	1.05	(8,168)	0.40
Involvement x Presenter	1.19	(8,168)	0.31
Explicitness x Involvement x Presenter	1.68	(8,168)	0.11

Table 7

Condom Use: Significant Effects for Attitude Change and
Cognitive Responses

	Presenter Levels			
	A	B	C	
	a			b
Explicitness	Attitude change scores			Presentation-based unfavorable MEO thought ratios
Explicit	0.778	1.747	0.526	.29
Nonexplicit	1.812	-1.231	0.571	.14
	c			
	Discussion-based Favorable MEO thought ratios			
	.52	.32	.30	

a
Interaction effect between degree of explicitness and person presenting, $p < .05$

b
Main effect for degree of explicitness, $p < .005$.

c
Main effect for person presenting, $p < .001$.

Table 8

Summary of Wilks' MANOVA Test Criteria: Cognitive Responses
Related to People With AIDS

Effect	<u>F</u>	<u>df</u>	Pr > <u>F</u>
Explicitness	1.47	(4, 84)	0.22
Involvement	1.12	(4, 84)	0.35
Presenter	1.84	(8, 168)	0.07
Explicitness x Involvement	0.88	(4, 84)	0.48
Explicitness x Presenter	1.41	(8, 168)	0.19
Involvement x Presenter	1.07	(8, 168)	0.39
Explicitness x Involvement x Presenter	0.94	(8, 168)	0.48

VITA

Jonathan M. Lipson

Candidate for the Degree of
Doctor of Philosophy

Thesis: EFFECTIVE AIDS EDUCATION: IS CANDID DISCUSSION THE
ANSWER?

Major Field: Clinical Psychology

Biographical:

Personal Data: Born in Providence, Rhode Island, May
3, 1961, the son of Sheldon R. and Joan B. Lipson.

Education: Graduated from Springbrook High School,
Silver Spring, Maryland, June, 1979; attended
Syracuse University, 1979 to 1981; received
Bachelor of Arts Degree in Psychology, Queen's
University, Kingston, Ontario, June, 1984;
received Bachelor of Arts (Honours) Degree,
Psychology, York University, Toronto, Ontario,
November, 1986; received Master of Science Degree,
Oklahoma State University, December, 1988;
completed requirements for the Doctor of
Philosophy Degree at Oklahoma State University,
May, 1993.

Professional Experience: Psychological Associate,
Psychological Services Center, Stillwater,
Oklahoma, 1988 to 1989; Psychological Associate,
Marriage and Family Counseling Service,
Stillwater, Oklahoma, 1989; Staff Psychotherapist,
Edwin Fair Community Mental Health Center,
Stillwater, Oklahoma, 1989 to 1990; Practicum
Student, Griffin Memorial Hospital, Norman,
Oklahoma, 1990 to 1991; Clinical Psychology
Intern, Department of Veteran's Affairs Medical
Center, Northport, New York, 1991 to 1992; HIV
Disease Delegation Member to Eastern Europe,
Citizen Ambassador Program, People to People
International, March, 1992.