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SKILLS TRAINING WITH HETEROSEXUAL FEMALES  
FOR THE PREVENTION OF HIV INFECTION, OTHER SEXUALLY  
TRANSMITTED DISEASES, AND SEXUAL ASSAULT

by

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(ABSTRACT)

College students are engaging in high rates of behavior related to risk of infection from Human Immunodeficiency Virus (HIV) and other sexually transmitted diseases (STDs). A cognitive-behavioral skills training program for heterosexual college females focused on sexual assertiveness skills and the reduction of risk-related behaviors was designed and evaluated and compared to an education-only program.

Forty-three heterosexual female undergraduates completed pre-intervention, post-intervention, and follow-up assessments of: 1) HIV/STD-related knowledge, beliefs, and social norms, 2) sexual, alcohol, and drug-related behaviors (self-reports and monitoring), and 3) sexual assertiveness role-plays (videotaped). The participants were randomly assigned to the

education-only group (control) and the education-plus skills training group (experimental). The focus of the skills training was on rehearsal of positive behavioral, cognitive, and social alternatives to risk-related behaviors with an emphasis on specific coping strategies.

Analysis of covariance on posttest and follow-up scores, using pretest scores as covariates, showed that skills training participants compared to education-only participants scored higher on sexual assertiveness skills, specific knowledge of HIV infection, and self-efficacy to perform lower risk sexual behaviors. Skills training compared to education-only participants also reported less frequency of drug use and unprotected oral sex. Self-efficacy and HIV infection knowledge score differences between groups were maintained at 1-month follow-up, although the lower reported frequency of high risk behaviors was not maintained. However, at follow-up consumption of four or more alcoholic beverages on one occasion was reported as less by the skills training participants and the overall reported frequency of high risk behaviors also was reported as approaching significantly less at follow-up by skills training participants.

Effective and ineffective aspects of this program as well as the key issue of personal vulnerability and

other barriers and facilitators of behavior change are discussed.

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In loving memory, this is dedicated to Carl Montgomery Hoback, Jr. Your spirit lives on.

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Introduction

Background

Human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS) possess unique psychological and social ramifications since HIV infection is preventable if individuals modify the behavior which brings them into contact with the virus (Miller, Turner, & Moses, 1990). Therefore, psychological theories of behavior change should play a major role in the development of AIDS prevention programs. This kind of program is also applicable to preventing other sexually transmitted diseases and, in some instances, sexual assault.

Prevention programs that influence diverse populations (e.g. men, women, youth, minorities) are urgently needed. Preventive interventions must focus on all persons engaging in behaviors likely to facilitate HIV infection, which means all sexually active individuals regardless of sexual orientation or drug-using history. For example, attention is now being paid to sexually active teenagers and young adults (Franzini, Sideman, & Dexter, 1988; MacDonald, Wells, Fisher, Warren, King, Doherty, & Bowie, 1990;

Schinke, Gordon, & Weston, 1990; Miller et al, 1990). However, minimal evaluation of education or behavior change strategies exist for these populations (Miller et al, 1990; Turner, Miller, & Moses, 1989).

A blinded HIV-seroprevalence survey was conducted at 19 universities throughout the United States to estimate the prevalence of HIV infection among university students (Gayle, Keeling, Garcia-Tunon, Kilbourne, Narkunas, Ingram, Rogers, & Curran, 1990). Of the 16,863 specimens in the sample, 0.2 percent (one per 500 students tested), were positive for antibodies to HIV. The seroprevalence rate was lower than the rates found among groups known to be at increased risk of HIV infection, but the authors concluded that HIV infection and the potential for its transmission exists in the college population and prevention efforts are needed.

STD/HIV-related knowledge, attitudes, and risk behavior were assessed among college students (MacDonald et al, 1990). A significant number of students reported high-risk behaviors which included substance use, irregular or no condom use, anal intercourse, 10 or more partners, or a previous STD. The reported factors associated with not using a condom included increased number of sexual partners, embarrassment about buying condoms, difficulty

discussing condom use with a prospective partner, use of oral contraceptives, belief that condoms interfere with sexual pleasure, and insufficient HIV/STD knowledge. The authors concluded that these factors are amenable to change and suggested that educational and behaviorally based interventions with the goal of broader changes in social norms are needed to improve condom use and reduce HIV/STD risk.

Many young adult heterosexuals at increased risk for HIV infection and other sexually transmitted diseases do not yet recognize their susceptibility, do not perceive the seriousness of the AIDS threat, or are not motivated to adopt behavioral modifications (Kegeles, Adler, & Irwin, 1988). Sexually active adolescents were knowledgeable and acknowledged the importance of condoms as preventive methods for sexually transmitted diseases. Yet, they indicated negative intentions to use condoms and showed no increase in condom use or decrease of multiple sex partners. Misperceptions existed about partners' attitudes toward condom use. For example, males' believed partners wanted them to use condoms, when in fact the females were mildly negative about their partners using condoms. Additionally, females were uncertain about males' desire to use condoms when the males were quite positive about it. These

misperceptions continued since males and females apparently did not discuss condom use. Moreover, regardless of knowledge and belief in the importance of condoms for prevention of sexually transmitted diseases, individuals may not feel personally vulnerable to contracting STDs from their partners (Kegeles et al, 1988). Thus , condoms may not be used.

Sexual practices of college women who utilized gynecologists at a university student health service in 1975, 1986, and 1989 were compared to examine behavior changes before and after the onset of the current epidemics of sexually transmitted diseases (DeBuono, Zinner, Daamen, & McCormack, 1990). The use of condoms as the usual method of birth control increased from 6 percent to 14 percent to 25 percent in 1975, 1986, and 1989, respectively. The "regular" use of condoms during sexual intercourse increased to 41 percent in 1989 from 21 percent in 1986 and 12 percent in 1975. No significant differences were found in the surveys across the years in the number of male sexual partners or the frequency of fellatio, cunnilingus, or anal intercourse. It was concluded that in this population there has been little change in sexual behavior after the onset of new epidemics of sexually transmitted diseases, with the exception of an increase in the use of condoms. Nevertheless, regular condom use still

fell below 50 percent (DeBuono et al, 1990).

A study of heterosexual male college students' condom use at a state university (Baffi, Schroeder, Redican, & McKluskey, 1989), concluded programs should be designed to encourage women to suggest condom use or provide condoms to their male partners. This conclusion was based on men reporting they were willing to use condoms if the suggestion were made by their partners.

All these studies suggest relatively low levels of protective behaviors. Protective behaviors may be increased with programs focusing on communication, skills training, and normative changes. These programs need to be guided by behavior change principles.

#### Behavior Change Strategies and Framework

Fundamental elements of behavior change include: recognition of a problem, motivation to act, and the necessary knowledge, beliefs, and skills to perform the action. However, individual attributes are often not sufficient to maintain behavior change. Impediments in the social environment often must be removed if behavior change is to be supported over time (Turner et al, 1989). For example, changing norms that support unprotected sex to "protected sex only" can both remove a barrier to behavior change and facilitate sustained change. Thus, the facilitation and maintenance of

behavior change involves education (e.g. information, skills training, media promotion), motivation, and support for behavior change (Brownell, Marlatt, Licktenstein, & Wilson, 1986).

In light of the components and processes of behavior change, the AIDS Risk Reduction Model (ARRM) was proposed as "an heuristic device intended to facilitate the conceptual organization of research on individual behavior change, and intervention development and evaluation" (Catania, Kegeles, & Coates, 1990, p. 55). The general framework is derived from social psychological concepts related to problem-solving, health beliefs, self-efficacy, emotional influence, and interpersonal processes. ARRM is also basically a stages of change model composed of three major stages: a) recognition and labeling of high risk behaviors, b) making a commitment to reduce high risk behaviors and increase low risk behaviors, and c) seeking and enacting strategies to obtain these goals.

Behavior change is conceptualized as a process and interventions must take into account the multiple steps leading to the final product, i.e., sustained behavior change. As stated by the authors (Catania et al, 1990), ARRM emphasizes the "goal of understanding why people fail to progress over the change process" (p. 56). Additionally, the authors highlighted the

importance of incorporating information and instruction specific to each stage of the change process in prevention program development. For example, knowledge of HIV transmission, perceived vulnerability, and social networks and norms that influence the labeling of high risk behaviors as problematic (e.g. use of condoms implying lack of trust in sexual partner) are critical components for stage one of problem perception of high risk behaviors.

More broadly, the conceptualization of AIDS prevention programs calls for an integrative framework based on a multilevel approach that considers the interactive relationships of biological, psychological, sociocultural, and political/historical factors within a larger environmental context. Even primarily psychological (i.e. individual) behavior change programs must recognize individual behavior is embedded in a sociocultural context that strongly determines its characteristics. Attempting to change specific, intimate behaviors that are carried out on a personal basis in an interpersonal setting, leads to examinations of social and cultural factors.

Behavior changes to prevent the transmission of HIV infection are interpersonal in nature and are affected by sex role norms, gender, economics, and culture (Mays & Cochran, 1988). Mays and Cochran

(1988) suggested a number of social, psychological, and cultural considerations for intervention designs including: sex serving as a form of financial or emotional support; physical or emotional abuse resulting from a partner's request to take part in lower risk behaviors; and cultural norms governing sexual behavior such as virginal women, sex only within marriage, and female naivete. Rodin and Ickovics (1990) also addressed the issue of women and AIDS as a priority item for the psychological research agenda on women's health issues. They stressed that gender-related issues must be studied in all areas of HIV infection, including behavioral risk reduction as well as the disease process. These issues include psychological and physiological reactions that may differ on the basis of sex such as hormonal and genetic differences, sex roles, social conditions, and socioeconomic factors that may influence exposure to HIV and the disease progression.

More generally, it is apparent interventions must be tailored to the social and cultural realities of a particular target group. However, it is not clear how socially and culturally relevant programs are to be designed and delivered. Formative research is considered one important aspect of designing specifically relevant programs targeted to different

population/cultural segments. The formative research for the present project will be discussed in a later section.

### Interpersonal Intervention for AIDS Prevention

AIDS prevention approaches at the personal and interpersonal levels encompass attitudes, values, beliefs, and behaviors related to social behaviors, sexual behaviors and drug and alcohol consumption. In addition, programs try to develop interventions which change social network norms in order to support behavior changes. It is now apparent that educational interventions can increase knowledge concerning health risk, but actually the probability of increasing risk reduction behaviors are influenced by factors other than knowledge gains (Kelly & St. Lawrence, 1988). These factors include specific cognitive, behavioral, affective, social, and environmental influences.

A cognitive-behavioral approach to AIDS risk reduction via skills training has been implemented and evaluated for gay men (Kelly, St. Lawrence, Hood, & Brasfield, 1989a) and heterosexual males and females (Franzini et al, 1988). The Kelly et al (1989a) project involved very intensive training in assertiveness, behavioral self-management, and social support development. This training consisted of twelve 75- to 90-minute weekly sessions led by two clinical

psychologists and two project assistants. The experimental intervention for gay men increased AIDS risk knowledge, increased behavioral skills for refusing sexual coercions and adoption of "safer sex" practices, and greatly reduced the reported frequency of high-risk sexual practices. Maintenance of behavior change was exhibited at an 8-month follow-up. It is important to note two critical factors in this program: the men were highly motivated because of the relative high risk for contracting HIV and the training was very extensive (J. Kelly, personal communication, June, 1990).

In contrast, the Franzini et al. study targeted at heterosexuals revealed continued wide spread practice of risky sexual behavior for all participants, even though knowledge increased about the transmission of HIV. This intervention involved three one-hour training sessions which included modeling of assertive interactions, role playing, behavior shaping, corrective feedback, verbal reinforcement assertiveness training, and an AIDS educational lecture. Behavioral training had a positive effect on overall assertiveness as assessed by role-play ratings, although few significant findings were shown for individual components of assertive behaviors. Thus, findings were apparently not consistent across studies with gay men

and heterosexuals.

While most studies on sexual behavior are limited by their reliance on self-report, the inconsistency between the two studies may be related to two critical differences between the populations. Gay men often feel very vulnerable to HIV infection. Heterosexual college students do not. (Dr. J. Kelly, personal communication to Dr. R. Winett, June 1990). Further, as noted, the training in Kelly et al was far more extensive than Franzini et al, with eighteen vs. three hours, respectively.

The interpersonal/personal approach to AIDS prevention with an emphasis on cognitive-behavioral training apparently has the potential for effective behavior change if participants not only gain knowledge, but receive extensive skills training and acquire a reasonable sense of personal vulnerability. Additionally, the effectiveness of programs may be enhanced for different population segments when more consideration is given to sociocultural factors affecting initial and sustained behavior change.

#### Skills Training Interventions for AIDS Prevention

The sexual assertiveness of heterosexual females is an important skill for preventing HIV infection, other sexually transmitted diseases, and sexual assault. A prototype cognitive-behavioral program

emphasizing sexual assertiveness has already been developed for preventing sexual coercion (Muehlenhard, Julsonnet, Carlson, & Flarity-White, 1989). Sexual assertiveness requires specific skills including communication skills and assertiveness skills for sexual situations (e.g. refusing a high risk behavior and suggesting a low risk alternative, if desired). Additionally, individuals need to learn and master technical skills (e.g. how to put on a condom) and other supportive communication and interpersonal skills (e.g. refusal skills for sexual activity, asking a partner to modify sexual behavior by using a condom).

Perceived self-efficacy has been given a primary role in interpersonal training programs for gaining control over HIV risk behaviors and situations (Bandura, 1988). Programs that focus on developing self-efficacy help individuals to change their behavior by increasing individuals' belief in their competency (Turner, Miller, & Moses, 1989).

However, programs based on principles of a social influence model must not only increase self-efficacy, but raise the level of general skills and specific social skills related to the target behavior (Turner et al, 1989). However, the specific requisite skills for AIDS prevention, such as using condoms consistently during sexual intercourse, will depend on an

individual's sense of "empowerment" or their belief and ability to appropriately handle one's self in risk situations.

Skills training intervention procedures typically include problem-solving, behavioral rehearsal, modeling, role-playing, practice, feedback, and social/environmental support. Sexual assertiveness training for AIDS prevention, in addition, must be designed in a socially and culturally appropriate way.

Promoting behavior change for AIDS prevention is a difficult task. The behaviors targeted for change generally are private; they are immediately reinforcing; the negative consequences of the behavior are distant; and the behaviors occur within an interpersonal/social context. The private nature of the behaviors being assessed also leads to the inherent problem of relying on situational role-plays and self-report of alcohol, drug, and sexual behaviors.

The present research was based on prior work on interpersonal skills training for HIV prevention. However, this project sought to use formative research to better target and refine procedures for heterosexual females, with the formative research process developing specific situations and behaviors appropriate for the target group. The formative research step was followed by a pilot test to further refine and test out

procedures. This preliminary work is described,  
followed by the description of the overall project.

## FORMATIVE RESEARCH AND PILOT RESEARCH

Focus groups and a pilot study were completed prior to the development, implementation, and evaluation of the skills training program. The results and conclusions were utilized to design the program format and evaluation.

Formative research included focus groups sessions with heterosexual females in which participants completed a set of self-report, attitudinal/belief, behavioral, and self-monitoring measures regarding issues of HIV infection and other sexually transmitted disease prevention (See Appendix B ). The goal of the focus group was to identify specific role-play situations for use in the sexual assertiveness skills training intervention. Overall, the focus group data indicated college women were highly educated about general AIDS information as assessed by the the AIDS Risk Behavior Knowledge Test (Kelly, St. Lawrence, Hood, & Brasfield, 1989b). This is a 33-item objective test of practical understanding of high-risk practices and precautionary behavior changes. Group norms were reported as supportive of safer sex practices, but nearly all participants reported involvement in risk-related situations and behaviors (e.g. sexual intercourse without a condom, unprotected oral-genital contact) and all participants estimated their behavior

over the past year as involving "slight" to a "good deal" of risk. (See Appendix C for description of results).

Based on information gathered from the focus groups, role-play scenarios were developed to use in the assessment of sexual assertiveness skills as well as for training situations in the sexual assertiveness skills training intervention (See Appendix D). A knowledge assessment covering specific information regarding HIV infection, sexually transmitted diseases, and social and peer norms for this target population was designed because of the ceiling for general AIDS information. Individuals' report of perceived invulnerability, participation in risk-related activities, and the lack of communication and assertiveness in sexual situations supported the premise of this study.

A pilot test of the skills training program was conducted with a group of five women. Questionnaires assessing vulnerability, self-efficacy, outcome expectancy, overall assertiveness, HIV/STD knowledge, and risk-related behaviors were administered pre and post intervention. Sexual assertiveness skills were assessed in role plays with a male research assistant. Role plays were audiotaped and rated by trained research assistants on overall effectiveness and

specific components of sexual assertiveness. (See Appendix E for questionnaires and Appendix F for Role Play Rating Form). Participants received four, one hour training sessions focused on AIDS risk education, behavioral self-management, assertive training, and decision making. Training sessions were discussion-oriented, involved modeling and role playing of assertiveness in risk-related situations, and demonstration and practice of condom-related skills. Ratings of overall sexual assertiveness as assessed in the role-plays increased significantly, although actual risk-related beliefs and behaviors did not change significantly (See Appendix G for Pilot Study Summary).

A focus group was also conducted for heterosexual male college students to obtain a "male perspective" on the issue of increasing sexual assertiveness in heterosexual females. Males were given the Skills Training Questionnaire (See Appendix E) and the male focus group supplement (See Appendix H). The males' knowledge, beliefs, and behaviors were similar to those of the females. Males reported a similar level of HIV/STD knowledge to females ( $X=13.7$ ,  $SD=1.77$ , range 10=16 out of possible 24) as assessed by the newly-designed knowledge assessment covering specific as opposed to general information. Group participants did not feel personally vulnerable to contracting HIV

or other STDs, felt that safer sex is accepted by peers, but also took part in risk-related activities (e.g. sexual intercourse without a condom). The males were supportive of women being sexually assertive. Such assertiveness was typically perceived as beneficial for clarifying feelings and expectations in a sexual situation. In general, the men felt that assertiveness would be beneficial for increasing communication with their partner.

Based on the results from the pilot program the following changes were made in the overall skills training program development and evaluation: 1) sexual assertiveness role-play scenarios would be presented on videotape using three prompts of increasing difficulty, with a practice scenario given; 2) skills training group sessions of greater intensity were designed consisting of more modeling and feedback from the group leader and group members (e.g. members practiced responses to role play situations in subgroups with feedback by other group members as well as with entire group with feedback from group leader as well); 3) an extended risk behavior self-monitoring form was developed; and 4) a skills use measure was designed to assess utilization of practice and use of skills outside of group sessions.

## OVERALL STUDY

### METHOD

#### Participants

Forty-three heterosexual female undergraduate volunteers were recruited through university classes, Greek organizations, and University Student Health Services and consented to participate and completed this study. The project was presented to approximately 350 class members and 225 members of Greek organizations. The project was also promoted by the University Student Health Services with a descriptive flier posted in the Health Center and the Women's Health Clinic, distributed to women with a sexually transmitted disease by the Women's Health Clinic nurse, and described by the Health Educator in three dormitory meetings about health-related issues. From these three recruitment approaches, 56 class members, 13 members of Greek organizations, and 3 women from the University Student Health Services indicated interest in the project. From the 575 students directly approached regarding participation in this program, 72 (13%) individuals were interested in the program, 55 (10%) agreed to participate in the study and 43 (7%) individuals completed the program.

Participants ranged in age from 19 to 22 years with a mean age of 20.14 ( $SD = .95$ ). The program was

targeted at women not currently in a long term monogamous relationship. This was defined as a sexually monogamous relationship for one year or more. Participants length of time in a relationship ranged from 0 to 10 months with a mean of 1.72 months ( $SD = 2.75$ ).

### **Measures**

All participants completed a set of self-report, attitudinal/belief, behavioral, and self-monitoring measures at pre-, post-, and one-month follow-up to the intervention (See Appendix E). Code numbers rather than names were used on all measures to promote candid responses and participants were assured of confidentiality.

STD/HIV Prevention Questionnaire. A 19-item questionnaire was developed to assess vulnerability, self-efficacy, outcome expectancy, and social norms regarding risk-related behaviors.

Risk History Survey. Modeled after instruments used in previous behavioral interventions to reduce AIDS-related risk activities (Kelly et al, 1989), a self-administered 24-item questionnaire eliciting information about sexual activities during the past 4-month and past 12-month period was completed by each participant (See Table 17).

Risk Behavior Self-monitoring. Similar to the format used for the Risk History Survey, more detailed data on the frequency of risk related activities were assessed in a manner less susceptible to retrospective recall bias (Kelly et al, 1989). Participants completed a two-week retrospective self-report of frequency of risk-related behaviors and the type of situation in which the activity occurred.

Condom Self-monitoring. Participants in both experimental and control groups received condoms for sexual intercourse and oral-genital sex (female to male). Participants completed a two-week retrospective self-report of the number of condoms used of those provided by the group leader. Condoms used for sexual intercourse and oral-genital contact were reported separately.

Overall Assertiveness Scale. The simplified version of the Rathus Assertiveness Schedule (Rathus, 1973) was administered to determine an overall level of assertiveness.

HIV-related Knowledge Questionnaire. A questionnaire was developed (because of the knowledge ceiling of general HIV/AIDS information) to assess specific HIV-related and other sexually transmitted disease knowledge. The test contained 24 multiple choice items that measured STD/HIV-related knowledge,

risk-related behaviors, prevention, and social norms. A single total score indicated the number of items answered correctly. Internal consistency measure of reliability resulted in an alpha coefficient of .28.

Sexual Assertiveness Role Plays. Six role-play situations were presented on videotape preceded by a practice scenario. The role-plays consisted of a narrated scene followed by three prompts of increasing difficulty from a male partner. The situations involved the proposal of a risk-related activity (social or sexual) or a sexual partner attempting to pressure the participant to take part in a risk-related activity. The role plays were modeled after instruments used in other AIDS prevention behavioral interventions strategies (Kelly et al, 1989). Participants' responses were videotape recorded. Sexual assertiveness skills were assessed at pre- and post- intervention (See Appendix D for script outlines).

Post-Intervention Measures. In addition to all pre- intervention measures, group participants also completed a 22-item questionnaire assessing frequency of skills practiced outside of group meeting, group cohesion, and program evaluation (See Appendix E).

#### Rating and Scoring of Measures

The questionnaire items assessing vulnerability,

self-efficacy, and outcome expectancy were evaluated as individual item responses as well as a sum score for each variable. For example, total vulnerability was the sum of scored responses to the perceived likelihood of having an unplanned pregnancy, contracting HIV, and contracting other sexually transmitted diseases. Social norm questions remained single items. (See Table 1 for internal consistency measures of reliability for outcome measures.)

Frequency of individual risk behaviors were scored on the Risk History Survey and the Risk Behavior Self-monitoring. Individual risk behavior items on the self-monitoring form were categorized as low-risk behaviors, high-risk behaviors, or avoidance of risk-related situations, and a sum score for each category was attained. (See Table 6 for high risk behaviors and Table 8 for low risk and avoidance behaviors.)

Reliability of self-report of risk-related behaviors was assessed in two ways: 1) a similar behavior was worded differently in another part of the monitoring form (i.e. sexual intercourse without a condom and sexual intercourse with birth control other than a condom) and 2) a more extensive structured interview was conducted with one-half of the participants to serve as a reliability check on self-reported behaviors (See Appendix I). A correlation of

.95 was obtained between self-monitored report of a similar behavior which was worded differently. Participants were asked to verbally report the frequency of specific risk-related and risk reduction behaviors in the past two weeks as well as respond to situational questions about one selected risk-related behavior and on risk reduction behavior. Verbal reports were compared to written responses on the self-monitored risk-related behavior form. Percentage of identical responses was tabulated. Participants provided the same response in written and verbal formats eighty-five percent of the time.

**Sexual Assertiveness Role Plays:**

Videotaped recordings of the sexual assertiveness role plays were presented to trained research assistants blind to whether role plays were from pre- or postintervention assessments or whether participants were in the experimental or control group. Participant responses to depicted scenes were rated for overall effectiveness from 1 (nonassertive) to 7 (extremely assertive). The rating reflected verbal and nonverbal skills and the importance of communicating with your partner in a nonaggressive way, yet stating your position firmly, was emphasized. Assertiveness was defined as "appropriately, firmly, but nonantagonistically expressing feelings, preferences,

needs, or opinions to others" and the importance of stating her position firmly and emphatically along with respectfully acknowledging the position of her partner were to be considered in the overall effectiveness rating. The responses were also rated for the following specific components of sexual assertion skills: acknowledging the partner's request, specifically refusing the risk behavior, providing a reason for the refusal, and suggesting a specific lower risk alternative. (See Appendix J for assertiveness definition and Appendix K for role play rating form ). These specific components were rated as 0 (absent), 1 (moderate), or 2 (exceptional).

The two research assistants independently rated an overlapping, randomly selected 25% of all tapes to establish reliability ratings. An interrater reliability coefficient, calculated using Pearson product-moment correlation between each rater's overall <sup>global</sup> effectiveness scores, was .84. Percentage agreement was calculated on presence or absence of the specific components with the following results: 88% (total components), 81% (acknowledgement), 95% (specific refusal), 91% (provide reason), and 83% (specific alternative). Percentage agreement on the 0-1-2 rating scale for specific components was 76%, 72%, 82%, 76%, and 74%, respectively.

**Procedures.** Following the assessment, participants were randomly assigned within recruitment strategies to skills training (n=28) and education-only (n=27) groups. Each group was subdivided into three groups which ranged in size from 7 to 10 ( $X=8.83$ ,  $SD=1.33$ ) participants. After the intervention, all participants were reassessed on all measures. The one-month follow-up assessment consisted of all written measures, but did not include the role-play assertiveness assessment.

Of the participants assessed before the intervention, 79% (n=22) of the skills training group and 78% (n=21) of the education-only group completed the training and the postintervention assessment. At completion, group size ranged from 4 to 9 ( $X=7.17$ ,  $SD 1.83$ ) participants. Analysis of variance indicated that dropouts did not differ significantly from those who completed the project on demographic or pretest measures. Eighty-six percent of both the skills training (n=18) and education-only (n=19) groups (37 total participants) completed and returned the one-month follow-up assessment.

**Skills Training Condition:**

The skills training condition consisted of four 75- to 90-minute sessions over a four week period for discussion and cognitive-behavioral training in the following topic areas: risk behavior education,

behavioral self-management, assertiveness training, decision making, safer sex negotiation, condom use, and maintenance of risk reduction behaviors. (See Appendix L for skills training sessions outline).

The overall focus during skills training sessions was on rehearsal of positive behavioral, cognitive, and social alternatives to risk-related behaviors. Sexual, alcohol, and drug related behaviors were the topics for group sessions. The emphasis was on the rehearsal of specific coping strategies as opposed to discussion of general strategies. The approach utilized techniques of problem-solving, behavioral rehearsal, modeling, role-playing, practice, and feedback from both the group leader and group members. Participants discussed alternatives to hypothetical and previously experienced social and sexual situations, specific lower risk alternatives and avoidance responses were modeled by the group leader as well as voluntary members, situations were role-played and practiced, and feedback was provided by group leader and group members. Group members role-played and practiced in small groups of three members prior to role-playing with entire group. Group members role-played and practiced a range of six to ten times, observed other group members responses, and were encouraged to practice outside of session (See Table 15). Given the importance of condom

availability, latex and oral sex condoms were given to participants during group sessions and their use was monitored.

#### **Education Only Condition:**

The education-only group participants received one 90-minute treatment session, using a didactic education approach to risk-related behaviors. Participants received the same information provided to the experimental group during session one in a lecture format and were allowed to ask questions. Condoms were also made available to control group participants and their use was monitored.

Participants were discouraged from engaging in high risk sexual behaviors as well as other risk behaviors. In fact, participants also were presented with strategies to help them avoid high risk situations such as decreasing amount of alcohol consumption or developing supportive social network to provide safe return home. Thus, education-only group participants received an intervention with some potentially efficacious components.

#### **Hypotheses**

It was hypothesized that skills training compared to the educational intervention would increase participants' sexual assertiveness skills and increase the utilization of "safer sex" behaviors. Safer sex

behaviors were defined in a variety of ways (e.g. avoidance of high-risk situations (including alcohol and drugs), abstinence, lower-risk sexual activities, using a condom during sexual intercourse).

Specifically, it was hypothesized that relative to the education-only group, skills training participants would increase:

- a) specific knowledge concerning HIV infection, other sexually transmitted diseases, and social norms regarding these issues;
- b) assertiveness skills assessed in role-plays of trained sexual situations;
- c) assertiveness skills assessed in role-plays of generalized sexual situations;
- d) self-reports of "safer sex" or lower risk behaviors;
- e) maintenance of self-reported lower risk behaviors;
- f) self-reports of vulnerability, self-efficacy, and outcome expectancy.

## RESULTS

### Pretest Findings

Analysis of variance indicated a statistically significant difference between skills training and education-only conditions on HIV-related knowledge,  $F(1,42) = 4.62, p < .04$ , and the belief that using safer sexual behaviors will protect you from a sexually transmitted disease,  $F(1,42) = 5.06, p < .03$ . Skills training participants scored higher on HIV-related knowledge, but were not as confident about safer sexual behaviors as protection from sexually transmitted diseases. No other statistically significant differences were found between skills training and education-only conditions on the dependent measures prior to intervention.

### Outcome Findings

Between-group treatment effects at posttest and follow-up were analyzed univariately. Separate one-way analysis of covariance (ANCOVA) on posttest and follow-up scores, using pretest scores as covariates, revealed several significant differences.

HIV-related Knowledge Questionnaire. ANCOVA on pretest to posttest differences on HIV/STD-related knowledge (Table 2) indicated that after intervention, education plus skills training participants scored significantly higher than education only participants,

$F(1,41) = 5.36, p < .026$ . This difference between conditions approached significance at one-month follow-up assessment,  $F(1,36) = 3.92, p < .056$ .

Questionnaire variables. ANCOVA on pretest to posttest differences indicated after the intervention, skills training participants compared to education-only participants reported a significantly higher level of self-efficacy (Table 4) regarding ability to consistently practice lower risk sexual behaviors,  $F(1,41) = 7.61, p < .009$ . This difference maintained at one-month follow-up,  $F(1,36) = 8.48, p < .006$ . Additionally, analyses of participants responses between pretest to follow-up on overall level of self-efficacy (determined by summation of beliefs regarding level of confidence in ability to consistently practice lower risk sexual behaviors, use a condom for sexual intercourse, take part in low risk sexual activities or choosing not to have sexual intercourse, and that participating in low risk sexual activities will result in a satisfying sexual relationship) was significantly higher at follow-up for skills training participants compared to education-only participants,  $F(1,36) = 4.06, p < .05$ . Responses assessing participants' beliefs of vulnerability, self-efficacy regarding specific lower risk behaviors, outcome expectancy, and self-reported overall assertiveness did not differ

between conditions at the three assessment points (Tables 2, 3, and 4).

Sexual Assertiveness Role Plays. (Table 5).

Separate ANCOVA, with pretest score as the covariate, compared the skills training and education-only groups' role-play performance at postintervention. Skills training participants relative to education-only participants were rated as more effective in overall assertiveness,  $F(1,41) = 22.19, p < .0001$ . On the specific components of sexual assertive skills, skills training participants significantly more often acknowledged the partner's request,  $F(1,41) = 5.77, p < .021$ , and suggested a specific lower risk alternative,  $F(1,41) = 14.95, p < .0004$ . Specific components of refusing the suggested risk behavior,  $F(1,41) = 1.77, p < .192$ , and providing a reason for the refusal,  $F(1,41) = 2.18, p < .148$ , did not differ significantly between conditions. However, a summation score of these specific sexual assertiveness components reflected a significant difference favoring the skills training participants relative to education-only participants,  $F(1,41) = 11.77, p < .002$ . However, three of the six role play situations were discussed and practiced during group sessions and the remaining three were used to assess generalizability to different situations. The patterns of significance remained regardless of

whether role-play situations were trained or not trained for in skills training group sessions.

Self-monitored risk-related behavior. (Tables 6 and 8). Pretest to posttest scores on two high risk-related behaviors were significantly different between the two conditions. Compared to education-only participants, skills training participants reported less use of drugs  $F(1,41) = 4.11, p < .05$ , and oral-genital sex without a condom,  $F(1,41) = 5.30, p < .027$ . These data were further examined based on participants' level of pre-intervention high risk behaviors: high (frequency of 5 or more high risk behaviors in two-week period), medium (frequency of 1 to 4 high risk behaviors in two-week period), and low (frequency of 0 high risk behaviors in two-week period). Women at the high level of risk behavior made the significant change as evidenced by skills training participants report of less use of drugs  $F(1,12) = 5.72, p < .05$ , and oral-genital sex without a condom,  $F(1,12) = 5.00, p < .05$  (See Table 7). No other significant differences were found between participants at the high pre-intervention level of risk behavior. Additionally, no significant differences were found between skills training and education-only participants at medium and low levels of pre-intervention risk behaviors. Differences between skills training and education-only groups on risk

behaviors were not maintained at one-month follow-up. However, there were significant differences between groups on the high risk behavior of drinking four or more alcoholic beverages on one occasion,  $F(1,36) = 5.33, p < .027$ .

An overall (summation score) report of high risk behaviors was also calculated. The difference between groups was not significant at posttest  $F(1,41) = 0.41$ , but did approach significance at follow-up  $F(1,35) = 3.63, p < .065$  (See Table 6).

ANCOVAs resulted in no significant differences in self-report of lower risk behaviors, high risk behaviors involving sexual intercourse without a condom or without birth control, avoidance or delay of sexual situations, or use of condoms provided by the group leader (See Tables 6, 8, 16). However, the frequency of sexual intercourse without a condom decreased in both skills training and education-only groups at both posttest and follow-up.

### **Correlational Analyses**

Change scores (pretest to posttest) were computed for the following variables: overall high risk behaviors (HIB), overall low risk behaviors (LOWB), overall effectiveness in sexual assertiveness role plays (ALL), summation of specific components in sexual assertiveness role plays (ALL), self-efficacy (SELF),

vulnerability (VULS), and knowledge (KNWT). See Tables 9, 10, and 11 for correlations of pre-intervention scores with change scores, pre- and post-intervention scores, and change scores, respectively. Correlations were separately computed for all participants (skills training and education-only groups), skills training participants, and education-only participants.

A significant correlation was found between change in high risk behavior and change in low risk behavior ( $\underline{r} = .55, p < .001$ ) as well as between change in high risk behavior and vulnerability ( $\underline{r} = .32, p < .04$ ). A significant negative correlation was also found between change in high risk behavior and change in self-efficacy ( $\underline{r} = -.50, p < .001$ ). A significant negative correlation was also found for the skills training group only between change in vulnerability and change in components of sexual assertiveness ( $\underline{r} = -.54, p < .01$ ) and a negative correlation between change in vulnerability and change in overall sexual assertiveness approached significance ( $\underline{r} = -.42, p < .06$ ). Change in knowledge was significantly correlated with change in overall sexual assertiveness ( $\underline{r} = .31, p < .04$ ) and change in components of sexual assertiveness ( $\underline{r} = .33, p < .04$ ) for all participants.

#### **Post Intervention Ratings**

Analysis of variance (ANOVA) revealed a

significantly higher level of cohesion among skills training participants relative to education-only participants as assessed by degree of liking of individual group members  $F(1,40) = 4.06, p < .05$ . However, only marginally significant differences were found for overall rating of liking the group  $F(1,40) = 3.61, p < .065$  (See Table 12). ANOVA comparing groups within each condition resulted in no difference in level of cohesion among groups in the education-only condition for individual members,  $F(2,19) = 0.47, p < .64$ , or overall group rating,  $F(2,19) = 2.45, p < .12$  (See Table 13). Significant differences in cohesion level were found between groups in the skills training condition for individual members,  $F(2,20) = 11.56, p < .001$ , and overall group rating,  $F(2,20) = 4.83, p < .021$  (See Table 14).

Program evaluation was assessed on a 7-point scale, from 1 (very ineffective) to 7 (very effective). Skills training and education-only participants responses, respectively, resulted in a mean effectiveness rating of 5.67 and 5.36 for development of sexual assertiveness skills and 5.72 and 5.27 for reducing risk-related behaviors. A mean rating of 5.77 and 5.54, respectively for skills training and education-only, indicated participants level of enjoyment in the program.

## DISCUSSION

A cognitive-behavioral skills training intervention developed through formative and pilot research, and focusing on the reduction of HIV risk-related behaviors was compared to an education-only program. The skills training program compared to the education-only program was found to be more effective in increasing specific HIV/STD knowledge, self-efficacy, and sexual assertiveness skills. Modest findings were found favoring skills training for the self-reported reduction of HIV risk-related behaviors.

Specific HIV/STD-related knowledge was increased in both conditions, although the education plus skills training group was greater than the education only group. Formative research had indicated a ceiling effect for level of general knowledge regarding HIV infection. Therefore, an assessment was devised to measure more specific knowledge about HIV infection as well as other sexually transmitted diseases. This study demonstrated that level of specific knowledge was low, but significant increases could be achieved and maintained. Areas of specific knowledge included the incubation period of HIV, estimates of persons infected with HIV, increasing rates of HIV infection, interpretation of positive and negative HIV antibody test results, as well as prevalence, symptomatology,

and complications of other STDs such as chlamydia, genital herpes, and syphilis.

Skills training participants' level of self-efficacy regarding ability to consistently practice lower risk sexual behaviors increased as did sexual assertiveness skills. Perceived self-efficacy and general and specific social skills related to the target behavior were previously cited as critical for behavior change (Bandura, 1988; Turner et al, 1989). Overall effectiveness in sexual assertiveness skills as well as the specific components of acknowledging the partner's request and suggesting a specific lower risk alternative increased in the education plus skills training group. However, the specific components of specific refusal and providing a reason for the refusal were present at a moderate level and did not increase to any degree. It seems that when an individual is placed in a sexual assertiveness role-play situation, the participant is capable of stating an adequate response. However, the skills training intervention increased participants' overall effectiveness and components of sexual assertiveness that could enhance communication with their partner. Additionally, the sexual assertiveness skills generalized to situations not specifically trained.

Correlational analyses appear to support the

conceptualization of this program which involves a relationship between self-efficacy and vulnerability to changes in high risk behavior. Sexual assertiveness skill changes did not directly correlate with changes in high risk behavior, although skills changes were related to beliefs of self-efficacy. ~~Insert Series II here~~ ~~CHASELL.F~~ behavior changes. However, since the change in high risk behavior was limited to a subset of participants, a predictive analyses could not be appropriately done with this sample size.

Women often have difficulty communicating with and making requests of their sexual partner, but it is suggested that increases in self-efficacy and sexual assertiveness skills will enhance a woman's ability to make behavioral changes to protect herself. As stated by Bayer (1990), women will have to develop the capacity to insist that their sexual partners modify their behavior. However, this effort will be difficult and challenging due to social and cultural influences on sex roles and sexual behavior. Social and cultural barriers such as the female's suggestion for condom use may be perceived by the male as threatening and possibly result in physical harm or withdrawal of

financial support for the female. Also, religious beliefs and/or economic hardship related to condom use, and reproductive issues of womanhood may interfere with sexual assertiveness and risk reduction behaviors.

A pertinent question concerns the application of these skills in real-life situations involving the reduction of risk-related behaviors. Skills training participants reported reduction of risk-related behaviors which involved a decrease in the use of alcohol and drugs. While the difference between groups on the high risk behavior of drinking four or more alcoholic beverages on one occasion was statistically significant, it should be noted that skills training participants at posttest still reported a higher frequency of this behavior than education-only group participants and the same rate of behavior at follow-up. Additionally, it should be noted that reported drug use decreased to zero frequency at follow-up for both skills training and education-only group participants. The absence of drug use at follow-up may be explained by the low frequency at pretest and/or the drop out at follow-up assessment of the two women with the highest reported frequency of drug use as pretest and posttest assessments.

Reduction of these substances is important because use of alcohol and drugs has been shown to increase

risk-related sexual activity, specifically to reduce the likelihood of using condoms (Hingson, Strunin, Berlin, & Heeren, 1990). The reduction in oral-genital sex without a condom from pretest to posttest was also an important finding. Many participants were not aware of the potential transmission of sexually transmitted disease through oral-genital contact. Skills training participants did not increase their use of oral sex condoms or other lower risk behaviors. It appears participants may have chosen not to take part in this risk-related behavior but possibly continued with other risk-related behaviors.

The skills training participants' overall level of high risk behavior approached a significant reduction at follow-up. However, it should be noted that the frequency of risk-related behaviors decreased in both skills training and education-only participants. Skills training participants dropped from an average of 4.55 high risk behaviors over a two-week period to 1.89, whereas the education-only participants decreased from an average of 3.53 to 2.67 high risk behaviors over the same time period. It is unclear why this decrease was seen for both groups. Perhaps these data represent socially desirable self-reports of risk behaviors, awareness of risk-related concerns by participation in the study, a change in social setting

or academic/social stressors (e.g. preparation for final exams, return home following end of academic year), or (more optimistically), a secular trend.

The reduction of risk-related behavior is difficult with a population that perceives limited risk in their behavior. Participants in both groups expressed beliefs of perceived invulnerability regarding HIV infection as well as other sexually transmitted diseases and unplanned pregnancy. Participants perceived the occurrence of these events as not at all likely for themselves, although interestingly they indicated it would be likely to happen to other female college students. This sense of personal vulnerability was not significantly impacted by the intervention program. However, the trend was for skills training participants' perceived vulnerability ratings to slightly decrease while those in the education only group increased. This trend was most evident on participants' rating on the likelihood of contracting HIV. A possible explanation for this would be that information and awareness raises perceived vulnerability, and with the additional skills training, participants' perceived themselves as more capable of handling risk situations and thus reported lower perceived vulnerability. It is also important to note that perceived vulnerability was very low for

participants in both groups.

Recognition of behavior as problematic is an initial key component of fundamental themes of behavior change (Turner et al, 1989) as well as the AIDS Risk Reduction Model (ARRM) proposed specifically for sexual behavior change related to HIV transmission (Catania, Kegeles, & Coates, 1990). Individuals do not appear to perceive risk-related behaviors as problematic, regardless of increased level of HIV/STD knowledge, and do not feel susceptible to risk and are minimally motivated to change behavior. The findings of continued personal invulnerability of women in this program suggests this program did not completely follow ARRM, nor, indeed the projects' own formative research. That is, saliency and vulnerability needed to be stressed more in this program to heighten motivation for behavior change. This can be reasonably done since women are at high risk for sexually transmitted diseases and increasingly for HIV infection (Campbell, 1990).

However, an estimation of absolute risk of HIV infection for college students must be considered in relation to the issue of perceived invulnerability. As stated earlier, it has been estimated that one in 500 students are infected with HIV (Gayle, et al, 1990). Using an infectivity rate of 0.002 for male to female

transmission (Hearst & Hulley, 1988), the estimated risk of HIV infection for a college student would be one in 250,000 for one sexual encounter without using a condom. This estimated risk is actually higher than that calculated by Hearst and Hulley who made their estimation on a prevalence of 0.0001 based on data from armed forces recruits and blood donors. The calculated estimate for risk of infection in college students must be interpreted cautiously. As indicated by Gayle et al, the survey was not a random sample of all colleges and universities or of all the students at the survey institutions. The HIV-antibody testing was done on blood collected at health centers for routine medical procedures, which may not be representative of all students. Additionally, the one sexual encounter may occur with someone who has a history of high risk behaviors as well as the increased risk as the number of encounters (same or different partner) increases.

Risk-related behaviors were reduced, although one must consider the meaningfulness of this change, the actual decreased risk, and the continued occurrence of risk behaviors. As demonstrated by the significant change in self-efficacy and sexual assertiveness skills, the participants appear to have the confidence and ability to perform risk-reduction behaviors but, as noted, the lack of perceived vulnerability is likely to

strongly impact the extent of risk behavior change.

Another factor to consider in relation to the limited risk behavior change is the below average level of risk behavior reported by the participants. In comparison to MacDonald et al (1990) in which 68.9% of the women were coitally active, only 56% of the participants in this study had sexual intercourse in the past year. More specifically, participants' reported number of sexual partners in the past year can be directly compared to the 1989 survey of college women examined by DeBuono et al (1990). The percentage of participants in this study reporting 0, 1, 2, and greater than 3 partners, respectively, was 44%, 28%, 12%, and 16%. Students in the DeBuono study reported 18%, 44%, 17%, and 21%, respectively. A substantially greater number of participants in this study had no sexual partners in the last year as well as a smaller percentage of partners overall. The participants' activity level may actually have fallen in a small range of risk behaviors which would make significant change less likely.

The behavior change evidenced in this study appears to be limited to a subset of participants who effectively reduced their initially medium to high frequency of risk behavior. These individuals did exhibit an increase in sexual assertiveness skills as

well as beliefs of self-efficacy regarding risk reduction behaviors, but perceived vulnerability was minimally affected. For example, participant A reported a reduction in overall level of high risk behavior from seventeen behaviors at pretest to four behaviors at posttest. Her report of overall self-efficacy increased from 19 to 26 (range of 4 - 28) and overall effectiveness in sexual assertiveness role plays increased from a rating of 15 to 31 (range of 6 - 42). The total of specific sexual assertiveness components increased from 16 to 37 (range of 0 - 48) with an increase from 6 to 12 and 2 to 10 (range 0 - 12) on individual components of acknowledging her partner's request and suggesting a specific alternative, respectively. However, her report of overall personal vulnerability actually decreased from 9 to 3 (range 1 -21). As portrayed by this participant, the reported frequency of high risk behaviors was reduced and ratings of self-efficacy and sexual assertiveness skills increased, but not only was perceived vulnerability minimally affected, as was the case with many participants, her perceived vulnerability decreased. However, this could be interpreted from the perspective that the participant's reduction in high risk behavior resulted in her perception of decreased susceptibility or vulnerability

to pregnancy, HIV infection, and other sexually transmitted diseases.

Even more exemplary of the issue of perceived invulnerability, lack of motivation to change behavior, and influential social norms was the difficulty in recruitment for this study. Many of the women who took part in this study reported a low level of risk behavior, but appeared to be interested in the program for a variety of reasons. Recruitment approaches that proved unsuccessful included utilizing the university's Women's Health Clinic to recruit women attending the clinic for annual exams and/or those women with a diagnosed sexually transmitted disease, as well as approaches to social organizations on campus. The purpose of recruiting members of social organizations was to utilize the social/community norms that can be influential on behavior change (Coates, 1990; Kelly et al, 1989). Unfortunately, the stigma surrounding (apparently ongoing) sexual behavior and alcohol and drug use seemed to prevent involvement of social organizations. It seems social expectations and standards regarding open acknowledgement and discussion of risk-related behaviors may contribute to the cycle of perceived invulnerability and continued occurrence of risk-related behaviors, coupled with the hope that the consequences of these behaviors will "not affect

us". Additionally, women known to be at higher risk of HIV infection (those with a sexually transmitted disease) also indicated minimal interest in the program. Two possible explanations for this subgroup's lack of interest: 1) Health Services personnel were asked to distribute information on the program and the extent of this activity is unknown, and 2) women with STDs may have been reluctant to participate for reasons related to confidentiality regarding their reason for program involvement (i.e. having an STD).

Overall, the sexual assertiveness skills training program was focused on primary prevention. The interpersonal intervention approach was effective in achieving change in knowledge, self-efficacy, and sexual assertiveness skills as well as reports of risk-related behaviors. Educational interventions are the first step in prevention program development, although education alone is not enough to affect behavior change. Program components of self-efficacy and sexual assertiveness skills appear to be effective. However, change in self-efficacy scores was minimal and sexual assertiveness skills increased, but did not approach a mastery level. An improved protocol with more intense training is likely necessary to achieve a higher level of skills change.

Behavior change as the goal for primary prevention

programs presents a dilemma that is difficult to resolve. The question remains as to how to provide training within a context in which individuals perceive themselves as invulnerable and are not motivated to change their behavior. This makes it difficult to retain individuals in a program in which mastery level of skills can be achieved. Future projects must find ways to increase perceived vulnerability. If individuals perceive themselves as more vulnerable, motivation for initial and sustained behavior change should be enhanced.

Increasing perceived vulnerability likely plays an initial role in the process of behavior change. However, it appears that college students have strong beliefs of perceived invulnerability. This issue presents a marketing dilemma and raises concerns about program implementation, since most students do not perceive a need to change their behavior in relation to HIV infection. A possible approach to this dilemma would be to market the program with an emphasis on sexual assertiveness and STD as well as sexual assault prevention. It is unlikely that this target population will feel vulnerable to HIV infection until more students develop HIV infection / AIDS. As a prevention program, the emphasis should be placed on increasing personal vulnerability, skills acquisition, and

redefining social norms. Another possible approach might be to incorporate elements of a skills training approach regarding high risk behaviors into the college curriculum and/or dormitory or social activities.

However, larger, contextual issues must also be addressed if individual and small group programs are to be more effective. The problems in recruitment for this study show that social, psychological and cultural barriers to frank and open discussion of sexual behaviors are impediments in the prevention process. Jeffrey (1989) distinguished between individual and population perspectives in understanding health risk behaviors, developing conceptual models of risk behaviors, and designing intervention strategies to change risk behaviors. The individual perspective is presented as emphasizing educational and skills training approaches whereas the population perspective is focused on epidemiological data and environmental regulations. Jeffrey concluded that population and individual strategies may support each other and result in a synergistic effect that maximizes effectiveness of the intervention program. A multiple strategies approach is appropriate for risk behaviors related to HIV infection, although many more efforts are necessary to develop effective prevention programs specifically targeted at women and HIV infection.

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Table 1

Internal Consistency (Alpha) Reliability of Belief and Behavior Measures

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Outcome Measure	No. of Items	Pretest Alpha	Posttest Alpha	Follow-up Alpha
Vul - Self	3	.84	.85	.84
Vul - Other	3	.86	.86	.87
Self-efficacy	4	.79	.77	.81
Outcome-expect	4	.74	.77	.74
Low-risk beh	5	.64	.70	.65
High-risk beh	5	.70	.67	.66
Avoidance beh	2	.86	.89	.78

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Table 2

Means and Standard Deviations for Knowledge, Overall Assertiveness, and Social Norm Variables

Variable	<u>Skills Group</u>		<u>Education Group</u>	
	M	SD	M	SD
<b>HIV/STD Knowledge*</b>				
Pretest	13.95	3.00	11.90	3.25
Posttest	18.95	2.38	16.90	1.97
Follow-up	18.89	2.30	17.26	1.88
<b>Overall Assertiveness**</b>				
Pretest	2.68	23.12	10.10	21.61
Posttest	7.14	23.68	11.19	20.28
Follow-up	3.33	27.37	12.79	22.11
<b>Social Norms***</b>				
<b>Friends Always Use Condoms</b>				
Pretest	2.82	1.26	2.76	1.34
Posttest	2.48	0.98	2.52	1.29
Follow-up	2.89	1.08	2.84	1.26
<b>Friends Talk Safe Sex More Than Practice</b>				
Pretest	3.27	1.24	2.71	1.15
Posttest	3.38	1.12	3.10	1.51
Follow-up	3.28	1.07	3.37	1.16

Table 2, cont.

Means and Standard Deviations for Knowledge, Overall Assertiveness, and Social Norm Variables

Variable	<u>Skills Group</u>		<u>Education Group</u>	
	M	SD	M	SD
<b>Friends Believe Safer Sex Implies Lack of Trust</b>				
Pretest	1.68	0.84	2.14	1.20
Posttest	2.95	1.32	1.81	1.03
Follow-up	2.44	1.20	2.42	1.22
<b>Safer Sex Accepted By Friends</b>				
Pretest	3.55	1.26	3.52	1.36
Posttest	3.71	1.27	3.71	1.10
Follow-up	3.89	1.18	3.47	1.12
<b>Friends Are Very Sexually Active</b>				
Pretest	3.36	1.22	3.43	1.29
Posttest	3.62	0.92	3.52	1.21
Follow-up	3.50	0.86	3.37	1.12

\*Correct score out of 24 items.

\*\*Rathus Assertiveness Schedule (Rathus, 1973),

Range -90 to +90

\*\*\*Five-point scale: 1 (Strongly Disagree), 5 (Strongly Agree)

**Table 3**

**Means and Standard Deviations for Perceived  
Vulnerability Variables**

<b>Variable</b>	<b><u>Skills Group</u></b>		<b><u>Education Group</u></b>	
	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>
<b>Vulnerability - Self</b>				
<b>Likelihood Of Unplanned Pregnancy*</b>				
Pretest	1.95	0.90	1.90	1.37
Posttest	2.00	1.18	2.43	1.96
Follow-up	1.78	0.81	2.16	1.68
<b>Likelihood of Contracting A STD*</b>				
Pretest	1.86	0.94	1.95	0.74
Posttest	2.43	1.29	2.71	1.65
Follow-up	2.17	1.20	2.68	1.83
<b>Likelihood of Contracting HIV*</b>				
Pretest	1.73	0.83	1.76	0.70
Posttest	1.95	0.86	2.43	1.33
Follow-up	1.83	0.92	2.05	1.22
<b>Total Vulnerability (Self) - Sum Scored of Above**</b>				
Pretest	5.55	2.30	5.62	2.40
Posttest	6.38	3.06	7.57	4.19
Follow-Up	5.78	2.60	6.89	3.94

\*Seven-point scale: 1 (Not at all likely), 7 (Extremely likely)   \*\*Sum of four 7-point scales

Table 3, cont.

Means and Standard Deviations for Perceived  
Vulnerability Variables

Variable	<u>Skills Group</u>		<u>Education Group</u>	
	M	SD	M	SD
<b>Vulnerability - Other</b>				
<b>Likelihood Of Other Women Having Unplanned Pregnancy*</b>				
Pretest	4.00	0.82	4.67	1.46
Posttest	4.10	1.04	4.67	1.39
Follow-up	4.06	1.00	4.21	1.65
<b>Likelihood of Other Women Contracting A STD*</b>				
Pretest	4.55	1.01	4.86	1.28
Posttest	4.52	1.25	5.24	1.37
Follow-up	4.67	1.19	4.47	1.58
<b>Likelihood of Other Women Contracting HIV*</b>				
Pretest	3.23	1.11	4.00	1.45
Posttest	3.62	1.36	4.48	1.72
Follow-up	3.67	1.19	4.00	1.60
<b>Total Vulnerability (Other) - Sum Scored of Above**</b>				
Pretest	11.78	2.41	13.52	3.80
Posttest	12.24	3.24	14.38	4.10
Follow-Up	12.39	2.83	12.68	4.66

\*Seven-point scale: 1 (Not at all likely), 7 (Extremely likely) \*\*Sum of four 7-point scales

Table 4

Means and Standard Deviations for Self-Efficacy and Outcome Expectancy Variables

Variable	<u>Skills Group</u>		<u>Education Group</u>	
	M	SD	M	SD
<b>Self-Efficacy</b>				
<b>Practice Lower Risk Sexual Behaviors*</b>				
Pretest	5.36	1.68	6.00	1.34
Posttest	6.29	0.85	5.86	1.46
Follow-up	6.22	0.73	5.63	1.50
<b>Use Condom for Sexual Intercourse*</b>				
Pretest	5.32	1.39	5.33	1.80
Posttest	5.76	1.22	5.67	1.39
Follow-up	5.67	1.37	5.42	1.68
<b>Practice Low Risk Sexual Behavior - No Intercourse*</b>				
Pretest	5.68	1.46	5.62	1.40
Posttest	6.10	0.94	5.90	1.41
Follow-up	5.83	1.38	5.89	1.15
<b>Avoid Situations Involving Alcohol, Drugs, or Sex*</b>				
Pretest	5.73	1.55	5.86	1.11
Posttest	6.10	1.09	6.10	1.26
Follow-Up	6.17	0.99	6.26	0.87

\*Seven-point scale: 1 (Not at all confident), 7 (Very confident)

Table 4, cont.

Means and Standard Deviations for Self-Efficacy and Outcome Expectancy Variables

Variable	<u>Skills Group</u>		<u>Education Group</u>	
	M	SD	M	SD
<b>Outcome Expectancy</b>				
<b>Safer Sex Will Protect From STDs*</b>				
Pretest	5.95	0.95	6.52	0.68
Posttest	6.43	0.60	6.24	0.83
Follow-up	6.28	0.67	6.26	0.56
<b>Use Of Condoms Will Protect from STDs*</b>				
Pretest	5.73	1.03	5.62	1.07
Posttest	6.24	0.62	6.10	0.89
Follow-up	6.17	0.86	6.00	0.47
<b>Low Risk Sexual Behaviors Will Be Sexually Satisfying*</b>				
Pretest	5.00	1.51	5.29	1.71
Posttest	5.62	1.36	5.57	1.47
Follow-up	5.44	1.42	5.79	1.23
<b>Avoid/Withdraw Will Reduce Risk Activities*</b>				
Pretest	5.55	1.37	5.86	1.11
Posttest	6.10	1.09	6.38	0.86
Follow-Up	5.94	1.30	6.42	0.69

\*Seven-point scale: 1 (Not at all confident), 7 (Very confident)

Table 4, cont.

Means and Standard Deviations for Self-Efficacy and Outcome Expectancy Variables

<u>Variable</u>	<u>Skills Group</u>		<u>Education Group</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Overall Self-Efficacy - Sum of Above Individual Self-Efficacy Variables**				
Pretest	22.09	4.47	22.81	4.01
Posttest	24.24	3.28	23.52	3.39
Follow-up	23.89	3.50	23.21	4.20
Overall Outcome Expectancy - Sum of Above Individual Outcome Expectancy Variables**				
Pretest	22.23	3.29	23.33	2.78
Posttest	24.38	2.38	24.29	3.08
Follow-up	23.83	2.73	24.47	2.09

\*\*Sum of four 7-point scales.

Table 5

Means and Standard Deviations for Sexual Assertiveness  
Role Plays

<u>Variable</u>	<u>Skills Group</u>		<u>Education Group</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
<b>Overall Assertiveness*</b>				
Pretest	19.67	4.98	18.90	5.06
Posttest	28.38	5.29	21.48	6.18
<b>Acknowledge Partner's Request**</b>				
Pretest	4.52	2.68	3.52	1.89
Posttest	7.57	3.47	4.81	2.75
<b>Specific Refusal**</b>				
Pretest	6.62	1.42	6.86	1.74
Posttest	7.71	1.49	7.24	1.67
<b>Provide Reason for Refusal**</b>				
Pretest	5.71	2.41	4.90	1.95
Posttest	7.29	2.72	5.86	2.01
<b>Specific Alternative**</b>				
Pretest	3.10	2.05	2.81	1.50
Posttest	7.14	2.80	4.00	2.41
<b>Specific Components - Total***</b>				
Pretest	19.95	6.21	18.10	4.77
Posttest	29.71	7.64	21.90	6.99

Possible Range: \* 6 - 42, \*\* 0 - 12, \*\*\* 0 - 48.

Table 6

Means and Standard Deviations for High Risk Behavior  
Variables - Frequency Over a Two-Week Period

Variable	<u>Skills Group</u>		<u>Education Group</u>	
	M	SD	M	SD
<b>Four or More Alcohol</b>				
Pretest	2.14	2.17	1.10	1.22
Posttest	1.90	2.14	1.33	2.31
Follow-up	1.22	1.70	1.21	1.51
<b>Used Drugs</b>				
Pretest	0.73	2.98	0.19	0.68
Posttest	0.67	3.06	0.57	1.57
Follow-up	0.00	0.00	0.00	0.00
<b>Sexual Intercourse - No Condom</b>				
Pretest	0.82	1.62	1.10	3.30
Posttest	0.24	0.89	0.48	1.44
Follow-up	0.39	1.20	0.42	1.07
<b>Oral-genital Sex - No Condom</b>				
Pretest	0.60	0.91	0.95	1.43
Posttest	0.05	0.22	0.48	0.75
Follow-up	0.22	0.55	0.78	1.93

Table 6, cont.

Means and Standard Deviations for High Risk Behavior  
Variables - Frequency Over a Two-Week Period

<u>Variable</u>	<u>Skills Group</u>		<u>Education Group</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
<b>Sexual Intercourse - No Birth Control</b>				
Pretest	0.27	0.94	0.19	0.68
Posttest	0.14	0.48	0.05	0.22
Follow-up	0.06	0.24	0.16	0.50
<b>High Risk Behaviors - Sum of Above Behaviors</b>				
Pretest	4.55	5.33	3.53	4.57
Posttest	3.00	4.02	2.90	4.12
Follow-up	1.89	2.83	2.67	2.70

Table 7

Means and Standard Deviations for High Risk Behavior  
Variables in Highest Risk Group - Frequency Over a Two-  
Week Period

Variable	<u>Skills Group</u>		<u>Education Group</u>	
	n=8		n=5	
	M	SD	M	SD
<b>Four or More Alcohol</b>				
Pretest	4.00	1.85	1.00	1.22
Posttest	3.25	2.12	1.80	3.03
<b>Used Drugs</b>				
Pretest	2.00	4.87	0.80	1.30
Posttest	1.75	4.95	1.60	2.61
<b>Sexual Intercourse - No Condom</b>				
Pretest	2.25	2.05	3.80	6.38
Posttest	0.50	1.41	1.40	2.61
<b>Oral-genital Sex - No Condom</b>				
Pretest	1.38	1.06	2.60	2.07
Posttest	0.00	0.00	1.00	1.00
<b>Sexual Intercourse - No Birth Control</b>				
Pretest	0.75	1.49	0.80	1.30
Posttest	0.25	0.71	0.20	0.45

Table 8

Means and Standard Deviations for Low Risk Behavior  
Variables - Frequency Over a Two-Week Period

Variable	<u>Skills Group</u>		<u>Education Group</u>	
	M	SD	M	SD
<b>Two or Three Alcohol</b>				
Pretest	2.82	2.40	1.76	1.58
Posttest	1.90	2.02	0.38	0.86
Follow-up	1.67	1.85	1.68	1.89
<b>Sexual Intercourse - With Condom</b>				
Pretest	0.45	1.18	0.38	0.87
Posttest	0.48	1.29	0.38	0.86
Follow-up	0.28	0.75	0.28	0.58
<b>Oral-genital Sex - With Condom</b>				
Pretest	0.00	0.00	0.00	0.00
Posttest	0.10	0.44	0.10	0.44
Follow-up	0.00	0.00	0.00	0.00
<b>Mutual Masturbation - Orgasm</b>				
Pretest	0.45	1.14	1.00	2.24
Posttest	0.19	0.87	0.38	0.87
Follow-up	0.17	0.51	0.47	1.31

Table 8, cont.

Means and Standard Deviations for Low Risk Behavior  
Variables

Variable	<u>Skills Group</u>		<u>Education Group</u>	
	M	SD	M	SD
<b>Other Sexual Activity</b>				
Pretest	0.91	1.19	2.67	4.07
Posttest	0.62	1.24	1.62	2.48
Follow-up	0.95	1.39	1.95	3.26
<b>Low Risk Behaviors - Sum of Above Behaviors</b>				
Pretest	4.64	3.39	5.81	5.57
Posttest	3.29	3.13	4.67	5.02
Follow-up	3.06	2.55	4.50	4.51
<b>Avoidance/Delay - Sexual Situation</b>				
Pretest	0.86	0.89	1.00	1.73
Posttest	0.81	1.33	0.81	0.93
Follow-up	0.56	0.62	0.67	1.03
<b>Avoidance/Delay - Alcohol or Drugs</b>				
Pretest	0.86	1.32	1.00	2.00
Posttest	0.57	0.87	0.30	0.80
Follow-up	0.33	0.69	0.00	0.00

Table 9

Correlations of Pre-intervention Variables with Change Scores

	<u>Change Scores</u>						
	HIB	LOWB	ALL	COMP	SELF	VULS	KNWT
<u>Pre</u>							
<u>HIB</u>							
Skills+	.60*	.11	-.13	-.07	-.41*	.03	-.17
Educ							
Skills	.67*	.52*	.09	.12	-.41	.07	-.28
Educ	.50*	-.10	.29	-.23	-.37	-.06	-.07
<u>LOWB</u>							
Skills+	.33*	.47*	-.13	-.07	-.37*	-.01	-.11
Educ							
Skills	.24	.38	.02	-.22	-.56*	.10	-.23
Educ	.45*	.51*	-.32	-.43*	-.35	-.02	-.06
<u>ALL</u>							
Skills+	.11	.11	.17	-.01	-.01	-.03	.04
Educ							
Skills	-.03	-.33	.41	.20	-.17	-.09	.21
Educ	.24	.31	.10	-.20	.19	-.02	-.11
<u>COMP</u>							
Skills+	.13	-.03	.08	.08	.02	-.04	.09
Educ							
Skills	.08	-.26	.31	.30	-.02	-.07	.24
Educ	.13	.07	.08	-.02	.19	-.10	-.07
<u>SELF</u>							
Skills+	-.34*	-.15	.12	.07	.63*	.15	-.02
Educ							
Skills	-.30	-.40	.01	.16	.71*	.15	.18
Educ	-.36	-.04	.19	-.17	.55*	.21	-.23
<u>VULS</u>							
Skills+	.33*	.18	.01	.04	-.38*	-.02	-.13
Educ							
Skills	.43	.47*	.03	.01	-.42	.08	-.06
Educ	.24	.07	-.03	.09	-.38	-.09	-.18
<u>KNWT</u>							
Skills+	.20	.12	-.06	-.04	-.24	.29	.70*
Educ							
Skills	.18	.13	-.08	-.07	.04	.38	.65*
Educ	.16	.10	.38	.34	-.37	.17	.81*

\*p &lt; .05

Table 10

## Correlations of Pre- and Post- Intervention Scores

	<u>Post Intervention Scores</u>						
	HIB	LOWB	ALL	COMP	SELF	VULS	KNWT
<u>Pre</u>							
HIB							
Skills+	.70*	.45*	.12	.10	-.32*	.22	.09
Educ							
Skills	.72*	.12	.01	.04	-.31	.37	.07
Educ	.69*	.78*	.14	.08	-.38	.16	.01
<u>LOWB</u>							
Skills+	.31*	.71*	.14	.09	-.18	.15	.06
Educ							
Skills	.35	.82*	.19	.15	-.35	.34	.18
Educ	.31	.67*	.27	.18	-.08	.05	.08
<u>ALL</u>							
Skills+	-.06	.03	.61*	.58*	.19	-.10	.08
Educ							
Skills	.16	.44*	.57*	.51*	.15	-.01	.17
Educ	-.28	-.20	.75*	.74*	.21	-.15	-.09
<u>COMP</u>							
Skills+	-.02	-.13	.57*	.61*	.16	-.10	.03
Educ							
Skills	.16	.10	.51*	.55*	.29	-.04	.10
Educ	-.25	-.28	.67*	.70*	.05	-.11	-.28
<u>SELF</u>							
Skills+	-.34*	-.29	.01	.04	.76*	-.45*	-.04
Educ							
Skills	-.35	-.36	.01	-.01	.81*	-.57*	.03
Educ	-.33	-.31	.12	.24	.74*	-.42	.04
<u>VULS</u>							
Skills+	.17	.11	-.15	-.17	-.36*	.66*	.24
Educ							
Skills	.34	.27	-.11	-.10	-.50*	.72*	.29
Educ	.02	.01	-.22	-.29	-.23	.64*	.26
<u>KNWT</u>							
Skills+	-.29	-.15	.12	.10	.14	-.17	.49*
Educ							
Skills	-.42*	-.16	.39	.31	.17	-.12	.50*
Educ	-.21	-.10	-.38	-.40	.06	-.15	.33

\*p &lt; .05

Table 11

## Correlations of Change Scores

	<u>Change Scores</u>						
	HIB	LOWB	ALL	COMP	SELF	VULS	KNWT
HIB							
Skills+	1.0	.55*	-.21	-.18	-.50*	.32*	-.04
Educ							
Skills	1.0	.70*	-.23	-.06	-.37	.41	-.08
Educ	1.0	.54*	-.06	-.22	-.59*	.24	.01
LOWB							
Skills+		1.0	-.08	-.17	-.30*	.28	-.04
Educ							
Skills		1.0	-.23	-.11	-.46*	.45*	-.04
Educ		1.0	.02	-.23	-.26	.22	-.04
ALL							
Skills+			1.0	.82*	.19	-.18	.31*
Educ							
Skills			1.0	.78*	.06	-.42	.33
Educ			1.0	.76*	.02	.18	.40
COMP							
Skills+				1.0	.25	-.21	.33*
Educ							
Skills				1.0	.34	-.54*	.33
Educ				1.0	-.10	.21	.39
SELF							
Skills+					1.0	-.17	.03
Educ							
Skills					1.0	-.42	.19
Educ					1.0	.07	-.11
VULS							
Skills+						1.0	.05
Educ							
Skills						1.0	.03
Educ						1.0	.08
KNWT							
Skills+							1.0
Educ							
Skills							1.0
Educ							1.0

\*p &lt; .05

Table 12

Means and Standard Deviations for Level of Group Cohesion

---

	<u>Skills Group</u>		<u>Education Group</u>	
<u>Variable</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Liking of Individual				
Group Members	5.52	0.82	4.99	0.88
Overall Liking of				
Group	6.00	0.84	5.30	1.45

---

\* Seven-point scale: 1 (Very Strong Dislike), 7 (Very Strong Like)

Table 13

Means and Standard Deviations for Level of Group Cohesion Within Educational-Only Group

Variable	<u>Group 1</u>		<u>Group 2</u>		<u>Group 3</u>	
	n=7		n=6		n=7	
	M	SD	M	SD	M	SD
Liking of Individual						
Group Members	4.77	0.61	4.95	1.24	5.24	0.80
Overall Liking of						
Group	4.43	0.53	5.50	2.07	6.00	1.15

\* Seven-point scale: 1 (Very Strong Dislike), 7 (Very Strong Like)

Table 14

Means and Standard Deviations for Level of Group  
Cohesion Within Skills Training Group

Variable	<u>Group 1</u>		<u>Group 2</u>		<u>Group 3</u>	
	n=9		n=3		n=9	
	M	SD	M	SD	M	SD
Liking of Individual						
Group Members	4.85	0.52	6.33	0.52	5.93	0.63
Overall Liking of						
Group	5.56	0.88	7.00	0.00	6.11	0.60

\* Seven-point scale: 1 (Very Strong Dislike), 7 (Very Strong Like)

Table 15

Means and Standard Deviations for Practice of Skills in  
 "Real Life" Situations - Frequency Over a Two Week  
 Period

<u>Variable</u>	<u>Skills Group</u>		<u>Education Group</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
<b>Avoid Alcohol Situation</b>				
Posttest	2.95	3.83	2.76	4.53
Follow-up	1.67	2.20	0.89	2.02
<b>Avoid Sexual Situation</b>				
Posttest	2.33	3.20	2.95	4.47
Follow-up	2.00	2.85	1.79	3.51
<b>Withdraw/Delay Alcohol Situation</b>				
Posttest	2.76	3.91	2.48	4.63
Follow-up	1.33	2.11	0.63	1.89
<b>Withdraw/Delay Sexual Situation</b>				
Posttest	2.43	3.28	2.57	4.33
Follow-up	1.72	3.29	1.74	3.09
<b>Assertiveness to Reduce High Risk Behavior</b>				
Posttest	2.67	3.95	3.00	4.60
Follow-up	1.33	2.17	1.58	2.24
<b>Assertiveness to Continue Low Risk Behavior</b>				
Posttest	2.90	4.24	4.29	5.49
Follow-up	0.94	2.07	1.26	2.38

Table 15, cont.

Means and Standard Deviations for Practice of Skills in "Real Life" Situations - Frequency Over a Two Week Period

<u>Variable</u>	<u>Skills Group</u>		<u>Education Group</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
<b>Assertiveness for Other Sexual Activity,</b>				
<b>Excluding Sexual Intercourse</b>				
Posttest	1.76	3.90	2.86	4.92
Follow-up	0.94	2.07	1.68	2.71
<b>Assertiveness to Use a Condom</b>				
Posttest	1.24	3.00	2.19	4.50
Follow-up	1.11	3.07	2.00	3.94

Table 16 Means and Standard Deviations for Use of  
 Condoms Provided by Group Leader - Frequency Over a Two  
 Week Period

<u>Variable</u>	<u>Skills Group</u>		<u>Education Group</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
<b>Oral Sex Condoms</b>				
Posttest	0.10	0.44	0.57	2.20
Follow-up	0.00	0.00	0.11	0.32
<b>Sexual Intercourse Condoms</b>				
Posttest	0.43	0.93	0.71	2.24
Follow-up	0.28	0.75	0.33	0.69
<b>Total Condoms</b>				
Posttest	0.52	0.98	1.29	4.38
Follow-up	0.28	0.75	0.44	0.86

Table 17

Pretest Means, Standard Deviations, and Ranges for  
Sexual History

<u>Variable</u>	<u>Skills Group</u>			<u>Education Group</u>		
	<u>M</u>	<u>SD</u>	<u>Range</u>	<u>M</u>	<u>SD</u>	<u>Range</u>
<u>Past Four Months - Number of Times</u>						
Sexual Intercourse Without a Condom	3.14	5.22	0-20	3.24	7.94	0-25
Sexual Intercourse With a Condom	1.36	2.50	0-10	2.90	8.29	0-36
Oral-Genital Sex on Male Without Condom	2.43	4.12	0-15	3.15	3.91	0-15
Oral-Genital Sex on Male With Condom	0.00	0.00	0	0.00	0.00	0
Unprotected Oral-Genital Sex By Male on Self	2.00	3.39	0-10	3.37	4.00	0-15
Low Risk Sexual Activity Without Insertion	2.29	4.38	0-15	5.21	10.14	0-35
<u>Past Four Months - Number of Partners</u>						
Sexual Intercourse Without a Condom	0.55	0.80	0-3	0.29	0.56	0-2
Sexual Intercourse With a Condom	0.41	0.59	0-2	0.33	0.48	0-1
Oral-Genital Sex on Male Without Condom	0.52	0.60	0-2	0.86	0.73	0-3

Table 17, cont.

Pretest Means, Standard Deviations, and Ranges for  
Sexual History

<u>Variable</u>	<u>Skills Group</u>			<u>Education Group</u>		
	<u>M</u>	<u>SD</u>	<u>Range</u>	<u>M</u>	<u>SD</u>	<u>Range</u>
Oral-Genital Sex on Male With Condom	0.00	0.00	0	0.05	0.22	0-1
Unprotected Oral-Genital Sex By Male on Self	0.48	0.51	0-1	0.86	0.85	0-4
Low Risk Sexual Activity Without Insertion	1.43	3.23	0-15	0.86	0.79	0-3
<u>Past Twelve Months - Number of Times</u>						
Sexual Intercourse Without a Condom	16.00	33.41	0-120	12.19	28.20	0-100
Sexual Intercourse With a Condom	2.14	3.37	0-10	6.85	12.14	0-40
Oral-Genital Sex on Male Without Condom	8.57	14.82	0-50	7.94	10.14	0-40
Oral-Genital Sex on Male With Condom	0.00	0.00	0	0.00	0.00	0
Unprotected Oral-Genital Sex By Male on Self	7.10	12.41	0-50	8.71	10.49	0-40
Low Risk Sexual Activity Without Insertion	8.05	16.91	0-75	13.24	21.45	0-80

Table 17, cont.

Pretest Means, Standard Deviation, and Ranges for  
Sexual History

<u>Variable</u>	<u>Skills Group</u>			<u>Education Group</u>		
	<u>M</u>	<u>SD</u>	<u>Range</u>	<u>M</u>	<u>SD</u>	<u>Range</u>
<u>Past Twelve Months - Number of Partners</u>						
Sexual Intercourse Without a Condom						
	1.14	1.73	0-6	0.48	0.98	0-3
Sexual Intercourse With a Condom						
	0.76	1.22	0-5	0.62	0.97	0-4
Oral-Genital Sex on Male Without Condom						
	1.00	1.38	0-6	1.52	1.57	0-6
Oral-Genital Sex on Male With Condom						
	0.00	0.00	0	0.05	0.22	0-1
Unprotected Oral-Genital Sex By Male on Self						
	1.18	1.30	0-5	1.38	1.16	0-5
Low Risk Sexual Activity Without Insertion						
	2.00	3.16	0-15	1.48	1.21	0-4

**Appendix A**  
**Consent Forms**

## AIDS Prevention Focus Group

### Consent Form

I, \_\_\_\_\_, freely and voluntarily consent to participate in a research program entitled, "AIDS Prevention Focus Group", to be conducted by Kathleen J. Sikkema, M.S. as part of her doctoral dissertation.

I understand that this research project has been approved by the Psychology Department Human Subjects Research Committee and the Institutional Review Board. The procedures to be followed have been explained to me, all my questions have been answered, and I understand the procedures. They are as follows:

Purpose of the Research and Procedures: The purpose of this focus group is to gather information on AIDS-related knowledge, attitudes, behaviors, and situational experiences of heterosexual females. A goal of the discussion groups is to identify role-play situations for use in developing a skills training intervention for AIDS prevention among heterosexual females in future studies.

The questionnaire and group discussion is centered on sexual behavior and alcohol and drug use. As a participant in the group, you will be asked to complete a questionnaire assessing the following topics in relation to AIDS: knowledge and attitudes, perceived risk, risk behavior and risk reduction behaviors, perceived peer activity, perceived consequences of behavior change, alcohol and drug use, and risk situations. A measure of assertiveness skills will also be administered.

In a group with other participants, you will be asked to discuss the following: specific situations (experienced or predicted) in which risk behavior has or may occur, acceptable alternatives to participation in risk behaviors, perceived peer activity, and perceived consequences of behavior change. At no time in the group will you be pressured to reveal any information that you do not want to discuss. With your written consent, the group discussion will be videotaped. The reason for videotaping is to allow the investigator to review and interpret what is discussed in the group. The principal investigator and the research supervisor will be the only persons to view the tape, after which the tape will be destroyed. If you prefer not to be videotaped, an audiotaping or no taping option will be offered.

You will also be asked to self-monitor sexual, drug, and alcohol related behaviors and situations over a two-week period. Monitoring forms will be identified

by code numbers such that no names will appear on the written forms. Monitoring forms will be delivered to the experimenter in a sealed envelope identified only by code number. You are free to note as much or as little information on these forms as you feel is appropriate. These forms will be locked in a secure location at the Center for Research in Health Behavior of the Department of Psychology.

Confidentiality: Questionnaires and monitoring forms will be identified by code numbers and will never be associated with participant's name. It will be requested that all information and experiences discussed during the focus group session will remain confidential within the group. As a participant in the group, you will agree to keep information discussed in the group confidential. The videotape will be destroyed after interpretation of the discussion and the development of role-play situations for future studies in AIDS prevention by the experimenter and research supervisor. At no time will you be pressured to reveal or discuss information you do not want to reveal or discuss.

Risks: It is possible that you may be embarrassed or feel uncomfortable responding to the questionnaire and discussing these sensitive and personal topics or, perhaps, reveal experiences that are sensitive and personal. You have the right to refuse or discontinue participation at any time throughout the steps of the assessment and focus group. If any issues arise or you wish further information, you are to contact one of the following:

Kathleen J. Sikkema	231-8747
University Student Health Services	231-6444
University Counseling Services	231-6557
RAFT Crisis Hotline	552-5706
Roanoke AIDS Project	1-800-354-3388 or 703-982-AIDS

Benefits: No promises for any benefits are made. By participating in this focus group, you may increase knowledge and awareness regarding AIDS-related issues and behavior change necessary for AIDS prevention. In addition, information you provide may be helpful to other women in the future.

Time Commitment: Participation will take approximately two hours.

If you have any questions regarding the project, you should contact one of the following:

Kathleen J. Sikkema, Principal Investigator	231-8747
Richard A. Winett, Ph.D., Faculty Supervisor	231-8746
Helen Crawford, Ph.D., Chair, Human Subjects Committee	231-6520
Ernest Stot, Ph.D., Chair, Institutional Review Board	231-5281

Please be assured that your participation is strictly voluntary. You are free to refuse to participate in this project and free to discontinue participation in this project at any point without penalty.

I have read this form and I \_\_\_\_\_  
Name of Participant  
agree to voluntarily participate in the AIDS Prevention Focus Group as described above. I have a copy of the consent form.

Signature \_\_\_\_\_

I.D. # \_\_\_\_\_

Age: \_\_\_\_\_

Please mark one of the following:

\_\_\_\_\_ I give my voluntary consent to being videotaped in the discussion group.

\_\_\_\_\_ I give my voluntary consent to being audiotaped in the discussion group.

\_\_\_\_\_ I do not wish to be videotaped or audiotaped in the discussion group.

Skills Training for AIDS Prevention  
with Heterosexual Females

Consent Form

I, \_\_\_\_\_, freely and voluntarily consent to participate in a research program entitled, "Skills Training for AIDS Prevention with Heterosexual Females", to be conducted by Kathleen J. Sikkema, M.S. as part of her doctoral dissertation.

I understand that this research has been approved by the Psychology Department Human Subjects Research Committee and the Institutional Review Board. The procedures to be followed have been explained to me, all my questions have been answered, and I understand the procedures. They are as follows:

Purpose of the Research and Procedures: The purpose of the skills training group is to examine whether skills training will increase the level of sexual assertiveness and be effective in changing AIDS-related risk behaviors.

Participants will complete the following prior to and following the training sessions: 1) risk history survey, 2) risk behavior self-monitoring form, 3) belief scale, 4) AIDS knowledge scale, 5) assertiveness scale, and 5) videotaped role plays. The same assessments, excluding the videotaped role plays, will be administered or sent by mail for a one-month follow-up assessment.

Participation also involves four, one and one-half hour training sessions over a four week period for discussion and training in AIDS risk education and assertiveness training. Sexual, alcohol, and drug related behaviors and situations will be the topics for skills training sessions. Participants in no way will be encouraged to engage in sexual behaviors or other risk behaviors. In fact, participants also will be given strategies to help them avoid such situations.

You also will be asked to self-monitor sexual, drug, and alcohol related behaviors and situations over a four-week period. Monitoring forms will be identified by code numbers such that no names will appear on the written forms. Monitoring forms will be delivered to the experimenter in a sealed envelope identified only by code number. You are free to note as much or as little information on these forms as you feel is appropriate. These forms will be locked in a secure location at the Center for Research in Health Behavior of the Department of Psychology.

**Confidentiality:** Questionnaires and monitoring forms will be identified by code numbers and will never be associated with participant's name. It will be requested that all information and experiences discussed during the training sessions will remain confidential within the group. As a participant in the group, you will agree to keep information discussed in the group confidential. The videotaped assessments will be destroyed after ratings made by the experimenter and research assistant. At no time will you be pressured to reveal or discuss information you do not want to reveal or discuss.

**Risks:** It is possible that you may be embarrassed or feel uncomfortable responding to the questionnaire, role playing, or discussing these sensitive and personal topics or, perhaps, reveal experiences that are sensitive and personal. You have the right to refuse or discontinue participation at any time throughout the steps of the assessment and group sessions. If any issues arise or you wish further information, you are to contact one of the following:

Kathleen J. Sikkema	231-8747
University Student Health Services	231-6444
University Counseling Services	231-6557
RAFT Crisis Hotline	552-5706
Roanoke AIDS Project	1-800-354-3388 or 703-982-AIDS

**Benefits:** No promises for any benefits are made. By participating in the skills training group, you may increase knowledge, awareness, or skills regarding AIDS-related issues and behavior change necessary for AIDS prevention. In addition, information you provide may be helpful to other women in the future.

**Time Commitment:** Participation will take approximately eight hours.

If you have any questions regarding the project, you should contact one of the following:

Kathleen J. Sikkema, Principal Investigator	231-8747
Richard A. Winett, Ph.D., Faculty Supervisor	231-8746
Helen Crawford, Ph.D., Chair, Human Subjects Committee	231-6520
Ernest Stot, Ph.D., Chair, Institutional Review Board	231-5281

Please be assured that your participation is strictly voluntary. You are free to refuse to participate in this project and free to discontinue participation in this project at any point without penalty.

I have read this form and I \_\_\_\_\_  
Name of Participant  
agree to voluntarily participate in the AIDS Prevention Skills Training Group as described above. I have a copy of the consent form.

Signature \_\_\_\_\_

I.D. # \_\_\_\_\_

Age: \_\_\_\_\_

Please initial one of the following:

\_\_\_\_\_ I give my voluntary consent to be videotaped in the role-play assessments.

\_\_\_\_\_ I do not wish to be videotaped in the role-play assessments.

Please initial one of the following:

\_\_\_\_\_ I give my voluntary consent to being videotaped in the group training sessions.

\_\_\_\_\_ I give my voluntary consent to being audiotaped in the group training sessions.

\_\_\_\_\_ I do not wish to be videotaped or audiotaped in the group training sessions.

**Appendix B**

**Focus Group Questionnaire**

SUBJECT # \_\_\_\_\_

AIDS PREVENTION FOCUS GROUP QUESTIONNAIRE

Please fill out the following information:

AGE: \_\_\_\_\_ YEAR IN COLLEGE \_\_\_\_\_ MAJOR: \_\_\_\_\_

HOUSING: \_\_\_\_\_ ON-CAMPUS \_\_\_\_\_ OFF-CAMPUS

CURRENTLY IN STEADY RELATIONSHIP: YES NO

If yes, number of months in relationship: \_\_\_\_\_

Attached is a questionnaire assessing a variety of beliefs, attitudes, behaviors, and situations regarding sexual behavior and alcohol and drug use. You do not have to answer any question that you feel uncomfortable with. You may leave blank any question that you wish or feel is too personal.

On a scale of 1 to 5 indicate how likely you think the following events are:

Very Unlikely					Very Likely
1	2	3	4	5	

1. How likely is it that you will experience the following while you are in college:

- |   |      |   |   |   |   |
|---|------|---|---|---|---|
| a. abuse alcohol/drink too much                   | a. 1 | 2 | 3 | 4 | 5 |
| b. use illegal drugs                              | b. 1 | 2 | 3 | 4 | 5 |
| c. get a sexually transmitted or venereal disease | c. 1 | 2 | 3 | 4 | 5 |
| d. become pregnant/or a father                    | d. 1 | 2 | 3 | 4 | 5 |
| e. become HIV infected or get AIDS                | e. 1 | 2 | 3 | 4 | 5 |

2. How likely is it that you will experience the following in your lifetime:

- |  |      |   |   |   |   |
|--|------|---|---|---|---|
| a. abuse alcohol/drink too much                      | a. 1 | 2 | 3 | 4 | 5 |
| b. use illegal drugs                                 | b. 1 | 2 | 3 | 4 | 5 |
| c. get a sexually transmitted or venereal disease    | c. 1 | 2 | 3 | 4 | 5 |
| d. become pregnant/or a father without being married | d. 1 | 2 | 3 | 4 | 5 |
| e. become HIV infected or get AIDS                   | e. 1 | 2 | 3 | 4 | 5 |

The next set of statements involves your opinion concerning how your friends behave. Even if you are not sure, please answer each question with your best guess.

- |   | <u>Strongly Disagree</u> | <u>Neutral</u> | <u>Strongly Agree</u> |   |   |
|---|--------------------------|----------------|-----------------------|---|---|
| 3. My friends always use condoms during sex.  | 1                        | 2              | 3                     | 4 | 5 |
| 4. My friends talk about safer sex more than they actually practice it.               | 1                        | 2              | 3                     | 4 | 5 |
| 5. My friends believe that insisting on safer sex implies lack of trust with partner. | 1                        | 2              | 3                     | 4 | 5 |
| 6. Safer sex is completely accepted by my friends.                                    | 1                        | 2              | 3                     | 4 | 5 |
| 7. My friends are very sexually active.   | 1                        | 2              | 3                     | 4 | 5 |

8. Please endorse any of the following activities that you have participated in in the last two years:

Sexual intercourse without a condom.

Sexual intercourse with a condom.

Performed oral-genital sex on a man without a condom.

Performed oral-genital sex on a man with a condom.

Man performed unprotected oral-genital sex on me.

Body rubbing, massage, or mutual masturbation to orgasm without any insertion.

Have not had sexual intercourse.

9. Based on what you know, please estimate how risky you think you have been in the past year in terms of AIDS risk activities?

No risk at all

Slightly risky

Somewhat risky

Good deal of risk

Extremely risky

10. Have you changed your sexual behaviors (i.e. safer sex) in any way since the onset of the AIDS epidemic?

Yes  No If so, how?

11. If you have changed your sexual behaviors, what have the consequences been?

12. If you were to change your sexual behavior to safer practices, what would you perceive the consequences of this behavior change to be?

13. How do your friends feel about safer sex practices? Do you think that your friends practice safer sex?

14. What kind of influence do alcohol and/or drugs have on your level and type of sexual activity? Do alcohol and/or drugs play a role in practicing or not practicing safer sex? If so, how?

15. Who's responsibility is it to provide contraception when having sex?

Men, Women, or Both. (Circle One.)

Indicate the degree to which you agree with the following statement using the following scale:

agree							disagree
1	2	3	4	5	6	7	

16. Wanting to use a condom with a sexual partner suggests that you do not completely trust them or love them. \_\_\_\_\_

17. Wanting to use a condom with a sexual partner is a way of showing that you care for them. \_\_\_\_\_

18. Using contraceptives is a sign that you have had or would like to have sex with many people. \_\_\_\_\_

19. Using condoms will or does decrease the pleasure of sex or ruin a romantic mood. \_\_\_\_\_

20. What would be your first three choices for birth control and why?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

21. Please list any type of situation (experienced or predicted) in which unsafe sexual activity may take place.

22. If you have been in this type of situation (unsafe sexual situation) or if you happen to be in the future, how would you handle it? What would you say? What would you do?

23. How would you convince a sexual partner to use a condom?

What would you say \_\_\_\_\_

What would you do \_\_\_\_\_

What might they say \_\_\_\_\_

What might they do \_\_\_\_\_

Why might this be difficult \_\_\_\_\_

24. Using the following scale:

Very Confident                      Neutral                      Not at all Confident  
1                                      2                                      3                                      4                                      5

How confident are you that you will be able consistently to practice safer sexual behaviors?  
1      2      3      4      5

How confident are you that using safer sexual behaviors will protect you from disease? 1      2      3      4      5

The next questions are about your sexual activities during the past four months. Please write the number of times you did each of these sexual activities in the last four months and the number of partners. Mark as many as apply during all sexual activities.

<u>Number of times</u>	<u>Number of partners</u>	
_____	_____	Sexual intercourse without a condom.
_____	_____	Sexual intercourse with a condom.
_____	_____	Performed oral-genital sex on a man without a condom.
_____	_____	Performed oral-genital sex on a man with a condom.
_____	_____	Man performed unprotected oral-genital sex on me.
_____	_____	Body rubbing, massage, or mutual masturbation to orgasm without any insertion.

The next questions are about your sexual activities during the past twelve months. Please write the number of times you did each of these sexual activities in the last twelve months and the number of partners. Mark as many as apply during all sexual activities.

<u>Number of times</u>	<u>Number of partners</u>	
_____	_____	Sexual intercourse without a condom.
_____	_____	Sexual intercourse with a condom.
_____	_____	Performed oral-genital sex on a man without a condom.
_____	_____	Performed oral-genital sex on a man with a condom.
_____	_____	Man performed unprotected oral-genital sex on me.
_____	_____	Body rubbing, massage, or mutual masturbation to orgasm without any insertion.

Please indicate the frequency and the type of situation in which the following activities occurred over the past week.

Frequency

\_\_\_\_\_ Drank alcoholic beverages.

Situations

---

\_\_\_\_\_ Drank alcoholic beverages to excess.

Situations

---

\_\_\_\_\_ Smoked marijuana.

Situations

---

\_\_\_\_\_ Took other drugs (e.g. cocaine, crack, heroin)

Situations

---

\_\_\_\_\_ Sexual intercourse without a condom.

Situations

---

\_\_\_\_\_ Sexual intercourse with a condom.

Situations

---

\_\_\_\_\_ Oral-genital sex without a condom.

Situations

---

\_\_\_\_\_ Oral-genital sex with a condom.

Situations

---

## AIDS RISK BEHAVIOR KNOWLEDGE TEST

This is a true/false test. Please don't skip any questions. Because this is a test, some of the statements are true and accurate, while others are false and inaccurate.

- True False 1. Most people who transmit the AIDS virus look unhealthy.
- True False 2. Anal intercourse is high risk for transmitting the AIDS virus.
- True False 3. Oral intercourse carries risk for AIDS virus transmission.
- True False 4. A person can be exposed to the AIDS virus in one sexual contact.
- True False 5. Keeping in good physical condition is the best way to prevent exposure to the AIDS virus.
- True False 6. It is unwise to touch a person with AIDS.
- True False 7. Condoms make intercourse completely safe.
- True False 8. Showering after sex greatly reduces the transmission of AIDS.
- True False 9. When people become sexually exclusive with one another, they no longer need to follow "safe sex" guidelines.
- True False 10. Oral sex is safe if the partners "don't swallow.
- True False 11. Most people who have been exposed to the AIDS virus quickly show symptoms of serious illness.
- True False 12. By reducing the number of different sexual partners, you are effectively protected from AIDS.
- True False 13. The AIDS virus does not penetrate broken skin.

- True False 14. Female-to-male transmission of the AIDS virus has not been documented.
- True False 15. Sharing toothbrushes and razors can transmit the AIDS virus.
- True False 16. Pre-ejaculatory fluids carry the AIDS virus.
- True False 17. Intravenous drug users are at risk for AIDS when they share needles.
- True False 18. A person must have many different sexual partners to be at risk for AIDS.
- True False 19. People carrying the AIDS virus generally feel quite ill.
- True False 20. Vaginal intercourse carries high risk for AIDS virus transmission.
- True False 21. Withdrawal immediately before orgasm makes intercourse safe.
- True False 22. Persons who are exclusively heterosexual are not at risk for AIDS.
- True False 23. Healthy persons in AIDS risk groups should not donate blood.
- True False 24. Sharing kitchen utensils or a bathroom with a person with AIDS poses no risk.
- True False 25. Intravenous drug users become exposed to the AIDS virus because the virus is often contained in heroin, amphetamines, and the injected drugs.
- True False 26. A wholesome diet and plenty of sleep will keep a person from becoming exposed to the AIDS virus.
- True False 27. A cure for AIDS is expected within the next two years.
- True False 28. It is more important to take precautions against AIDS in large cities than in small cities.

- True False 29. A negative result on the AIDS virus antibody test can occur even for people who do not carry the virus.
- True False 30. A positive result on the AIDS virus antibody test can occur even for people who do not carry the virus.
- True False 31. Coughing does not spread AIDS.
- True False 32. Only receptive (passive) anal intercourse transmits AIDS.
- True False 33. Most present cases of AIDS are due to blood transfusions that took place before 1984.
- True False 34. Most persons exposed to the AIDS virus know they are exposed.
- True False 35. A great deal is now known about how the AIDS virus is transmitted.
- True False 36. Donating blood carries no AIDS risk for the donor.
- True False 37. No cases of AIDS have ever been linked to social (dry) kissing.
- True False 38. Mutual masturbation and body rubbing are low in risk unless the partners have cuts or scratches.
- True False 39. People who become exposed to the AIDS virus through needle-sharing can transmit the virus to others during sexual activities.
- True False 40. The AIDS virus can be transmitted by mosquitoes or cockroaches.

### Rathus Schedule

Directions: Indicate how characteristic or descriptive each of the following statements is of you by using the code given below.

- +3 very characteristic of me, extremely descriptive
- +2 rather characteristic of me, quite descriptive
- +1 somewhat characteristic of me, slightly descriptive
- 1 somewhat uncharacteristic of me, slightly nondescriptive
- 2 rather uncharacteristic of me, quite nondescriptive
- 3 very uncharacteristic of me, extremely nondescriptive

1. \_\_\_ Most people seem to be more aggressive and assertive than I am.
2. \_\_\_ I have hesitated to make or accept dates because of "shyness".
3. \_\_\_ When the food served at a restaurant is not done to my satisfaction, I complain about it to the waiter or waitress.
4. \_\_\_ I am careful to avoid hurting other people's feelings, even when I feel that I have been injured.
5. \_\_\_ If a salesman has gone to considerable trouble to show me merchandise which is not quite suitable, I have a difficult time saying "No".
6. \_\_\_ When I am asked to do something, I insist upon knowing why.
7. \_\_\_ There are times when I look for a good, vigorous argument.
8. \_\_\_ I strive to get ahead as well as most people in my position.
9. \_\_\_ To be honest, people often take advantage of me.
10. \_\_\_ I enjoy starting conversations with new acquaintances and strangers.

11. \_\_I often don't know what to say to attractive persons of the opposite sex.
12. \_\_I will hesitate to make phone calls to business establishments and institutions.
13. \_\_I would rather apply for a job or for admission to a college by writing letters than by going through with personal interview.
14. \_\_I find it embarrassing to return merchandise.
15. \_\_If a close and respected relative were annoying me, I would smother my feelings rather than express my annoyance.
16. \_\_I have avoided asking questions for fear of sounding stupid.
17. \_\_During an argument I am sometimes afraid that I will get so upset that I will shake all over.
18. \_\_If a famed and respected lecturer makes a statement which I think is incorrect, I will have the audience hear my point of view as well.
19. \_\_I avoid arguing over prices with clerks and salesmen.
20. \_\_When I have done something important or worthwhile, I manage to let others know about it.
21. \_\_I am open and frank about my feelings.
22. \_\_If someone has been spreading false and bad stories about me, I see him (her) as soon as possible to "have a talk" about it.
23. \_\_I often have a hard time saying "No".
24. \_\_I tend to bottle up my emotions rather than make a scene.
25. \_\_I complain about poor service in a restaurant and elsewhere.
26. \_\_When I am given a compliment, I sometimes just don't know what to say.

27. \_\_If a couple near me in a theatre or at a lecture were conversing rather loudly, I would ask them to be quiet or to take their conversation elsewhere.
28. \_\_Anyone attempting to push ahead of me in line is in for a good battle.
29. \_\_I am quick to express an opinion.
30. \_\_There are times when I just can't say anything.

**Appendix C**  
**Focus Group Summary**

## Focus Group Summary

### AIDS Risk Knowledge

Mean = 36/40 (90%) Standard Deviation 1.26

Range = 34-37

### Rathus Assertiveness Schedule

Range = -32 - +86 Possible Range = -90 - +90

Mean = 28

### Conclusion

-College-aged women believe they are likely to abuse alcohol, somewhat likely to use illegal drugs, and unlikely that they will get a sexually transmitted disease, become pregnant without being married, or become infected with HIV either during college or in their lifetime.

-Perceived peer norms regarding sexual activity and safer sex suggest the following: friends are sexually active, safer sex is accepted by peers but may be talked about more than actually practiced, and that friends are not consistently using condoms during intercourse. Some sets of peers report that these issues are not discussed among friends.

-All participants reported sexual intercourse with and without a condom and unprotected oral-genital sex over the past two years. Sexual behavior in the past year was described as slightly, somewhat, or a good

deal risky. Only one participant reported changing her sexual behavior in response to the AIDS epidemic (e.g. being more particular about partners).

-Alcohol use reportedly increases sexual desire/ decreases inhibitions and often results in casual sexual activity. Situations that are conducive to unsafe sexual activity are primarily alcohol related, unavailability of birth control and/or condoms, or involvement in a "steady" relationship.

-All of the women believe it is both the man and woman's responsibility to provide contraception. Condoms were reported as the top choice for birth control, followed by the birth control pill. Attitudes toward condom use appear to be positive, with some varied opinion as to their effect on sexual pleasure and interruption of sexual activity. Issues of trust were indicated if condom use is approached in an ongoing relationship.

-Participants generated some sexually assertive responses to unsafe/coercive situations (e.g. avoid drinking, ask him to get a condom, refuse sex), but were concerned that assertiveness would be necessary in the actual situation and that this type of situation may cause stress. Traditional sex roles appear to be a problem for women in handling sexual situations (i.e.

dominant, aggressive male).

-Self-efficacy ratings suggest confidence in ability to practice safer sexual behaviors, with the range being very confident to neutral.

-The Risk History Survey was indicative of high frequencies of safe and unsafe sexual behaviors with the majority of respondents reporting 1 or 2 partners over the past year. The exception to this was two separate individuals reported having sexual intercourse without a condom with 3 and 4 different partners.

-Over the week prior to the focus group, all individuals reported drinking alcoholic beverages, three of these women reported drinking alcohol to excess. Two of six women reported having sexual intercourse without a condom over the past week (not with a steady partner).

-Other issues expressed during the group discussion were:

- 1) use of other contraceptives (the pill) rather than condoms (pregnancy is greater concern than STDs),
- 2) partner's sexual history is never discussed,
- 3) knowledge and skills for proper use of condoms is lacking,
- 4) importance of self-esteem in developing safer

sex practices,

5) if behavior is changed, maintenance is difficult,

6) freshman women have different situations and experiences than upperclass women, and

7) perceived risk of HIV infection is basically nonexistent, and those aware of risk do not typically change their sexual behavior, particularly under the influence of alcohol and/or drugs.

**Appendix D**  
**Role Play Scenarios**

## Role Play Scenarios

### Role Play 1

You are at a keg party in a friend's apartment and an interesting guy is making a move on you. You have had too much to drink, but enjoy talking with him briefly. You find yourself quite attracted to him and sense that he really wants to pick you up tonight. He has been touching you and kisses you on the neck. His body language is telling you that he is interested in you sexually. He says:

Partner comment 1: Would you like to come over to my apartment for another beer?

Partner comment 2: I live in the apartment next door; would you like to come over?

partner comment 3: Why don't you come over to my place after the party?

### Role Play 2

You are alone with a good friend in your apartment. You have been feeling kind of down and lonely lately, and he has come over to visit to help cheer you up. You have been drinking a couple glasses of wine, having a good conversation, and he begins to come on to you. He says:

Partner comment 1: You really are very attractive, and

I would like to go to bed with you.

Partner comment 2: Even though you are feeling down on yourself, I think you are really great. I would enjoy making love to you. What do you say?

Partner comment 3: You have always been a very special friend to me. What do you think about having sex with me?

### Role Play 3

You have been involved in a serious relationship with this guy for nearly one year. You have been using the birth control pill as an effective means of contraception. You have never discussed his sexual history or yours and realize that it is important that you begin using condoms as a safer sex practice. He is resistant to the idea and says:

Partner comment 1: Why don't you just keep using the pill? You have not gotten pregnant yet, have you?

Partner comment 2: I can't feel anything if I use a rubber. Plus, it really ruins my mood to stop and put one on.

Partner comment 3: I'll just pull out, or is it that you don't really trust me?

### Role Play 4

You have gone out to a bar with a bunch of your

friends. You end up having too much to drink and going home with a guy you had met last week at a party. He is coming on very strong and you are uncertain of what to do. You do not have any condoms with you. He says:  
Partner comment 1: You're really sexy. Come on, let's go to bed.

Partner comment 2: Let's go to bed. There is no need to worry,; I know what to do.

Partner comment 3: Let's go to bed and make love. I know we'll have a great time and there is no need to worry.

#### Role Play 5

You have been talking to this guy all night at a great party and are together in his room. You are now in bed with him; kissing passionately and both of you are partly undressed. You kind of like the guy but are unsure about having sex with him. He has been nice to you all evening and you kind of feel like you have led him this far. He has not talked about having sex with you, but he is moving toward taking off the rest of

your clothes and you know what he is expecting. He says:

Partner comment 1: Come on, I really like you a lot.

Partner comment 2: You sure are hot; this is going to be great.

Partner comment 3: You're making me crazy and I can't wait any longer.

### Role Play 6

You have been dating this guy for a few weeks and you really like him and find him attractive. You are together in bed after a really nice evening. One thing leads to another and you are both ready to have sexual intercourse. You ask him if he would wear a condom.

He says:

Partner comment 1: I really have a hard time with those things and don't like to use them.

Partner comment 2: I have trouble using condoms and will lose my erection to stop and put it on.

Partner comment 3: I can't feel a thing when I wear a condom.

**Appendix E**

**Pilot and Overall Study Questionnaire**

SUBJECT # \_\_\_\_\_

SKILLS TRAINING FOR AIDS AND STD PREVENTION  
WITH HETEROSEXUAL FEMALES

Please fill out the following information:

AGE: \_\_\_\_\_ YEAR IN COLLEGE \_\_\_\_\_ MAJOR: \_\_\_\_\_

HOUSING: \_\_\_\_\_ ON-CAMPUS \_\_\_\_\_ OFF-CAMPUS

CURRENTLY IN STEADY RELATIONSHIP: YES NO

If yes, number of months in relationship: \_\_\_\_\_

Attached is a questionnaire assessing a variety of beliefs, attitudes, behaviors, and situations regarding sexual behavior and alcohol and drug use. You do not have to answer any question that you feel uncomfortable with. You may leave blank any question that you wish or feel is too personal.

Please answer the following questions:

1. What is the likelihood that you will have an unplanned pregnancy during your college years?

NOT AT ALL LIKELY				LIKELY		EXTREMELY LIKELY
1	2	3	4	5	6	7

2. What is the likelihood that you will contract a sexually transmitted disease during your college years?

NOT AT ALL LIKELY				LIKELY		EXTREMELY LIKELY
1	2	3	4	5	6	7

3. What is the likelihood that you will contract HIV (AIDS virus) during your college years?

NOT AT ALL LIKELY				LIKELY		EXTREMELY LIKELY
1	2	3	4	5	6	7

4. What is the likelihood that other female college students will have an unplanned pregnancy during their college years?

NOT AT ALL LIKELY				LIKELY		EXTREMELY LIKELY
1	2	3	4	5	6	7

5. What is the likelihood that other female college students will contract a sexually transmitted disease during their college years?

NOT AT ALL LIKELY				LIKELY		EXTREMELY LIKELY
1	2	3	4	5	6	7

6. What is the likelihood that other female college students will contract HIV (AIDS virus) during their college years?

NOT AT ALL LIKELY				LIKELY		EXTREMELY LIKELY
1	2	3	4	5	6	7

Please answer the following questions:

7. How confident are you that you will be able to consistently practice safer (lower risk) sexual behaviors?

NOT AT ALL CONFIDENT			NEUTRAL			VERY CONFIDENT
1	2	3	4	5	6	7

8. How confident are you that using safer sexual behaviors will protect you from sexually transmitted diseases?

NOT AT ALL CONFIDENT			NEUTRAL			VERY CONFIDENT
1	2	3	4	5	6	7

9. How confident are you that you will be able to consistently use a condom for sexual intercourse?

NOT AT ALL CONFIDENT			NEUTRAL			VERY CONFIDENT
1	2	3	4	5	6	7

10. How confident are you that using condoms during sexual intercourse will protect you from disease?

NOT AT ALL CONFIDENT			NEUTRAL			VERY CONFIDENT
1	2	3	4	5	6	7

11. How confident are you that you will be able to take part in low risk sexual activities (e.g. fondling, mutual masturbation) if you choose not to have sexual intercourse?

NOT AT ALL CONFIDENT			NEUTRAL			VERY CONFIDENT
1	2	3	4	5	6	7

12. How confident are you that taking part in low risk sexual activities will result in a satisfying sexual relationship?

NOT AT ALL CONFIDENT			NEUTRAL			VERY CONFIDENT
1	2	3	4	5	6	7

13. How confident are you that you will be able to avoid or withdraw from risk situations involving alcohol, drugs, or sex if you choose not to participate?

NOT AT ALL						VERY
CONFIDENT			NEUTRAL			CONFIDENT
1	2	3	4	5	6	7

14. How confident are you that avoiding or withdrawing from risk situations will keep you from taking part in risk activities?

NOT AT ALL						VERY
CONFIDENT			NEUTRAL			CONFIDENT
1	2	3	4	5	6	7

The next set of statements involves your opinion concerning how your friends behave. Even if you are not sure, please answer each questions with your best guess.

	<u>Strongly</u> <u>Disagree</u>		<u>Neutral</u>		<u>Strongly</u> <u>Agree</u>
15. My friends always use condoms during intercourse.	1	2	3	4	5
16. My friends talk about safer sex more than they actually practice it.	1	2	3	4	5
17. My friends believe that insisting on safer sex implies lack of trust with partner.	1	2	3	4	5
18. Safer sex is completely accepted by my friends.	1	2	3	4	5
19. My friends are very sexually active.	1	2	3	4	5

The next questions are about your sexual activities during the past four months. Please write the number of times you did each of these sexual activities in the last four months and the number of partners. Mark as many as apply during all sexual activities.

<u>Number</u> <u>of times</u>	<u>Number</u> <u>of partners</u>	
_____	_____	Sexual intercourse without a condom.
_____	_____	Sexual intercourse with a condom.
_____	_____	Performed oral-genital sex on a man without a condom.
_____	_____	Performed oral-genital sex on a man with a condom.
_____	_____	Man performed unprotected oral-genital sex on me.
_____	_____	Body rubbing, massage, or mutual masturbation to orgasm without any insertion.

The next questions are about your sexual activities during the past twelve months. Please write the number of times you did each of these sexual activities in the last twelve months and the number of partners. Mark as many as apply during all sexual activities.

<u>Number</u> <u>of times</u>	<u>Number</u> <u>of partners</u>	
_____	_____	Sexual intercourse without a condom.
_____	_____	Sexual intercourse with a condom.
_____	_____	Performed oral-genital sex on a man without a condom.
_____	_____	Performed oral-genital sex on a man with a condom.
_____	_____	Man performed unprotected oral-genital sex on me.
_____	_____	Body rubbing, massage, or mutual masturbation to orgasm without any insertion.

Please indicate the frequency and the type of situations in which the following activities occurred over the past two weeks.

Frequency

\_\_\_\_\_ Drank 2-3 alcoholic beverages on one occasion.  
Situations \_\_\_\_\_

\_\_\_\_\_ Drank 4 or more alcoholic beverages on one occasion.  
Situations \_\_\_\_\_

\_\_\_\_\_ Used drugs (e.g. marijuana, cocaine, crack)  
Situations \_\_\_\_\_

\_\_\_\_\_ Sexual intercourse without a condom.  
Situations \_\_\_\_\_

\_\_\_\_\_ Sexual intercourse with a condom.  
Situations \_\_\_\_\_

\_\_\_\_\_ Oral-genital sex without a condom.  
Situations \_\_\_\_\_

\_\_\_\_\_ Oral-genital sex with a condom.  
Situations \_\_\_\_\_

\_\_\_\_\_ Sexual intercourse with birth control other than a condom.  
Situations \_\_\_\_\_

\_\_\_\_\_ Sexual intercourse without birth control.  
Situations \_\_\_\_\_

\_\_\_\_\_ Mutual masturbation to orgasm.  
Situations \_\_\_\_\_

\_\_\_\_\_ Other sexual activity (body rubbing, massage, fondling) without having sexual intercourse.  
Situations \_\_\_\_\_

\_\_\_\_\_ Avoidance or delay of sexual situation.  
Situations \_\_\_\_\_

\_\_\_\_\_ Avoidance or delay of situations that involve drinking alcohol or using drugs.  
Situations \_\_\_\_\_

\_\_\_\_\_ Number of condoms used of those provided by group leader. \_\_\_\_\_ Regular \_\_\_\_\_ Oral

## PRACTICE OF SKILLS

In the past two weeks, how often did you use or practice the following skills in "real life" situations?

1. Avoid an alcohol-related situations.

0 - 2 - 4 - 6 - 8 - 10 - 12 - 14  
Never Every Day

2. Avoid a sexual situation.

0 - 2 - 4 - 6 - 8 - 10 - 12 - 14  
Never Every Day

3. Withdraw from or delay an alcohol-related situation.

0 - 2 - 4 - 6 - 8 - 10 - 12 - 14  
Never Every Day

4. Withdraw from or delay a sexual situation.

0 - 2 - 4 - 6 - 8 - 10 - 12 - 14  
Never Every Day

5. Assertiveness with someone to reduce and/or not participate in high risk behaviors.

0 - 2 - 4 - 6 - 8 - 10 - 12 - 14  
Never Every Day

6. Assertiveness with someone to continue with low risk behaviors.

0 - 2 - 4 - 6 - 8 - 10 - 12 - 14  
Never Every Day

7. Assertiveness with someone to take part in other sexual activity, excluding sexual intercourse.

0 - 2 - 4 - 6 - 8 - 10 - 12 - 14  
Never Every Day

8. Assertiveness with someone to use a condom during sexual intercourse.

0 - 2 - 4 - 6 - 8 - 10 - 12 - 14  
Never Every Day

## Rathus Schedule

Directions: Indicate how characteristic or descriptive each of the following statements is of you by using the code given below.

+3 very characteristic of me, extremely descriptive

+2 rather characteristic of me, quite descriptive

+1 somewhat characteristic of me, slightly descriptive

-1 somewhat uncharacteristic of me, slightly nondescriptive

-2 rather uncharacteristic of me, quite nondescriptive

-3 very uncharacteristic of me, extremely nondescriptive

1. \_\_\_ Most people seem to be more aggressive and assertive than I am.
2. \_\_\_ I have hesitated to make or accept dates because of "shyness".
3. \_\_\_ When the food served at a restaurant is not done to my satisfaction, I complain about it to the waiter or waitress.
4. \_\_\_ I am careful to avoid hurting other people's feelings, even when I feel that I have been injured.
5. \_\_\_ If a salesman has gone to considerable trouble to show me merchandise which is not quite suitable, I have a difficult time saying "No".
6. \_\_\_ When I am asked to do something, I insist upon knowing why.
7. \_\_\_ There are times when I look for a good, vigorous argument.
8. \_\_\_ I strive to get ahead as well as most people in my position.
9. \_\_\_ To be honest, people often take advantage of me.
10. \_\_\_ I enjoy starting conversations with new acquaintances and strangers.

11. \_\_\_ I often don't know what to say to attractive persons of the opposite sex.
12. \_\_\_ I will hesitate to make phone calls to business establishments and institutions.
13. \_\_\_ I would rather apply for a job or for admission to a college by writing letters than by going through with personal interview.
14. \_\_\_ I find it embarrassing to return merchandise.
15. \_\_\_ If a close and respected relative were annoying me, I would smother my feelings rather than express my annoyance.
16. \_\_\_ I have avoided asking questions for fear of sounding stupid.
17. \_\_\_ During an argument I am sometimes afraid that I will get so upset that I will shake all over.
18. \_\_\_ If a famed and respected lecturer makes a statement which I think is incorrect, I will have the audience hear my point of view as well.
19. \_\_\_ I avoid arguing over prices with clerks and salesmen.
20. \_\_\_ When I have done something important or worthwhile, I manage to let others know about it.
21. \_\_\_ I am open and frank about my feelings.
22. \_\_\_ If someone has been spreading false and bad stories about me, I see him (her) as soon as possible to "have a talk" about it.
23. \_\_\_ I often have a hard time saying "No".
24. \_\_\_ I tend to bottle up my emotions rather than make a scene.
25. \_\_\_ I complain about poor service in a restaurant and elsewhere.
26. \_\_\_ When I am given a compliment, I sometimes just don't know what to say.

27. \_\_If a couple near me in a theatre or at a lecture were conversing rather loudly, I would ask them to be quiet or to take their conversation elsewhere.
28. \_\_Anyone attempting to push ahead of me in line is in for a good battle.
29. \_\_I am quick to express an opinion.
30. \_\_There are times when I just can't say anything.

Please circle the best response.

1. HIV is transmitted primarily through

- a. blood or blood products
- b. sexual contact
- c. infected mother to infant
- d. all of the above
- e. don't know

2. The incubation period of AIDS is defined as

- a. the type of symptoms exhibited by HIV infected persons
- b. the period of time from infection to when a person is diagnosed with AIDS
- c. the average amount of time a person with AIDS lives with a diagnosis
- d. the transmission of HIV between mother and infant
- e. don't know

3. The average length of the incubation period is

- a. 2 years
- b. 8 years
- c. 6 months
- d. 1 year
- e. don't know

4. HIV may affect

- a. the central nervous system
- b. the brain
- c. both a and b
- d. none of the above
- e. don't know

5. The Public Health Service estimates that \_\_\_\_\_ people are infected with HIV in the United States.

- a. 100,000
- b. 10 billion
- c. 1-2 million
- d. 5-10 million
- e. don't know

6. The fastest growing group of AIDS patients is
- a. children aged 0 - 13
  - b. heterosexual females
  - c. homosexual males
  - d. the elderly
  - e. don't know
7. Genital herpes and AIDS are both
- a. life-threatening
  - b. possibly damaging to the central nervous system
  - c. prevented by using condoms correctly
  - d. caused by HIV
  - e. don;t know
8. Other than abstinence, which of the following is considered most effective in preventing the sexual transmission of HIV:
- a. diaphragm
  - b. condom
  - c. birth control pill
  - d. latex condom used with nonoxynol-9
  - e. don't know
9. Alcohol and drug use increase the likelihood of HIV infection
- a. because people may feel less inhibited in risky situations
  - b. by causing minimal brain damage, thus, increasing the possibility of HIV infection
  - c. by directly lowering the immune system's defenses
  - d. because sharing the same beer bottle or marijuana cigarette can spread HIV infection
  - e. don't know
10. The following behaviors put an individual at risk of HIV infection
- a. exchanging sex for a hit of cocaine
  - b. sharing needles to inject drugs intravenously
  - c. having sex with someone who's past sexual history is unknown to you
  - d. all of theabove
  - e. a and c, only
  - f. don't know

11. The drug AZT

- a. can be taken to prevent AIDS
- b. may reduce the problems and symptoms of people infected with HIV
- c. eliminates most of the problems and symptoms of people with AIDS
- d. will soon be a routine vaccination taken by children to prevent AIDS, much like other vaccinations to prevent other diseases
- e. don't know

12. \_\_\_\_\_ is the most prevalent sexually transmitted disease (STD) in the United States.

- a. herpes
- b. syphilis
- c. chlamydia
- d. gonorrhea
- e. don't know

13. The most rapid increase of genital herpes is occurring among which of the following sexually active persons?

- a. black females, age 15 - 25
- b. white males, age 20 - 30
- c. white males and females, age 25 - 35
- d. black males and females, age 25 - 35
- e. don't know

14. Up to \_\_\_\_\_ percent of women with chlamydial infection will have no noticeable symptoms until complications set in.

- a. 80
- b. 60
- c. 40
- d. 25
- e. don't know

15. Sexually transmitted diseases (excluding HIV infection) such as chlamydia, herpes, or syphilis may result in which of the following complications:

- a. infertility
- b. arthritis
- c. cervical cancer
- d. heart disease
- e. a and c
- f. all of the above
- g. don't know

16. Which of the following are considered low risk sexual behaviors in relation to HIV infection

- a. mutual masturbation
- b. unprotected vaginal intercourse
- c. oral-genital sex
- d. a and c
- e. don't know

17. A positive HIV antibody test means that

- a. you have AIDS
- b. you have the active virus in your body, but may or may not be capable of transmitting HIV to others
- c. there is no need to protect yourself from further infection with HIV
- d. you have been infected with HIV and your body has produced antibodies
- e. don't know

18. A negative HIV antibody test may be explained in the following way(s):

- a. you have not been infected with HIV
- b. you have been infected with the virus but have not yet produced antibodies
- c. you are protected from HIV infection
- d. a and b
- e. don't know

19. Most college-aged women believe they are likely to:

- a. abuse alcohol
- b. use illegal drugs
- c. get pregnant without getting married
- d. get a sexually transmitted disease
- e. a and b
- f. none of the above

20. Situations that are conducive to risky sexual activity are influenced by:

- a. the use of alcohol and drugs
- b. involvement in a "steady" relationship
- c. high levels of social support
- d. easy access to condoms
- e. a and b
- f. a and d

21. A skill or belief that is thought to increase lower risk (safer) sexual behaviors is:

- a. self-efficacy
- b. beliefs of invulnerability
- c. anxiety
- d. depression
- e. a and c

22. Most college-aged heterosexual females believe that:

- a. they have they skills and knowledge for proper use of condoms
- b. the use of condoms is the male's responsibility
- c. maintaining lower risk behaviors is difficult over time and across situations
- d. a and c
- e. all of the above

23. A woman may effectively handle a difficult sexual or alcohol-related situation in which of the following ways:

- a. avoiding a risk-related situation
- b. being aware that it is highly unlikely that she would get AIDS
- c. managing the situation at a safer level
- d. a and c
- e. all of the above

24. Individual behaviors in a sexual situation are influenced by which of the following factors:

- a. sexual arousal and use of alcohol
- b. self-esteem, sexual arousal, and use of alcohol
- c. use of alcohol alone

Please answer the next question using the following scale:

VERY STRONG DISLIKE				NEUTRAL				VERY STRONG LIKE
1	2	3	4	5	6	7		

How much do you like each of the following group members:

_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7
_____	1	2	3	4	5	6	7

Overall, how much did you like the group?

VERY STRONG DISLIKE				NEUTRAL			VERY STRONG LIKE
1	2	3	4	5	6	7	

**PROGRAM EVALUATION FORM**

1. Please rate how effective each of the following program components were in developing sexual assertiveness skills, using the following scales.

Very Ineffective				Neutral				Very Effective			
1	2	3	4	5	6	7					
A. Information / Education					1	2	3	4	5	6	7
B. Behavioral Self Management (e.g. Avoid, Withdraw, Handle Safely, or Social Support)					1	2	3	4	5	6	7
C. Sexual Assertiveness Skills/ Safer Sex Negotiations					1	2	3	4	5	6	7
D. Role Playing					1	2	3	4	5	6	7
E. Practice and Feedback					1	2	3	4	5	6	7
F. Condom Skills					1	2	3	4	5	6	7

2. Please rate how effective each of the following program components were in reducing risk related behaviors, using the following scales.

Very Ineffective				Neutral				Very Effective			
1	2	3	4	5	6	7					
A. Information / Education					1	2	3	4	5	6	7
B. Behavioral Self Management (e.g. Avoid, Withdraw, Handle Safely, or Social Support)					1	2	3	4	5	6	7
C. Sexual Assertiveness Skills/ Safer Sex Negotiations					1	2	3	4	5	6	7
D. Role Playing					1	2	3	4	5	6	7
E. Practice and Feedback					1	2	3	4	5	6	7
F. Condom Skills					1	2	3	4	5	6	7

3. Please rate how enjoyable each of the following program components were, using the following scales.

	Very Ineffective		Neutral			Very Effective					
	1	2	3	4	5	6	7				
A. Information / Education					1	2	3	4	5	6	7
B. Behavioral Self Management (e.g. Avoid, Withdraw, Handle Safely, or Social Support)					1	2	3	4	5	6	7
C. Sexual Assertiveness Skills/ Safer Sex Negotiations					1	2	3	4	5	6	7
D. Role Playing					1	2	3	4	5	6	7
E. Practice and Feedback					1	2	3	4	5	6	7
F. Condom Skills					1	2	3	4	5	6	7

**Appendix F**

**Role Play Rating Form - Pilot Study**

Role Play Rating Form - Pilot Study

PARTICIPANT NUMBER \_\_\_\_\_ RATER \_\_\_\_\_

1. Scene 1:

R1	R2	R3
Acknowledgement___	Acknowledgement___	Acknowledgement___
Refusal _____	Refusal _____	Refusal _____
Reason _____	Reason _____	Reason _____
Safer _____	Safer _____	Safer _____
Specific Alt. _____	Specific Alt. _____	Specific Alt. _____

Overall Effectiveness 1 2 3 4 5 6 7

2. Scene 2:

R1	R2	R3
Acknowledgement___	Acknowledgement___	Acknowledgement___
Refusal _____	Refusal _____	Refusal _____
Reason _____	Reason _____	Reason _____
Safer _____	Safer _____	Safer _____
Specific Alt. _____	Specific Alt. _____	Specific Alt. _____

Overall Effectiveness 1 2 3 4 5 6 7

3. Scene 3:

R1	R2	R3
Acknowledgement___	Acknowledgement___	Acknowledgement___
Refusal _____	Refusal _____	Refusal _____
Reason _____	Reason _____	Reason _____
Safer _____	Safer _____	Safer _____
Specific Alt. _____	Specific Alt. _____	Specific Alt. _____

Overall Effectiveness 1 2 3 4 5 6 7

4. Scene 4:

R1	R2	R3
Acknowledgement___	Acknowledgement___	Acknowledgement___
Refusal _____	Refusal _____	Refusal _____
Reason _____	Reason _____	Reason _____
Safer _____	Safer _____	Safer _____
Specific Alt. _____	Specific Alt. _____	Specific Alt. _____

Overall Effectiveness 1 2 3 4 5 6 7

5. Scene 5:

R1	R2	R3
Acknowledgement___	Acknowledgement___	Acknowledgement___
Refusal ___	Refusal ___	Refusal ___
Reason ___	Reason ___	Reason ___
Safer ___	Safer ___	Safer ___
Specific Alt. ___	Specific Alt. ___	Specific Alt. ___
Overall Effectiveness	1 2 3 4 5 6 7	

6. Scene 6:

R1	R2	R3
Acknowledgement___	Acknowledgement___	Acknowledgement___
Refusal ___	Refusal ___	Refusal ___
Reason ___	Reason ___	Reason ___
Safer ___	Safer ___	Safer ___
Specific Alt. ___	Specific Alt. ___	Specific Alt. ___
Overall Effectiveness	1 2 3 4 5 6 7	

**Appendix G**  
**Pilot Study Data Summary**

Pilot Study Data Summary

	Pretest		Posttest		Sig
	M	SD	M	SD	
Vulnerability-Self (3 - 21)	10.00	6.73	9.75	6.19	NS
Vulnerability-Other (3 - 21)	14.00	4.55	14.75	4.86	NS
Self-Efficacy (4 - 28)	18.25	7.04	22.50	1.91	NS
Outcome Expectancy (4 - 28)	21.00	5.60	23.50	2.89	NS
Overall Assertiveness (-90 - +90)	13.00	11.89	14.00	19.49	NS
Knowledge (0 - 24)	15.25	2.06	17.25	2.36	NS

SEXUAL ASSERTIVENESS ROLE PLAY RATINGS

Total Score (7 -42)	21.00	4.24	27.25	0.96	p<.05
Average Rating (1 - 7)	3.50	0.71	4.54	0.16	p<.05

\*65% Agreement on Overall Ratings

Component Ratings  
(0 - 18)

Acknowledgement	17.75	0.50	18.00	0.00	NS
Refusal	14.25	3.30	15.00	2.45	NS
Reason	11.25	0.96	12.75	3.10	NS
Safer	5.50	3.42	6.75	3.59	NS
Specific Alternative	2.75	2.50	6.75	3.30	NS

Pilot Study Data Summary, cont.

	Pretest		Posttest		Sig
	M	SD	M	SD	
High Risk Behavior (0-56) -Alcohol to excess -Used drugs -SEXual intercourse no condom -Oral-genital sex no condom	5.75	8.26	6.25	7.76	NS
Low Risk Behavior (0-98) -Sexual intercourse with condom -Oral-genital sex with condom -Mutual masturbation -Other sexual activity -Avoidance of sexual situations -Avoidance of alcohol/drugs	11.25	10.25	15.25	15.80	NS
Sex With Condom (0-14)	0.75	1.50	2.00	4.00	NS
Sex No Condom (0-14)	4.50	7.05	3.50	4.73	NS
Masturbation and Other (0-28)	6.25	7.80	8.75	9.43	NS
Avoid Sex and Alcohol (0-28)	3.50	2.65	2.00	2.45	NS
Use Alcohol (0-28)	1.75	2.36	1.75	2.36	NS

\* 80% Agreement on Sexual Intercourse Without a Condom and Unprotected Sexual Intercourse (Likely due to interpretation of latter term as meaning sexual intercourse without birth control.)

**Appendix H**  
**Male Focus Group Supplement**

## Male Focus Group Supplement

Please answer the following questions.

1. In general, how do you feel about women being sexually assertive?

2. Sexual assertiveness can be related to a variety of choices and behaviors. How do you feel about a women being assertive in regard to each of the following behaviors?

A. Refusing to go home to spend the night with you:

B. Going home with you but refusing to have any sexual activity other than kissing:

C. Having only sexual activity that does not involve sexual intercourse (e.g. kissing, massage, mutual masturbation):

D. Having sexual intercourse only if a condom is used:

E. Refusing to drink alcohol to excess:

3. If you are sexually active, do you automatically/consistently use a condom during sexual intercourse (i.e. without being asked by your partner)?

4. Do you use a condom during sexual intercourse only if your partner asks you to?

**Appendix I**  
**Behavioral Report Interview**

## Behavioral Interview for Reliability

1. In the last two weeks, how many times have you:

\_\_\_ drank alcoholic beverages to excess?

\_\_\_ had sexual intercourse without a condom?

\_\_\_ had oral genital sex without a condom?

\_\_\_ had sexual intercourse with a condom?

\_\_\_ had oral genital sex with a condom?

\_\_\_ had other sexual activity (e.g. mutual  
masturbation, fondling)?

\_\_\_ avoided sexual situations?

\_\_\_ avoided alcohol or drug related situations?

2. Select a risk-related behavior or situation:

---

Where were you?

When was it?

Who was with you?

What led up to the situation?

How did you feel afterward?

What was the result for you?

How did you manage the situation?

Do you have plans to act differently?

What are they?

3. Select a risk-reduction behavior or situation:

---

Where were you?

When was it?

Who was with you?

What led up to the situation?

How did you feel during the situation?

How did you feel afterward?

What was the result for you?

How did you manage the situation?

Do you have plans to act differently?

What are they?

## **Appendix J**

### **Guidelines for Definition of Assertiveness**

## Assertiveness Definitions

Assertiveness - Communication as the important factor.

-Appropriately, firmly, but nonantagonistically express feelings, preferences, needs or opinions to others.

-Distinguish from aggression - situations described involved interest or feelings between the two individuals.

### Components of Sexual Assertiveness:

1. Acknowledge partner's request - respond to what is being asked by male partner. Think of as first part of communication. Examples:

-restate/reflect partner's statement

-statement of personal reaction/thought/emotion (e.g. flattered, pleased, uncertain, interested)

-question or clarification

2. Specifically refuse high-risk behavior - direct statement refusing the risk behavior/activity requested or suggested by male partner. Examples:

- I do not want to go over to your place for another beer.

- I am not interested in spending the night at your place.

- I am not going to have sex with you without using a condom.

3. Provide reason for refusal - a convincing/believable response stating why the risk behavior is being refused. Rationale for refusal. Examples:

- I don't know you well enough. I just met you and I don't go home with someone that I know so little about.

- I'm concerned about pregnancy and STDs and only have sex if we use a condom.

- I want both of us to be protected from diseases.

4. Suggest specific low risk alternative - make suggestion or statement to take part in a behavior or activity that would be of lower risk. States specific alternative. Examples:

- Call me sometime.

- I'll give you a call this weekend.

- Let's lie here together, but not have sex.

- How about if we please each other sexually without having intercourse.

- I'd like to make love to you but only if we use a condom.

**\*\*Consider the following in addition to the specified components for the overall rating:**

1. States position firmly.
2. Respectfully acknowledging the position of the other.
3. States position emphatically.

Nonverbal components - eye contact  
body posture  
voice tone

**Appendix K**

**Role Play Rating Form - Overall Study**

Role Play Rating Form

PARTICIPANT NUMBER \_\_\_\_\_

RATER \_\_\_\_\_

Components: 0 = Absent  
1 = Moderate  
2 = Exceptional

Overall Effectiveness: 1---2---3---4---5---6---7  
Non Assertive Extremely Assertive

Practice Scene

Acknowledgement 0 1 2  
Specific Refusal 0 1 2  
Provide Reason 0 1 2  
Specific Alternative 0 1 2

Overall Effectiveness:  
1--2--3--4--5--6--7

Scene 1

Acknowledgement 0 1 2  
Specific Refusal 0 1 2  
Provide Reason 0 1 2  
Specific Alter. 0 1 2

Overall Effectiveness:  
1--2--3--4--5--6--7

Scene 2

Acknowledgement 0 1 2  
Specific Refusal 0 1 2  
Provide Reason 0 1 2  
Specific Alter. 0 1 2

Overall Effectiveness:  
1--2--3--4--5--6--7

Scene 3

Acknowledgement 0 1 2  
Specific Refusal 0 1 2  
Provide Reason 0 1 2  
Specific Alter. 0 1 2

Overall Effectiveness:  
1--2--3--4--5--6--7

Scene 4

Acknowledgement 0 1 2  
Specific Refusal 0 1 2  
Provide Reason 0 1 2  
Specific Alter. 0 1 2

Overall Effectiveness:  
1--2--3--4--5--6--7

Scene 5

Acknowledgement 0 1 2  
Specific Refusal 0 1 2  
Provide Reason 0 1 2  
Specific Alter. 0 1 2

Overall Effectiveness:  
1--2--3--4--5--6--7

Scene 6

Acknowledgement 0 1 2  
Specific Refusal 0 1 2  
Provide Reason 0 1 2  
Specific Alter. 0 1 2

Overall Effectiveness:  
1--2--3--4--5--6--7

**Appendix L**  
**Skills Training Group Sessions Outline**

## Skills Training Sessions Outline

### SESSION #1

Risk Behavior Education - HIV Infection/AIDS  
Alcohol and Drug Use  
Sexually Transmitted Diseases  
Social/Cultural Influences

### SESSION #2

Behavioral Self-Management

Sexual Assertiveness Skills - Modeling  
Role plays / Rehearsal  
Feedback - group leader  
and group members  
Practice

Condom Use

Homework Assignment

### SESSION #3

Sexual Assertiveness Skills

Self-Efficacy and Social Support

Condom Use

Homework Assignment

### SESSION #4

Review - Educational Information  
Sexual Assertiveness Skills  
Behavioral Self-Management  
Condom Use

Maintenance of Risk Reduction Behaviors

Follow-Up Information

## Additional Literature Review

## Literature Review

### Review of AIDS Prevention Literature

An extensive number of AIDS prevention programs have been developed with an emphasis on public health education and community level interventions targeted at gay/bisexual men and intravenous (IV) drug users (Sikkema, 1989). Program evaluation generally indicated increases in knowledge and awareness, and effective behavior change in some communities (Schechter, Craib, Willoughby, Douglas, McLeod, Maynard, Constance & O'Shaughnessy, 1988). The impact of HIV antibody testing on behavior change remains a controversial issue (Coates, Morin, & McKusick, 1988). However, cognitive-behavioral interventions on a personal/interpersonal level provide a viable option for potential impact on high risk behaviors (e.g. Kelly & St. Lawrence, 1988a).

Becker and Joseph (1988) provided a comprehensive review of published reports encompassing the issues of behavioral risk reduction and knowledge/attitudes regarding AIDS. The authors concluded that these studies demonstrated a ". . . rapid, profound, but expectably incomplete alterations in the behavior of both gay/bisexual males and IV drug users" (p. 394). The focus of behavior change has been on the number of sexual partners, frequency of anal intercourse, and

abstinence or modification of drug use behavior. Risk reduction apparently has occurred more often through modification rather than elimination of sexual or drug use behavior. Moreover, longitudinal descriptions of individual behavior demonstrate instability and recidivism.

Much more optimistically, Stall, Coates, and Hoff (1988) reviewed studies of behavioral risk reduction among gay and bisexual men and concluded that AIDS education and prevention approaches have resulted in ". . . the most profound modifications of personal health-related behaviors ever recorded" (p. 878). The authors suggested that the evidence also supported maintenance of behavior change over time, which is a considerable contrast to many health behavior changes such as weight loss or tobacco use that suffer high recidivism rates. However, it is unclear if findings indicating such large changes also will be found outside of large cities with established gay communities (Dr. J. Kelly, personal communication to Dr. R. Winett, September 1989).

IV drug users are another primary target group for community education prevention approaches. The possible mechanisms of behavior change have been outlined in a review of recent studies of AIDS risk reduction and HIV prevention efforts among IV drug

users (Turner, Miller, & Moses, 1989). It appears that dangerous patterns of IV drug use may be altered by interpersonal interventions plus the availability of cleaning fluids and/or clean needles (Des Jarlais & Friedman, 1988).

The importance of multilevel interventions based on the integration of behavior change strategies embedded within larger environmental changes has also been the conclusion of another overall review of AIDS prevention programs (Sikkema, 1989). Besides an overall review of prevention approaches, methodological limitations were examined, effective components of other types of prevention approaches were identified, and future directions for psychosocial approaches to AIDS-related behavior change were discussed.

The examination of the effectiveness of other health-related prevention programs also is considered critical and useful for the development of AIDS prevention programs (Sikkema, 1989). Reviews and meta-analyses of prevention programs for smoking (Best, Thomson, Sanit, Smith, & Brown, 1988; Flay, 1987; Rundall & Bruvold, 1988), substance abuse (Tobler, 1986), and teenage pregnancy (Schinke, 1984; Winett, King, & Altman, 1989) provide a basis for AIDS prevention programs. Effective interventions have combined education, skills training, and group or peer

influence. Cognitive-behavioral approaches based on interpersonal communication training utilizing modeling, practice, and feedback in problem-solving and decision making appear to be effective elements of different prevention approaches.

#### Future Direction of AIDS Prevention

The AIDS epidemic is a particularly difficult health crisis given the concomitant epidemic of fear and hysteria, the distinctiveness and sensitivities of target subpopulations at risk, and the marked (mostly private) behavior changes that are needed. As presented by Bowen (1988), a long term approach with maximal effects needs to have mutually reinforcing elements and include the following components:

1. The presentation of clear facts and information giving consideration to different settings, circumstances, and cultural perspectives; thus suggesting specific details and a multilingual approach.
2. The realization that it is not sufficient to provide information, but it is also necessary to provide methods and techniques for behavior change, reinforce safe sex behavior, and to inform of risk behavior.
3. The initiation of an individual's personal examination of their behavior, making HIV

infection relevant and increasing perceived vulnerability; and the offering of modes of protection.

4. The creation of skills for safer sexual behaviors including the buying, using and negotiating for use of condoms; dating without sexual activity; and the acceptance of no drug use or sexual activity among teenagers.

5. The further understanding of normative group behaviors and the impact of group influence as one example of a potentially modifying interpersonal/ environmental influence (Dr. J. Kelly, personal communication to Dr. R. Winett, September, 1989).

An integration of current approaches to AIDS prevention in combination with effective components of other prevention programs points to the need for program development broadly based on psychological models and concepts concerning skills development and maintenance of behavior change strategies (e.g. change in group norms). Research from community health risk modification program (e.g. smoking, obesity, cardiovascular risk) indicates that behavioral norms can be established by: a) providing visible and credible models to the target population who can legitimize behavior change; b) encouraging development

and utilization or resistance skills; c) creating social environments and assistance resources that reinforce risk reduction; and d) developing mechanisms which develop pride and concern for self and others (Kelly & St. Lawrence, 1988b).

Fundamental themes of behavior change are that individuals must recognize the problem, be motivated to act, and have the necessary knowledge and skills to perform the action. Furthermore, impediments in the social environment must be removed if behavior change is to be supported over time (Turner et al, 1989). Thus, the initial facilitation, maintenance, and institutionalization of behavior change involves education (e.g. information, skills training, media promotion), motivation and maintenance of behavior change, social support for behavior change, evaluation of effectiveness to identify key components, and diffusion of effective programs to relevant organizations.

The conceptualization of AIDS prevention programs calls for an integrative framework based on a multilevel approach that considers the interactive relationships of biological, psychological, sociocultural, and political/historical factors within a larger environmental context. Even primarily psychological (i.e. individual) behavior change

programs must recognize that individual behavior is embedded in a sociocultural context that strongly determines its characteristics. Attempting to change specific, intimate behaviors that are carried out on a personal basis in an interpersonal setting, leads to examinations of social and cultural factors.

AIDS prevention programs can utilize structured behavioral intervention principles, in addition to education regarding behavioral risk reduction, to assist individuals in changing behavior to reduce risk of exposure to HIV infection. Kelly and St. Lawrence suggested the following factors were associated with changes in the direction of risk reduction behaviors: personal efficacy, depression, level of agreement with risk-reduction guidelines, ability to hold a visual image of the physical deterioration caused by AIDS, and perceived emotional support. A cross-sectional analysis of gay men in San Francisco evidenced a strong relationship between drug and alcohol use during sex and non-compliance with safer sex behaviors (Stall, McKusick, Wiley, Coates, & Ostrow, 1986). Thus research has indicated that behavior change intervention should include an emphasis on social and psychological factors that can facilitate the change of other related risk reduction behaviors.

## Generalization and Maintenance

Issues of generalization and maintenance of behavior change are particularly important in the case of AIDS prevention; recidivism is potentially lethal in the case of HIV infection.

Stokes and Osnes (1989) outlined some principles and tactics recommended as likely to facilitate generalization and maintenance in clinical programs. The generalization programming principles to follow were 1) exploit current functional contingencies, 2) train diversely, and 3) incorporate functional mediators. Training diversely means that less rigid programming will likely have a greater impact on generalization outcomes. If the goals and procedures used in training are diverse, then behavior change may be more generalized over time and situations. For example, the authors suggest the use of sufficient stimulus and response exemplars and less discriminable antecedents and consequences.

The question of specificity vs. generality in skills training is another issue to consider. The type of training received will most likely affect the facilitation of generalizability. Generalizability may be defined as:

- 1) different situations in training;
- 2) situations outside of training ("real world");

3) situations over time.

In order to maximize generalizability, it is important to be specific within a training situation but to identify a range of related situations so as to increase the probability of responding in situations requiring sexual assertiveness (Dr. R. Eisler, personal communication, September 22, 1989).

The issue of maintenance of effective behavior change for AIDS prevention can be considered from the model of relapse prevention (Marlatt & Gordon, 1985). The model is based on teaching individuals to expect and cope with temptation, short-term lapses, and actual relapses. The techniques used in relapse prevention include increasing self-efficacy and self-control, learning to identify and anticipate high-risk situations, mastering alternative behaviors and coping mechanisms, and altering personal feelings and perceptions following a lapse or relapse.

Determinants and predictors of relapse are considered to be an interaction of individual/interpersonal, physiological, and environmental/social factors (Brownell, Marlatt, Lichtenstein, & Wilson, 1986). These authors proposed an approach to the prevention of lapse and relapse that corresponds to the stages of behavior change: motivation and commitment, initial behavior change, and maintenance. The areas to

be covered in initial treatment are decision making, cognitive restructuring, and coping skills. Areas of intervention considered appropriate for the maintenance phase are continued monitoring, social support, and general lifestyle changes.

As is the case with addictive behaviors, it is imperative that maintenance skills be incorporated into skills training interventions for AIDS prevention. The power of the treatment package could be enhanced by teaching and ensuring the implementation of acquired skills that will reduce the likelihood of relapse (Jacobson, 1989). The treatment should be designed to initiate behavior change, but long-term effects require maintenance skills. Kendall (1989) suggested that skills concerning decision making and coping could assist the client in maintenance of behavior change. Realistically, it is most unlikely that behaviors will be "perfectly" maintained (Kendall, 1989), yet as noted, with AIDS prevention maintenance is critical.

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**CURRICULUM VITAE**

## CURRICULUM VITAE

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### EDUCATION:

1991 Ph.D. (Expected) in Clinical Psychology  
Virginia Polytechnic Institute and State University  
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Doctoral Dissertation: Skills Training with  
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1990-91 Predoctoral Internship in Clinical Psychology  
Rush-Presbyterian-St. Luke's Medical Center  
Department of Psychology and Social Sciences  
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1988 M.S. in Clinical Psychology  
Virginia Polytechnic Institute and State University  
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Thesis: Psychosocial Variables in the Prediction of  
Somatic Complaints with Application to Stress-related  
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- 1987 M.S. in Clinical Psychology  
Illinois State University  
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Central University of Iowa  
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**HONORS:**

VPI&SU Graduate Student Service Award  
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Women's Research Institute, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, Prevention of AIDS, STDs, and Sexual Assault with Heterosexual Females: A Skills Training Approach, 1990-1991. K. J. Sikkema, Principal Investigator.

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Winett, R. A., Moore, J. F., Anderson, E. S., HYTE, L. A., Neubauer, T. E., Hook, R. J., Wagner, J. L., Lombard, D., Sikkema, K. J., Webster, D. A., Taylor, C. D., Leahy, M., & Walker, W. B. (In press.) Broad definition of social validity illustrated by two health behavior change projects. Journal of Applied Behavior Analysis.

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Skidmore, J. R., Eisler, R. M., Blalock, J. A., & Sikkema, K. J. (1988, March). Cardiovascular reactivity in men as a function of masculine gender role stress. Presented at the 19th Annual Meeting of the Biofeedback Society of America, Colorado Springs.

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#### **RESEARCH EXPERIENCE:**

1988-1990      Graduate Research Assistant, VPI&SU. Research assistant in NIMH funded research project entitled A Family/Media Approach to AIDS Prevention. Responsibilities include family interviews and assessments, research protocol development, data analysis, videotape development, and assistance to and acting in the absence of the project director. Supervisor: Richard A. Winett, Ph.D.

1988-1990      Project Coordinator, VPI&SU. Treatment of chronic tension headache study and 12-month follow-up. Responsibilities included subject recruitment and screening, supervision of treatment therapists, and organization and implementation of follow-up assessment. Supervisor: Debra F. Neff, Ph.D.

1987-1988      Graduate Research Assistant, Behavioral Medicine Clinic, VPI&SU. Therapist in treatment study of chronic tension headache and irritable bowel syndrome. Relaxation training treatment protocol with follow-up assessment. Participated in the development and implementation of a study of the effect of personal efficacy on outcome of behavioral treatment of chronic tension headache. Supervisor: Debra F. Neff, Ph.D.

- 1987-1988      Psychology Technician, Veterans Administration Medical Center, Salem, VA. Group therapist and data analyst in smoking cessation programs for veterans with medical and psychiatric conditions. Supervisor: Kathryn C. Finnell, Ph.D.
- 1984-1985      Graduate Research Assistant, ISU. Standardization testing of Kaufman- ABC Intelligence Test. Supervisor: Mark Swerdlik, Ph.D.
- 1984-1985      Graduate Research Assistant, ISU. Data collection and coding in a mentor study. Supervisor: Mark Swerdlik, Ph.D.
- 1985            Graduate Research Assistant, ISU. Data collection and coding in a class reunion study. Supervisor: Douglas H. Lamb, Ph.D.

#### CLINICAL EXPERIENCE

- 1990-present    Predoctoral Intern, Department of Psychology and Social Sciences, Rush-Presbyterian-St. Luke's Medical Center, Chicago, IL.

##### **Internship Rotations:**

##### Geropsychology and Rehabilitation.

Responsibilities included assessment and treatment of acute and chronic disease primarily in older adults. Emphasis placed on diseases most common in elderly: heart disease, stroke, diabetes, and degenerative joint disease. Additional opportunities included work with patients on rehabilitation, extended care and other medical units. Developed advanced skill in multifaceted assessment included intellectual, personality, neurological, and symptomatic domains. Provided consultation to multidisciplinary rehabilitation team.

Supervisors: Martita Lopez, Ph.D.

Bruce Rybarczyk, Ph.D.

##### Couples and Individual Behavioral Medicine.

Responsibilities included individual and marital outpatient psychotherapy and inpatient consultations. Patients typically seen included lifestyle management difficulties, illness

adjustment, depression, anxiety, and marital distress.

Supervisor: Tamara Sher, Ph.D.

Cancer Center. Responsibilities included inpatients and outpatients on a consultation basis. Responsible for assessment and treatment of patients and their spouses/families as well as follow-up to referring physician. Common referrals included difficulty adjusting to illness, communication problems between patient, family and staff, death and dying issues, and treatment noncompliance. Provided consultation and assistance to medical center staff on the care and management of cancer patients.

Supervisors: David Cella, Ph.D.

Suzanne Yellen, Ph.D.

Sleep Disorders Program. Services provided on an inpatient/outpatient sleep disorders consultation service. Patients seen on this rotation include those with narcolepsy, sleep apnea, disorders of initiating and maintaining sleep and other sleep disturbances. Consultations included chart review, clinical interview, psychological evaluation, review of sleep lab evaluations, and follow-up with both patient and referral source. Outpatient assessment and long term psychotherapy provided.

Supervisors: Rosalind D. Cartwright, Ph.D.

Saul Rothenberg, Ph.D.

Multiple Sclerosis. Responsibilities included outpatient group psychotherapy with a patient group that has a chronic and progressively degenerative illness. Group contained individuals with multiple sclerosis and their spouses. Conducted intake interviews and inpatient visits to patients with multiple sclerosis.

Supervisor: James Stewart, Ph.D.

1987-present

Specialization in HIV Infection. Clinical and research emphasis in the treatment and prevention of HIV infection. Clinical experiences include psychological consultation, individual therapy, support group facilitation, client services

coordination, and community program development. Clinical positions held at the VAMC, Salem, VA (staff position in addition to practicum experience) and the AIDS Council of Western Virginia. Ongoing and planned research in prevention of HIV infection. Invited university lectures and professional speaking engagements on prevention and treatment of HIV infection.

1987-1989

Psychology Technician, VAMC, Salem, VA.

Responsibilities included assistance to and acting in the absence of the Consult/Liaison Psychologist to the medical, surgical, and rehabilitation wards. Assessment and intervention for a variety of inpatients, including HIV infection, oncology, pulmonary, cardiac, surgical, and nursing home care. Duties included cognitive-behavioral and supportive therapy, smoking cessation groups, interview and objective assessment, outpatient referrals, oncology nurses support group, and clinical research. Also served as a psychological consultant on the HIV infection and oncology multidisciplinary teams. Specialization in HIV infection/AIDS and cancer. Supervised salaried position.

Supervisor: Kathryn C. Finnell, Ph.D.

1986-1987

Therapist, Psychological Services Center, Blacksburg, VA.

Responsibilities included cognitive and behavioral assessment and treatment for individual, marital, and family cases; personality and behavioral assessment, and administrative duties. Clients presented with a variety of problems including child behavior problems, depression, anxiety disorders, migraine and muscle tension headaches, marital conflicts, and interpersonal difficulties.

Supervisors: Richard E. Eisler, Ph.D.

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1985-1986

Therapist, McLean County Center for Human Services, Bloomington, IL.

Responsibilities included individual, couples, family, and group

psychotherapy; administration and interpretation of a variety of assessment materials. Clients included children, adolescents, and adults with a variety of presenting problems including marital and family conflicts, relationship difficulties, personality disorders, depression, and child behavior problems. Group treatment was designed and implemented for adolescent sexual offenders. Supervisor: Constance Patterson, M.S.

1985-1986

Therapist, ISU Counseling Center, Normal, IL. Responsibilities included individual therapy and objective assessment with undergraduate students. Presenting problems included affective and anxiety disorders, interpersonal difficulties, personality disorders, and academic concerns. Supervisors: Nan R. Presser, Ph.D.  
Douglas H. Lamb, Ph.D.

1983

Therapist, Women's Resource Center, Shelter for Battered Women, Clinton, IA. Responsibilities included therapy with children of women in the shelter and assistance to women in the shelter. Assessment and treatment involved play and art therapy with the children, and individual therapy with the women and children. Supervisor: Lana Underdonk, Director

#### **TEACHING EXPERIENCE:**

1988-1990

Invited Lectures on HIV Infection, VPI&SU, Blacksburg, VA. Invited Instructor for undergraduate and graduate courses in Department of Psychology, Health Education, and Counseling. Responsibilities included instruction, discussion, and professional experience with prevention and psychosocial treatment issues in HIV infection.

1986

Graduate Teaching Assistant, ISU, Normal, IL. Lab Instructor for graduate course in Theories and Techniques of Counseling. Responsibilities included instruction and supervision of clinical psychology graduate students in interviewing and assessment skills. Supervisor: Nan R. Presser, Ph.D.

**ADMINISTRATIVE EXPERIENCE:**

- 1989-1990      New River Valley AIDS Coalition (Volunteer Organization); AIDS Council of Western Virginia, Client Services Coordinator. Responsibilities include the coordination of volunteers, education and training of volunteers, direct services and case management to clients, friends, and family, design and implementation of community education programs, and membership on the Coalition Steering Committee.  
Supervisor: John H. Conley, Director of the AIDS Council of Western Virginia
- 1989-1990      University AIDS Education Committee, VPI&SU, Blacksburg, VA. Responsibilities included the development and implementation of AIDS education programs for university students and faculty and development of the university HIV/AIDS policy.  
Committee Chair: Elizabeth Alexander, M.D.
- 1988-1989      Clinical Faculty Student Representative, VPI&SU. Responsibilities included representing clinical graduate students at bimonthly faculty meetings.  
Clinical Director: Thomas H. Ollendick, Ph.D.
- 1986-1988      Coordinator of Undergraduate Psychology Program, Assistant to Psychology Department Head, VPI&SU. Graduate assistant responsible for undergraduate student advising and administrative assistance in the coordination of the undergraduate psychology program.  
Supervisor: Joseph A. Sgro, Ph.D.
- 1987            Long Term Planning Committee Student Representative, VPI&SU. Responsibilities included meeting with clinical faculty to discuss future program needs and develop a long term plan for program development.  
Committee Chair: Jack Finney, Ph.D.
- 1984-1986      Graduate Assistant, ISU, Normal, IL. Assistant to Director of Clinical Psychology Program.  
Department Head: Nan R. Presser, Ph.D.

**VOLUNTEER WORK:**

1988-1990

AIDS Council of Western Virginia, Roanoke, VA.

Activities included:

- support group facilitator for persons with AIDS or symptomatic HIV infection,
- individual counseling and support for persons with HIV infection/ AIDS, friends, and family members,
- crisis intervention and psychological consultation in medical centers and psychiatric/state hospitals,
- speakers bureau and media interviews,
- invited speaker for volunteer trainings,
- administrative assistance,
- New River Valley AIDS Coalition (NRVAC) Client Services Coordinator,
- NRVAC Steering Committee member, and
- Supervisor for NRVAC Support Group for Persons with HIV Infection.