8-1996

Culture-Specific HIV/STD Prevention Programming for Lesbian and Bisexual Women

Kathleen M. Morrow
Western Michigan University

Follow this and additional works at: http://scholarworks.wmich.edu/dissertations

Part of the Health Psychology Commons

Recommended Citation
http://scholarworks.wmich.edu/dissertations/1714

This Dissertation-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Dissertations by an authorized administrator of ScholarWorks at WMU. For more information, please contact maira.bundza@wmich.edu.
CULTURE-SPECIFIC HIV/STD PREVENTION PROGRAMMING
FOR LESBIAN AND BISEXUAL WOMEN

by

Kathleen M. Morrow

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Philosophy
Department of Psychology

Western Michigan University
Kalamazoo, Michigan
August 1996
HIV/AIDS prevention research continues to target populations in which AIDS is already responsible for a significant number of deaths. Since an AIDS diagnosis often indicates the transmission of HIV several years earlier, targeting groups currently manifesting AIDS neglects those groups which may be at risk for transmission of HIV today. Among the lowest incidence in known cases of AIDS are women who have sex with women. Despite a preponderance of biomedical research which implicates vaginal secretions and blood products as vehicles in HIV transmission, there remains only a minimal effort to educate these women regarding their risk of HIV or STD infection. The present study utilized a programmatic line of exploratory research designed to: (a) assess the potential risk of exposure to HIV/STDs within a community of women who have sex with women, (b) develop a culture specific prevention program, and (c) implement and evaluate such a program.

Results from Study #1 suggest that women who have sex with women are at risk for STDs and HIV via their sexual behavior. Study #2 determined the cultural aspects of prevention unique to this community. Study #3 implemented and evaluated a prevention program. The program consisted of a workshop designed to affect knowledge, attitudes,
and risk perceptions, as well as precautionary sexual behavior through the training of safer sex skills. The workshop was followed-up by peer support meetings designed to address social norm change and problem-solving related to maintenance of behavioral change. Dependent variables included self-report measures of HIV/STD-related knowledge, risk perceptions, and attitudes, as well as self-reports of frequency of engagement in risky sexual behaviors. Results indicated that this sample of lesbian and bisexual women were quite knowledgeable with regard to general HIV/AIDS knowledge and that their risk perceptions were affected by their participation in the program. The sample's attitudes toward safer sex improved following their participation in the intervention. Frequencies of engagement in risky sexual behaviors varied across individual subjects: however, there appeared to be an indication of decreased risk among those who participated in the prevention program.
INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6” x 9” black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor MI 48106-1346 USA
313/761-4700 800/521-0600

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
ACKNOWLEDGMENTS

I dedicate this work to the memory of Carlos A. Delgado (1960-1994). He was, and always will be, my greatest inspiration in my work with HIV-disease. I miss him everyday. I would like to thank my mom and dad, Diane and Henry Saladino for their support. My mother taught me to take care of myself and pursue my education whatever the hardship, always knowing I would become who I aspired to be. My dad offers encouragement and support and helps me to smile and be proud of my accomplishments, as he is every day. I would also like to thank all the women (and one Butterfly!) who supported me throughout (you know who you are!). In a special way, I’d like to thank my partner, Tracey, for giving me the space and encouragement I needed these last few months to finish writing, and for "cracking the whip" when I needed the extra push. Love you, Sweetie!

And, finally, I'd like to acknowledge my committee members: R.Wayne Fuqua, who saw my potential and let me go with it; Patricia M. Meinhold, who was my model of confidence and competence in a female academic - one who would not bend to anything less than her own high standards; Bradley Huitema, who made statistics understandable and validated my frustrations, encouraging me to go on in spite of...; and James Croteau, another academic inspiration for this young lesbian clinician/researcher. Thank you... all of you!

Kathleen M. Morrow
# TABLE OF CONTENTS

ACKNOWLEDGMENTS ................................................................................... ii

LIST OF TABLES ............................................................................................... vi

LIST OF FIGURES .............................................................................................. vii

HIV AND WOMEN .......................................................................................... 1
  The Current State of HIV/AIDS Prevention Research ................. 1
  The Case for Inclusion of Women Who Have Sex With Women ........................................................................... 4
  Female-to-Female Transmission of HIV ........................................... 8

STUDY #1: VERIFYING THE PROBLEM ....................................................... 16
  Rationale .......................................................................................... 16
  Methods ............................................................................................ 16
  Questionnaire .......................................................................... 16
  Procedure .................................................................................. 18
  Results ........................................................................................... 18
  Discussion ........................................................................................ 22

STUDY #2: DEVELOPING CULTURE-SENSITIVE PROGRAMMING .......... 24
  Rationale ......................................................................................... 24
  Methods ........................................................................................... 26
  Subjects .......................................................................................... 26
  Setting .............................................................................................. 26

iii

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
| Topics to Be Addressed in a Lesbian/Bisexual Woman-Specific Prevention Program | 28 |
| Presentaion of a Rationale for Adopting a Safer Sexual Lifestyle | 29 |
| Necessary Skills | 30 |
| Additional Concerns | 31 |

STUDY #3: EVALUATING AN INTERVENTION | 34 |

Rationale: Conceptualizing Prevention | 34 |

Methods | 41 |

Subjects | 41 |

Settings | 43 |

Materials | 43 |

Dependent Variables | 45 |

Independent Variables | 47 |

Procedure | 48 |

Experimental Design | 52 |

Results and Discussion | 54 |

Availability of Subjects | 54 |

Subject Selection | 55 |

Data and Design Considerations | 58 |
Table of Contents—continued

Knowledge ................................................................................ 59
Attitudes Toward Sexual Health and Safer Sex ..................... 63
HIV and STD Risk Perceptions .............................................. 68
Sexual Risk Behavior .............................................................. 72
Consumer Evaluations ........................................................... 79

CONCLUSIONS AND IMPLICATIONS ....................................................... 84

APPENDICES

A. National Survey ..................................................................................... 96
B. Informed Consent [Elicitation Project] ............................................. 104
C. Confidentiality Agreement [Elicitation Project] ............................. 106
D. Elicitation Topic Questions .............................................................. 108
E. Informed Consent [Intervention] ..................................................... 110
F. Confidentiality Agreement [Intervention] ........................................ 113
G. Initial Demographics Questionnaire ................................................ 115
H. HIV/AIDS Knowledge Test .......................................................... 118
I. Opinions/Attitudes Questionnaire .................................................. 121
J. Risk Perception Questionnaire ...................................................... 125
K. Sexual Behavior Questionnaire ...................................................... 127
L. Weekly Sexual Behavior Data Sheet ................................................ 130
M. Human Subjects Institutional Review Board Approval
   Letters ...................................................................................................... 132

BIBLIOGRAPHY ................................................................................................... 140

v
LIST OF TABLES

1. Subject Demographics [Age, Education, and Relationship Status] ................................................................. 57
2. Correspondence Between Assessment Period and Phase of Study by Group ................................................................. 59
3. Attitudes and Risky Sexual Behaviors [All Participants] .................................................................................. 64
4. Attitudes and Risky Sexual Behaviors of High Risk Subjects ........................................................................ 66
5. Participant Evaluation: Mean Ratings ....................................................................................................................... 81
LIST OF FIGURES

1. HIV/AIDS Knowledge Scores ................................................. 61
2. STD Risk Perceptions ............................................................. 69
3. HIV Risk Perceptions ............................................................. 70
4. Frequency of Risky Sexual Behavior [Subjects 1-6] .................. 74
5. Frequency of Risky Sexual Behavior [Subjects 7-11] ................. 75
6. Frequency of Risky Sexual Behavior [Subjects 12-17] ............... 76
HIV AND WOMEN

The United States is in the midst of its second decade of HIV-disease (Human Immunodeficiency Virus). Initially deemed to be a disease of homosexual men (i.e., Gay Related Immune Deficiency: GRID) and intravenous drug users (IDUs), the scientific community and the general public alike are beginning to accept that the disease we now call AIDS (Acquired Immune Deficiency Syndrome) infects and affects all people, regardless of race, gender, religion, age, sexual orientation, or ability. Historically, prevention education efforts in this country have focused on gay men, injection drug users, and, more recently, heterosexuals. The virtual absence of women, and, in particular, lesbian and bisexual women, from education efforts, is the initiative for the present study.

The Current State of HIV/AIDS Prevention Research

HIV education and prevention research initially, and appropriately, focused on gay males and injection drug users (Becker & Joseph, 1988). Numerous controlled group approaches with these populations have attempted to determine what interventions actually produce consistent and durable behavior change. Possibilities include, but are not limited to, education, access to HIV antibody testing, social norm changes, and changes in personal risk perception due to multiple AIDS-related losses in an individual's lifetime (Kelly & Murphy, 1992). There have been few single component studies, and even fewer true experimental within-
subject designs addressing the efficacy of current prevention programming.

Intervention strategies continue to encounter difficulties in their widespread acceptance, efficacy and use. Conclusions and recommendations drawn from their results are often broad and nondescript, using correlative and descriptive data only. Within the drug using populations, for instance, research to date has resulted in few empirically derived solutions to education and prevention questions. Generalities include notions that the success of safer injection practices among IDUs is greatest with those who have injection patterns that are less frequent and less established. In a review of literature, Kelly & Murphy (1992) also report a greater success among opiate users, as opposed to cocaine users, and among those users who are older. Within the sexual arena, consistent and regular use of condoms among IDUs remains infrequent (Feucht, Stephens, & Roman, 1990). There has been no known study to date which includes issues related to protected oral sex (i.e., oral-vaginal, oral-anal) through the use of latex barriers.

Within the gay male community, there was, initially, a vast amount of behavior change. However, behavior maintenance remains inconsistent and there is new evidence which suggests that younger gay males are not consistently engaging in safer sex (CDC, 1993). Much of the behavior change initially noted within the gay male community was evident in white, well-educated, high socioeconomic status males and cannot necessarily be generalized to members of other racial, economic, or education strata (Kelly & Murphy, 1992).
Despite the paucity of sound experimentally controlled outcome studies, there continue to be some common threads throughout the literature which offer hope to future prevention efforts. We know that substance use, especially that immediately preceding sexual activity, is associated with increased risk-taking. We also know that such factors as an individual's underestimation of their personal risk, their perception that safer sex is not the norm within their community, and the high reinforcement value of unprotected sexual activity, are all associated with increased risk behaviors. Prevention strategists are also becoming increasingly aware of the impediments to maintaining behavior change: competing survival responses, socioeconomic disadvantage, lack of access to health care, and cultural differences, to name a few (Kelly & Murphy, 1992).

HIV/AIDS knowledge is quite well established: most people can identify the most common forms of HIV transmission (i.e., sexual behavior and injection drug use). Racial minorities and individuals from lower socioeconomic groups, however, remain less educated with regard to AIDS knowledge (Sweat & Levin, 1995). Still to be determined, additionally, is the role that subcultural traditions, values and belief systems play in providing the rationale for engagement in risk behaviors. Additionally, we know little as behavioral scientists about how to affect change in the behaviors of entire communities, as opposed to individuals. There is particular difficulty when the behaviors to be targeted are socially stigmatized (Hahn, 1991). AIDS prevention programs continue to be impeded by our inability to effectively address these arenas.
The majority of our knowledge regarding HIV/AIDS, whether it be from the perspective of prevention, treatment or psychosocial effects, is based on research with males. Gay men, in particular, and male injection drug users, have been most often studied. Many of these studies are descriptive and/or epidemiological in nature and have been reviewed elsewhere (Kelly & Murphy, 1992; Becker & Joseph, 1988). According to Kelly, Murphy, Sikkema, and Kalichman (1993), there are only seven published controlled intervention outcome studies to date, only two of which include females in their subject pool. Kelly et al. (1993) present three basic models for HIV prevention and education work which seem to offer the greatest promise of effectiveness: cognitive-behavioral skills training models, social norm change models, and multifaceted community mobilization efforts. It remains imperative that epidemiological and survey research continue. However, given the continued rapid escalation of HIV infection and the cost effectiveness of primary prevention, it is also imperative that increased efforts be placed on experimentally controlled outcome studies (Kelly et al., 1993).

The Case for Inclusion of Women Who have Sex With Women

Absent almost completely from HIV/AIDS-related research are women. It is this absence, and, in particular, the absence of focus on lesbian and bisexual women, which this study attempts to address. There are, admittedly, a number of descriptive studies which include women as either primary injection drug users or partners of IDUs (Feucht, Stephens, & Roman, 1990; Cohen, Hauer, & Wofsy, 1989; Mondanaro, 1987). Several
even address women of color, appropriately so given their disproportionate representation among female AIDS cases in this country (Kalichman, Kelly, Hunter, Murphy, & Tyler, 1993; Kalichman, Hunter, & Kelly, 1992; DiClemente, Boyer, & Morales, 1988; Mays & Cochran, 1988). As is the case with HIV prevention research with gay males and IDUs, there have been few empirically controlled outcome studies with women. There have been three published to date; one involving women in Rwanda (Allen, Serufilia, Boggerts, Van de Perre, Nsengumuremyi, Lindan, Carael, Wolf, Coates, & Hulley, 1992), one which included female adolescents (Rotheram-Borus, Koopman, & Haignere, 1991, as cited in Kelly et al., 1993), and one involving African-American urban women (Kalichman et al., 1993).

Within the last few years, surveillance statistics kept by the Centers for Disease Control and Prevention (CDC) show a disproportionate increase in AIDS cases among women. Recent reports from the CDC (1993) state that women now comprise half of all new AIDS cases in the United States, and half of all new reported HIV transmissions. Historically, it has been assumed by the scientific and medical communities that HIV is transmitted to women primarily via sexual intercourse with males and the sharing of HIV-contaminated injection equipment. Admittedly, the majority of female AIDS cases currently being reported to the CDC can be categorized as cases of male-to-female transmission or injection-related transmissions. However, the basis of transmission of nearly 12% of AIDS cases in women are still classified as "risk not identified." This is over twice the rate of male cases in the same
category (CDC, 1995). In addition, among AIDS cases in persons age 25 years or younger, 11% of female cases are classified as "risk not identified," while only 4% of males are so classified (CDC, 1993). It is possible that this discrepancy is due, at least in part, to a lack of data relevant to woman-to-woman transmission.

It is important to note that, historically, women, as stated earlier, have enjoyed only cursory inclusion in prevention and treatment efforts within the AIDS pandemic. Because there was a hesitancy regarding using women “of reproductive age” in experimental trials (Corea, 1992), HIV antibody positive (HIV+) women have been denied access to clinical trials and been given drugs still untested on women. Prior to April, 1993, many women died HIV+ because the opportunistic infections and diseases often contracted by HIV+ women were not included in the official diagnostic criteria for AIDS. As a result, many died without validation of their suffering, or having had the medical and social benefits routinely given to their male counterparts (Stevens, 1993; Young, Weissman, & Cohen, 1992; Corea, 1992).

The rate of AIDS cases among women in the "risk not identified" category is currently twice as high as men, as stated previously. Additionally, there is a long latency between infection and onset of symptomology of HIV disease. AIDS case diagnoses, as a result, lag considerably behind transmission, and therefore, presumably underestimate the growing rates of HIV seroprevalence in, as yet, undetected populations. It is thus imperative that any population which appears to be in the initial stages of infection by HIV be strongly considered
for HIV prevention education. To do otherwise is to be negligent. Within the context of subcultural values and traditions, there are two groups that may be at risk of HIV infection through less-than-traditional modes of transmission: lesbians and bisexual women. Bisexual women who are HIV+ are often classified by the CDC as having been infected through heterosexual contact or through injection drug use. Lesbian women who are HIV+ are commonly classified as IDUs or "risk not determined." The picture is further complicated by the fact that an unknown proportion of lesbians who report that their sexual partner(s) is an IDU may be included in the "partner of IDU" category, with the implication that a male IDU transmitted HIV to her through heterosexual contact. The relative risk of female-to-female sexual transmission remains essentially unknown. There are few empirical data which document the frequency of risky sexual behaviors (e.g., those involving vaginal fluids or menstrual blood products), or rates of HIV seropositivity in women who engage in sexual activity with other women. Likewise, we know little about patterns of personal risk perception or attitudes toward safer sex practices in this population, nor have recommendations for safer sex practices specific to lesbian and bisexual women been developed and tested empirically. As a result, women who have sex with other women have been underdocumented and underserved in this epidemic (Young, Weissman & Cohen, 1992; Stevens, 1993). Additionally, the impediments to maintaining behavior change suggested by Kelly and Murphy (1992) seem to be particularly applicable when one surveys the lesbian community (Bybee, 1990). According to Bybee's (1990) survey, a large
percentage of lesbian residents of Michigan are of low economic status. Many lack the jobs which offer health care benefits, and even fewer of their employers allow partner health care benefits. In addition, the lesbian culture is one which offers numerous challenges to discussions of sex and health, an aspect imperative to the development of valid culture-specific education.

Female-to-Female Transmission of HIV

Transmission of HIV from male-to-male and male-to-female is well-documented. Female-to-male transmission is also cited in the HIV literature (Padian, Shiboski & Jewell, 1991). Little, however, is known about the incidence or relative risk of female-to-female transmission of HIV and other STDs. Woman-to-woman HIV transmission has been reported in the medical literature since 1984 (Sabatini, Patel, & Hirschman, 1984). The first case involved a 37 year old, non-Haitian, non-drug using, black woman who reported sexual contact only with women. The second documented female-to-female HIV transmission case involved the female sexual partner of a female IDU (Marmor, Weiss, Lyden, Weiss, Saxinger, Spira, & Feorino, 1986). A third case involved a woman who reported having exclusively female-to-female sexual contact, denying all heterosexual contact and injection drug use (Monzon & Capellan, 1987). Perry, Jacobsberg, and Fogel (1989) reported still another possible female-to-female transmission of the HIV virus from an injection drug-using female to her non-injection drug using female partner. Most recently, one HIV+ woman was reported to have no other risk factors than female-to-
female sexual activity (Rich, Buck, Tuomala & Kazanjian, 1993). The CDC conducted a retrospective epidemiological study to determine if there is indeed a risk of 'lesbian' transmission of HIV. In that study (Chu, Buehler, Flemming, & Berkelman, 1990), the CDC's surveillance definition of 'lesbian' was used. That definition states that only women who have engaged in exclusively female-to-female sexual contact since 1977 are considered 'lesbian.' Despite this extremely limited view of lesbian behavior, the researchers nonetheless concluded that women who engage in sexual activity with other women can be exposed to HIV. They validated their assertions by pointing to the case reports of female-to-female sexual transmission of HIV, as well as the fact that female-to-male transmission is well-documented (Spitzer & Weiner, 1989; Padian, Shiboski & Jewell, 1991). This study was subsequently updated in 1992 (Chu, Hammett & Buehler). Data were examined from 164 women with AIDS who reported sexual contact only with other women. According to Chu et al. (1992), all cases were accounted for by injection drug use or blood transfusions prior to 1985. However, again, the authors did caution that woman-to-woman transmission of HIV is possible, especially via exposure to vaginal secretions and menstrual blood.

In addition to these reports, a number of less known reports and presentations can conceivably add some new data to those already available. A survey conducted in 1989 among lesbian residents of Michigan (Bybee, 1990) reported that lesbian women were, at that time, only beginning to be concerned with HIV infection. Nineteen percent reported having been tested for HIV antibodies, and 28% reported having
made behavioral changes since the beginning of the AIDS epidemic in an effort to avoid exposure. Over half the respondents, however, reported having engaged in potentially risky sexual behaviors in the three years prior to the survey: for instance, 25% reported having had more than one sexual partner in the past year. These same women were also more likely to have a history of injection drug use. Eleven percent had a history of sexually transmitted disease (STD), another cofactor for HIV risk. Over half reported "possible risk due to sexual practices" (p. 52), including oral sex during menstruation, sharing sex toys, and oral-anal sex. In another study (1989), Martin and Battles reported that 23% of lesbians responding to their survey reported HIV transmission risk due to injection drug use, and 41% reported unprotected sex with men.

Hunter, Rosario, and Rotheram-Borus (1993) reported on adolescent lesbians attending gay and lesbian community-based agencies in New York City, stating that 20% reported exchanging sex for drugs or money, 28% reported a history of cocaine or crack use, and 75% reported being sexually active with males. In a self-administered structured questionnaire, 141 mostly Caucasian, college-educated lesbian women, reported their HIV risk history (Hunter, Rotheram-Borus, Reid & Rosario, 1992). Lifetime sexual behaviors among these women included 81% penile-vaginal penetration, 18% anal-penile sex, and 69% active oral-penile sex. Additionally, 96% engaged in active oral-vaginal sex with other women, and 31% engaged in active anilingus with women partners. This sample's lifetime prevalence of STDs ranged from 0-7%. Only 2% of these women reported using a dental dam in the past year, and 41% reported having
refused active oral sex with a lover who requested the use of a dental dam.

In a discussion of AIDS public policy, Young, Weissman and Cohen (1992), cite a sample of 711 women, in which twice as many self-identified lesbian and bisexual women than heterosexual women reported that they had engaged in anal sex with a male in the previous three years.

Most recently, Einhorn and Polgar (1995) reported on high-risk behavior among lesbian and bisexual women. Results from their anonymous survey of 1,086 predominantly white (i.e., 82%) lesbian women indicated "considerable HIV-risk behavior" (p. 514). Of 119 women who reported engaging in sexual practices with high-risk partners, 75% had had vaginal intercourse without a condom, 15% had had anal intercourse without a condom, and 50% had given and received oral sex without a barrier. Of all respondents, only 26% had ever been tested for HIV-antibodies. Only 6% of 647 respondents reported consistently engaging in what they deemed to be safer sex with their female partners. Thirteen percent reported having three or more sexual partners per year.

Einhorn and Polgar (1995) did not report on female-to-female risk behaviors, but instead confined their results to "traditional" modes of HIV transmission (i.e., injection drug use, sex with a male injection drug user, or sex with a gay/bisexual male).

Women who have sex with women are at risk for HIV infection sexually via open lesions on body parts involved in sexual activity, oral sex, the sharing of sex toys, drug use, and donor insemination (Stewart, Cunningham, Driscoll, Tyler, Barr & Gold, 1985; Eskenazi, Pies, Newstetter, Shepard & Pearson, 1989). Their risk is particularly high when
menstrual blood is present in the vaginal fluid (Clavreul, 1992). Sexual partners of IDU lesbians are at increased risk of exposure to the virus and would be able to transmit the virus to other sexual partners (Dicker, 1989). In addition, communication skills play a key role in whether or not safer sex techniques are employed. This is particularly true while women are exploring their sexuality, and often times doing so with other women and men who are exploring as well: It is often not a time of comfort with regard to frank discussions about sex and negotiations for safer sex (Martin & Battles, 1989).

Lesbians characteristically do not consider themselves at risk for HIV infection (Young, et al., 1992; Case, Downing, Fergusson, Lorvick, & Sanchez, 1988; Stevens, 1993). Sixteen years of unknowns and misinformation from governmental and community organizations certainly may be one reason they feel confident that they are not at risk. Lesbians continue to engage in potentially risky sexual behaviors and verifiably risky injection drug use behaviors (Stevens, 1993), possibly as a result of such confidence. Even in more AIDS-aware lesbian and gay communities, the advent of safer sex for women who have sex with women has not been well received. Women initially accused the gay male establishments who were, at that time, doing the most to educate and prevent HIV transmission, of making them (i.e., lesbians) engage in safe sex when they did not really need to. Other women felt, and still feel, as though those women who advocate for lesbians engaging in safer sex are overreacting (O'Sullivan, 1990). However, it seems quite obvious from the data presented above that women who engage in sexual activity with
women are at risk for being exposed to HIV. The necessary "ingredients" for transmission (i.e., vaginal secretions, blood products/byproducts, and semen) are present in many of the sexual activities of lesbian and bisexual women.

Despite a currently low incidence of AIDS cases among women who voluntarily report their sexual orientation as lesbian or bisexual, now is the time to focus prevention efforts in this population, so that the seroprevalence rates of other groups do not have to be duplicated within this one. To focus only on those who are currently diagnosed with AIDS in the determination of target groups for prevention is counterproductive. Given the long incubation period from infection to symptomatic disease, such a focus would be approximately ten years behind current infection rates, and, therefore, negligent. The longer lesbian and bisexual women are excluded from prevention education, the more likely it is that their infection rates will continue to rise (Cole & Cooper, 1990-1991).

The issue, then, comes down to the methodology and content of prevention research and education for this unique population. A key issue involves accurate data collection. The CDC defines a lesbian as a woman who has had sexual contact exclusively with women partners since 1977 (Stevens, 1993). In addition, the categorization system is hierarchical, often identity based, and contains only mutually exclusive categories. Only recently have multiple transmission routes been reported, but individual cases are still assigned to categories based on the epidemiological distribution of AIDS cases in the United States. There is no category for female-to-female transmission, or even "women who
have sex with women." The CDC surveillance definitions systematically exclude these women: there are no data taken on sexual orientation of HIV+ women, as there are for men. In a recent survey of 960,000 female blood donors, the CDC found no evidence for female-to-female HIV transmission (Peterson, Doll, White, Chu & the HIV Blood Donor Study Group, 1992). The definition cited above was used in that study and does not allow for a realistic representation of the lesbian population. Had the same exclusivity criteria been used with self-identified gay males in the early years of the epidemic, the history of the pandemic may have been grossly distorted. It assumes that any woman having sex with a male partner (given that he is HIV+) or using injection drugs must be at risk through those means rather than through female-to-female sexual contact. In addition, the study assumes that 'lesbian' women did not select themselves out of blood donor activities due to their own assessment of HIV status or risk. Lesbian and bisexual women remain officially uncounted according to this definition, and yet they are still told that evidence for HIV transmission between women is nonexistent (Warren, 1993; Stevens, 1993; Young, Weissman, & Cohen, 1992; Clavreul, 1992).

Beyond biases in surveillance definitions, there remains bias in research protocol. Sex is almost exclusively defined by the presence of a penis, whether penile-anal sex, penile-oral sex, or penile-vaginal sex. 'Lesbian' still excludes any woman who has had even one sexual encounter with a male since 1977. In addition, frequency of condom use is used, often erroneously, as an indicator of frequency of dental dam use (Young, Weissman & Cohen, 1992).
Within the lesbian and bisexual women's communities themselves, there is a continued lack of risk perception. This is probably at least in part a function of a lack of emphasis on inclusion of woman-to-woman sexual practices in sixteen years of discussion about safer sex in the HIV/AIDS epidemic. It is also a function, presumably, of lesbians not knowing other lesbians who are HIV+, and especially not HIV+ lesbians whose only risk factor was female-to-female transmission (Young, Weissman, & Cohen, 1992; O'Sullivan, 1990; Case et al., 1988; Stevens, 1993). This low perceived risk of infection, coupled with high rates of potentially risky sexual and drug-using behaviors, necessitates a conclusion that lesbian and bisexual women are potentially at risk for HIV infection (Cole & Cooper, 1990-1991; Case, Downing, Fergusson, Lorvick, & Sanchez, 1988).
STUDY #1: VERIFYING THE PROBLEM

Rationale

Given the limited data on sexual and drug risk-taking behaviors within the lesbian and bisexual women's communities, it seemed reasonable that this project should begin by assessing the current situation and making a determination whether lesbian and bisexual women truly are at risk. The studies presented earlier were beginnings to a data base of HIV issues within the community of women who self-identify as lesbian or bisexual. However, the studies were somewhat inconsistent or inadequate, consisting of small sample sizes, or samples which were not representative of racial, educational or socioeconomic characteristics. Mainly, the rationale for conducting the present survey study involved the creation of a data base that would address as many pertinent issues regarding lesbian and bisexual HIV and STD risk as possible.

Methods

Questionnaire

A 12-page anonymous self-administered questionnaire assessed respondents along several dimensions. A demographics section obtained information on residency, age, self-identified sexual orientation, racial/ethnic background, educational status, and sources of information regarding sexuality and sexual behavior, whether or not a respondent's
primary care physician was aware of her sexual orientation and, if not, why not. In addition, the questionnaire obtained information on relationship status, length of current relationship(s) or reasons for not being currently in relationship, and relevant health histories.

A sexual behavior section obtained information on the respondent's lifetime history of engaging in specific sexual behaviors, as well as, which behaviors they typically engage in currently and whether or not they use safer sex strategies when doing so. An attitudes/opinion section assessed the respondent's general rate of engaging in safer sex techniques, how often they suggest using safer sex with their partner(s), how often their partner(s) suggest using safer sex to them, and what the outcome of those suggestions typically is. Finally, we incorporated a risk perception segment to the questionnaire which asked respondents to estimate their perceived level of STD and HIV exposure in the previous year and in the coming year based on their current pattern of sexual practices.

We also obtained a HIV-antibody testing history, along with their knowledge of their partner(s) HIV testing history. If they had never been tested, we added probe questions to determine what their reason was for not doing so. In addition, there were several questions which addressed the respondent's desire to parent children and her perceived options for doing so (e.g., adoption, foster care, alternative insemination). With this line of questioning, we also included some probe questions addressing whether or not they had anticipated the potential for HIV/STD infection should they choose to alternatively inseminate.
A copy of the text from this questionnaire is available in Appendix A. The questionnaire and methodology for this study was approved by the Western Michigan University Human Subjects Institutional Review Board (WMU-HSIRB). A copy of the approval letter can be found in Appendix M.

Procedure

The questionnaires were distributed throughout the United States. Most were distributed during three separate music festivals which took place during the summer of 1993. All three festivals cater to women, with a significant number of participants being lesbian and bisexual women. Two typically draw both national and international participants: one was a regional (i.e., New England) event, which drew some participants from outside New England. Additional questionnaires were distributed by women working in HIV/STD service organizations or at women's health collectives who had volunteered to distribute questionnaires to their clients. Two thousand questionnaires were distributed. At two of the three festivals, drop-off points were made available for the return of the questionnaire while respondents were still on-site. Those that were not returned on-site, and those distributed through caseworkers and at the New England festival were returned via mail. Self-addressed envelopes were provided for this purpose.

Results

Lesbian and bisexual women from over 34 states and Canada
participated in the study (95% of respondents were from the United States). A total of 504 questionnaires were completed and returned for analysis. This reflected a return rate of over 25%. Eighty-seven percent of respondents self-identified as lesbian, while 13% self-identified as bisexual women. The average age of respondents was 34.7 years, with a range of 19-84 years. Most were high school graduates, with many (82.5%) having some college or technical training or a post-graduate degree. Eighty-five percent of the respondents self-identified as Euro-American/White, while 5.8% self-identified as Bi/Multi-Racial, 4% self-identified as Jewish, 2.2% self-identified as Latina/Hispanic, 1.2% self-identified as African-American, and 1% self-identified as Native-American. Over 60% of women in this study reported that their primary sources of information regarding sexuality and sexual health came from their friends and sexual partners.

Sixty-seven percent of respondents reported that they were currently in monogamous sexual relationships, 20.4% reported they were currently sexually nonmonogamous, and 12.7% reported that they were not currently sexually active. The length of current relationships ranged from several days to 20 years or more. Of those women who reported not being sexually active, 11% reported that the reason why they were not sexually active was because they were afraid of getting a sexually transmitted disease. Twenty seven percent reported that they had been diagnosed with an STD sometime in their life.

Of those women who reported being sexually active, 27% reported two or more female sexual partners in the last year, and 6% reported two
or more male partners in the last year. Eighty-four percent reported one or more episode of unprotected sex with a female partner per month on average, and 7% reported one or more episode of unprotected sex with a male partner per month on average. Eight percent of sexually active women reported engaging in oral-penile sex with a male partner without a condom. Six percent reported engaging in vaginal-penile sex with a male partner and no condom, and 1.2% reported engaging in receptive anal-penile sex with a male partner and no condom. With regard to sexual activity with women, 90% reported engaging in active oral-vaginal sex and 88% reported engaging in active digital-vaginal sex. Nineteen percent reported engaging in active oral-anal sex, and 35% reported engaging in active digital-anal sex. Twenty percent of sexually active respondents reported engaging in sexual activity involving the possible exposure to blood products. And 2%, 4%, and 3% reported engaging in anonymous or sex club sex with men and women, women alone, or men alone, respectively. In summary, over 90% reported engaging in sexual activities which involved fluid transmission (i.e., vaginal secretions and/or blood products) from their partners to themselves. Five respondents reported having sex in exchange for drugs or money in the past year.

Of note, only 21% of respondents reported ever having suggested the use of safer sex to their sexual partners. However, of that 21%, 86% reported that either their wishes were respected and they and their partner engaged in safer sex, or they were able to refuse unsafe sex attempts by their partner. Only 14% of the original 21% had unprotected sex
subsequent to their safer sex suggestion. Reasons why the women who responded to this questionnaire are not using safer sex included feeling that STDs and HIV are "not an issue" for them, not knowing how to use safer sex supplies between women, believing that they and their partner are not at risk for HIV infection, and, like gay males and heterosexuals, these women believe that safer sex techniques decrease sexual spontaneity, and/or decrease the sexual sensitivity experienced by either themselves or their partner.

Of those illicit drugs most commonly associated with risky sexual or drug self-administration behaviors, 3% of respondents reported current use of cocaine by inhalation and none reported current use of cocaine via injection. One respondent reported current use of heroin by injection. Sixty-six percent reported the use of some quantity of alcohol and 4% reported its daily use.

In spite of 27% of all respondents reporting at least one diagnosed STD in their medical history, 66% reported a 0.0 estimated probability of exposure to any STD, and 86% reported a 0.1 estimated probability of exposure. Probability of exposure was presented in a "zero (0)" (i.e., "absolutely no exposure/infection") to "100" (i.e., "certain that I have been exposed/infected") scale, with a middle marker at "50" (i.e., "possible exposure/infection 1 out of every 2 times").

The estimated potential risk of exposure to HIV perceived by respondents was even lower than that for STDs, with 77% of respondents reporting a 0.0 estimated probability of exposure to HIV and 95% reporting a 0.0-0.1 estimated probability of exposure to HIV. Of 266 respondents
(53%) who reported having been tested for HIV antibodies at least once in their lifetimes, almost 1% (i.e., 2 respondents) reported that they were HIV seropositive. Additionally, 3 respondents wrote into the questionnaire that they had current female sexual partners who were HIV seropositive. Of note, 9% of those women who reported not having been tested for HIV antibodies stated that they had not done so because they were "afraid [they] might be HIV-positive and [didn't] really want to know."

Discussion

It is difficult to discern whether the present sample of lesbian and bisexual women are representative of the existing population of lesbian and bisexual women in this country. However, given the preponderance of white, well-educated respondents, one could assume that it is not. It is possible that the data collection procedure itself, i.e., a majority of data coming from questionnaires distributed at women's music festivals, could bias the sample toward those women with either the financial means to attend such an event and/or those women whose involvement in the community would make it more likely that they attend such an event. Given the current social climate and its barriers to women publicly identifying as lesbian or bisexual, there is little one can reasonably do to adequately assess such indices as racial make-up of the lesbian/bisexual women's community, or to what extent subsamples of this population engage in risky sexual behavior. The reported data indicate that women who self-identify as lesbian and bisexual engage in many HIV and STD risk behaviors. Like gay males and heterosexuals of both genders, lesbian
and bisexual women are at risk via injection drug use. Although, the data in the present study show very little (i.e., one respondent) current injection drug use, it would be reasonable to assume that this is not representative of all lesbian and bisexual women, especially those of non-white racial groups and those of lower socioeconomic standings.

Lesbian and bisexual women are also at risk for STD and HIV exposure via sexual behavior. Though the previous literature addresses lesbian and bisexual risk based on their sexual practices involving men, especially gay/bisexual men or men who inject drugs, the present data suggest that lesbian and bisexual women are also at risk by virtue of their sexual practices with other women. Epidemiological data indicate that certain forms of sexual behavior present a lower relative risk than others (e.g., receptive anal-penile sex being a higher risk behavior than active oral-penile sex). However, given the lack of clear evidence with regard to risk via menstrual blood products and vaginal secretions (and oral transmission in general), there is little to indicate that we should not be advocating safer sexual practices with regard to oral-vaginal/anal sex or digital-vaginal/anal sex for lesbian and bisexual women.
STUDY #2: DEVELOPING CULTURE-SENSITIVE PROGRAMMING

Rationale

It was clear from the survey data that lesbian and bisexual women were putting themselves at some degree of risk through their engagement in high risk sexual behavior. In order to develop a maximally effective intervention strategy, the community's existing level of preventive knowledge, attitudes and behaviors needed to be determined. This information could then be used to tailor a group-specific intervention designed to affect those levels of knowledge, attitudes and behavioral skills. This strategy of including qualitative research in such a programmatic line of research (Black, 1994) is especially true for marginalized groups such as women who have sex with women, i.e., women who require knowledge, attitudes and skills which differ from current information available in public health arenas. There are several points of information imperative to an understanding of lesbian culture and how the current climate of sexuality within the lesbian culture can have an indelible effect on the health of lesbian lives.

Within the lesbian culture, as well as cultures of gay men and heterosexuals, the notion of monogamy as it pertains to sexual health is greatly misunderstood. Many believe that being sexual with one partner at a time denotes monogamy, which technically is true. However, when an individual is sexually monogamous to one partner for, e.g., several weeks or months, then leaves that relationship and becomes sexually
monogamous with another for a period of several weeks or months, this is not sexually healthy monogamy, but *multiple partnerships*, i.e., serial monogamy, and is high risk behavior with regard to HIV and STD infections.

Peer influence and cultural practice also play key roles in sexual behavior patterns. This fact speaks volumes to the importance of accurate sexual health information within the lesbian community and culture. Like the gay male community, if cultural norms and peer influence encourage safer sexual practices, individuals within that culture will be more likely to abide by those cultural norms. Additionally, since only half of the lesbian and bisexual women in the study reported being comfortable enough with their physicians to discuss their sexual orientation, accurate sources of information regarding HIV and STD transmission need to be present through opinion leaders within the community itself. Hence, a woman's ability to discuss safer sex with her partner, both to obtain information and suggest a healthy sexual lifestyle, is greatly associated with the woman's potential for engaging in safer sex.

The lesbian and bisexual women's communities need to be targeted for culturally specific and relevant HIV prevention programs (Croteau, Morgan, Henderson, & Nero, 1992; Croteau, Nero, & Prosser, 1993), not because their risk behaviors are unique, but because of their potential resistance to traditionally available programs which have historically excluded them and invalidated their existence (Stevens, 1993). According to Fisher & Fisher (1992), using elicitation research ensures greater ecological validity in terms of determining what AIDS-related information, motivation, and behavioral
skills are spontaneously available to individuals in a population of interest and thus which of these elements is lacking and needs to be included in an intervention (p. 464).

In summary, then, the purpose of Study #2 was to gather the culture specific information needed to develop a prevention program which would meet the needs of this particular community of women.

Methods

Subjects

Self-identified lesbian and bisexual women voluntarily committed to one two-hour focus group session. All participants signed consent forms and agreements of confidentiality to protect the privacy of all other participants in the groups. Five small group (i.e. 5-8 participants per group) sessions occurred over a three-month period, resulting in information accumulated from 33 lesbian and bisexual women.

Setting

Focus groups were held in two primary target cities, Kalamazoo and Grand Rapids. In Kalamazoo, sessions were held in the Women's Research Institute's conference room on the campus of Western Michigan University. In Grand Rapids, sessions were held at the Lesbian/Gay Community Network of Southwestern Michigan's community center.

Topics

Focus group sessions attempted to gather relevant qualitative
information regarding the community's degree of HIV/AIDS knowledge, personal perception of risk of exposure to HIV or other STDs, and attitudes concerning safer sex. In addition, a significant portion of the session was dedicated to gathering their opinions and suggestions for the development and implementation of culture-specific prevention programming. The guide to questioning during focus groups is included in Appendix D.

Procedure

Participants were recruited via advertisements in gay/lesbian/bisexual community newsletters and through word-of-mouth. Interested women were contacted via telephone and scheduled for one of several group sessions which was most convenient for her.

When participants arrived, they were given an explanation of the session, as well as basic information on HIV/STD risk among lesbian and bisexual women, in an attempt to orient them to the agenda. Sessions were structured such that a variety of questions were posed to the group, corresponding to those issues listed within the previous section. Follow-up questions were then presented to the group based on the answers given until a particular topic area had been addressed adequately. Sessions were audiotaped for later analysis. Each woman was paid $10 for her participation. Recommendations pursuant to those discussions are included here.

The procedure for this study was approved by the WMU-HSIRB. A copy of the approval letter can be found in Appendix M.
Data Analysis

Following the completion of focus groups, the author reviewed all audiotapes. Statements made by participants which offered suggestions or insights into the development or implementation of the project were tabulated and categorized (i.e., sensitivity to lesbian/bisexual culture; sexual behavior; safer sex materials and necessary skills; rationale for safer sex; and program practicalities). Any statement or suggestion that was endorsed by two or more of the five groups was considered during the development of the protocol. Suggestions offered by earlier groups were raised by the facilitator in later groups in an effort to assess validity of the statement/suggestion. This often led to more detailed discussion of the area of interest and additional suggestions or options were obtained.

Results and Discussion

Numerous concerns and suggestions were raised and addressed during the focus group sessions. Those raised by two or more of the five groups will be discussed here.

Topics to Be Addressed in a Lesbian/Bisexual Woman-Specific Prevention Program

Several key issues were raised repeatedly, culminating in the following three recommendations. First, all groups recommended that the knowledge portion of the program addressed all forms of sexual behavior, i.e., vaginal, anal and penile sex should be included. The participants cautioned that some women may have difficulty with the
notion of discussing penile sex: However, all groups eventually conceded that to not address a behavior which occurs frequently among lesbians would be negligent. Second, all groups recommended that, when discussing "risk" of STD/HIV exposure or transmission, "risk" be defined broadly as any exposure to body fluids which are known vehicles of HIV/STD transmission. In addition, they recommended that all fluids (i.e., semen, blood, vaginal secretions including menstrual blood, and breast milk) be discussed, not only those most likely to prove detrimental (i.e., semen and blood). The participants pointed out that, although rare, the potential exists for a woman to be exposed to all fluids via sexual behavior (i.e., a woman could be exposing herself to semen through sex with a man, vaginal fluids and menstrual blood products through sex with a woman, and breast milk if her woman partner has borne a child and is lactating). Third, all groups recommended the inclusion of some event/exercise within the program which would emphasize the erotic potential of safer sex between women.

Presentation of a Rationale for Adopting a Safer Sexual Lifestyle

Participants recommended approaching subjects from the perspectives of sexual health, and community unity and responsibility. Within the sexual health rationale, they specifically recommended appealing to a woman's responsibility to her own health, addressing issues of regular health care visits, HIV and STD testing, and increasing self-efficacy with regard to her ability to express her needs regarding safer sex within a sexual dyad. Within the community unity rationale, they
specifically recommended a political discussion emphasizing 15 years of a medical and scientific community neglecting to inform them of their risk, as minimal as it may be. Additionally, they emphasized addressing the gay/lesbian/bisexual community as a whole and discussing how institutionalized and internalized homophobia in the American culture had left the gay male community to "fend for itself" initially and that there is no reason to think the response would be any different with regards to lesbians with HIV/AIDS. An emphasis on each individual woman's responsibility to the community was regarded as key to these participants.

**Necessary Skills**

Skills the participants in these groups saw as crucial included a woman's ability to merely use sexual terms and the group's ability to discuss sex frankly and graphically in order to demystify lesbian sex and overcome the lesbian community's own awkwardness in discussing their sexuality. Additionally, it was deemed important that the program involve an emphasis on relationship and communication skills, specific to the context of woman-to-woman dyads. The general skills taught would be typically the same as those taught in interventions targeting gay men or non-gay populations (e.g., assertiveness, refusal of the resister). However, it was important to these participants that a "safe" and "empowered" context be created for the intervention which would not only include woman-to-woman sex, but would lend it credence and respect. Further, they recommended that the risk discussion be presented in a logical yet forceful (i.e., "in your face") style, somewhat confrontative.
but supportive.

Additional Concerns

The participants discussed their concern regarding the accessibility of safer sex barriers particular to oral-vaginal, oral-anal, and digital vaginal/anal sex (i.e., dental dams, latex surgical examination gloves, latex finger cots). They suggested that a study might attempt to provide those materials not yet available. Two practical concerns were also addressed in three of the five groups: that of presenters and settings for programs. With regard to presenters, it was recommended that the program be a joint effort between researchers and lesbian/bisexual community leaders. They felt that the researcher would be able to offer factual information and resources for skills acquisition, while the community leaders would be able to bridge the gap between a scientific medical community which the participants felt had "betrayed" them by perpetuating the myth of the safety "inherent" in "being a lesbian" and the community which now is looking for assistance in addressing their concerns. Overall, the issue of trust with regard to the community accepting this information was of large concern to these participants and they felt a joint effort would prove most effective at alleviating this bias as much as possible. With regard to setting, the participants in three of the five groups felt that holding the program in neutral settings (i.e., those not gay/lesbian/bisexual affiliated, as well as those not affiliated with HIV/STD services) would offer the most feasible setting for drawing the most participants, as many of the subjects targeted for intervention (i.e., young lesbian/bisexual women,
newly "out" women) may not be comfortable in established community settings.

Taken together, the women who participated in these focus groups with the purpose of eliciting community-specific needs, described an intervention which would focus on the unique needs of a community of women who have sex with other women. They included recommendations for content specific to woman-to-woman sexual experience, experiential exercises and cognitive-behavioral approaches designed to address open discussion of sexuality within a comfortable and "safe" environment, and rationale specific to women within their own southwestern Michigan communities.

The risk illustrated by this population's use of substances, their underestimation of their personal risk of infection, their perception that safer sex is not the norm in their communities, their negative attitudes toward the practice of safer sex, and, most importantly, their engagement in potentially risky sexual behaviors that involve the exchange of body fluids without use of latex or other barriers necessitated a culture specific prevention strategy. To date, a culture specific prevention education program for lesbian and bisexual women had not been empirically evaluated. As was clear following the completion of focus groups in southwestern Michigan, such a program necessitated the inclusion of components designed to increase accurate knowledge regarding HIV/STD infection, challenge erroneous attitudes and beliefs with regard to safer sex techniques, facilitate the training and practice of culturally appropriate communication skills, and train women in the proper use of safer sex
materials. In addition, such a program would need to incorporate opportunities for the development of new social norms relevant to HIV/STD prevention that support consistent engagement in precautionary sexual behaviors. The third phase of this project implemented such a program, with the intention of determining the effects of culture sensitive cognitive-behavioral skills training and education on the frequency of risky sexual behaviors engaged in by lesbian and bisexual women. The study explored the effects of this type of programming on the verbal reports of knowledge, attitudes and risk perceptions pertaining to HIV/STDs in this population, as well as self-reported engagement in unsafe sexual behaviors.
Rationale: Conceptualizing Prevention

A person's probability of engaging in sexual behavior, whether HIV/STD-risk behavior or safer sexual behavior, involves a complex set of contingencies, each of which is unique to an individual's idiosyncratic learning history. However, a few generalities can be hypothesized which can facilitate our understanding of sexual behavior. It should be noted that each of these conceptualizations involves a global analysis of sexual behavior. A more specific analysis is warranted for each subset of a given population, and most likely, for each individual.

First, antecedent stimuli exist within each individual's learning history which either evoke, elicit, or have no effect on a given individual's target behaviors. In terms of respondent behaviors, direct stimulation of a person's body (e.g., clitoral stimulation, "erogenous zone" stroking) elicits an unconditioned response (i.e., sexual arousal and/or orgasm). As a result of respondent conditioning, these responses, with frequent and consistent pairings, come to be elicited by what had previously been neutral stimuli with regard to sexual arousal. For instance, the smell of a lover's perfume, through higher order classical conditioning, might come to elicit some level of sexual arousal. Merely by respondent conditioning alone, a myriad of antecedent stimuli could become conditioned stimuli for a conditioned sexual arousal response.

Through operant conditioning, environmental stimuli which...
began as neutral in relation to sexual behavior, can be conditioned to evoke or inhibit subsequent engagement in sexual behavior. Some stimuli (e.g., the physiological characteristics associated with being "high" on drugs or intoxicated with respect to alcohol) could serve as discriminative stimuli (i.e., $S^d$) for sexual behavior. Conversely, other stimuli (e.g., being in your mother's living room) could function as $S^-$ deltas (i.e., $S^\Delta$). In addition, establishing operations which momentarily alter the reinforcing effectiveness of an event and the frequency of behaviors which have historically been consequted by those events are also key determinants of the occurrence or nonoccurrence of sexual behavior. For example, risky sexual behavior may be more likely to occur when an individual has been abstaining from sexual behavior for some time, thus the reinforcing effectiveness of sexual stimulation may be sufficient enough to increase the likelihood of behaviors (e.g., "cruising") which lead to engagement in risky sexual behavior.

In the case of human behavioral contingencies, responses are also affected by verbal stimuli known as function-altering and contingency-specifying stimuli (Schlinger & Blakely, 1987; Blakely & Schlinger, 1987). Function-altering stimuli change the associations between verbal stimuli, thereby altering the function of that stimuli. Similarly, contingency-specifying stimuli alter the function of antecedent stimuli (i.e., conditioned stimuli, discriminative stimuli, and establishing operations) by specifying a relation between a given behavior and its consequences. Contingency-specifying stimuli and function-altering stimuli are especially important in complex human behavioral repertoires such as
sexual behavior because they can be used to explain the functioning of both immediate and delayed antecedents, as well as immediate and delayed consequences. They alter the momentary probability of a given behavior, based on their ability to specify the associations between antecedent stimuli, behaviors, and consequent stimuli.

Consequent stimuli also significantly affect the acquisition, maintenance, or extinction/elimination of a particular behavioral repertoire. One of the most profound difficulties prevention researchers have had with regard to high risk sexual behavior is the competing nature of various consequent stimuli associated with sexual behavior. The effect of positive stimuli added to an individual's environment, or negative/aversive stimuli removed from an individual's environment immediately following a response, is to increase the likelihood of that response occurring again in the future. Sexual behavior and many of the events sometimes associated with engaging in sexual behavior (e.g., physical stimulation, social contact, drugs) are typically reinforcing stimuli which occur immediately upon engagement in the behavior and are enduring and consistent contingencies. Given both the immediacy and high degree of saliency of consequent stimuli associated with sexual behavior, it has proven difficult to reengineer an individual's contingencies such that sexual behavior is not so saliently affected. In addition, few contiguous punishing consequences are available for unsafe sexual behavior (pragmatically or ethically) to be utilized in contingency management, even if it could be deemed that the negative side effects of using aversives would somehow be justifiable.
The strong effects of immediate and positive consequences for engagement in sexual behavior compete successfully with delayed consequences. In fact, with regard to risky sexual behavior, the immediate presentation of reinforcing consequences typically holds a much higher relative saliency than some delayed and often less probabilistic consequences, even those as aversive as the suffering of HIV-disease and death.

Above and beyond the antecedent and consequent stimuli directly associated with sexual risk behavior, there are numerous other stimuli within an individual's environment which increase or decrease the likelihood of engaging in risky sexual behavior. The psychological and physiological effect of illicit drug use, the availability of shelter or other survival needs based on an individual's "willingness" to engage in sex, or other competing psychological, physical, or emotional "needs" which are often met via sexual contact, influence an individual's probability of engaging in risky sexual behavior. An example which may help elucidate this construct might be one of a homeless single woman with a history of sexual trauma and depression. She has two small children and is assured by a "john" in the car which just pulled up to her on the street that he will get her a motel room and a meal for her kids if she will have sex with him. The immediate survival needs of shelter and food for her children prove often to be a set of more salient consequent stimuli than the threat of HIV or STD months or years from now.

Antecedent and consequent stimuli, contingency-specifying stimuli and the relative saliency of these variables with regard to exposure to an
STD or HIV is only one piece in the complicated picture of sexual and drug risk behaviors. In a review of outcome research to date, Fisher and Fisher (1992) theorize that AIDS preventive behavior can be conceptualized as having three fundamental determinants: information, motivation, and behavioral skills. These three constructs readily relate back to the philosophical underpinnings stated above. According to Fisher and Fisher (1992), AIDS risk reduction information and AIDS risk reduction motivation work as "prerequisites" for an AIDS risk reduction behavioral skills repertoire, all of which eventually lead to acquired and maintained AIDS preventive behavior. This information-motivation-behavioral skills (IMB) model suggests that the use of these constructs is highly generalizable to any population of interest. By completing elicitation research to identify a specific population's current level of knowledge, their motivation to reduce AIDS/STD risk, and their current behavioral skills, one can create the necessary population-appropriate interventions needed to produce proprevention changes in knowledge, motivation and behavioral skills. With these components in place, it is more likely that an individual will engage in AIDS preventive behaviors and maintain those behaviors across time.

AIDS (and STD) preventive knowledge includes general knowledge about the disease, but also includes specifics with regard to the populations being addressed. For instance, knowledge regarding needle sharing during self-administration of drugs is important to present in any intervention. However, it is particularly important to focus on this information when one is intervening with known drug users. The
information presented in this scenario would obviously need to be highly focused and specific, with rationale included which would appeal to this population. Similarly, AIDS/STD risk reduction motivation is also key, as knowledge is a necessary but not sufficient component in AIDS/STD prevention programming. Studies reviewed by Fisher and Fisher (1992) show that both people's attitudes toward AIDS prevention and perceived social norms which are prevention-relevant are consistently associated with the practice of preventive behaviors.

With regard to prevailing motivational theories of disease prevention and health promotion, Fisher and Fisher (1992) illustrate that the health belief model has at best been inconsistent in its ability to predict or explain a person's use of safer sexual practices. Instead, they believe there is more merit to Ajzen and Fishbein's (1980) theory of reasoned action. This theory asserts that the primary components of an AIDS preventive intervention are the influence of attitudes toward performing AIDS preventive acts and the influence of perceived social norms which support AIDS preventive behavior. In brief, attitudes can be impacted by changing beliefs about the consequences of the sexual behavior or the evaluations of these consequences, adding preventive beliefs and evaluations to the person's thought process about the issue. Perceptions in normative support can be impacted by influencing perceptions of others relevant in the person's social network or adding social influences which are preventive.

Behavioral skills which are AIDS/STD preventive are the third component to the IMB model. Outcome studies are clear that AIDS/STD
preventive behavioral skills are strongly correlated with engagement in AIDS/STD preventive behaviors. These include sexual communication skills, AIDS/STD-specific assertiveness skills, and the ability to avoid alcohol and/or drugs prior to sex. In addition, Fisher (1990) postulates an even broader range of more universal AIDS preventive behavioral skills. These include one's acceptance of themselves as sexual beings, one's use of skills for acquiring accurate AIDS information, one's ability to negotiate preventive behavior with a partner, and one's ability to leave a situation where negotiation is not possible. In addition, he believes that one must be able to engage in public prevention acts such as purchasing safer sex supplies and getting HIV antibody tested. One must also be able to practice safer sex consistently and reinforce themselves and their partners for engaging in safer sex without relapse.

In summary, the IMB model provides a useful framework for understanding the individual context in which relevant AIDS/STD prevention behaviors might occur. As such, the following study focused particularly on impacting general and culture-specific HIV/STD knowledge, attitudes regarding safer sexual behavior, general and culture-specific HIV/STD preventive behavioral skills, and the development of a new social norm within the context of small groups of women. Given the findings in Study #1, women who have sex with women appear to be placing themselves at risk for HIV and STD infection via risky sexual behavior. Within Study #2, the rationale, context, and content for the development and implementation of a prevention program designed to meet the unique needs of this group of women was ascertained. The
purpose of the current study, then, was to evaluate such a program with respect to its ability to affect the verbal self-report of HIV/STD knowledge, attitudes toward safer sex behavior, accuracy of perceptions of risk of exposure to HIV and/or other STDs, and self-reported frequency of risky sexual behaviors.

Methods

Subjects

Subjects were recruited for membership in one of two groups, intervention and “delayed intervention.” Recruitment restrictions limited the success of recruitment efforts and resulted in the necessary utilization of a less powerful AB design with delayed intervention control. Women were recruited within their own communities and assigned to membership within that community’s group. Subjects were recruited via community newsletters and flyers, posters located in gay/lesbian/bisexual bars and community centers, and through outreach efforts at local lesbian/bisexual events. Thirteen women began participation in the intervention groups. The study was ultimately completed with 11 intervention subjects. There were six women who served as delayed intervention subjects. All participants self-identified as lesbian or bisexual women who were currently sexually active. Women involved in monogamous long-term relationships (i.e., more than 6 months) who reported virtual certainty that neither partner was having sex outside the relationship were excluded from the study, due to their lesser degree of risk and need for engagement in safer sex behaviors. Also excluded were
women who had been tested for the HIV antibody in the last six months, reported a negative test result, and engaged in safer sexual activity since that time. Hence, participants included in the study met the following criteria:

1. Women were at least 18 years of age and reported that they self-identified as lesbian or bisexual.
2. Women reported being sexually active with another woman/other women.
3. Women reported that they were either (a) currently involved in a new relationship, monogamous or otherwise, that had lasted less than 6 months, or (b) reported having sexual contact with more than one sexual partner over the past 6 months.
4. Women reported inconsistent use of safer sex strategies during sexual encounters over the past 6 months. And,
5. Women reported either an unknown HIV status or HIV+ status for themselves and/or their current partner(s). "Unknown HIV status" was defined as not having been HIV-antibody tested in the last six months, while in that same six months, having been sexually active, and reporting having engaged in inconsistent or no safer (i.e., protected) sex.

A petition to conduct research was applied for and obtained from the Western Michigan University Human Subjects Institutional Review Board (HSIRB) prior to the start of recruitment of subjects. All guidelines required by the HSIRB were adhered to in the strictest of fashions. Copies of HSIRB approval letters and approvals of minor revisions can be found in Appendix M.
Settings

The settings used for the conduct of assessment and intervention sessions varied specifically for each group. Assessment sessions which took place in Kalamazoo were conducted in the behavioral medicine laboratory of Wood Hall, on Western Michigan University's main campus. Intervention sessions which took place in Kalamazoo were conducted in a conference room, also in Wood Hall. Assessment and intervention sessions conducted in Grand Rapids were conducted in a community center which serviced the gay/lesbian/bisexual community of that city. Sessions conducted in Ann Arbor were conducted in an office of the student union affiliated with the University of Michigan. Confidentiality was strictly adhered to within each setting for all assessment and intervention sessions.

Materials

Enrollment of participants made use of several assessment devices, designed to assess general knowledge with regard to HIV/AIDS, attitudes regarding safer sex strategies, current levels of HIV and STD personal risk perception, and retrospective self-report data on frequency of engagement in risky versus precautionary sexual and drug using behaviors. These assessments were used as pre-study baseline observations. Enrollment also included teaching participants how to self-monitor their sexual behaviors and how to use required data collection forms. Assessment of HIV/AIDS knowledge was completed using the Kelly, St. Lawrence, Hood, and Brasfield (1990) HIV/AIDS Knowledge Test, a true/false questionnaire
measuring general HIV/AIDS information (see Appendix H). Attitudes regarding safer sex strategies were assessed through three primary indicators: (1) a participant's HIV-antibody testing history (i.e., whether or not a subject was tested during the course of the intervention), (2) a participant's efforts to decrease their potential risk of exposure to HIV or STDs (i.e., whether or not a subject decreased their risk by decreasing their number of sexual partners and using safer sex barriers), and (3) whether or not a subject reported an increased frequency in suggestions to their partner(s) to use safer sex strategies (see Appendix I). HIV and STD risk perception was assessed via a questionnaire used in the earlier national survey (i.e., in Study #1) of lesbian and bisexual risk behavior (Morrow, Meinhold, & Fuqua, 1994) (see Appendix J). Sexual behavior was assessed via global assessments which occurred at prescribed intervals (i.e., baseline, immediately following the workshop, immediately following the 12-week group support component, and at 2-month follow-ups for 6 months following the completion of the formal intervention). The questionnaire addressed such behaviors as receptive versus active vaginal, anal and penile sex, sex using barriers versus unprotected sex, use of drugs or alcohol prior to sex, and the subject's known information about their sexual partner(s). In addition, sexual behavior was monitored weekly from baseline week-1 through intervention week-12, using weekly sexual behavior data sheets (see Appendices J & K, respectively).

The primary intervention (i.e., intensive workshop) made use of a video of lesbian women demonstrating the use of safer sex materials (Fatale, 1993). A second video was used which educated the participants...
regarding sexually transmitted diseases. This information was presented in the video by an STD expert from the Kalamazoo County Department of Public Health in a monologue/lecture format. In addition, numerous exercises were conducted which made up the education and skill-building portions of the intervention. No specific materials, other than worksheets and visual aids (i.e., overheads, handouts, latex condoms, latex dental dams, latex finger cots, Saran Wrap®) were employed.

Dependent Variables

Questionnaires

HIV/AIDS knowledge, attitudes toward safer sex, and personal risk perception data were assessed six times throughout the study. Changes in participant scores across these assessments were analyzed.

Self-reports

Target behaviors included frequency of risky sexual behaviors and number of safer sex coupons redeemed. "Coupons redeemed" was defined as the number of coupons collected by the investigators at project meetings. Each coupon was coded by participant, such that it was possible to determine which participants were making use of the coupons in their efforts to obtain safer sex supplies.

Sexual behaviors monitored included vaginal contact with and without barriers (i.e., dental dams, condoms, surgical gloves, finger cots, plastic wrap), anal contact with and without barriers, and penile contact with and without barriers. From these measures, a compilation score

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
indicating frequency of engagement in risky sexual behavior was calculated by summarizing frequencies of risky (i.e. non-barriered) sexual behavior across contact areas.

Participants were also asked whether or not they or their partner(s) had consumed alcohol or taken drugs during the three hours prior to engagement in sexual activity. This information was obtained in the form of a "yes/no" question. In addition, participants were asked to provide brief information about their partner(s) involved in each sexual encounter. This information included the partner's gender, whether or not the participant was aware of any injection drug use engaged in by their partner(s), whether or not the participant was aware of other sexual partners with whom their partner(s) may have been sexually active, and whether or not the participant was aware of their partner(s') HIV and STD status, and, if so, what that status was. At the end of each week, participants were asked whether they themselves had received the results of an STD test or HIV-antibody test in the last week, and, if so, what those results were.

**Consumer Satisfaction**

Following the intervention, each subject completed an evaluation form containing general satisfaction items related to their participation in the study, as well as items which indicated their progress in behavioral change and an indication of perceived social norms. These items included statements reflecting the participants' perception of change in their level of HIV/STD-related knowledge, their completion of steps toward
incorporating safer sex strategies into their lifestyle, their commitment to communication and use of safer sex and their perception that members of their community endorsed safer sex.

Independent Variables

The independent variable involved two basic components, designed in a cognitive-behavioral skills training format. The first component involved an intensive educational workshop, including multiple exercises designed to impact the knowledge, attitudes, and risk perceptions of participants. In addition, participants were trained in skills necessary for engagement in safer sex practices. Exercises and training included: (a) challenges to ineffective or erroneous cognitions (i.e., knowledge and attitudes) regarding STDs, HIV and their effect on the lesbian and bisexual women’s communities; (b) communication skills training specific to negotiating the use of safer sex techniques with potential sexual partners, the use of assertiveness and unsafe sex refusal skills when prospective partners refuse to engage in safer sex, and communicating with peers regarding safer sexual attitudes; (c) skill-building in the purchase and use of safer sex materials (e.g., the proper use of dental dams, including how to cut condoms and surgical gloves to use as dams); (d) skill-building in creating environments that support precautionary sexual activity (i.e., setting up one's home to facilitate safer sex, being prepared for safer sex episodes, problem-solving in unanticipated situations); and (e) the use of proper procedures for cleaning sexual paraphernalia. Exercise modalities included dialogue, lecture,
modeling/demonstration, and role-play scenarios. Participants were also given information on STD and HIV testing.

The second component in the intervention involved regularly scheduled (i.e., biweekly) support meetings. The support meetings were designed to allow for the establishment of a supportive social group, the facilitation of problem-solving related to practicing and maintaining precautionary sexual behaviors, and the collection of data and distribution of self-monitoring sheets for the coming weeks. Making risk reduction behaviors the norm within the lesbian and bisexual women's community and producing these norm changes before the prevalence of STD/HIV infection rises to high levels allows for the greatest efficacy of prevention within this population. Ostensibly, the support meetings hoped to accomplish this normative change on a small scale and facilitate the prevention of "relapse" to engagement in risky sexual behaviors.

Participants were provided with incentives for their continued enrollment in the study, including regular attendance at the support meetings, and their consistent and timely return of self-monitoring sheets. Incentives were in the form of gift certificates and other "freebies" donated by members of the lesbian artisan community and lesbian-friendly businesses, services and organizations.

Procedure

Data Collection

Upon enrollment in the present study, participants were asked to complete several assessment measures: demographics (see Appendix G),
knowledge of HIV/AIDS (see Appendix H), attitudes toward safer sex (see Appendix I), personal perception of risk regarding infection with HIV and other STDs (see Appendix J), and a retrospective self-report of frequency of engagement in risky versus precautionary sexual behaviors (see Appendix K). These assessments (excluding the retrospective self-report) were completed by the participants for a second time following the intensive workshop component of the intervention, after the 12-week support group phase, and during the three follow-up periods. They were returned to the investigators during the meeting or via mail in investigator-addressed envelopes. Weekly data regarding frequency of engagement in selected sexual behaviors were obtained during baseline and throughout the formal portion of the intervention study (Week 1-Week 15) (see Appendix L). Retrospective self-reports of sexual behavior (Appendix K) were included again during follow-up assessments.

Additionally, the investigators collected and counted coupons redeemed by each participant at regularly scheduled meetings. Each participant was given coupons redeemable for free safer sex materials.

**Chronology of Participation**

Subject participation began during the original advertising campaign, consisting of advertisements in gay/lesbian/bisexual newsletters in each city. Participants were solicited to “call for details” regarding a study about sexual behavior and health. When potential subjects called the information number, they were read a script detailing the study and asking whether or not they wished to participate in the
initial assessments. The purpose of the initial assessment was to: (a) screen potential participants and determine if they met criteria for inclusion in the program, (b) inform enrollees of the activities they would engage in as participants, (c) complete initial assessment and data collection, (d) obtain consent from each participant for their inclusion and participation in the study, (e) obtain each participants agreement to maintain the confidentiality of all participants, and (f) train participants in self-monitoring (i.e., operational definitions of behaviors, completion of forms, return of data).

Those subjects who met criteria, agreed to participate, and were assessed, were then given information regarding the date and time of the upcoming workshop. The workshop's major goals were to: (a) introduce participants to some of the issues to be discussed throughout the workshop, evaluate their current attitudes and offer accurate information regarding safer sex attitudes, homophobia, and erotophobia; (b) desensitize participants to an open and honest discussion of sex; (c) disseminate the most up-to-date information available on STDs and relate it to the lesbian and bisexual women's experience; (d) disseminate the most up-to-date information available on HIV/AIDS and relate it to the lesbian and bisexual women's experience and arouse their political activism regarding women's health and the politics of STDs and HIV in women; (e) provide participants with a rationale for practicing safer sexual health behaviors; (f) dispel myths regarding these participants perceptions of risk of STD and HIV infection and begin to foster more accurate perceptions of their risk; (g) train participants in skills necessary for preventive behaviors (i.e.,
promote self-awareness and self-esteem, teach communication skills in the context of woman-to-woman relationships, teach the how-to's of safer sex in woman-to-woman and woman-to-man sex, provide the opportunity to practice communication skills learned in sex-related scenarios, and provide the opportunity to practice how to refuse the sexual advances of partner(s) unwilling to use safer sex); and (h) provide the participants with an opportunity to make a public and personal commitment to sexual health.

Following completion of the workshop, all participants were required to attend biweekly group support/problem-solving meetings designed to: (a) facilitate group cohesion and develop a social subgroup that would be pro safer sex and would encourage and promote those behaviors within its members, and (b) provide support, suggestions, and ideas when participants had difficulties incorporating safer sex practices into their lives. The facilitator was available for individual discussion/consultation when requested.

Following the formal intervention phase, each subject was contacted via mail and asked to complete assessments every two months. Assessment instruments were the same as those completed earlier in the study, except for minor modifications in time citations (e.g., instead of asking for past six-month sexual history, only the previous two months were requested). Participants were debriefed following their completion of the study, as to the general conclusions able to be drawn from the data.
Experimental Design

Two intervention groups completed the program. The second group was completed in association with a delayed intervention group. For final analyses, the two intervention groups were combined and compared with the delayed intervention group. As such, the study ultimately resulted in an AB design with a control/delayed intervention condition.

Intervention Group 1 completed the day-long workshop, followed by six biweekly support meetings. The last four weeks of this cycle coincided with Intervention Group 2's baseline period. Intervention Group 2 completed the day-long workshop, followed by six biweekly support meetings, as well. A twelve-week support group period ended the formal portion of the intervention for both intervention groups. Participants then completed three follow-up assessments at two-month intervals. Again, following multiple regression analyses, it was determined that data from the two intervention groups could be combined for further analyses.

The above design is similar to the simultaneous replication design originally proposed, illustrated by multiple replications of individual subjects being exposed to a group intervention, in a modified multiple baseline format (Barlow & Hersen, 1984). It was hoped that the extension of data collection in the experimental groups through a three-month formal intervention would allow for a detection of delayed effects (Barlow & Hersen, 1984), anticipated to be a function of the continuation of support meetings and social norm changes within that group of participants.
Following the completion of the formal intervention (i.e., day-long workshop plus 12-week support groups), the remaining delayed intervention subjects were exposed to the intervention. It was anticipated that additional assurance would be given to the effectiveness of the intervention by doing so. Additionally, given the success of the intervention, ethical considerations demand the exposure of a nontreated "control group" to a successful and, in this case, potentially lifesaving intervention, hence a "delayed intervention" group, as opposed to a true "control" group which is not exposed to the intervention at all.

With respect to changes in conditions, the intervention groups remained in baseline for four weeks. Following baseline, they were exposed to the intensive day-long workshop component of the intervention. Following the workshop component, they began exposure to the second component of the intervention by attending biweekly meetings of the support group. This strategy, suggested by focus group participants prior to the initiation of the current study, allowed for an initial opportunity for the group to solidify as a social unit and facilitate early support of intended behavior change. These support groups continued to meet for three months following the workshop. Both groups submitted follow-up data at 2-month intervals, through ten-eleven months of total participation in the study. The delayed intervention group began participation in the study at the same time as Group 2 and continued as controls through the first 16 weeks of Group 2's involvement. Following Group 2's completion of the formal intervention, the delayed intervention participants took part in the
intervention themselves. This participation coincided in time with the beginning of the follow-up period for the second intervention group.

Results and Discussion

The current intervention study resulted in an exploratory analysis of some of the key issues facing behavioral prevention researchers attempting to influence engagement in precautionary sexual behaviors for the purpose of preventing STDs and HIV/AIDS in lesbian and bisexual women. As an exploratory project, we attempted to address as many issues as was feasible, with the intent of discovering whether our current model of risk is applicable to this particular population and what adjustments might need to be made in future larger scale projects.

Availability of Subjects

The lesbian and bisexual women's communities make up a relatively small percentage of the population. This study excluded approximately 65% (Morrow, Meinhold, & Fuqua, 1994) of that group simply due to their involvement in mutually monogamous relationships. This exclusion criterion resulted in an available sample of only 35% of the lesbian community, some of whom chose celibacy, others who were not currently sexually active, and still others who chose not to participate in such a study. As a result of the limited available subject pool within a single community, the threat of contamination to the independent variable was highly probable. That is, it was highly likely that women within the same community who met criteria for inclusion in the study
would know other women involved in the study, and, if they were to be assigned to different groups within the same community (i.e., control versus experimental), they could inadvertently influence each other, thus threatening the integrity of the independent variable. Given this rationale, there were two experimental groups within the current study involving women from separate communities. Admittedly, this design makes random assignment of subjects to experimental and control/delayed intervention groups impossible. In addition, the use of a reversal or withdrawal design was precluded by the irreversibility of the intervention.

Subject Selection

It is important to acknowledge several points about the present participant sample which will be pertinent to interpretations derived from the data. First, the women who participated in the current intervention study were volunteers who were compensated for their participation. As such, they were self-selected and potentially motivated by factors other than those which might be motivative within the general population. It would be reasonable to assume that the women who participated did so due to a unique set of circumstances. For example, it is conceivable that women participated out of a sense of social responsibility, or because they have been affected by their own or someone else's diagnosis with a sexually transmitted disease such as HIV. As such, it is difficult to discern to what degree the current sample was representative of the general population of lesbian and bisexual women at risk for STD or HIV.
infection.

Second, by the end of the study, 4 of 11 intervention subjects and 2 of six delayed intervention subjects had been lost to follow-up. Due to these losses and the extent of missing data which resulted, a multiple regression analysis was conducted to determine if group membership could be predicted by age, education or relationship status. There was one potential outlier among the subjects, but further analyses of standardized residuals yielded no significant findings. As such, age, education, and relationship status were not predictive of group membership, allowing further analyses to be completed with combined groups. The final intervention group consisted of 11 participants, while the delayed intervention group consisted of six participants. Sexual behavior data were analyzed across all individual participants, while knowledge, attitudes and risk perception data were analyzed across a smaller group of subjects. The use of only grouped data for these analyses was necessitated, again, by a large degree of incomplete data sets. Group analyses consisted of data from seven intervention subjects and 4 delayed intervention subjects, all of whom had completed at least 4 of 6 possible assessment packages. This small sample size for group analyses severely limited the extent to which generalizations could be made and obviated the use of extensive statistical analyses due to a lack of statistical power.

Table 1 shows age, education and relationship status information on all subjects. Those subjects whose data were used in grouped analyses are indicated by an asterisk (i.e., "+"). The mean age for the intervention group was 26 years. The mean age for the delayed intervention group was
Table 1
Subject Demographics [Age, Education, and Relationship Status]

<table>
<thead>
<tr>
<th>Subject</th>
<th>Group</th>
<th>Age</th>
<th>Education</th>
<th>Relationship Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(^{a})</td>
<td>1(^{b})</td>
<td>21</td>
<td>high school</td>
<td>monogamous</td>
</tr>
<tr>
<td>2(^{a})</td>
<td>1</td>
<td>21</td>
<td>high school</td>
<td>monogamous</td>
</tr>
<tr>
<td>3(^{a})</td>
<td>1</td>
<td>46</td>
<td>high school</td>
<td>monogamous</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>35</td>
<td>college</td>
<td>nonmonogamous</td>
</tr>
<tr>
<td>5(^{a})</td>
<td>1</td>
<td>19</td>
<td>high school</td>
<td>nonmonogamous</td>
</tr>
<tr>
<td>6(^{a})</td>
<td>1</td>
<td>22</td>
<td>high school</td>
<td>nonmonogamous</td>
</tr>
<tr>
<td>7(^{a})</td>
<td>1</td>
<td>21</td>
<td>college</td>
<td>monogamous</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>31</td>
<td>high school</td>
<td>monogamous</td>
</tr>
<tr>
<td>9(^{a})</td>
<td>1</td>
<td>28</td>
<td>high school</td>
<td>monogamous</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>21</td>
<td>college</td>
<td>nonmonogamous</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>19</td>
<td>high school</td>
<td>nonmonogamous</td>
</tr>
<tr>
<td>12(^{a})</td>
<td>2(^{b})</td>
<td>31</td>
<td>high school</td>
<td>nonmonogamous</td>
</tr>
<tr>
<td>13(^{a})</td>
<td>2</td>
<td>30</td>
<td>college</td>
<td>monogamous</td>
</tr>
<tr>
<td>14(^{a})</td>
<td>2</td>
<td>45</td>
<td>college</td>
<td>nonmonogamous</td>
</tr>
<tr>
<td>15</td>
<td>2</td>
<td>28</td>
<td>college</td>
<td>nonmonogamous</td>
</tr>
<tr>
<td>16(^{a})</td>
<td>2</td>
<td>40</td>
<td>college</td>
<td>monogamous</td>
</tr>
<tr>
<td>17</td>
<td>2</td>
<td>26</td>
<td>high school</td>
<td>nonmonogamous</td>
</tr>
</tbody>
</table>

Note. \(^{a}\) Subject used in grouped analyses; \(^{b}\) 1=Intervention, 2=Delayed Intervention
33 years. Seventy-three percent and 33% of women in the intervention and delayed intervention groups, respectively, had at least a high school education. Twenty-seven percent and 67% of women, respectively, had a college degree. Forty-five percent of women in the intervention group reported being in monogamous relationships lasting less than six months. Sixty-seven percent of women in the delayed intervention group reported a similar relationship status.

Data and Design Considerations

Given the nature of sex-related research, reliance on self-report of sexual behavior, and verbal report of knowledge, attitudes and personal risk perceptions leaves researchers with limited observable data. Our best indirect measures include role-played demonstration of skills and indirect measures such as coupon redemption. Whether demonstrated skills and indirect behavioral measures are valid and generalizable to "real life" is as yet unclear, especially with a relatively unknown research population such as lesbian and bisexual women.

It was anticipated that the intensive workshop intervention alone would not adequately facilitate and allow for the maintenance of sexual behavior change for participants. In fact, the most recent literature reviewing empirically-validated prevention programs advocates for consistency in social support through social norm changes and peer/significant other support (Kelly et al., 1993). Given these recommendations, the current study incorporated the regular meeting of participants both to facilitate social norm changes that support
precautionary sexual practices, and to provide an opportunity for intervention in problematic areas as the participants attempted to change their sexual behaviors. This component of the intervention, as such, allowed for changes and additions to training received in the intensive workshop component. Participants were encouraged to bring examples of problematic situations to the group for discussion, problem-solving, and support.

Knowledge

In the present study, general HIV/AIDS knowledge was assessed across six assessment periods. Table 2 indicates which phase of the design the intervention and delayed intervention groups were in and the corresponding assessment period.

Table 2

Correspondence Between Assessment Period and Phase of Study by Group

<table>
<thead>
<tr>
<th>Assessment Period</th>
<th>Intervention</th>
<th>Delayed Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Baseline</td>
<td>Baseline</td>
</tr>
<tr>
<td></td>
<td>Workshop Presented</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Post-Workshop</td>
<td>Baseline</td>
</tr>
<tr>
<td>3</td>
<td>Post-Group Sessions</td>
<td>Baseline</td>
</tr>
<tr>
<td></td>
<td>Workshop Presented</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Follow-Up 1</td>
<td>Follow-Up 1</td>
</tr>
<tr>
<td>5</td>
<td>Follow-Up 2</td>
<td>Follow-Up 2</td>
</tr>
<tr>
<td>6</td>
<td>Follow-Up 3</td>
<td>Follow-Up 3</td>
</tr>
</tbody>
</table>
As shown in Figure 1, results indicated that this sample of lesbian and bisexual women were well-versed in HIV/AIDS knowledge. Scores on the HIV/AIDS Knowledge Test (Kelly et al., 1990) ranged from 31-40 (instrument's maximum score = 40) for the selected group data. Intervention group averages ranged from 36-37, while delayed group averages ranged from 34-38. The knowledge scores for the intervention group did not differ significantly from the delayed intervention group, suggesting a generally equal level of knowledge across this sample. Both group averages during baseline assessment were indicative of a high degree of general HIV/AIDS knowledge. Of note, all subjects from both groups were engaging in risky sexual behavior at this time and demonstrated a moderate degree of personal risk perception. One may conclude from these data that this sample of lesbian and bisexual women are at least as knowledgeable as the general population with regard to general HIV/AIDS knowledge. However, there appears to be no association between this general knowledge and their degree of risk perception or their probability of engaging in precautionary sexual behavior, as general knowledge scores varied little while risk perception scores and frequency of risky sexual behaviors were often more varied. There may be numerous reasons for this lack of association. An individual's knowledge base with respect to sexually transmitted disease, including HIV, and its association with that individual's potential for engaging in risky versus precautionary sexual and drug-related behaviors, has been extensively monitored throughout the literature. A review by Fisher and Fisher (1992) notes that interventions which stressed AIDS risk
Figure 1. HIV/AIDS Knowledge Scores.
reduction information along with motivational and behavioral skills acquisition proved to have the greatest impact on the probability of engagement in AIDS preventive behavior. It appears that information of a general nature (i.e., that related to general AIDS knowledge; e.g., what "HIV" stands for) is limited in its utility with regard to its ability to predict the occurrence of specific AIDS preventive behaviors. However, information regarding specific methods of preventing infection are necessary prerequisites. That is, there is a lack of consistent relationship between general HIV/AIDS knowledge and precautionary sexual behavior, primarily because of the general content domain and lack of "ecological validity" with regard to specific preventive behaviors within specific populations (Fisher & Fisher, 1992). If, however, prevention programming is able to convey specific knowledge which is ecologically valid for a given population, acquisition of that knowledge is associated with AIDS/STD preventive behavior. As with other studies of AIDS-related knowledge, it appears in this study that the occurrence of ceiling effects make it difficult to detect any relationship between knowledge and prevention. In addition, relationships between these variables may be difficult to detect due to the small sample size, as discussed earlier.

The lesbian and bisexual women's communities have been under the impression that they are virtually risk-free from HIV infection and little has ever been done with those communities with regard to general sexual health, e.g., STD prevention. From a clinical viewpoint, one could surmise that a self-selected group of lesbian and bisexual women volunteering for an HIV and STD prevention study would likely have a
high degree of general HIV/AIDS knowledge, but may also have lower
degrees of positive attitudes toward safer sex between women and variable
degrees of personal risk perceptions.

**Attitudes Toward Sexual Health and Safer Sex**

A number of factors were assessed with regard to the sample's
general attitudes toward sexual health and safer sex. Table 3 presents data
from subjects belonging to both the intervention (n=7) and delayed
intervention (n=4) groups. There were no statistically significant
differences between the groups on any category of attitudes or risky
behavior during baseline analysis, with the exception of "subjects with 4+
sexual partners" ($p=0.0028$). However, given that the sample sizes were so
small, it would be erroneous to assume that this represents any
meaningful difference across groups. Significance levels for group
differences for "safer sex material utilization," "risk behavior patterns,"
"sexual behavior risk," and "subjects with 3+ sexual partners" were,
respectively, $p=0.68$, $p=0.12$, $p=0.58$, and $p=0.34$. Table 4 notes risky
attitudes and behaviors of particular importance for the most "risky" of
participants (i.e., those participants who reported engaging in sex with 3+
or 4+ sexual partners). Of note, also, are the following findings.

Two of the original eleven intervention subjects reported ever
having been tested for HIV or STDs prior to the current study. By the end
of the study, eight of the eleven reported having been tested both for HIV
antibodies and STDs. None of the delayed intervention subjects reported
being HIV and STD tested by the end of the study. Second, the number of
Table 3

Attitudes and Risky Sexual Behaviors [All Participants]

<table>
<thead>
<tr>
<th></th>
<th>Intervention (7 subjects)</th>
<th>Delayed (4 subjects)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sexual Activity Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monogamous</td>
<td>29%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Safer Sex Material Utilization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latex Condom Use</td>
<td>43%</td>
<td>25%</td>
</tr>
<tr>
<td>Latex Dental Dam Use</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Latex Finger Cot Use</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Latex Examination Glove Use</td>
<td>14%</td>
<td>25%</td>
</tr>
<tr>
<td>Plastic Wrap Use</td>
<td>14%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Risk Behavior Patterns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subject Reported Using Protected Sex During 25% of Sexual Encounters</td>
<td>43%</td>
<td>25%</td>
</tr>
<tr>
<td>Subject Reported Using Protected Sex During 26% or more of Sexual Encounters</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Injection Drug Use Current or History</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Tested for HIV Antibodies</td>
<td>57%</td>
<td>75%</td>
</tr>
<tr>
<td>Own HIV Status Unknown</td>
<td>43%</td>
<td>25%</td>
</tr>
<tr>
<td>Partner's HIV Status Known</td>
<td>29%</td>
<td>0%</td>
</tr>
<tr>
<td>History of Sex in Exchange for Drugs</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>History of Sex in Exchange for Money</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Refused Sex Due to Partner's Drug History</td>
<td>57%</td>
<td>0%</td>
</tr>
<tr>
<td>Refused Sex Due to Partner's Sex History</td>
<td>71%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table 3 - Continued

<table>
<thead>
<tr>
<th>Sexual Behavior Risk</th>
<th>Intervention (7 subjects)</th>
<th>Delayed (4 subjects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Questions or Knows of Partner(s) Having Other Sex Partners</td>
<td>71%</td>
<td>50%</td>
</tr>
<tr>
<td>Receptive Vaginal Sex Without Barriers</td>
<td>86%</td>
<td>100%</td>
</tr>
<tr>
<td>Receptive Anal Sex Without Barriers</td>
<td>29%</td>
<td>75%</td>
</tr>
<tr>
<td>Receptive Penile-Vaginal/Anal/Oral Sex Without Barriers</td>
<td>14%</td>
<td>0%</td>
</tr>
<tr>
<td>Share Sex Toys Without Use of Barriers</td>
<td>43%</td>
<td>50%</td>
</tr>
<tr>
<td>Subject Use of Alcohol/Drugs Prior to Sex</td>
<td>29%</td>
<td>25%</td>
</tr>
<tr>
<td>Partner(s) Use of Alcohol/Drugs Prior to Sex</td>
<td>57%</td>
<td>0%</td>
</tr>
<tr>
<td>Subject Reported 3 Sexual Partners in Last 6 Months</td>
<td>71%</td>
<td>25%</td>
</tr>
<tr>
<td>Subject Reported 4 Sexual Partners in Last 6 Months (°inclusive of above category)</td>
<td>43%*</td>
<td>0%</td>
</tr>
</tbody>
</table>

sexual partners each subject reported was assessed as an indicator of risk for STD and HIV exposure. One intervention subject reported having two sexual partners during the six months prior to the start of the study. Three of eleven participants in the intervention group reported having three sexual partners in the six months prior to the study. Three additional participants reported having four sexual partners during the same time period. Additionally, one of six delayed intervention group participants reported having three sexual partners in the six months prior to the study. Clearly, many of the women participating in the study were at risk for STD or HIV exposure prior to the beginning of the study merely by being
Table 4

Attitudes and Risky Sexual Behaviors of High Risk Subjects

<table>
<thead>
<tr>
<th>Of Subjects with 3+ Sexual Partners....</th>
<th>(of 5 subjects)</th>
<th>(of 1 subject)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Questions or Knows of Partner(s) Having Other Sex Partners</td>
<td>80%</td>
<td>100%</td>
</tr>
<tr>
<td>Receptive Vaginal Sex Without Barriers</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Receptive Anal Sex Without Barriers</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Receptive Penile-Vaginal/Anal/Oral Sex Without Barriers</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Share Sex Toys Without Use of Barriers</td>
<td>20%</td>
<td>100%</td>
</tr>
<tr>
<td>Subject/Partner Use of Alcohol/Drugs Prior to Sex</td>
<td>20%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Of Subjects with 4+ Sexual Partners....</th>
<th>(of 3 subjects)</th>
<th>(none)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Questions or Knows of Partner(s) Having Other Sex Partners</td>
<td>66%</td>
<td>n/a</td>
</tr>
<tr>
<td>Receptive Vaginal Sex Without Barriers</td>
<td>100%</td>
<td>n/a</td>
</tr>
<tr>
<td>Receptive Anal Sex Without Barriers</td>
<td>66%</td>
<td>n/a</td>
</tr>
<tr>
<td>Receptive Penile-Vaginal/Anal/Oral Sex Without Barriers</td>
<td>0%</td>
<td>n/a</td>
</tr>
<tr>
<td>Share Sex Toys Without Use of Barriers</td>
<td>33%</td>
<td>n/a</td>
</tr>
<tr>
<td>Subject/Partner Use of Alcohol/Drugs Prior to Sex</td>
<td>66%</td>
<td>n/a</td>
</tr>
</tbody>
</table>

involved with multiple partners. Following the study, numbers of partners was reassessed. Within the intervention group, six of the eleven subjects decreased their number of sexual partners during the course of the
study. Another four maintained their same number of sexual partners (i.e., did not increase their number of partners). In the delayed intervention group, the one subject who had reported three initial partners completed the study with one partner. This decrease occurred following this subject's exposure to the workshop intervention. This information alone offers little with regard to assessing the degree of risk via multiple partners. However, this information, combined with the above testing information indicates that, in general, the delayed intervention group subjects did little to assure their level of safety during the course of the formal intervention (i.e., workshop plus 12-week group sessions).

Suggestions to utilize safer sex supplies was also used as an indicator of subject attitudes toward safer sex and sexual health in general. Of the selected group data, 5 of 7 (71%) intervention subjects increased their frequency of suggestions to use safer sex during the course of the intervention, while only 1 of 4 (25%) of the delayed intervention subjects did so. Of all subjects, 7 of 11 (64%) intervention subjects increased their frequency of suggesting safer sex, while only 2 of 6 (33%) of delayed intervention subjects did so.

Taking all of the above information into account, while also taking into account the small sample size of this exploratory study, there appears to be some suggestion of change in attitudes toward practicing safer sex and toward women considering their overall sexual health as a result of participating in the intervention.
HIV and STD Risk Perceptions

Self-reports of personal risk perceptions regarding HIV and other STDs were quite similar across groups and across the diseases measured. As depicted in Figure 2 and 3, baseline risk perceptions for both groups were moderate and potentially inaccurate, reflecting a potential rationale for these women's participation in the study (i.e., it is possible that this group of women self-selected to participate in the study because they were concerned about their risk of exposure or infection to HIV or another STD). Immediately following the day-long workshop, risk perceptions increased further for both groups. It is unclear whether the intervention alone impacted the risk perceptions of the intervention group because the delayed intervention group also showed an increase in risk perception at the same point in time. An alternative explanation may be that all the subjects were evidencing a sensitivity to assessment which resulted in the higher scores. Or, it would also be feasible to suggest that different variables affected the groups, but in a similar fashion. For instance, it is possible that the intervention group was sensitized to their previous risk patterns during the workshop and thus showed an increase in their risk perception scores, whereas the delayed intervention subjects may have been affected by baseline assessment and continued to evidence that sensitivity across time. Both groups reported higher than expected risk perception scores, i.e., potentially inaccurate perceptions of their risk via sexual contact. Additionally, it is important to highlight, again, the small sample size and potential for one extreme score to greatly affect overall mean scores.
Figure 2. STD Risk Perceptions.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Figure 3. HIV Risk Perceptions.
Following the 12-week support portion of the intervention, the intervention group evidenced a marked decline in their mean risk perception scores (the delayed intervention group data for this assessment period were not collected). This decline most likely represents a more accurate appraisal of their risk for HIV and STD exposure, an appraisal which held relatively constant throughout the remainder of the study. Once the intervention subjects had completed the 12-week support group portion of the study, the members of the delayed intervention group were exposed to the intervention. Their data for Assessment Periods 4-6, then, reflect their post-intervention risk perceptions. As with the intervention group, the delayed intervention group showed a marked decline in risk perception scores, a decline which more accurately reflected their level of risk of exposure.

Risk perception scores did not predict group membership and were highly correlated between groups (r=0.765 for STD risk perception and r=0.889 for HIV risk perception). Overall, all subjects reported slightly lower levels of risk perception for HIV than other STDs. This is most likely an accurate perception, as, in general, women who have sex with women, are at greater risk for STD exposure than HIV exposure merely due to the current rates of STD infection. This analysis would suggest that the intervention had an effect on the accuracy of risk perceptions for all subjects following intervention with the added caveat that the initially high risk perception scores in both groups could denote an overall inaccuracy in risk perception across the sample, a general lack of understanding regarding probability of risk, or initial sensitivity to
assessments.

Sexual Risk Behavior

Use of Safer Sex Supplies

Many of the intervention subjects requested safer sex supply kits, consisting of condoms, dental dams, surgical gloves, and instructions for use. Ten of eleven intervention subjects requested safer sex kits via redemption of coupons. Upon visual inspection of the data, it appears that safer sex kit coupon redemption was somewhat associated with decreases in risky sexual behavior. For instance, the two women who requested the most kits (i.e., Subject 4 and Subject 9, who requested 52 and 39 kits, respectively) were also two of the intervention subjects who reported consistent decreases in risky sexual behavior practices. The evidence is less clear, however, for subjects who requested relatively fewer kits. Subjects 7 and 8, who reported a moderate degree of risky sexual behavior, requested the least kits (3 and 2, respectively). However, Subjects 2 and 3, who at times reported high frequencies of risky sexual behavior, requested 16 and 20 kits, respectively. As such, the coupon redemption data sheds little light on sexual behavior risk. An explanation for this lack of substantiating evidence via indirect behavioral measures includes the lack of utility of such indicators (i.e., do we have any evidence to suggest that using indirect measures such as coupon redemption will provide reliable evidence of behavioral risk reduction?). There is an alternative explanation, however. The safer sex kits included, as stated earlier, condoms, surgical gloves and dental dams. First, only one subject
engaged in sex with a male during the course of the study. As such, unless subjects were cutting the condoms for use during oral-vaginal/anal sex (or using them with sex toys), the condoms held little utility for this group of women. Second, dental dams are considered a less than desirable oral sex technology by many lesbians (Morrow, Fuqua, & Meinhold, 1994). With Saran Wrap® or another plastic wrap as an alternative, few women may opt for cutting a condom or a surgical glove, or using a dental dam. As such, it is entirely reasonable to conclude that the use of plastic wrap was a more viable option to many of the subjects than what was available to them via the safer sex kits. As such, we had no way of measuring their use of that strategy over latex dams, gloves or condoms.

**Risky Sexual Behavior**

Total weekly frequencies of unsafe sexual behavior during the baseline and intervention phases of the study are presented in Figures 4, 5, and 6. Figures 4 and 5 present the data for the intervention subjects. Figure 6 presents the data for the delayed intervention subjects. Overall frequency of sexual behavior, whether risky or safer, varied significantly across subjects and groups. Due to the wide range of frequencies in sexual behavior and due to the small sample size, grouping the data together for an overall analysis of risk between groups was not indicated. Several discrete statistical analyses were conducted between groups, however, in an effort to discern changes in levels and trends within each subject's data. An analysis of variance (ANOVA) was conducted to determine if there had been a significant change in means across phases. An ANOVA was
Figure 4. Frequency of Risky Sexual Behavior [Subjects 1-6].
Figure 5. Frequency of Risky Sexual Behavior [Subjects 7-11].
Figure 6. Frequency of Risky Sexual Behavior [Subjects 12-17].
also conducted to determine if there were significant changes in the level of intercept between phases and whether there were significant changes in slope between phases. There were no significant findings in any of these analyses. Again, little information may be derived from these analyses due to the small sample size and resulting low power of analysis.

Given the unknown relative risk of exposure to STDs or HIV via specific sexual behaviors, the data are presented with the implication that each unsafe sexual act (i.e., a sexual behavior which potentially allows for the transmission of blood, semen or vaginal secretions between partners) is a risk. As you can see from the figures, one intervention subject (Subject 1) reported a total frequency of risky sexual behaviors of zero (0) across the intervention phase. Seven of eleven subjects showed decreases in their overall mean frequency of risky sexual behaviors (Subjects 1, 4, 5, 6, 9, 10, and 11). Subjects 7 and 8 from the intervention group began showing a decreasing trend in frequency of risky sexual behaviors as the monitoring of weekly sexual behavior data was concluding. Only two delayed intervention subjects showed decreases in their overall mean frequency of risky sexual behaviors during the time the formal intervention was being conducted (Subjects 12 and 16). Overall, delayed intervention subjects maintained moderate levels of risky sexual behaviors throughout the intervention phase of the study. These data indicate that the intervention did potentially have some effect on risk behavior among intervention subjects, though it is clear that there is a great degree of variance between individuals.

It was interesting to note the discrepancy in overall mean risky
sexual behavior frequencies between monogamous and nonmonogamous subjects. Of nonmonogamous subjects, two of six intervention subjects showed decreases in mean frequency of risky sexual behavior, whereas one of two nonmonogamous delayed intervention subjects showed decreases. Of monogamous subjects, five of five intervention subjects showed decreases in mean frequency of risky sexual behaviors, whereas only two of four delayed intervention subjects did the same. Admittedly, the small number of subjects obviates any meaningful conclusions, especially given that the delayed intervention subjects engaged in higher frequencies of risky sexual behavior overall, regardless of their relationship status. Whether or not their decreases are clinically significant remains to be seen.

Analyzing overall frequency of risky sexual behavior allows us to assess overall level of risk. However, it is important to note that this measure is somewhat limited on an individual basis. For example, a women who reports engaging in zero (0) risky sexual behaviors could be either engaging in safer sex consistently, or not engaging in sexual behavior at all. Given the large range of frequencies of sexual risk behavior in this sample, however, it was inappropriate to calculate relative frequencies without also providing an equally unclear picture. For example, a reported 0% risky sexual behavior could indicate zero episodes out of one opportunity, or zero episodes out of 50 opportunities, obviously a more clinically relevant issue. Ultimately, using absolute frequencies of episodes of risky sexual behavior resulted in a more clinically useful measure of overall risk. An overall zero incidence of risk
behavior, whether a woman had opted to abstain from sexual behavior in order to avoid infection, or whether she had engaged in consistent safer sex practices, was considered to be more relevant in an exploratory project such as this than being able to compare one participant's relative frequencies of risk with another's.

Consumer Evaluations

Subjects who participated in the intervention were asked to complete an evaluation. The evaluation was comprised of 27 Likert-type statements, assessing such areas as perceived changes in HIV/STD knowledge, perceived acquisition of safer sex skills, commitment to using safer sex techniques, and social norm perceptions (see Table 5). Ten of eleven participants completed the evaluations. Relevant to knowledge, all subjects strongly agreed with the statement "I learned new information about HIV and STDs as a result of this study." Regarding attitudes toward safer sex, most strongly agreed that they were more likely to communicate with potential sexual partners about past sexual and drug histories. In addition, all either agreed or strongly agreed that they would say "no" to sex if they did not know their potential partner's STD or HIV status. It was interesting to note that there were discrepancies between their anticipated behavior with current versus new sexual partners. All subjects strongly agreed with the statement "I am more likely than in the past to practice safer sex with a new sexual partner," while the agreement was somewhat less with regard to the same statement concerning their current partner. The same was true for their level of commitment to using safer sex with
new versus current partners.

With regard to HIV and STD risk perception, most \textit{strongly agreed} that they had "seriously considered [their] potential for risk of STD or HIV infection in [their] current sexual relationships" following their participation in the study. This consideration may be, as stated earlier, one of the explanations for a more accurate perception of their risk for HIV and STD infection. Most had minimally talked about safer sex with their partners and many had experimented with safer sex materials since participating in the workshop.

Social norms were illuminated through this evaluation, as well, indicating a lack of encouragement and support for safer sex in the communities of which these women are a part. Most \textit{disagreed} with the statement "Most of my lesbian/bisexual women friends practice safer sex when they are with new sexual partners," and few perceived their friends as believing that safer sex is "the right thing to do." All \textit{agreed} that safer sex is acceptable when engaging in sex with a man, but somewhat less acceptable when engaging in sex with a woman. Their attitudes toward safer sex seem also to be favorable in this evaluation, possibly a reflection on the intervention's ability to affect their evaluation of safer sex and its place in their sexual behavioral repertoire. Table 5 shows the mean ratings for each statement from the evaluation.
Table 5
Participant Evaluation: Mean Ratings

<table>
<thead>
<tr>
<th>Mean Level of Agreement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I learned new information about HIV and STDs as a result of this study.</td>
</tr>
<tr>
<td>1.1</td>
<td>I learned how to use safer sex techniques as a result of this study.</td>
</tr>
<tr>
<td>1.2</td>
<td>I am more likely to communicate with my potential sexual partner(s) about their past sexual and drug histories because of the things I have learned in this study.</td>
</tr>
<tr>
<td>1.4</td>
<td>I am more likely than in the past to practice safer sex with my current sexual partners.</td>
</tr>
<tr>
<td>1</td>
<td>I am more likely than in the past to practice safer sex with a new sexual partner.</td>
</tr>
<tr>
<td>1.1</td>
<td>I have seriously considered my potential for risk of STD or HIV infection in my current sexual relationships as a result of attending this study.</td>
</tr>
<tr>
<td>1</td>
<td>I have talked with my sexual partner(s) about using safer sex since I enrolled in the study.</td>
</tr>
<tr>
<td>2 †</td>
<td>I have experimented with safer sex materials during masturbation since I enrolled in this study.</td>
</tr>
<tr>
<td>1.8 =</td>
<td>I have experimented with safer sex materials with my sexual partner(s) since I enrolled in this study.</td>
</tr>
<tr>
<td>1.8</td>
<td>I have committed myself to using safer sex techniques with my current partner(s).</td>
</tr>
</tbody>
</table>
Table 5 - Continued

<table>
<thead>
<tr>
<th></th>
<th>Mean Level of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. I have committed myself to using safer sex techniques with new sexual partners until we are aware of our STD/HIV status and can accurately assess our risk.</td>
<td>1</td>
</tr>
<tr>
<td>12. Most of my lesbian/bisexual women friends practice safer sex when they are with new sexual partners.</td>
<td>3.4</td>
</tr>
<tr>
<td>13. My closest friends view practicing safer sex as the right thing to do.</td>
<td>2.3</td>
</tr>
<tr>
<td>14. My closest friends will say &quot;no&quot; to sex if their partner refuses to use safer sex.</td>
<td>2.7</td>
</tr>
<tr>
<td>15. I will say &quot;no&quot; to sex if I don't know the STD/HIV status of my female partner(s).</td>
<td>1.5</td>
</tr>
<tr>
<td>16. I will say &quot;no&quot; to sex if I don't know the STD/HIV status of my male partner(s).</td>
<td>1.3 *</td>
</tr>
<tr>
<td>17. If I wanted to have sex, I would first talk to my partner about using safer sex techniques.</td>
<td>1.2</td>
</tr>
<tr>
<td>18. I will use safer sex the next time I have sex with a male partner.</td>
<td>1 †</td>
</tr>
<tr>
<td>19. I will use safer sex the next time I have sex with a female partner.</td>
<td>1.6 *</td>
</tr>
<tr>
<td>20. I do not plan to use safer sex in the future.</td>
<td>3.9</td>
</tr>
<tr>
<td>21. Sex is not as &quot;good&quot; with latex or plastic barriers.</td>
<td>2.8</td>
</tr>
<tr>
<td>22. Using safer sex means you don't trust your sexual partner.</td>
<td>3.6</td>
</tr>
<tr>
<td>23. I do not have a need to use safer sex.</td>
<td>3.8</td>
</tr>
<tr>
<td>Question</td>
<td>Mean Level of Agreement</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>24. My sexual partner(s) would react badly if I suggested the use of safer sex techniques.</td>
<td>3.1</td>
</tr>
<tr>
<td>25. As a result of all that I have learned in this study, I will be more likely to consider my own safety with regard to STD or HIV infection in future sexual relationships.</td>
<td>1.1</td>
</tr>
<tr>
<td>26. I communicate less about sex practices with my sexual partner(s) since attending this study.</td>
<td>3.5 ≈</td>
</tr>
<tr>
<td>27. I do not enjoy using safer sex techniques at all.</td>
<td>3.3 *</td>
</tr>
</tbody>
</table>

Note. † Denotes data taken from 7 subjects only.  *= Denotes data taken from 8 subjects only.  * Denotes data taken from 9 subjects only.
CONCLUSIONS AND IMPLICATIONS

The current project involved a three-year programmatic line of research investigating the potential risk of transmission of HIV and other STDs between women who self-identify as lesbian or bisexual, and the ability to provide efficacious prevention programming to this population. The initial survey research established that many women who self-identify as lesbian or bisexual are at risk for STD or HIV transmission through their engagement in sexual behaviors involving an exchange of blood, semen, vaginal secretions, menstrual by-products, or breast milk. It was clear from these data that existing HIV/STD prevention programs have neglected a population of women who are indeed at risk via their sexual behavior. It is not that lesbian and bisexual women are at risk via a different transmission route than heterosexuals per se, but merely that their culture specific needs for prevention education, including risk of infection via oral-vaginal, oral-anal and digital penetration have not been adequately addressed. In addition, the fact has been neglected that women who self-identify as lesbian or bisexual are also at risk via sexual contact with men and via injection drug use. The key issue regarding prevention with this population is not a lack of information or technology, but a lack of sensitivity to the cultural mores at work within this population of women. Current HIV/STD prevention programs lack ecologically valid constructs pertaining to these women.

Given that women who self-identify as lesbian or bisexual are at
risk for HIV and STD infection via sexual and drug-related behavior, the task becomes one of developing prevention programming which proves useful and effective for this community. However, the lesbian and bisexual women's communities are quite diverse, as they vary, like heterosexual culture, by other demographic variables such as ethnic and racial heritage, age, and religious convictions. As such, it becomes imperative that one utilize qualitative research strategies such as elicitation research in order to better define and delineate what information, rationale, and skills need to be disseminated within any particular group of women (Black, 1994; Stillman, 1992).

Within the current study, participants in elicitation research stressed the need for accurate and more meaningful information specific to their risk for infection as women who engage in sex with other women, as well as members of their community who engage in sex with men and use injection drugs. They stressed that lesbians had been complacent for too long with regard to HIV and STDs and that they have been supported in their complacency by the lack of accurate information available to them. This urgency was qualified, however, with their admission in a lack of trust for the medical and scientific "establishment." They suggested that research and prevention programming address this historic chasm by finding researchers and community leaders who would work together and provide the basis for trust, accuracy and safety. In addition to these more global issues, the participants stressed the need for safer sex skills specific to oral-vaginal/anal, and digital-vaginal/anal sex. They stressed the need for accessible safer sex technologies and educational environments that
were not only tolerant to their presence, but welcoming and safe for discussions of their own culturally specific issues. It is hoped that these issues were addressed and that such an environment was achieved during the current project. It was clear from the evaluations completed by the participants that women who sleep with women and advocate the use of safer sex are in a minority within their own communities. As such it will be important in the future to address the needs of these women through other avenues and work diligently at recreating more preventive social norms in the lesbian and bisexual women's communities.

In discussing the need for culture-specific programming, one needs to consider which issues and needs are culture-specific to women who have sex with women and which are needs of all communities which have yet to be addressed consistently in current prevention programming. For instance, specific to the lesbian/bisexual culture would be the historical lack of trust which pervades this community in general with regard to the medical and scientific "establishment." This issue would certainly need to be addressed in initial discussions or through adequate preparation of the community prior to the initiation of community-based interventions. Addressing the support needs of women who elect to adopt safer sexual lifestyles in a community which currently does not endorse such a lifestyle is also specific to women who have sex with women. Also imperative for the lesbian/bisexual women's community, though not necessarily a behaviorally unique issue, is that of the lack of information specific to oral-vaginal/anal exposure based on the particular body fluids involved. Given the current system of surveillance with
regard to HIV and other STDs, it is difficult to discriminate the finer points of probability of transmission given these behaviors. However, having clearer data available in this arena is key to presenting a rationale for the adoption of a safer sexual lifestyle to women who have sex with women.

In contrast, there are other topics of discussion and skills to be acquired which are, for all intents and purposes, the same across cultures. All sexually active individuals require good communication skills with respect to discussing sex, although the language and context in which such discussions occur vary significantly across cultures. Assertiveness skills, negotiation skills, and refusal skills are key behaviors all sexually active individuals need. The more subtle issues within woman-to-woman, man-to-man, or woman-to-man relationships can then be addressed within these larger skills areas. Additionally, all sexually active individuals need to be aware of sexual risk behaviors other than those which require a latex condom (e.g., men engaging in oral-vaginal sex should also know how to properly use a dental dam or plastic barrier). In summary, then, some issues are unique to women who have sex with women, some issues span across culture and relationship, and some issues have similarities across cultures but offer unique challenges which are dependent on the make-up of the relationship. It will be important for prevention scientists to continue to be aware of these similarities and differences.

A lack of consistent relationship between AIDS knowledge and AIDS/STD preventive behavior as seen in other HIV/AIDS literature was replicated in the current findings. As stated earlier, this could be true for
several reasons. First, knowledge and behavior measures would be more apt to reveal more consistent correlations if both were measured with respect to a similar content domain and at the same level of specificity (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). In the present study, like most previous literature, general knowledge of AIDS information had little to do with specific preventive behaviors (e.g., knowing what "HIV" stands for has little to do with condom or dental dam usage). Second, ceiling effects regarding general AIDS knowledge make it difficult to detect changes in knowledge-prevention skills relationships (Fisher & Fisher, 1992). It is suggested that more behaviorally specific, operationally defined items or assessments be added to our traditional models for assessing HIV/AIDS preventive knowledge. It would be important to continue assessing general levels of knowledge, however, one should begin to look at how to assess the level of culture specific or ecologically valid knowledge bases present and in need within the groups being targeted for prevention programming.

Integrally related to an individual's behavioral skills repertoire is their own belief in their ability to use those skills (i.e., self-efficacy) (Bandura, 1989). It is clear throughout prevention literature that self-efficacy is a key component to one's current engagement and maintenance of health promotive behaviors. Within AIDS preventive literature, the two seem inextricably woven (O'Leary, Goodhart, Sweet Jemmott, & Boccher-Lattimore 1992; Kelly, St. Lawrence, Brasfield, Lemke, Amidei, & Roffman, 1990). Hence, providing prevention programming which maximizes this effort would appear paramount. A limitation to the
current intervention could potentially have been that it did not allow for enough time for refinement and rehearsal of behavioral skills, nor did it measure the acquisition of skills using role-play or some other behavioral correlate outcome measure. As such, it is not clear that participants adequately acquired the skills necessary for consistent use of safer sex skills. This may be one explanation for the inconsistency in findings across subjects. Subjects had been given time to be exposed to communication skills and to practice, but it is not clear whether those skills generalized and ultimately resulted in AIDS/STD preventive behavior.

Risk perception remains an area of keen interest among social scientists. An individual’s ability to estimate risk is influenced by numerous factors, including their sensitivity to absolute frequencies, their experience with certain events being estimated, the perceived lethality of an event, their perceived invulnerability to it, and how an event or behavior is defined (Fischhoff, Bostrom & Quadrel, 1993). Perceived level of risk of exposure and attitudes toward safer sex proved to be rather elusive constructs within the current study. It is unclear whether the assessment measures were adequate or whether reported perception of risk and indices of attitudes have any clear impact on preventive behavior. Fisher and Fisher (1992) note that risk perception and attitudes are only part of a more global construct which defines AIDS reduction motivation. Perhaps a more global measure of motivation, addressing perceived vulnerability, perceived social norms, and perceived costs and benefits of AIDS/STD preventive behavior would be a more sensitive
measure. As was seen with the participant evaluation, current social norms within the participants' communities were not at all encouraging of AIDS/STD preventive behaviors.

Sexual risk behavior as measured by the current study was defined as any sexual act which potentiated the exchange of bodily fluids known to be vehicles for HIV and STD infection. Given Fisher and Fisher's (1992) IMB model of AIDS prevention, AIDS/STD preventive behavior within the current sample of lesbian and bisexual women would necessitate three determinants: (1) prerequisite AIDS/STD risk reduction knowledge, both general and specific to the sexual behaviors they engage in, (2) prerequisite and maintained AIDS/STD risk reduction motivation, and (3) AIDS/STD risk reduction behavioral skills. These determinants are fundamental in this model to an individual's ability and probability of engaging in AIDS/STD preventive behavior. The current study provided the most up-to-date information available regarding sexual risk among women who have sex with women, as well as more "traditional" modes of sexual risk. The current study provided an introduction to AIDS/STD risk reduction behavioral skills. In addition, the current study attempted to address the needs of the community by providing a safe and encouraging environment for the participants to discuss their sexual behavior openly.

Several barriers presented themselves, however. First, little is known about the relative risk of HIV or STD transmission between women. There are cases which substantiate the risk, but there has been little epidemiological work with this population. As such, the participants in this study were provided with minimal "hard evidence" and much
"circumstantial evidence." This level of "knowledge" could potentially have been seen as little more than conjecture by the participants, hardly enough "hard fact" to warrant such a definitive and socially unacceptable change in sexual behavior. With regard to information on the proven effectiveness of the use of dental dams or plastic wrap to prevent transmission of HIV or other STDs, again, the facts are minimal and often conjecture. This lack of clearly delineated data potentially minimized the affect of the intervention on this group of subjects. Second, the current perceived social norms for preventive behavior in the lesbian community are greatly lacking. As such, it is difficult to provide a rationale for engaging in safer sex in a community where the prevalence of HIV is minimal and the prevalence of STDs is virtually unknown.

The limitations of the present study reflect the limitations inherent in much of today's sexual risk reduction literature. Subject self-selection calls into question the generalizability of the findings. Were the current samples of survey respondents, focus group participants, and prevention intervention participants representative of the lesbian/bisexual women's community? Were they representative of the broader category of "women who have sex with women?" Because these populations are not readily accessible to researchers, it is difficult to determine the racial, socioeconomic, and educational make-up of these populations. As a result, convenience samples, as utilized in this study, remain the norm in research with these groups.

Reliance on self-report data calls into question the reliability and validity of the data. Attrition rates continue to hamper the ability to
address long-term maintenance of behavioral change. In addition, and
specific to this study, the experimental design, admittedly necessitated by
limited recruitment, leaves unanswered the questions of historical factors
mediating change and/or change being associated with some third
variable outside the experimenter's control. This is especially a concern
with the group data of risk perception. It is difficult to discern what factors
played a role in the similarity of scores across intervention and delayed
intervention groups. The small sample size excluded the statistical
analysis of data.

The current study, however, also had merit. Among its greatest
strengths was its mere existence. To the author's knowledge, this study is
the first programmatic line of research addressing the unique needs of
women who have sex with women in the prevention of HIV and STDs. It
began, in Study #1, by surveying a large population of women and
determining that risk did exist which needed to be addressed. In Study #2,
a culture specific program addressing the unique needs of a geographically
specific sample of lesbian and bisexual women was developed. In Study
#3, that program was implemented and evaluated, noting some degree of
success in terms of increasing knowledge of HIV and STD risk, challenging
long-standing attitudes regarding the need for safer sex between women
who have sex with women, teaching women to more accurately assess
their level of risk, and, in some cases, influencing women's use of
AIDS/STD preventive behaviors. The prevention intervention program
addressed several key issues being suggested in HIV/AIDS prevention
literature, including motivating the use of safer sex by eroticizing safer sex
techniques, encouraging harm-reduction in a stepwise fashion, and facilitating small group norm change.

The program was supported by several key community organizations in southwestern Michigan. As such, the curriculum used during the study will be modified and utilized within the communities that supported its development. It is hoped that this effort will effectively begin the process of community-based prevention and social norm change.

Specific to the current study, several suggestions can be made for future research in this area. First, the support of the community is paramount to the success of recruitment. This includes both the support of the community at large and the institution through which the research is being done. It is suggested that researchers and community leaders work together to prepare the community for the program by setting the stage with informational meetings prior to the start of the study. This may help raise awareness and curiosity with regard to the program. Additionally, it would be important to include women who are not currently sexually active because of their fear of contagion. These are the women who would benefit from the program by being able to become safely sexually active. With regard to measurement, the current study lacked a repeated measure of intention to engage in safer sex, which may have offered additional insight into understanding a woman’s choice to engage in safer sex or not.

On a broader scale, the current study offers several insights into the road ahead for prevention of HIV and STDs in the lesbian and bisexual
women's community. Accurate information regarding the prevalence of STDs and HIV in this community is sorely needed. In addition, methods for engaging in safer sex and the efficacy of these methods need to be explored and tested. This includes not only the efficacy of latex barriers, but plastic wraps, as well. In addition, more research needs to be completed which addresses specific safer sex communication skills in woman-to-woman relationships. Finally, further research addressing the specific barriers of changing sexual behaviors within current relationships needs to continue with all sexually active individuals (i.e., not just Lesbian and bisexual women). This predicament (i.e., of being in a current relationship with a history of unsafe sexual behavior and having a desire to alter that pattern to one of safer sex) appeared to be a major hurdle for many of the women in the current study.

The components necessary for a successful intervention with women who have sex with women include, this author believes, the following: (a) strong, culturally (and regionally) specific rationale for adoption of safer sexual lifestyles; (b) specific how-to's that address women's concerns in communicating their desire for safer sex, and their ability to refuse risky sexual advances; (c) improved access to safer sex information and materials; (d) a safe, welcoming and encouraging environment for learning and support; and (e) ongoing involvement by both prevention specialists and leaders within the Lesbian/bisexual women's communities.

Ultimately, though a halting feat, behavioral scientists must begin to address the need for affecting community-based behavioral change.
Behavioral scientists must begin to address more globally inclusive yet operationally defined behavioral change. The needs of specific subcultures must not be minimized, but highlighted.
Appendix A

National Survey
Lesbian/Bisexual Womyn's Sexual Behavior Survey

1. Your age: __________

2. What State/Province/Country do you live in?: ____________________________

3. Please indicate your racial/ethnic group:
   a. ___ Bi/multiracial  b. ___ African American  c. ___ Jewish  d. ___ Caribbean
   e. ___ Latina/Hispanic  f. ___ Native American  g. ___ Asian  h. ___ Middle Eastern
   i. ___ White/Euro-American

4. Please indicate your primary sexual orientation:
   a. ___ Lesbian/Gay  c. ___ Bisexual  e. ___ Asexual
   b. ___ Heterosexual  d. ___ Celibate  f. ___ Transsexual/
      Transgenderal

5. What is your highest level of education?
   a. ___ Did not complete high school  d. ___ Master's degree
   b. ___ High School Diploma  e. ___ Doctoral degree
   c. ___ Bachelor's degree  f. ___ Post-Doctoral work

6. Which of the following would you consider to be/have been important source(s)
of information for you about sex and sexual health? Please check all that apply.
   a. ___ Books  d. ___ Movies  f. ___ Pornography
   b. ___ Family  e. ___ Friends  g. ___ Partner(s)
   c. ___ Health Care Provider(s)  h. ___ Magazines
   i. ___ Other (specify): ____________________________

7. Do you feel comfortable discussing your sexual practices with your
physician(s)/health care provider(s)?  Yes  No
   Explain:_________________________________________________________________

8. What is your current status? Please check "sexually active" or "not sexually
active", then follow the instructions.

   a. ___ I am sexually active. Please check which situation applies to you.
      a1. ___ My sexual activities occur with only one partner and that partner
             has sex only with me (Monogamous). Please estimate how long you
             have been involved in this relationship: ______________
      a2. ___ I am not exclusive to one partner. (ie., "open relationship" with a
             limited number of sexual partners)
      a3. ___ I have many sexual partners.
      a4. ___ Other (specify): ______________

   b. ___ I am not sexually active. Please check all that apply to you:
      b1. ___ I have no opportunity for sex/no partners
      b2. ___ I have chosen not to be sexually active
      b3. ___ I am afraid of getting a sexually transmitted disease
      b4. ___ I have a sexually transmitted disease and don’t want to give it to
             anyone else
      b5. ___ Other (specify): ____________________________

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
9. Please indicate which sexually transmitted diseases (STD's) you have had or currently have:
   a. Crabs ___Yes ___No
e. Genital Warts ___Yes ___No
   b. Urethritis ___Yes ___No
   f. Syphilis ___Yes ___No
c. Gonorrhea ___Yes ___No
   g. Chlamydia ___Yes ___No
d. Herpes ___Yes ___No
   h. Other (specify)_____________________

10. Have you ever had any of the following?
   a. Vaginal yeast infection ___Yes ___No
d. Cervical Dysplasia ___Yes ___No
   b. Active Tuberculosis (TB) ___Yes ___No
e. Breast Cancer ___Yes ___No
   c. Cervical/Uterine Cancer ___Yes ___No
   f. P. I. D. ___Yes ___No

11. Please estimate the number of different sexual partner(s) that you have had within the last year on each appropriate line. (Please include zeros [0] as needed).
   a. ______Lesbian
d. ______Gay male
   b. ______Bisexual woman
e. ______Bisexual man
   c. ______Heterosexual woman
f. ______Heterosexual man

12. In which of the following activities with sexual partner(s) do you engage? Please check all that apply.
   a. ______Kissing / "Making Out"
   b. ______Cuddling / "Petting"
   c. ______Touching / sucking partner's breast
d. ______Sucking / Licking partner's skin
e. ______Mutual masturbation
   f. ______Rubbing bodies together / Tribidism
g. ______Fantasy Play
   h. ______Bondage / S&M Play
   i. ______Cutting / Piercing / Tattooing
   j. ______"Anonymous sex" / Sex club sex
   k. ______Group sex / Sex parties (Womyn only)
l. ______Oral Sex / Your mouth on your partner's labia/genitals
   m. ______Oral sex / Your partner's mouth on your labia/genitals
   n. ______Your finger(s) / fist inserted in your partner's vagina
   o. ______Your partner's finger(s) / fist inserted in your vagina
   p. ______You using sex toy / dildo on your partner's body
   q. ______Your partner using sex toy / dildo on your body
   r. ______Your finger(s) / fist inserted in your partner's anus
   s. ______Your partner's finger(s) / fist inserted in your anus
   t. ______Anal Play / Your mouth/tongue on your partner's anus
   u. ______Anal Play / Your partner's mouth/tongue on your anus
   v. ______Group sex / Sex parties (Womyn and Men)

13. Which of the following barrier methods do you typically use during various sexual activities? Check all that apply. (The terms "Split" or "Whole" depend on the sexual activity engaged in).
   a. ______Dental dam / Latex dam
d. ______Latex / Surgical glove (split/whole)
   b. ______Condom / rubber (Split/whole)
e. ______Glad Wrap / Plastic wrap
   c. ______Finger Cots
f. ______Other (specify):____________________
g. ______I have never tried using a barrier during sex
14. In a typical month, how many times do you engage in sexual activities with another person? _______

15. In a typical month, how many times do you "go down on" your female sexual partner (your mouth on her labia/genitals) in the following situations? Please write the approximate number on each line.
   a. ______ WITHOUT a barrier AND NOT while she is menstruating
   b. ______ WITHOUT a barrier AND while she is menstruating
   c. ______ WITH a barrier AND NOT while she is menstruating
   d. ______ WITH a barrier AND while she is menstruating

16. In a typical month, how many times does your sexual partner "go down on" you (your partner's mouth on your labia/genitals) in the following situations? Write the approximate number on each line.
   a. ______ WITHOUT a barrier AND NOT while you are menstruating
   b. ______ WITHOUT a barrier AND while you are menstruating
   c. ______ WITH a barrier AND NOT while you are menstruating
   d. ______ WITH a barrier AND while you are menstruating

17. In a typical month, how many times do you "go down on" a male sexual partner (his penis in your mouth) in the following situations? Please write the approximate number on each line.
   a. ______ While the male sexual partner was wearing a condom / rubber
   b. ______ When the male sexual partner was NOT wearing a condom / rubber

18. In a typical month, how many times do you have vaginal intercourse with a male sexual partner (his penis in your vagina) in the following situations? Please write the approximate number on each line.
   a. ______ While the male sexual partner was wearing a condom / rubber
   b. ______ When the male sexual partner was NOT wearing a condom / rubber

19. In a typical month, how many times do you have anal intercourse with a male sexual partner (his penis in your anus) in the following situations? Please write the approximate number on each line.
   a. ______ While the male sexual partner was wearing a condom / rubber
   b. ______ When the male sexual partner was NOT wearing a condom / rubber
Please estimate the number of times each of the following situations occurs in a typical month:

20a. Write the number of times, during a typical month, that you suggest a safer sex practice to a sexual partner. _____

Of those times you ask/suggest that barriers (condoms, dental dams, finger cots, plastic wrap, etc) be used during sexual activities, how many times do each of the following typically occur? Write a number (or zero/0) on each line.

b. _____ My sexual partner agrees and is highly supportive

c. _____ My sexual partner agrees with objections and/or reservations, but we ultimately use barriers

d. _____ My sexual partner objects, but we have sex anyway (without barriers)

e. _____ My sexual partner objects and refuses to continue having sex

f. _____ My sexual partner objects, so I refuse to continue having sex

21a. Write the number of times, during a typical month, that a sexual partner suggests a safer sex practice to you. _____

Of those times your sexual partner asks/suggests that barriers (condoms, dental dams, finger cots, plastic wrap, etc) be used during sexual activities, how many times do each of the following typically occur? Write a number (or zero/0) on each line.

b. _____ I agree and am highly supportive

c. _____ I agree with objections and/or reservations, but we ultimately use barriers

d. _____ I object, but we have sex anyway (without barriers)

e. _____ I object and refuse to continue having sex

f. _____ I object, so my partner refuses to continue having sex

22a. Have you ever had sex with someone in exchange for drugs? __Yes __No

22b. If "Yes", write the approximate number of times in the past year this has occurred. ________

23a. Have you ever had sex with someone in exchange for money? __Yes __No

23b. If "Yes", write the approximate number of times in the past year this has occurred. ________

24. Have you ever refused or avoided sexual contact with someone because of their past / current drug history? _____Yes _____No

25. Have you ever refused or avoided sexual contact with someone because of their past / current sexual history? _____Yes _____No
26. Please indicate your past or current drug use with the following drugs. If you have never used alcohol or other drugs, please go on to Question 27. If there are certain drugs you have never used, put an "X" on the line.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulants (speed)</td>
<td></td>
<td></td>
<td>&quot;Eight Balls&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sedatives (&quot;Barbs&quot;)</td>
<td></td>
<td></td>
<td>Smoked Heroin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snorted</td>
<td></td>
<td></td>
<td>Snorted Heroin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocaine</td>
<td></td>
<td></td>
<td>Heroin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freebased</td>
<td></td>
<td></td>
<td>Shot Tranquilizers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocaine Shot</td>
<td></td>
<td></td>
<td>Heroin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocaine Crack</td>
<td></td>
<td></td>
<td>Alcohol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27. Use the scales below to estimate your possibility of exposure or infection:

0--------10--------20--------30--------40--------50--------60--------70--------80--------90--------100

Absolutely NO exposure/infection

1 out of every 2 times

Certain that I have been exposed/infectected

a. Estimate the possibility/probability that you have been exposed to any STD (i.e. chlamydia, gonorrhea, herpes, syphilis, crabs, genital warts, vaginitis) in the last year. _____ (write the number)
What is the basis for your estimation?

b1. Estimate the possibility/probability that you have been exposed to HIV (the virus that causes AIDS) infection in the last year through sexual activity. _____ (write the number)
What is the basis for your estimation?

b2. Estimate the possibility/probability that you have been exposed to HIV infection in the last year through injection drug use. _____ (write the number)
What is the basis for your estimation?

b3. Estimate the possibility/probability that you have been exposed to HIV infection in the last year through other means (please specify). _____ (write the number)
What is the basis for your estimation?

c. Estimate the possibility/probability that you have become infected with HIV/AIDS in the last year through any means. _____ (write the number)
What is the basis for your estimation?
d. Assuming that you continue to engage in sexual activities and/or drug activities as you currently do, estimate the possibility/probability that you will be exposed to any STD (i.e. chlamydia, gonorrhea, herpes, syphilis, crabs, genital warts, vaginitis) in the next year. ______ (write the number)
What is the basis for your estimation?

e. Assuming that you continue to engage in sexual activities and/or drug activities as you currently do, estimate the possibility/probability that you will be exposed to HIV infection in the next year. ______ (write the number)
What is the basis for your estimation?

Please use the following scale in answering Question 28.

0-------------------------------------------25---------------------50------------------------75------------------------100

Never Seldom Half the time Most of the time Always

28. Please estimate the percentage of times in which you use each of the following safer sex practices in a typical month to avoid STD/HIV exposure/infection:

a. ___ Latex condoms/rubbers PLUS spermicide/foam with nonoxynol-9
b. ___ Latex condoms/rubbers only
c. ___ Only spermicide/foam with nonoxynol-9
d. ___ Latex barriers/dental dams/finger cots/surgical gloves/plastic wrap
e. ___ Mutual masturbation
f. ___ Solitary masturbation
g. ___ Fantasies
h. ___ Any other nonpenetrative sexual activity (cuddling, stroking, use your imagination!)


30. If you do not consistently practice safer sex techniques to reduce your risk of sexually transmitted diseases, including HIV, why not? (Check all that apply)

a. ___ I am involved in a mutually monogamous, long-term relationship with an uninfected partner
b. ___ I don't think that STD's are an issue for me
c. ___ I don't think that HIV/AIDS is an issue for me.
d. ___ I don't have safer sex supplies available when the opportunity arises
e. ___ I tend to not use safer sex when my judgement is impaired by alcohol or other drugs
f. ___ I don't know how to obtain/purchase safer sex supplies
g. ___ I am uncomfortable purchasing latex barriers and/or other safer sex supplies
h. ___ I don't know how to properly use safer sex supplies (i.e. condoms, latex dams, etc.)
i. I don’t believe that myself or my partner is at risk for infection
j. I believe that safer sex techniques decrease sexual spontaneity
k. I feel that safer sex techniques decrease sensation for myself
l. I believe that safer sex techniques decrease sensation for my partner
m. I believe that it is my partner’s responsibility to obtain and use safer sex supplies
n. I’m too embarrassed to discuss safer sex techniques with my partner
o. I feel that even if I did ask my partner to use safer sex, s/he wouldn’t do it
p. I’ve tried to discuss this with my partner, but s/he does not change her/his behavior
q. I’m afraid that s/he would respond with anger
r. I have difficulty communicating with my partner about sex
s. My religious beliefs prohibit me from using many safer sex supplies/techniques
t. I cannot afford to purchase safer sex supplies.

31. Have you ever been tested for HIV Antibodies, that is, "had the AIDS test"? (Does not include giving blood).

a. Yes (If “yes,” please answer questions a1-a3.)
   a1. Please indicate if the results were: __Positive (HIV+) __Negative (HIV-)
   a2. How many times have you been tested? __________
   a3. When was the last time you were tested? __________ (Month/Year)
   a4. Why were you tested? ____________________________

b. No (If “no,” why not? Check all that apply.)
   b1. I don’t believe I am at risk for HIV infection
   b2. I’m afraid I might be HIV positive and I don’t really want to know
   b3. I don’t believe the test is safe and/or accurate
   b4. The test is not readily available or it is too inconvenient for me
   b5. I don’t know how or where to get tested
   b6. I can’t afford the test
   b7. Other (please specify) ____________________________

32. Do you, or have you ever considered, parenting children? Yes ___ No ___

33. If “Yes”, what method(s) have you used, or considered using, for having children?
   a. Through sex with a man c. Adoption
   b. Foster Care d. Artificial Insemination

34. If your considerations have included either getting pregnant through sex with a man or artificial insemination...
   a. Do/did you know the HIV status of the donor? Yes ___ No ___
   b. Do/did you know the sexual history of the donor? Yes ___ No ___
   c. Do/did you know the drug use history of the donor? Yes ___ No ___

35. Have you had a gynecological exam within the past year? Yes ___ No ___

36. Have you had a mammogram within the past year? Yes ___ No ___
Appendix B

Informed Consent [Elicitation Project]
Dear Participant,

We are asking you to participate in the initial stages of a research project designed to investigate current safer sex practices among sexually active lesbian and bisexual women. In particular, we are seeking your opinions regarding some prevention strategies we would like to use in your communities to promote safer sex practices among lesbian and bisexual women. The format for this initial investigation will be a discussion group, consisting of approximately 6-8 women.

The discussion group in which you will participate will meet only once, for 1-2 hours. You will have the opportunity to discuss all the issues openly, with no judgement or criticism. We anticipate that you will gain insight into your own sexual practices and be able to make more informed choices about your use of safer sex techniques.

We anticipate no risks to you in participating in the focus groups. Please be aware that if the group identifies certain content areas which are uncomfortable for you to discuss, you may opt to either leave the room or not participate actively during that part of the discussion.

If you choose to participate, you will be asked to provide us with your opinions regarding the techniques we are currently developing. The group will be audiotaped for later analysis. These tapes will subsequently be stored in a locked file cabinet during the analysis, and accessible only to the project facilitator, and her faculty supervisor. You will not be required to identify yourself in the discussion group. All participants will be required to sign a confidentiality agreement, protecting the identity of all other group members. In addition, if you decide that you no longer wish to participate at all, at any time during the group, it is your option to leave the group. We would expect, however, that you stay your agreement to maintain group members' confidentiality.

If you have any questions, please address them to the discussion group facilitator during the group, or call her, Kate Morrow, at the Behavioral Medicine Laboratory, 387-4492. The faculty advisor for this research is Dr. Wayne Fuqua, also available at that number.

I, ____________________, consent to my participation in Western Michigan University's Psychology Department's "Lesbian/Bisexual Womyn's Safer Sex" discussion group. I hereby certify that I am at least 18 years of age, and have read and understand the above consent information.

_____________________________  ______________________________
Signature                      Date
Appendix C

Confidentiality Agreement [Elicitation Project]
Confidentiality Agreement

I, ______________________, do hereby agree to maintain the confidentiality of all participants in Western Michigan University's Psychology Department's "Lesbian/Bisexual Womyn's Safer Sex" discussion groups.

I have been informed by the facilitator of the importance of maintaining the anonymity of all participants in the discussion groups, and I agree to keep the identities and all identifying information of the other participants in the strictest of confidence.

---------------------------------
Signature Date

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Appendix D

Elicitation Topic Questions
Focus Group Question Guide

1. Welcome participants

2. Explain purpose of focus group: Introduce data from national survey. Address conclusions regarding women who have sex with women being at risk for STD and HIV infection via sexual behaviors

3. Ask for initial questions

4. “Given this information, and given my goal of recruiting women to participate in a prevention program...”

   - what do you feel the basic level of knowledge is regarding STD and HIV infection in the lesbian/bisexual women’s community here?

   - how do you think they would feel about such a program? do you think women would participate?

   - what would be my best options for recruiting these women?

   - would there be a particular focus to recruitment?

   - what are the key phrases to use/not use in terms of sexually explicit terms? what’s appropriate to this community?

   - what kind(s) of rationale do I use to motivate and interest these participants? what rationale’s would appeal to them? how strongly do I include politics?

   - how might I challenge negative attitudes toward safer sex between women?

   - what would be the best way(s) to train women in safer sex skills, including communication and the actual how-to’s of safer sex?

   - how best can I format such a program? how long should it be - both in actual contact time with me and in terms of involvement in the study? do I need incentives? how can I make data collection “user-friendly”?

   - any additional barriers to participation?
Appendix E

Informed Consent [Intervention]
I have been invited to participate in a research project entitled "HIV Prevention Programming for Lesbian and Bisexual Women." I understand that this research is intended to study how a sexual health program tailored specifically for lesbian and bisexual women will effect their practice of safe sexual behaviors. I further understand that this project is Kathleen ("Kate") Morrow's dissertation project.

My consent to participate in this project indicates that I will be asked to meet with Kate Morrow or her assistant to fill out initial information forms and assessments. These forms will include such information as my age, ethnic/racial background, relationship status and health history, as well as my opinions on safer sex and other beliefs about sexually transmitted diseases. This meeting will last approximately one(1) hour. If the results of the questionnaires indicate that I meet criteria for participation in the program, I will attend an intensive workshop conducted by Kate Morrow and her assistants. The workshop will total 6-10 hours: dates, times, and arrangements will be made to suit program participants. I will also be asked to attend group support sessions that will meet every other week for twelve weeks (i.e., 6 sessions) and last approximately 1 to 1-1/2 hours per meeting. Once the first twelve weeks (i.e., 6 sessions) are complete, I and the other group members will be given the option to continue meeting, if desired. Additionally, Kate Morrow will contact me twice following the formal group sessions to collect "follow-up" information. In total, if I choose to participate in the program, I will be involved for approximately 9-12 months, and, except for the commitment of one full day to the workshop, my regular involvement, again, will only involve 1 to 1-1/2 hours every other week for three months, a minute or two to fill out a data sheet, and approximately 1 hour to complete follow-up information toward the end of my involvement. If the results of the questionnaires indicate that I do not meet criteria for participation in the program, I will be given written information about sexual health, and referral numbers in case I have questions about what I read. The workshop will involve my being taught about sexually transmitted diseases, including HIV, the virus that causes AIDS. It will also involve experiences that will help me reflect on my beliefs about taking care of myself and my health. In addition, the workshop will develop my skills in communicating in my relationships with partner(s), and how to use safe sexual practices. The group support sessions will involve meeting with other members of the program to discuss accomplishments and difficulties we may be experiencing in our attempts to live healthier safer sexual lives. Kate Morrow and her assistants will be there to help facilitate our discussions and offer suggestions and the opportunity to problem-solve specific issues. I will also be asked to record my sexual behaviors and provide Kate Morrow with information on data sheets.

As in all research, there may be unforeseen risks to the participant. If an accidental injury occurs, appropriate emergency measures will be taken; however, no compensation or treatment will be made available to the subject except as otherwise stated in this consent form. I understand that one potential risk of my participation in this project is that I may be given information that may lead me to be concerned for my health. I understand, however, that Kate Morrow is prepared to provide crisis counseling should I become significantly upset and that she is prepared to make a referral if I need further counseling.
I will be responsible for the cost of therapy, or testing, if any, should I choose to pursue it.

One way in which I may benefit from this activity is in having the opportunity to learn more about my health as it pertains to my sexuality, and learn skills necessary to take care of my health in relationships with my partner(s). I also understand that others who are concerned about their own health and the health of their friends may benefit from the knowledge that is gained from this research.

I understand that all the information collected from me is confidential. That means that my name will not appear on any papers on which this information is recorded. The forms will all be coded, and Kate Morrow will keep a separate master list with the names of participants and the corresponding code numbers. Once the data are collected and analyzed, the master list will be destroyed. All other forms will be retained for three years in a locked file cabinet in the principal investigator's laboratory.

I understand that I will be required to sign an Agreement of Confidentiality upon my enrollment in the program. This agreement will mean that I agree to maintain the confidence of other program participants by not disclosing any personal information about other participants outside of scheduled meetings. Other program participants will be required to sign the Agreement as well.

I understand that I may refuse to participate or quit the program at any time during the study without prejudice or penalty. If I have any questions or concerns about this study, I may contact either Kate Morrow at (616) 387-4492 or Wayne Fuqua at (616) 387-4474. I may also contact the Chair of the Human Subjects Institutional Review Board (387-8293) or the Vice President for Research (secretary: 387-8283) if questions or problems arise during the course of the study. My signature below indicates that I understand the purpose and requirements of the study and that I agree to participate.

-------------------------------------------------  -------------------------------------------------
Signature                                      Date
Appendix F

Confidentiality Agreement [Intervention]
Confidentiality Agreement

I, ________________________________, agree to maintain the confidentiality of all participants in Western Michigan University's Psychology Department's program given in cooperation with the Lesbian and Gay Community Network, Inc. of Western Michigan. The program is entitled "HIV Prevention Programming for Lesbian and Bisexual Women".

I understand that my agreement to maintain confidentiality means that I will not disclose any personal information of other program participants to anyone outside the program, or discuss sensitive or personal topics about other participants outside of the program.

My signature below indicates that I understand the above and agree to maintain the confidentiality of all participants.

______________________________  __________________________
Signature                      Date
Appendix G

Initial Demographics Questionnaire
1. Your age: __________ 2. What City & State do you live in?: ____________________________

3. Please indicate your racial/ethnic group:
   a. ______ Bi/multiracial  b. ______ African American  c. ______ Jewish  d. ______ Caribbean
   e. ______ Latino/Hispanic  f. ______ Native American  g. ______ Asian  h. ______ Middle Eastern
   i. ______ White/Euro-American

4. Please indicate your primary sexual orientation:
   a. ______ Lesbian/Gay  b. ______ Bisexual  c. ______ Heterosexual

5. What is your highest level of education?
   a. ______ Did not complete high school  d. ______ Master's degree
   b. ______ High School Diploma  e. ______ Doctoral degree
   c. ______ Bachelor's degree  f. ______ Post-Doctoral work

6. Do you currently engage in injection drug use (i.e., skin pop, intramuscular, intravenous)?
   __ Yes __ No

   Have you ever engaged in injection drug use (i.e., skin pop, intramuscular, intravenous)?
   __ Yes __ No  If "Yes", how long ago was your last use? _______ months

7. What is your current status? Please check "sexually active" or "not sexually active", then follow
   the instructions.
   a. ______ I am sexually active. Please check which situation applies to you.
      a1. _____ My sexual activities occur with only one partner and that partner has sex only
          with me (Monogamous). Please estimate how long you have been involved in this
          relationship: ____ months
      a2. _____ I am not exclusive to one partner. (e.g., "open relationship" with a limited
          number of sexual partners)
      a3. _____ I have many sexual partners.
      a4. _____ Other (specify):__________________________________________________________

   b. ______ I am not sexually active. Please check all that apply to you:
      b1. _____ I have no opportunity for sex/no partners
      b2. _____ I have chosen not to be sexually active
      b3. _____ I am afraid of getting a sexually transmitted disease
      b4. _____ I have a sexually transmitted disease and don't want to give it to anyone.
      b5. _____ Other (specify):__________________________________________________________

   • If you are in a mutually monogamous relationship for longer than six months, how certain
     are you that neither you nor your partner has had sex outside the relationship? Please check which
     applies to you best.
     ______ absolutely certain
     ______ mostly certain
     ______ fairly certain
     ______ doubtful
     ______ not certain at all

8. Please indicate which sexually transmitted diseases (STD's) you have had or currently have:
   a. Crabs ___________Yes ___________No  e. Genital Warts ___________Yes ___________No
   b. Urethritis ___________Yes ___________No  f. Syphilis ___________Yes ___________No
   c. Gonorrhea ___________Yes ___________No  g. Chlamydia ___________Yes ___________No
   d. Herpes ___________Yes ___________No  h. Other (specify) _________________________________________
9. Have you ever had any of the following?
a. Vaginal yeast infection  ____Yes  ____No  
b. Active Tuberculosis (TB)  ____Yes  ____No 
c. Cervical/Uterine Cancer  ____Yes  ____No 
d. Cervical Dysplasia  ____Yes  ____No  
e. Breast Cancer  ____Yes  ____No 
f. PID  ____Yes  ____No

10. Please estimate the number of different sexual partner(s) that you have had within the last six (6) months on each appropriate line. (Please include zeros [0] as needed).

<table>
<thead>
<tr>
<th>Type of Sexual Partner</th>
<th>Type of Sexual Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ____ lesbian</td>
<td>d. ____ gay man</td>
</tr>
<tr>
<td>b. ____ bisexual woman</td>
<td>e. ____ bisexual man</td>
</tr>
<tr>
<td>c. ____ heterosexual woman</td>
<td>f. ____ heterosexual man</td>
</tr>
</tbody>
</table>

11. Please indicate which barriers you have used, if any, in the last six (6) months. Place a check next to each which applies to you.

a. ____ latex condom, cut or whole 
b. ____ latex dental dam/latex square 
c. ____ latex finger cots 
d. ____ surgical examination gloves, cut or whole 
e. ____ Glad Wrap® 
f. ____ Other plastic wrap. What brand name did you use? ______________

• What percentage of time would you say you use any of these barriers during sex?

  __0% (0 out of 4 times: not at all) 
  __25% (1 out of 4 times: rarely) 
  __50% (2 out of 4 times: half the time) 
  __75% (3 out of 4 times: most of the time) 
  __100% (4 out of 4 times: always)

12. a. Do you know your current HIV status?  ____Yes  ____No 
b. Have you ever been tested for HIV antibodies?  ____Yes  ____No 
c. How many times have you been tested? (Write the number) _______ 
d. When was the most recent time?  (month/year) ____________ 
e. What were the results? (check which applies to you):  ____HIV-  ____HIV+

  If HIV+, to what do you attribute the transmission of the virus? ______________

13. a. Do you know your current sexual partner(s) HIV status?  ____Yes  ____No 
b. Do you know if your current sexual partner(s) has ever been tested for HIV antibodies  ____Yes  ____No 
c. How many times has/have s/he/they been tested? (Write the number, or "?"?) _______ 
d. When was the most recent time?  (month/year) ____________ 
e1. Were you present when your partner(s) received the results of the HIV antibody test?  ____Yes  ____No 
e2. • If "Yes", what were the results?  ____HIV-  ____HIV+
e3. • If "No", what did your partner(s) tell you the results were?  ____HIV-  ____HIV+

  If HIV+, to what does your partner attribute the transmission of the virus? ______________
Appendix H

HIV/AIDS Knowledge Test
HIV/AIDS Knowledge Test

This is a true/false test. Please do not skip any questions. Circle the appropriate "True" or "False." Because this is a test, some of the statements are true and accurate, while others are false and inaccurate.

False 1. Most people who transmit the AIDS virus look unhealthy.
True 2. Anal intercourse is high risk for transmitting the AIDS virus.
True 4. A person can be exposed to the AIDS virus in one sexual contact.

False 5. Keeping in good physical condition is the best way to prevent exposure to the AIDS virus.
False 6. It is unwise to touch a person with AIDS.
False 7. Condoms make intercourse completely safe.
False 8. Showering after sex greatly reduces the transmission of AIDS.

False 9. When people become sexually exclusive with one another, they no longer need to follow "safe sex" guidelines.
False 10. Oral sex is safe if the partners "don't swallow."

False 11. Most people who have been exposed to the AIDS virus quickly show symptoms of serious illness.

False 12. By reducing the number of different sexual partners, you are effectively protected from AIDS.
True 13. The AIDS virus does not penetrate unbroken skin.
False 14. Female-to-male transmission of the AIDS virus has not been documented.
True 15. Sharing toothbrushes and razors can transmit the AIDS virus.
True 16. Pre-ejaculatory fluids carry the AIDS virus.
True 17. Intravenous drug users are at risk for AIDS when they share needles.
False 18. A person must have many different sexual partners to be at risk from AIDS.
False 19. People carrying the AIDS virus generally feel quite ill.
True 20. Vaginal intercourse carries high risk for AIDS virus transmission.
False 21. Withdrawal immediately before orgasm makes intercourse safe.
False 22. Persons who are exclusively heterosexual are not at risk from AIDS.
True 23. Healthy persons in AIDS risk groups should not donate blood.
True 24. Sharing kitchen utensils or a bathroom with a person with AIDS poses no risk.

False 25. Intravenous drug users become exposed to the AIDS virus because the virus is often contained in heroin, amphetamines, and the injected drugs.
False 26. A wholesome diet and plenty of sleep will keep a person from becoming exposed to the AIDS virus.
False 27. A cure of AIDS is expected within the next two years.
False 28. It is more important to take precautions against AIDS in large cities than in small cities.

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

Opinions/Attitudes Questionnaire
Safer Sex Opinion/Attitude Form

Please estimate the number of times each of the following situations occurs in a typical month:

1a. Write the number of times, during a typical month, that you suggest a safer sex practice to a sexual partner. _____

Of those times you ask/suggest that barriers (condoms, dental dams, finger cots, plastic wrap, etc) be used during sexual activities, how many times do each of the following typically occur? Write a number (or zero/0) on each line.

b. _____ My sexual partner agrees and is highly supportive
c. _____ My sexual partner agrees with objections &/or reservations, but we ultimately use barriers
d. _____ My sexual partner objects, but we have sex anyway (without barriers)
e. _____ My sexual partner objects and refuses to continue having sex
f. _____ My sexual partner objects, so I refuse to continue having sex

2a. Write the number of times, during a typical month, that a sexual partner suggests a safer sex practice to you. _____

Of those times your sexual partner asks/suggests that barriers (condoms, dental dams, finger cots, plastic wrap, etc) be used during sexual activities, how many times do each of the following typically occur? Write a number (or zero/0) on each line.

b. _____ I agree and am highly supportive
c. _____ I agree with objections and/or reservations, but we ultimately use barriers
d. _____ I object, but we have sex anyway (without barriers)
e. _____ I object and refuse to continue having sex
f. _____ I object, so my partner refuses to continue having sex

3a. Have you ever had sex with someone in exchange for drugs?
   _____YES _____NO _____N/A

3b. If "Yes", write the approximate # of times in the past year this has occurred. __

4a. Have you ever had sex with someone in exchange for money?
   _____YES _____NO _____N/A

4b. If "Yes", write the approximate # of times in the past year this has occurred. __

5. Have you ever refused or avoided sexual contact with someone because of their past/current drug history? _____Yes _____No _____N/A

6. Have you ever refused or avoided sexual contact with someone because of their past/current sexual history? _____Yes _____No _____N/A
Please use the following scale in answering Question 7.

0-------------------25-------------------50-------------------75-------------------100

Never Seldom Half the time Most of the time Always

7. Please estimate the percentage of times in which you use each of the following safer sex practices in a typical month to avoid STD/HIV exposure/infection:

a. ___ Latex condoms/rubbers PLUS spermicide/foam with nonoxynol-9
b. ___ Latex condoms/rubbers only
c. ___ Only spermicide/foam with nonoxynol-9
d. ___ Latex barriers/dams/finger cots/surgical gloves/plastic wrap
e. ___ Mutual masturbation
f. ___ Solitary masturbation
g. ___ Fantasies
h. ___ Any other nonpenetrative sexual activity (cuddling, stroking, use your imagination!)

8. Are you allergic to:
   a. Nonoxynol-9?   ___Yes ___No ___Don't Know
   b. Latex?   ___Yes ___No ___Don't Know

9. If you do not consistently practice safer sex techniques to reduce your risk of sexually transmitted diseases, including HIV, why not? (Check all that apply)

a. ___ I am involved in a mutually monogamous, long-term relationship with an uninfected partner
b. ___ I don’t think that STD’s are an issue for me
c. ___ I don’t think that HIV/AIDS is an issue for me.
d. ___ I don’t have safer sex supplies available when the opportunity arises
e. ___ I tend to not use safer sex when my judgement is impaired by alcohol or other drugs
f. ___ I don’t know how to obtain/purchase safer sex supplies
g. ___ I am uncomfortable purchasing latex barriers and/or other safer sex supplies
h. ___ I don’t know how to properly use safer sex supplies
i. ___ I don’t believe that myself or my partner is at risk for infection
j. ___ I believe that safer sex techniques decrease sexual spontaneity
k. ___ I feel that safer sex techniques decrease sensation for myself
l. ___ I believe that safer sex techniques decrease sensation for my partner
m. ___ I believe that it is my partner’s responsibility to obtain and use safer sex supplies
n. ___ I’m too embarrassed to discuss safer sex techniques with my partner
o. ___ I feel that even if I did ask my partner to use safer sex, s/he wouldn’t do it
p. ___ I’ve tried to discuss this with my partner, but s/he does not change her/his behavior
q. ___ I’m afraid that s/he would respond with anger
r. ___ I have difficulty communicating with my partner about sex
s. ___ My religious beliefs prohibit me from using many safer sex supplies/techniques
t. ___ I cannot afford to purchase safer sex supplies.
10. If you have never been tested for HIV antibodies (i.e., had the "AIDS test),
please check off which of the below best express(es) your reason(s) why: (check all
that apply)

a. _____ I don't believe I am at risk for HIV infection
b. _____ I'm afraid I might be HIV positive and I don't really want to know
c. _____ I don't believe the test is safe and/or accurate
d. _____ The test is not readily available or it is too inconvenient for me
e. _____ I don't know how or where to get tested
f. _____ I can't afford the test
g. _____ Other (please specify) ____________________________
Appendix J

Risk Perception Questionnaire
HIV/AIDS/STD Risk Perception Form

Please use the corresponding scales to estimate your possibility of exposure or infection; (see a-e below for specific questions)

0----------10----------20----------30----------40----------50----------60----------70----------80----------90----------100

Absolutely possible exposure/infection
NO exposure/infection
0
1 out of every 2 times
I have been exposed/infected

a. Estimate the possibility/probability that you have been exposed to any STD (i.e. chlamydia, gonorrhea, herpes, syphilis, crabs, genital warts, vaginitis) in the last year.

Write the number: ___________ What is the basis for your estimation?

b1. Estimate the possibility/probability that you have been exposed to HIV (the virus that causes AIDS) infection in the last year through sexual activity.

Write the number: ___________ What is the basis for your estimation?

b2. Estimate the possibility/probability that you have been exposed to HIV infection in the last year through injection drug use.

Write the number: ___________ What is the basis for your estimation?

b3. Estimate the possibility/probability that you have been exposed to HIV infection in the last year through other means (please specify).

Write the number: ___________ What is the basis for your estimation?

c. Estimate the possibility/probability that you have become infected with HIV/AIDS in the last year through any means.

Write the number: ___________ What is the basis for your estimation?

0----------10----------20----------30----------40----------50----------60----------70----------80----------90----------100

Absolutely possible exposure
NO exposure
0
1 out of every 2 times
I will be exposed

d. Assuming that you continue to engage in sexual activities and/or drug activities as you currently do, estimate the possibility/probability that you will be exposed to any STD (i.e. chlamydia, gonorrhea, herpes, syphilis, crabs, genital warts, vaginitis) in the next year.

Write the number: ___________ What is the basis for your estimation?

e. Assuming that you continue to engage in sexual activities and/or drug activities as you currently do, estimate the possibility/probability that you will be exposed to HIV infection in the next year.

Write the number: ___________ What is the basis for your estimation?
Appendix K

Sexual Behavior Questionnaire
Sexual Behavior History

1. Write the average number of times you have had sex per month, in the last ## months: ____

2. Have you, in the last six months:
   - drunk alcohol? yes no If yes, how many times/month? ____
   - used marijuana? yes no If yes, how many times/month? ____
   - smoked crack? yes no If yes, how many times/month? ____
   - snorted cocaine? yes no If yes, how many times/month? ____
   - popped/injected/slammed cocaine? yes no If yes, how many times/month? ____
   - popped/injected/slammed heroin? yes no If yes, how many times/month? ____
   - used any other drug? yes no If yes, how many times/month? ____
   Please specify which drug(s): ________________________________

3. For each separate sexual partner you have had sex with in the last ## months, please answer the following:

   a) Partner #: Write the person's initials here: _________
      • Circle one: Female Male
      • In the last six months, has this person:
        drunk alcohol? yes no unsure
        used marijuana? yes no unsure
        smoked crack? yes no unsure
        snorted cocaine? yes no unsure
        popped/injected/slammed cocaine? yes no unsure
        popped/injected/slammed heroin? yes no unsure
      • Does this person have any other sexual partners? yes no unsure
      • Is this person HIV+? (has s/he been tested and determined HIV+?)
        yes no unsure
      • Please check which behaviors you engage(d) in with this person:

<table>
<thead>
<tr>
<th>Vaginal Sex</th>
<th>Anal Sex</th>
<th>Penile Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>___Give oral w/barrier</td>
<td>___Give oral w/barrier</td>
<td>___Give oral w/barrier</td>
</tr>
<tr>
<td>___Give oral w/out barrier</td>
<td>___Give oral w/out barrier</td>
<td>___Give oral w/out barrier</td>
</tr>
<tr>
<td>___Receive oral w/barrier</td>
<td>___Receive oral w/barrier</td>
<td>___Receive anal w/barrier</td>
</tr>
<tr>
<td>___Receive oral w/out barrier</td>
<td>___Receive oral w/out barrier</td>
<td>___Receive anal w/out barrier</td>
</tr>
<tr>
<td>___Give finger/toy w/barrier</td>
<td>___Give finger/toy w/barrier</td>
<td>___Receive vaginal w/barrier</td>
</tr>
<tr>
<td>___Give finger/toy w/out barrier</td>
<td>___Give finger/toy w/out barrier</td>
<td>___Receive vaginal w/out barrier</td>
</tr>
<tr>
<td>___Receive fing/toy w/barrier</td>
<td>___Receive fing/toy w/barrier</td>
<td>___Receive anal w/barrier</td>
</tr>
<tr>
<td>___Receive fing/toy w/out barrier</td>
<td>___Receive fing/toy w/out barrier</td>
<td>___Receive anal w/out barrier</td>
</tr>
</tbody>
</table>

Did you/Do you share sex toys/fingers with this sex partner (i.e., are/were any objects, including fingers, used on both yourself and your partner without first being washed/cleaned)?
   yes no unsure
Please check the barrier(s) used during the above sexual activity, if any:

- latex condom, whole
- latex condom, cut
- latex (dental) dam
- latex finger cots
- surgical exam. glove, whole
- surgical exam. glove, cut
- Glad Wrap®
- other plastic wrap

Did/do you use lubricant during sexual activities? yes no
If so, does/did it contain nonoxynol-9? yes no

Did you consume alcohol or use drugs within the 3 hours before having sex? Circle one.
never rarely sometimes often always

Did your partner consume alcohol or use drugs within the 3 hours before having sex? Circle one.
never rarely sometimes often always
Appendix L

Weekly Sexual Behavior Data Sheet
Fill out one sheet for each sexual partner you had this week.

Partner’s First Name, Middle Initial, Last Initial:_______

Circle the appropriate response: Female Partner Male Partner

- Do you think this sexual partner has ever injected/popped/slammed any illegal drug? __Sure s/he did not ___Pretty sure s/he did not ___Don’t Know ___Pretty sure s/he did ___Sure s/he did

- Do you think this sexual partner has had sex with anyone else in the past year? __Sure s/he did not ___Pretty sure s/he did not ___Don’t Know ___Pretty sure s/he did ___Sure s/he did

- Has this sexual partner ever been diagnosed with a sexually transmitted disease (STD)? Name: _______
   __Sure s/he has not ___Pretty sure s/he has not ___Don’t Know ___Pretty sure s/he has ___Sure s/he has

- Has this sexual partner been tested for the AIDS virus (HIV)? If so, when? _______
   __Yes, s/he tested negative for HIV ___Yes, s/he tested positive for HIV

Write the number of times you engaged in each activity on the corresponding line. Record “0” if you did not engage in the behavior.

Vaginal Sex Anal Sex Penile Sex

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>gave oral w/barrier</td>
<td>gave oral w/barrier</td>
<td>gave oral w/barrier</td>
</tr>
<tr>
<td>gave oral w/out barrier</td>
<td>gave oral w/out barrier</td>
<td>gave oral w/out barrier</td>
</tr>
<tr>
<td>received oral w/ barrier</td>
<td>received oral w/ barrier</td>
<td>received vaginal w/barrier</td>
</tr>
<tr>
<td>received oral w/out barrier</td>
<td>received oral w/out barrier</td>
<td>received vaginal w/out barr.</td>
</tr>
<tr>
<td>gave finger/toy w/barrier</td>
<td>gave finger/toy w/barrier</td>
<td>gave finger/toy w/barrier</td>
</tr>
<tr>
<td>gave finger/toy w/out barrier</td>
<td>gave finger/toy w/out barrier</td>
<td>gave finger/toy w/out barrier</td>
</tr>
</tbody>
</table>

Check which barriers you used during sexual activity, if any:

___latex condom, cut or whole ___surgical examination glove, cut or whole
___latex dental dam ___Glad Wrap®
___latex finger cots ___other plastic wrap

With respect to this week’s sexual activity, did you use lubricant (circle):

   All the time Some of the time Never

If so, did it contain nonoxynol-9? ___yes ___no ___don’t know

Did you consume alcohol or drugs within the 3 hours prior to engaging in sex? ___yes ___no

Did your partner consume alcohol or drugs within the 3 hours prior to engaging in sex? ___yes ___no ___don’t know

Were you tested for HIV antibodies during the past week? ___yes ___no

Results (circle)? HIV negative HIV positive Don’t know yet

Were you diagnosed with an STD (other than HIV) in the last week? ___yes ___no

Specify, if any: __________
Appendix M

Human Subjects Institutional Review Board Approval Letters
Date: December 17, 1992

To: Kathleen Morrow & Timothy O'Hara

From: M. Michele Burnette, Chair M. Michele Burnette

Re: HSIRB Project Number 92-12-17

This letter will serve as confirmation that your research protocol, "Women and safer sex: An investigation of barriers" has been approved after expedited review by a subcommittee of the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any change in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: December 17, 1993

xc: Fuqua, PSY
Date: April 8, 1993

To: Kathleen Morrow

From: M. Michele Burnette, Chair

Re: HSIRB Project Number 93-04-14

The Human Subjects Institutional Review Board will consider your application for the approval of the research project entitled "HIV risk assessment within the lesbian/bisexual women's communities" at its next meeting on April 14, 1993. The review will be considered under expedited conditions.

Expedited reviews are initially considered by a subcommittee of the Board which makes a recommendation to the full Board regarding the approval of the application. While the subcommittee recommendation may be known prior to the full Board meeting, approval of the application cannot be made until the full Board has considered the recommendations. Immediately following the meeting of the full Board, you will receive information on the status of the application.

Thank you for the timely manner in which you made your submission.

xc: Fuqua, PSY
Date: May 11, 1994

To: Kathleen Morrow

From: Kevin Hollenbeck, Chair

Re: HSIRB Project Number 94-05-11

The Human Subjects Institutional Review Board will consider your application for the approval of the research project entitled "HIV prevention programming for lesbians and bisexual women" at its next meeting on May 18, 1994. The application will be considered under full review conditions.

Although each member of the Board will have a copy of the approval application, it is often desirable for the principal investigator to attend the meeting of the Board to provide verbal clarification of issues which arise. Attendance is expected. If you decide to attend the meeting, you must contact Jorge Teodoro in the HSIRB office, telephone number 387-8293. The approximate time of the review is 8:30 a.m. The meeting will be held in the Conference Room, third floor, Walwood Hall (East Campus).

Thank you for the timely manner in which you made your submission.

xc: Fuqua, Psych.
Date: May 18, 1994
To: Kathleen Morrow
From: Kevin Hollenbeck, Chair
Re: HSIRB Project Number 94-05-11

This letter will serve as confirmation that your research project entitled "HIV prevention programming for lesbians and bisexual women" has been reviewed under the full category of review by the Human Subjects Institutional Review Board. The protocol is not approved in its current form. Please submit the following for review at the next full board meeting scheduled for June 15, 1994. Submissions (an original plus nine copies) are due by 5:00 pm, June 1, 1994.

1. Both within the protocol and the consent form state the durations of the workshops and of the study. Clarify that participants will have the option to carry on with the group sessions beyond the termination of the study.
2. Include a description of what will happen in the workshops. Explain how each topic will be addressed and describe the activities.
3. Make changes to the recruitment poster so that it is clear to participants that this will be a safe sex workshop. The focus of the poster should be on the workshop not on "hot sex". Also provide a copy of the recruitment script that you will use when telephoned by prospective participants.
4. Delete the first paragraph of the second page of the consent form and the last paragraph on the first page of the consent form.
5. On the form, "Initial Demographics", question #7.a2 "i.e." should be changed to "e.g.", and add HIV to question #9.
6. State within the consent form, that questions will be asked concerning participants' ongoing sexual behavior. Also include this information in the recruitment script that you will be using over the telephone.

Please submit the above changes in writing to HSIRB, 320C Walwood Bldg(East Campus). Please do not address correspondence directly to me.

Please be reminded that research activity cannot begin until all revisions are complete and final approval has been granted. If you have any questions, please call Jorge Teodoro in the HSIRB office, telephone number 387-8293.

xc: Fuqua, Psych
Date: June 6, 1994
To: Kathleen Morrow
From: Kevin Hollenbeck, Chair
Re: HSIRB Project Number 94-05-11

The Human Subjects Institutional Review Board will consider the revisions to your application for the approval of the research project entitled "HIV prevention programming for lesbians and bisexual women" at its next meeting on June 15, 1994. The application will be considered under full review conditions.

Although each member of the Board will have a copy of the approval application, it is often desirable for the principal investigator to attend the meeting of the Board to provide verbal clarification of issues which arise. Attendance is expected. If you decide to attend the meeting, you must contact Jorge Teodoro in the HSIRB office, telephone number 387-8293. The approximate time of the review is 8:00 a.m. The meeting will be held in the Conference Room, third floor, Walwood Hall (East Campus).

Thank you for the timely manner in which you made your submission.

xc: Fuqua, Psych
The Human Subjects Institutional Review Board will consider your application for the approval of the research project entitled "HIV prevention programming for lesbians and bisexual women" at its next meeting on July 20, 1994. The application will be considered under full review conditions.

Although each member of the Board will have a copy of the approval application, it is often desirable for the principal investigator to attend the meeting of the Board to provide verbal clarification of issues which arise. Attendance is expected. If you decide to attend the meeting, you must contact Jorge Teodoro in the HSIRB office, telephone number 387-8293. The approximate time of the review is 8:20 a.m. The meeting will be held in the Conference Room, third floor, Walwood Hall (East Campus).

Thank you for the timely manner in which you made your submission.

xc: Fuqua, PSY
Date: September 1, 1994

To: Kathleen M. Morrow

From: Richard Wright, Interim Chair

Re: HSIRB Project Number 94-05-11

This letter will serve as confirmation that the changes you requested to your research project entitled "HIV prevention programming for lesbians and bisexual women" have been reviewed by the Human Subjects Institutional Review Board. The changes can be approved once the following revisions have been received:

1. Describe how the distribution of incentives will occur. For example, raffling items at the end of each session. The Board would prefer there to be an equitable distribution of incentives among the subjects and that the distribution be out of your control (i.e., that it be random with each subject having an equal chance).

Please submit the above changes in writing to HSIRB, 320C Walwood Bldg (East Campus). To avoid delays, please do not send revisions addressed to Dr. Wright.

If you have any questions please call Jorge Teodoro in the HSIRB office, telephone number 387-8293.

xc: Fuqua, PSY
BIBLIOGRAPHY


140


