

ETHNIC IDENTITY, GAY IDENTITY AND SEXUAL SENSATION SEEKING:  
HIV-RISK TAKING PREDICTORS AMONG MEN OF COLOR

WHO HAVE SEX WITH MEN

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Thesis Prepared for the Degree of

MASTER OF SCIENCE

UNIVERSITY OF NORTH TEXAS

August 1999

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Géliga-Vargas, Jesús A., Ethnic identity, gay identity and sexual sensation seeking: HIV risk-taking predictors among men of color who have sex with men. Master of Science (Health Promotion), August 1999, 99 pp., 6 tables, references, 67 titles.

This study examined relationships among ethnic identity, gay identity, sexual sensation seeking, and HIV risk-taking behaviors among 302 men of color recruited from gay bars, bathhouses, community agencies, and the 1998 United States Conference on AIDS. The sample included 24% African American, 28% Latino, 25% Asian/ Pacific Islander, 19% Caucasian, 1% American Indian, and 3% other ethnicity. Logistic regression analysis identified sexual sensation seeking, having an undefined gay identity, being in a sexually exclusive relationship, not being HIV seronegative, and length of stay in the country (for those born overseas) as significant predictors of unprotected anal intercourse (insertive and penetrative) among men of color who have sex with men.

## ACKNOWLEDGEMENTS

The author would like to acknowledge the time and expertise provided by the staff and volunteers of the Resource Center of Dallas. I like to offer special appreciation to the Outreach Coordinators and Peer Educators of the HIV Prevention and Education Department for their cooperation during the data collection phase of the study.

Dr. Allen Jackson and Dr. Chwee Lye Chng, of the Department of Kinesiology, Health Promotion, and Recreation, at the University of North Texas deserve acknowledgment for their contributions in the study design and statistical analysis.

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## CHAPTER I

### INTRODUCTION

The introduction in 1996 of protease inhibitors and combination therapies for the treatment of HIV brought a new sense of hope for those living with HIV and for those at risk of becoming infected. Many people living with HIV now are living longer and more productive lives, and many no longer consider HIV a terminal illness (Cameron, Heath-Chiozzi, & Kravick, 1997). Health educators and prevention counselors have suggested that this new attitude toward HIV and AIDS has encouraged many men who have sex with men (MSM) to drop their defenses and engage in high-risk sexual behaviors (Lurie, DeCarlo, & Miller, 1997). Currently, there is no conclusive empirical data to support this hypothesis. Recent studies suggest that many MSM continue to engage in unprotected sex (Doll, Byers, Bolan, Douglas, Moss, Weller, Joy, Bartholow, & Harrison, 1991; de Wit & van Griensven, 1994). The question as to why MSM continue to increase in high-risk sexual behaviors remains unanswered.

According to the Center for Disease Control and Prevention (CDC) AIDS Surveillance, in the United States homosexual sexual contact continues to be the primary mode of HIV transmission. Although this data indicates that the prevalence and incidence rates of AIDS among this group are lower than a decade ago, the rates among men of

color who have sex with men (MSM of color) have continued to increase (Holmberg, 1996). In 1996, fifty six percent of the reported AIDS cases in the U.S. were among Latinos and African Americans. In 1997, thirty three percent of the reported AIDS cases among men who have sex with men were African American and 6% were Latinos (CDC 1997). The increase in AIDS cases also has been noted among Asians/Pacific Islanders (API) and American Indians. From 1989 to 1994 the proportion of AIDS cases reported among Asians/Pacific Islanders was 4.0 and 6.2, respectively, and among American Indians was 3.9 and 6.9, respectively (Sy, Chng, Choi, & Wong, 1998). In Dallas County, 23% of the AIDS cases reported through February 1998 were African Americans. People of color represent 34% of the AIDS cases reported in the County (DCHHS, 1998). Men who have sex with men and people between the ages of 20-29 represent 82% and 21%, respectively, of the AIDS cases reported in Dallas County (DCHHS, 1998).

Recent studies suggest that ethnicity, gay identity, and sexual sensation seeking are correlates of HIV risk-taking behaviors (Marin & Peterson, 1988; Schroth, 1996; Seibt, McAlister, Freeman, Krepcho, Hedrick, & Wilson, 1991). Ethnicity refers to “ethnic affiliation or identity” (Strong & DeVault, 1997), and is an important factor that determines one’s attitudes and beliefs about health and health-related behaviors (Juliá, 1996). Ethnic groups such as Latinos and African Americans have been highly affected by HIV. Many researchers argue that being a member of these two groups is a strong predictor of HIV risk-taking behaviors (Doll et al., 1991). One group of researchers has reported that among gay and bisexual men seeking services at three urban STD clinics, having a Latino ethnicity was one of the major predictors of unprotected anal sex (Doll et

al., 1991). Doll and associates have been able to successfully identify psychosocial predictors for HIV risk-taking among MSM of color. However, they have not assessed the relationship between HIV risk taking and level of identification with one's ethnic background. Factors such as acculturation level, degree of participation in ethnic behaviors such as traditions and celebrations, and association with other members of the same ethnic group are expected to influence one's attitudes and beliefs, including personal norms for safer sex. However, a variation in the degree of identity and participation in behaviors associated with the group should be expected among individuals. In addition, it is suspected that the degree of involvement and identification with one's group will have an impact on one's set of values and norms associated with safer sex. However, the effect of the variations in the degree of identification with one's ethnicity on risk-taking behavior has not been assessed.

For Latino MSM machismo is a factor associated with an emphasis on penetrative sex. For many Latino MSM sex without penetration is not considered "sex" (Diaz, 1998). Low sexual control also is associated with machismo. Generally, Latino men are socialized not to control their sexual desires, and their promiscuous behavior is socially accepted. These two factors are strong predictors of potential HIV transmission. According to Diaz, other factors associated with the Latino culture that have a potential influence on sexual risk taking among Latinos MSM are homophobia, family loyalty, and sexual silence. Homophobia is a strong sense of personal shame about same-sex sexual desire. Diaz suggests that this shame may induce fear of rejection in sexual encounters, thereby limiting the opportunities to bargain with partners for safer sex. This homophobia

prevents the self-identification as a member of a group at high risk for HIV, and may give an individual a false sense of security. Family loyalty is an important issue, especially in the context of a homophobic family. Latino MSM may remain in the closet to protect their family from the shame associated with homosexuality. This denial of one's sexual identity limits the opportunities to identify with the gay community and to develop a support system (Diaz, 1998). Finally, sexual silence or the inability to talk openly about sexuality, may inhibit open and frank discussions of sexuality with partners.

African American MSM account for the highest rates of increased cases of AIDS in the United States (Peterson et al., 1996). As with Latino MSM, cultural factors such as homophobia may limit their commitment to safer sex. Peterson and Marin (1988) indicate that due to the cultural negative attitudes about homosexuality, African American men may choose to engage in anonymous sex as a way to protect themselves from being identified as gay. Moreover, these non-gay identified men may avoid any involvement in the gay community and may ignore prevention messages targeting gay men. Another factor associated with high-risk sexual behaviors among African Americans is their preference for penetrative sex (Doll & Becker, 1996). According to Doll and Becker, African American MSM, like Latino MSM, prefer oral and anal penetrative sex over mutual masturbation. Even when these behaviors are high-risk behaviors for HIV transmission, if these non-gay identified men do not consider themselves to be in a "high risk" category, then they may not perceive their behaviors as risky (Kowaleski, Henson, & Longshore, 1997).

In most Asian cultures, perpetuation of the family name through marriage is an obligation of a male child in the family (Choi, Coates, Catania, Lew, & Chow, 1995). For these cultures homosexuality is deviant and a dishonor to the family. Many homosexual Asian men are unable to accept their sexuality, as they fear dishonoring the family or being rejected by their family or community members. As a result, Choi and associates suggest that Asian/ Pacific Islanders MSM may downplay their vulnerability to HIV and engage in unprotected sex. In addition, they may be isolated from the gay community and lack the social support and skills to negotiate for safer sex. Sexual silence is another factor associated with the Asian and Pacific Islander culture (Julia, 1996). The lack of open and frank discussion about sexuality may prevent these men from bargaining for safer sex and talking about HIV and AIDS with friends and partners. DiClemente and associates suggest that Asian MSM have an overall lower knowledge of HIV and AIDS than Latinos, African Americans and Caucasians (DiClemente, Zorn, & Temoshok, 1987).

As previously mentioned, in addition to ethnic and gay identity, sexual sensation seeking has been associated with HIV risk-taking behaviors (Kalichman, & Rompa, 1995). According to Zuckerman (1983) sensation seeking is “a trait defined by the need for varied novel, and complex sensations and experiences and willingness to take physical and social risks for the sake of such experiences”. He suggests that sexual sensation seekers prefer and enjoy sexual experiences with a greater variety of partners than low sensation seekers. There are four dimensions for the sensation-seeking construct: thrill and adventure, experience seeking, disinhibition and boredom susceptibility (Kalichman,

et al., 1994; Zuckerman, Bone, Neary, Mangelsdorff, & Brustman, 1972). The multidimensional concept offers a motivational explanation for engaging and maintaining high HIV risk-taking behaviors. Although previous research has attempted to predict high HIV risk-taking behaviors based on sensation seeking among MSM, it has not assessed this construct among the sub-population of men of color. Previous research also has failed to assess the relationship of sensation seeking with variables such as gay identity and ethnic identity.

### Theoretical Background

Many HIV prevention and education programs have incorporated a theoretical framework in their campaigns and interventions. Several health promotion models and theories have been applied to interpret risk-taking behaviors among MSM. Among these theories, the Social Learning Theory (SLT) and the Health Belief Model (HBM) best describe the factors associated with HIV risk-taking behaviors among men of color who have sex with men (Choi, & Kumekawa, 1998; Fairbank, Bregman, & Maullin, 1991; Kegels, Hays, & Coates, 1996; Kircht, & Joseph, 1989).

Bandura's SLT is a commonly used model in programs targeting prevention among men of color who have sex with men. The central idea of SLT is that a person's behavior is either reinforced or extinguished by other people (Butler, 1994; Grusec, & Lytton, 1988). This theory proposes that there are four major conditions needed for behavior change: information; development of self-protective skills and controlling self-efficacy; skill enhancement and building resilient self-efficacy; and social support for desired behavior changes (Bandura, 1986). Bandura suggests that behavior is dynamic and

depends on environment and individual constructs, influencing each other simultaneously. This interaction is referred to as reciprocal determinism (LaFromboise, Coleman & Gerton, 1993). According to Bandura, the environment is critical, as it provides models for behaviors. He argues that one's expectations, or the value a person places on a specific outcome, arise from experiencing or observing a situation. Observational or vicarious learning allows the individual to learn a behavior based on observations. By observing others one may find that certain behaviors are socially acceptable, and decide to adopt those behaviors. An important component of SLT is the concept of self-efficacy. A person must feel confident that he has the ability to perform an action. Bandura suggests that self-efficacy is the most important prerequisite for behavior change (Butler, 1994).

The theoretical framework of SLT can be applied to sexual behavior changes among men of color who have sex with men. African-, Latino-, and Asian-American MSM who strongly identify with their ethnic background may lack some of the basic components needed to change and maintain safer sexual behaviors. Many of these men isolate themselves from the gay community, and from a gay-identified social support system. Therefore, they have limited opportunities for vicarious learning of positive behaviors such as safer sex. Furthermore, they may vicariously learn to perpetuate homophobic attitudes of their ethnic group. In the case of the Latino MSM, the machismo attitude and their perceived lack of sexual control may hinder their self-efficacy to change sexual behaviors.

Based on SLT framework, the cultural attitudes and norms associated with high-risk sexual behaviors among men of color who have sex with men are expected to be stronger among the men who have a higher ethnic identification. It also is expected that those men of color who have acculturated, or are in the process of acculturation to the mainstream gay culture may report fewer high-risk sexual behaviors.

The Health Belief Model (HBM) is a major theoretical formulation used to explain health behaviors (Simon, & Das, 1994). This model explains the relationship between individual health beliefs associated with a medical condition, such as perceived personal vulnerability to HIV, and the likelihood of engaging in preventive behaviors, such as using a condom. According to Kirscht and Joseph (1989), the theory consists of four health beliefs: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. Additionally, this model suggests that there are at least three conditions leading to behavior changes: an increase in perceptions of susceptibility, severity and benefits; a decrease in perceptions of barriers; and the use of cues to action to encourage individuals to adopt healthy behaviors. As HBM suggests, those men who have sex with men and who are sensation seekers are more likely to engage in HIV risk-taking behaviors as they are highly reinforced by the novelty and diversity of their behaviors. The attempts of sensation seeker to adopt low HIV risk-taking behaviors may decrease their thrill and experience seeking. Moreover, safer behavior practices, such as decreasing number of sexual partners and consistent use of condoms, may result in undesirable consequences such as boredom (Kalichman & Rompa, 1995).

### Problem of Study

On the one hand, ethnicity and sexual sensation seeking have been associated with high HIV risk-taking behaviors. On the other hand, gay identification has been associated with the development of a social support system that promotes safer sex. The purpose of this study was to assess how reported sexual behaviors vary among men of color according to ethnic and gay identification. In addition, it assessed how sexual sensation seeking predicted sexual risk-taking behaviors among the sample.

### Significance of the Study

In the United States, HIV infection is disproportionately affecting MSM of color. Previous research has shown that there are specific cultural barriers to HIV prevention among these men. This study identified the relationship among HIV risk taking, ethnic identity, and gay identity for MSM of color. Such findings will aid HIV prevention programs targeting MSM of color in the development of effective interventions.

### Justification of the Study

Sexual sensation seeking has been correlated with HIV risk-taking behaviors among MSM. Factors such as thrill and adventure seeking, and boredom avoidance may influence sensation seekers to engage in unprotected anal sex. However, studies have failed to investigate the relationship between HIV risk-taking behaviors and sexual sensation seeking on a sample of MSM of color. In addition, research targeting MSM of color has failed to measure ethnic identity and its impact on risk-taking behaviors. Furthermore, as MSM of color assimilate into the mainstream gay culture and become more gay identified, conflict between the norms and attitudes of the two cultures will

arise (LaFroboise, Coleman & Gerton, 1993). Discovering how these conflicts, and the redefinition of personal norms, interact with risk taking will facilitate the development of effective interventions to promote less risky sexual behavior.

### Research Questions

The following research questions will be investigated:

1. What is the relationship of *ethnic identity* and HIV risk-taking behaviors among MSM of color?
2. What is the relationship of *gay identity* and HIV risk-taking behaviors among MSM of color?
3. What is the relationship of *sexual sensation seeking* and HIV risk-taking behaviors among MSM of color?
4. What are interaction effects of *ethnic identity*, *gay identity*, and *sexual sensation seeking* scores and HIV risk-taking behaviors among MSM of color?

### Hypotheses

The following hypotheses were investigated:

1. MSM of color who report high ethnic identity will report significantly more HIV risk-taking behaviors.
2. MSM of color who report high gay identity will report significantly less HIV risk-taking behaviors.
3. MSM of color who report high sensation seeking will report significantly more HIV risk-taking behaviors.

## Definition of Terms

Coming out of the closet - The process of sharing one's gay orientation with family and friends (Strong & DeVault, 1997).

Ethnic identity - The sum total of group members' feelings about those value, symbols and common histories that identify them as a distinct group (Smith, 1991).

Gay identity - A process that involves the identification of homosexual desires and feelings, the adoption of homosexual behaviors, the sharing of those feelings with family and friends, and the adoption of norms and attitudes associated with the gay culture.

HIV risk-taking behaviors - for the purpose of this study, the following behaviors are considered high risk for HIV transmission: unprotected anal intercourse (both receptive and insertive).

Homophobia - A strong sense of personal shame about same-sex sexual desire (Díaz, 1998).

Machismo - In the context of Latino men who have sex with men, it refers to an extreme focus on penetrative sexual practices to the extent that sex without penetration is not considered sex (Díaz, 1998).

Men of color - member of one or more of the following ethnic groups: Latino, African American, Asian/Pacific Islander, American Indian (Native American).

Sexual Sensation Seeking - A trait defined by the need for varied, novel, and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences (Zuckerman, 1983).

*Men who have sex with men (MSM)* - Behavioral definition referring to men engaging in sexual contact with other men. These behaviors are not directly correlated with a person's sexual identity.

## Summary

The Center for Disease Control and Prevention reports that MSM of color are increasingly more at risk for HIV than Caucasian MSM. As cases among MSM of color continue to increase, effective prevention interventions are needed. While previous research has identified ethnicity and sexual sensation seeking as predictors of HIV risk taking, it has failed to assess to what extent ethnic identity and sexual sensation seeking interact with HIV risk taking. Research is needed to assess these factors, as well as to identify differences among ethnic groups.

## CHAPTER 2

### LITERATURE REVIEW

This chapter includes a review of the literature addressing ethnic identity, gay identity, sensation seeking tendencies, and their relationship to HIV risk-taking behaviors. The first section examines the multidimensional aspects of ethnic identity, including its relationship to HIV risk taking among ethnic minorities. It will also review how researchers have tried to measure the construct. The second section highlights the construct of gay identity, clarifying the psychosocial predictors associated with HIV risk taking among Latinos, African Americans, Asians/Pacific Islanders and American Indians. Finally, the third section explores the research on sexual sensation seeking as it correlates to differences in HIV risk-taking behaviors among MSM.

#### Ethnic Identity

Members of an ethnic group typically share language, family structure, religion, ethnic signs, symbols and value orientation (Kwan & Sodowsky, 1997). This ethnic social and cultural heritage is transmitted between generations with modifications controlled by intergenerational acculturation. Smith (1991) suggests that ethnic identity is “the sum total of group members’ feelings about those values, symbols and common histories that identify them as a distinct group.” When defining ethnic identity, Kwan and Sodowsky (1997) have suggested two aspects: internal and external identity. They describe three dimensions of internal identity. A cognitive dimension includes self image and images of one’s ethnic group, as well as knowledge of the group history and values. A moral dimension refers to the person’s feelings of group obligation. It is considered the most

central dimension. Finally, an affective dimension of internal identity refers to an ethnic person's feelings of attachment to one's group. External identity refers to observable social and cultural behaviors. Some examples of these behaviors include the use of specific language, participation in group and cultural activities, and maintaining ethnic traditions.

Tajfel (1981) refers to ethnic identity as "that part of an individual's self concept that derives from his or her knowledge of membership in a social group (or groups) together with the value and emotional significance attached to that membership." As suggested by Tajfel and by Kwan and Sadowsky, members of a group have a unique history, traditions, and values that are specific for each group. However, Phinney (1992) argues that ethnic identity can be studied as a general phenomenon that is relevant across groups. Phinney recognizes that each group has its unique characteristics, but he believes that the sense of belonging, or identifying with one's own group, is common to all individuals. Phinney (1992) suggests that there are four components of ethnic identity that can be applied across groups. He describes one component as self identification, the label that one uses to identify oneself. This label does not necessarily represent one's ethnicity, and it is a precondition of establishing an ethnic identity. Another component is ethnic behaviors and practices. This concept refers to an individual's involvement in social events with members of one's group and to an individual's participation in cultural traditions. The third component is affirmation and belonging, or feelings and attitudes toward the group. Finally, Phinney refers to ethnic identity achievement as the ethnic identity developmental process. He suggests that the development of one's ethnic identity

is a dynamic process that accommodates changes in the social and historical context.

Phinney's description of ethnic identity and its components is similar to that provided by Kwan and Sadowsky. They have suggested that Phinney's ethnic behaviors and practices component refers to the external identity described in their model.

### Measuring Ethnic Identity

Most studies that have attempted to measure ethnic identity have focused on specific groups. These studies have developed reliable ethnic identity measurements that are unique to individual ethnic groups such as Mexican Americans, Asian Americans, and African Americans. However, these measurements do not allow cross group contrast and comparison (Phinney 1992). The Multi group Ethnic Identity Measure (MEIM) has been designed to be used with diverse groups. Phinney (1992) identified four components of ethnic identity that apply across groups. He argues that even when groups may have unique histories and traditions, these general components (self identification, ethnic behaviors and practices, affirmation and belonging, and ethnic identity achievement) are common to all human beings.

The MEIM is a 14-item scale that assesses overall ethnic identity and three aspects associated with it: positive ethnic identity and sense of belonging (5 items), ethnic identity achievement (7 items), and ethnic behaviors or practices (2 items). Items are rated using a Likert scale from strongly agree (4) to strongly disagree (1). Total scores range from 4 (high ethnic identity) to 1 (low), and are derived by reversing the values of the negatively worded items, summing across items, and obtaining the mean. In addition, sub-scores for each of the three aspects of ethnic identity can be obtained following the

same procedure for each sub group of questions. The instrument has an open-ended question asking for the participants' self label, and close-ended questions requesting the participants' ethnicity as well as their parents'. Phinney included a six-item scale in the survey that assesses other-group orientation. Although this is not an aspect of ethnic identity, he suggests that other group orientation may interact with ethnic identity as an aspect of one's social identity in the larger society.

Phinney (1992) administered the MEIM to 136 high school students and 417 college students. In both samples, participants were ethnically diverse, including Latinos, Asians/Pacific Islanders, African Americans, and European Americans. He reported internal consistency reliability coefficients (Cronbach's alpha) of .81 for the high school sample and .90 for the college sample. Individual reliability scores also were calculated for two of the three sub-scales. For the third sub-scale (Ethnic Behaviors), a reliability coefficient was not given because reliability cannot be calculated with only two items. The 6-item other group orientation scale had the lowest reliability coefficient (.71 for high school and .74 for college students).

In another study measuring ethnic identity, Taub (1995) administered the MEIM to a sample of 331 college women aged 16-25 years, in which 22.5 % were African American, 26.8% Asian American, 19.1% Latinas, 27.1% Caucasians, and 4.3% self identified as being of mixed race/ethnicity. Taub reported internal consistency reliability coefficients (alpha) of .92 and .82 for the ethnic identity and group orientation scales, respectively. Once again, Phinney's MEIM has been successfully used to measure ethnic identity levels among groups and allowed for cross group comparison and contrast.

## HIV Risk Taking and Ethnicity

Recent research findings suggest that ethnicity may be a factor associated with HIV high risk-taking behaviors, such as unprotected sex. Some argue that sociocultural factors are associated with HIV risk-taking behaviors (e.g., sexual norms that facilitate bisexual behaviors, homosexual stigma) (Doll & Beeker, 1996). A study conducted in an urban STD clinic predominately serving Latinos and African Americans, found that one of three major predictors of unprotected sex was being of Latino ethnicity (Díaz, 1998). Similarly, interviews with 601 men who attended three urban STD clinics and who reported engaging in anal sex with men suggested that Latino ethnicity was one of the most consistent predictors of risk behaviors (Doll et al, 1991). Other researchers have found negative correlations between acculturation level and use of condoms among Latino MSM (Marin, Gomez, & Tschann, 1993). The following review looks at HIV risk taking predictors among Latino, African American, and Asian/Pacific Islander MSM.

### Latino MSM and HIV Risk Taking

Carballo-Diéguez (1989) suggests that there are several barriers to HIV prevention among Latino MSM. Some of these barriers are social and environmental factors, such as language and socioeconomic status. He also suggests that traditional values and religious / folk beliefs tend to interfere with HIV prevention messages. According to Carballo-Diéguez, language is one of the primary environmental barriers. In many cases, the prevention and education messages are not translated into Spanish. Furthermore, when the materials and information are translated, issues such as literacy levels, and the use of slang or regionalism are not considered. In addition to language barriers, low education

levels, lack of skills and lack of resources are factors confounded with socioeconomic status, and predictors of poor knowledge about HIV and AIDS.

Religious and folk beliefs have been associated with HIV risk taking and distorted risk perception (Carballo- Diéguez, 1989). Catholicism which influences the Latino culture, is based on traditional values, strongly opposes the gay lifestyle. Many Latino men may engage in furtive sex because of their guilty feelings associated with their religious beliefs. Engaging in anonymous sex, with minimal opportunities for bargaining safe sex, may increase their chances for HIV transmission. Another social factor in the Latino culture interfering with HIV prevention efforts is the fear of social judgement; recognized among Latinos as “el que dirán” (or what would others think?). This fear may prevent Latino MSM from associating with gay-identified men or from becoming part of the gay community, thereby limiting the opportunities for learning appropriate safe sex norms and behaviors from peers.

There is data supporting the existence of specific sexual behavioral differences between Latinos and Caucasian MSM. One of these differences is the dichotomization of sex roles among Latinos. Carrier and Magaña (1991) suggest that on the one hand, Mexican men generally have a preference for playing either the anal receptive or the insertive sexual role. Mexicans also seem to have preference for anal sex over oral sex. On the other hand, Caucasian men generally show no preference for one role over the other and do not necessarily prefer anal intercourse to oral sex. Carrier and Magaña suggest that an important outcome of this dichotomous arrangement is that more Mexican males than Caucasians may be involved in bisexual behaviors.

Carballo-Diéguez agrees with Carrier and Magaña, suggesting that many bisexual Latino MSM do not identify as gay. He adds that they may have a distorted perception of their risk (Carballo-Diéguez, 1989). From a young age, Latino men are expected to be sexually active and to maintain promiscuous sexual behavior through life (Carballo-Diéguez, 1989). Within this context it may be acceptable that a heterosexual man uses a gay man to satisfy his immediate sexual needs. Many of these men reject HIV prevention messages targeting gay men, and may perceive their own behavior as low risk for HIV transmission. In addition, these men often do not maintain social interactions with other gay men, and are not able to establish a social support network that promotes safer sex.

Social support has been associated with regular use of condoms among MSM (Catania et al., 1991). Catania and associates collected data from a longitudinal cohort and three cross-sectional samples of MSM in San Francisco, and assessed condom use changes among the samples. The results of a logistic regression analysis indicated an increasing level of informal social support (i.e., friends, family) is associated with always using condoms, relative to using them only sometimes or never.

In another study conducted by Diaz, Stall, Hoff, Daigle & Coates (1996), HIV sexual risk-taking behavior was correlated with some specific psychosocial predictors in a sample of 159 Mexican MSM. The sample represented only English speaking Mexicans living in El Paso, Texas and Juarez, Mexico. These Latino MSM completed a survey that measured sexual activity, HIV risk, and psychosocial variables such as intention to practice safe sex, perception of social norms regarding condom use and the practice of safer sex, social communication with friends and acquaintances about safer sex practices

and/or relapses, perceived sexual impulse control in risky situations, substances use during sex, depression, and AIDS loss.

Díaz and associates found that in this sample of highly educated, acculturated Latino MSM, those who practiced unprotected anal intercourse with non-sexually exclusive partners during the last 30 days reported less income ( $p < .001$ ) and were less educated ( $p < .001$ ) than men in the lower risk categories. Diaz and associates argue that this negative correlation should be expected to be higher among less acculturated Latino MSM. Analysis of psychosocial predictors suggests that low perceptions of sexual self-control ( $p < .01$ ) and low perception of self-efficacy to practice safer sex ( $p < .001$ ) are statistically significant correlates of high risk taking (unprotected anal intercourse) in this sample.

Since there is no cure for HIV, consistent use of condoms continues to be the main focus of prevention efforts (Reitman, Lawrence, Jefferson, Alleyne, Brasfield, & Shirley, 1996). Carballo-Diéguez and Dolezal (1996) assessed obstacles to condom use for 182 Puerto Rican men in New York City who have sex with men. Eighty-five percent of the sample identified as gay or bisexual and 55% reported always using condoms. The sample identified “dislike of condoms” as the number one obstacle to condom use (60%). Other obstacles included: “low risk perception” (60%), “trust in” and “emotional connection with partner” (42%), “unavailability / inconvenience of condoms” (31%), “lack of control” (25%), “indifference / ignorance about safer sex” (16%), and “communication problems” (13%). Lack of control in this study refers to the inability to control sexual urges or to control the passion of the moment. This perceived lack of

control is what Carballo-Diéquez (1989) suggests to be the uncontrollable and promiscuous sexual behaviors supported by the machista norms of the Latino culture.

Although there are no studies that have assessed the relationship between ethnic identity and HIV risk taking, there are some studies which have measured acculturation levels and sexual risk-taking behaviors. Carballo-Diéquez and Dolezal (1996) assessed the acculturation level of their sample using the Short Acculturation Scale. A comparison between low and high acculturated subgroups did not show significant differences with regard to the first three obstacles (dislike of condoms, low risk perception, trust in, and emotional connection) (Carballo-Diéquez and Dolezal, 1996). However, they did not assess differences in any of the other obstacles, including lack of control. As previously mentioned, lack of control is a factor associated with machista norms of the Latino culture. It is suspected that for less acculturated men perceived lack of control is more of an obstacle than for those who are more acculturated.

Marin, Gomez, and Tschann, (1993) assessed condom use among Hispanic men with secondary female partners. In a sample of 361 Latinos who reported having a secondary female sexual partner in the 12 months prior to the interview, they found that less acculturated men were more likely to carry condoms and to report a positive attitude toward condom use ( $R^2 = 0.14$ ,  $p < .001$ ). However, less acculturated men were not more likely than the more acculturated men to actually use condoms. Another predictor associated with consistent use of condoms was comfort with sexuality. In the study, this element was a predictor of self-efficacy to use condoms. As the authors suggest, comfort with sexuality is not a common norm among Latinos. For many Latinos, sexuality is

embarrassing and is not to be discussed, even with one's sexual partner (Marin, et al., 1993). The authors suggest that those who are uncomfortable with sexuality and who have multiple partners will be less likely to plan for sex, which may include purchasing and carrying condoms.

Carrier and Magaña (1991) suggest that sexual behaviors among MSM of Mexican origin may vary depending on the selective acculturation of the individual. They argue that a major determinant of these differences is the individual's sexual socialization during adolescence. If individuals of Mexican origin predominately socialize with Caucasian males, their sexual experiences are more likely to be with a Caucasian male, thereby increasing the opportunities for adopting Caucasian sexual norms, preferences and techniques.

#### African American MSM and HIV Risk Taking

As with Latino MSM, African American MSM report higher prevalence of unprotected anal sex than Caucasian men (Peterson et al., 1992). African American MSM account for more than 10% of all AIDS cases in the United States. They also account for the highest rates of increased cases among MSM (Peterson et al., 1996). Although there is limited research addressing this population and HIV risk taking, the information available suggests some specific predictors related to African American men and unprotected anal sex. One research found no differences between Caucasian and African American men regarding the most frequently performed sexual activity (Peterson & Marín, 1988). Both groups reported oral sex to be the number one performed sexual activity. However, there were significant differences in the second most frequently performed sexual activity.

Caucasian men in the sample reported hand-genital contact as the second most frequently performed activity. On the other hand, African American men reported anal intercourse, the sexual activity with the highest risk for HIV transmission, as their second most frequently performed activity. African American bisexual men also have reported higher rates of unprotected penetrative sex with both men and women (Doll & Beeker, 1996).

Peterson and Marin (1988) suggest that many African American men have erroneous attitudes and beliefs about HIV. They argue that this population may believe that anal intercourse is safe if they are the insertive partners, and if this activity is performed only with non-Caucasian men. HIV information and knowledge are other factors associated with high-risk sexual behaviors among this population. According to data available from the beginning of the epidemic from the National Center for Health Statistics, African Americans consistently report lower levels of information about HIV than Caucasians (Peterson & Marín, 1988). As with Latino MSM, cultural differences, prejudice, and racism have isolated African American from the usual source of information available to Caucasian MSM. In addition, cultural socialization may influence African American MSM to suppress their gay identity. These men may protect themselves from the inference of homosexual identity by only engaging in anonymous sex, or by only assuming what they consider to be masculine sexual roles, such as insertive oral or anal sex (Peterson & Marín, 1988). This detachment from the gay community may prevent these men from developing social supports that promote safer sex and condom use (Catania et al., 1991).

In 1990, the African American Men's Health Study recruited 250 subjects between the ages of 18 to 39 (Peterson et al., 1992). These subjects were recruited from bars, bathhouses, adult bookstores, street outreach, and African American organizations. Research findings indicate that 73% of the sample engaged in anal intercourse with primary or secondary partners. Primary partners were defined as the participants' main male sexual partner, with whom they live or have a commitment, and all other sexual partners were defined as secondary partners. Participants provided information on their sexual activity in the six months prior to the study. Twenty two percent of these men reported engaging in unprotected intercourse with primary male partners and 35% reported engaging in unprotected anal intercourse with a secondary partner. In addition to their sexual activity, respondents answered questions relating to predictor variables including: discomfort with disclosing homosexual behavior, own HIV status, partner's HIV status, AIDS knowledge, AIDS ethnocentrism, help-seeking, social support, perceived risk, and condoms expectations, self-efficacy, and norms. Peterson and associates found statistical significant relationships between unprotected anal sex and discomfort with publicly disclosing their homosexuality (Adjusted OR = 1.15,  $p = .02$ ), greater risk perception (Adjusted OR = 2.50,  $p = .01$ ), and perceived lack of social support for safer sex (Adjusted OR = 0.51,  $p = .05$ ). Findings also suggest that men who had low income, had been paid for sex, and/or had injected drugs were less likely to use condoms. In addition, there was a significant difference ( $p = .05$ ) in condom use between men who had and who had not experienced discomfort with publicly revealing their homosexuality. The authors define AIDS ethnocentrism as "race-relevant beliefs that

African American males espouse regarding their risks of HIV infection or AIDS” (Peterson et al., 1992). This tool was designed to assess misperceptions that African American men have about HIV and AIDS. For this sample, AIDS ethnocentrism was not significantly related to unprotected anal sex or condom use.

Another factor associated with HIV risk-taking behaviors among the African American male population has been age. Grinstead, Peterson, Faigles, and Catania (1997) found a significant relationship between age and condom use in a sample of 369 men at risk for HIV transmission through heterosexual sex. According to their findings, condom use decreased with age for men (OR = 0.19, 95% CI = 0.07, 0.52). The authors indicate that among at-risk respondents with secondary partners, older respondents were less likely to use condoms (OR = 0.96, 95% CI = 0.94, 0.98).

Other researchers have agreed with previous reports, suggesting that among African American adolescents, condom use decreases and sexual activity increases over time (Reitman et al., 1996). In a sample of 110 African American adolescents from a Public Health Service 330-funded clinic, Reitman and associates found that gender, self-efficacy, and risk perception were strong predictors of HIV risk-taking behaviors. According to their findings, males ( $p < .02$ ) who reported lower self-efficacy in avoiding AIDS ( $p < .002$ ), and perceived themselves at greater risk for HIV transmission ( $p < .004$ ), were more likely to be engaging in high risk-taking behaviors. Furthermore, when comparing adolescents who use condoms consistently with intermittent users and with those who never use them, significant univariate differences were present. Findings suggest that consistent condom users hold more positive attitudes toward condoms, and

have higher knowledge of HIV and AIDS. Adolescents who reported never using condoms were older than those who use them consistently or intermittently. For this particular sample, inconsistent with other studies' findings, social support was not significantly associated with either of the dependent variables.

#### Asian and Pacific Islander (API) MSM and HIV Risk Taking

In the United States, research on HIV prevention and on MSM, has predominately focused on Caucasian MSM. When addressing men of color who have sex with men, researchers have directed their attention toward Latinos and African Americans. There is limited research addressing HIV risk taking among Asian/Pacific Islander MSM. Studies that have included these sub-populations, usually have included them as part of a broader population such as MSM or MSM of color. Most of the available research targeting Asian/Pacific Islander MSM has taken place outside of the United States. However, as with African American and Latino groups, there are specific cultural barriers to HIV prevention. In general, the Asian/Pacific Islander cultures do not reinforce an open and frank discussion about sexuality (Juliá, 1996). This cultural norm may prevent Asian/Pacific Islander MSM from discussing safer sex concerns with friends and partners. In addition, due to the low prevalence of HIV among this population during the early years of the epidemic, Asians/Pacific Islanders have been perceived as the “model minority”, untouched by HIV. Such a perception may promote their denial of HIV as a threat (Sy, Chng, Choi, & Wong, 1998). In the second decade of the HIV epidemic, the infection rate is higher among Asian/Pacific Islander MSM than among Caucasian MSM.

The behavioral changes noted among many MSM in the late 1980's have not occurred among API MSM (Choi et al., 1996).

In 1993 Choi and associates concluded that the number of people reportedly engaging in unprotected sex was higher among Asian and Pacific Islander MSM than among Caucasian MSM (Choi, Coates, Catania, Lew, & Chow, 1995). A sample of 241 gay identified API in San Francisco completed a mailed questionnaire about HIV-related knowledge, attitudes, and behavior. Twenty seven percent reported engaging in unprotected anal sex at least once during the three months prior to the study. Findings suggest that the most influential determinant of unsafe sex was substance use (OR = 5.22, 95% CI = 2.46-11.05,  $p < 0.01$ ). In addition, reports suggest that Asian/Pacific Islander MSM who engage in unprotected anal intercourse were less likely to perceive themselves at risk of HIV. Contrary to previous findings, unprotected anal intercourse was correlated with greater comfort about sexual communication with sexual partners, friends and acquaintances. Choi and associates argue that this discrepancy is the result of a difference in the variable being measured. Previous studies had measured frequency and quality of communication only with sexual partners. However, Choi's work assessed general comfort levels in talking about sex with sexual partners, friends, and family (Choi et al., 1995). Another discrepancy found in this study was that men who engaged in anal intercourse were less likely to feel uncomfortable with disclosing homosexual behaviors.

In another study, Choi and associates assessed the efficacy of brief group counseling in reducing HIV risk-taking behaviors among a group of Asian/Pacific Islander MSM in San Francisco (Choi et al., 1996). The sample ( $n = 258$ ) was

predominately immigrants (63% and 67% for the experimental and control group respectively). At baseline, 28% of the experimental group and 29% of the control group reported unprotected anal sex. In addition, the experimental and control samples reported 4.1 and 3.7 sexual partners in the last three months, respectively. The group counseling intervention provided general HIV education, but the primary focus was to develop positive sexual and ethnic identities. A three-month follow up suggested a significant difference in the number of sexual partners. The experimental group reported 3.9, versus 6.4 reported by the control group ( $p = 0.0004$ ). Although there was not a significant difference in unprotected anal sex between the two groups, the data suggested an 18% decrease from baseline of men reporting unprotected anal sex. There were significant changes between the Filipino and Chinese men who participated in the counseling sessions and those who did not. Choi and associates indicated that these men were less likely to report unprotected anal sex at 3-month follow up (OR, 0.41%; 95% CI, 0.19--0.89;  $P = 0.024$ ). These findings suggest that developing a positive ethnic and sexual identity had a significant role in the reduction of sexual partners, and for some men a decreased rate of unprotected anal sex.

#### American Indians (Native Americans) MSM and HIV

As with Asians and Pacific Islanders, there is limited empirical data focusing on American Indians and HIV. Recently there has been an increased report of AIDS cases among this population (Metler, Conway, & Stehr-Green, 1991). Between 1989 and 1990 the largest percentage increase in AIDS diagnoses was among American Indians. In comparison with the total US population, American Indians are younger, less educated,

less likely to be employed, and poorer (Metler et al., 1991). Researchers and health educators suggest that these factors, in combination with high rates of other sexually transmitted diseases and the use of alcohol and drugs, are conducive to the spread of HIV among this population. A recent analysis of the data reported to the CDC on AIDS cases indicates that 53% of the AIDS cases among American Indians reported homosexual/bisexual contact as the mode of exposure. This is a higher proportion than those reported for Latinos (39%) and African Americans (12%). Metler and associates suggest that younger age and drug use are predictors of HIV risk taking, as well as HIV infections, among the American Indian population.

#### Gay Identity

The process of establishing a gay identity includes several phases and usually begins in late childhood or early adolescence (Strong & DeVault, 1997; Brady, & Busse, 1994). According to Strong and DeVault, homoeroticism (feelings of sexual attraction to members of the same sex) precedes gay activity by several years. The first phase in this process is usually one of fear and suspicion that one's feelings are different. The authors suggest that during the second phase the individual labels those feelings of attraction, love, and desire as gay. It is during phase three that the individual self identifies as gay. During this phase one must confront the issue of "coming out", or publicly acknowledging one's gay orientation. Though it may jeopardize many relationships, this phase is an essential component of the process given that it is an important mean of self validation. The next phase is marked by the person's first love affair, and it denotes the commitment to unify affection and sexuality. Finally, Strong & DeVault suggest that

becoming involved in the gay subculture is the final phase in establishing a gay identity. This process may include developing a social support of predominately gay friends, going out to gay bars and clubs, and joining gay activist groups.

Brady and Busse (1994) have described a model based on Cass' clinical observations of gay clients and on tenets of interpersonal congruency theory. According to the authors, interpersonal congruency theory "maintains that stability and change in human behavior are dependent upon the congruency or incongruency in an individual's interpersonal matrix and the interpersonal environment." The Homosexual Identity Formation Model (HIF) is similar to the process described by Strong and De Vault. HIF suggests that one moves from pre-homosexual to homosexual identity as a result of experienced incongruence when confronting the following: (1) one's perception of a characteristic attributed to oneself; (2) one's perception of one's behaviors, and (3) one's perceptions of what people think about oneself. There are six stages in HIF: identity confusion, identity comparison, identity tolerance, identity acceptance, identity pride, and identity synthesis. Individuals may change from one stage to the other as they strive for congruency between perception about their behaviors, their self identity, and other's beliefs about them (Brady, & Busse, 1994).

### Measuring Gay Identity

Many researchers have attempted to develop a reliable measure for gay identity. In 1994, Cass developed the Homosexual Identity Questionnaire (HIQ) based on the HIF model (Brady, & Busse, 1994). Some of its limitations were the length, the use of both multiple choice and checklist items, and the need to use six different scoring keys (Brady

& Busse, 1994). Guided by previous research and the constructs of the HIF model, Brady and Busse designed the Homosexual Identity Questionnaire (HIQ). After the use of a modified Delphi survey method and two pilot tests, the authors modified a 100-item questionnaire into the 45-item GIQ. The final design includes 42 questions used to assign subjects to one of the six stages of the Homosexual Identity Formation Model, and three items used to verify that subjects have homosexual thoughts, feelings and/or behaviors. Items in the HIQ represent each of the six stages of HIF. Adding a point for each item where "true" was marked scores the instrument. Then, points in each subset (HIF stage) are added, and the subset with the highest score represents the subject's HIF stage. In the case in which a subject accrues an equal amount of points in two or more subsets, the person receives a dual-stage designation. Brady and Busse point out that a limitation in the development and design of the HIQ is that there were not enough subjects identified in the first two stages of HIF (Identity Confusion, Identity Comparison). This limitation did not permit the researchers to assess the reliability of the items representing these two stages.

After the pilot tests and final modifications, HIQ was administered to 225 male subjects who were selected from beaches, parks, gymnasiums, counseling groups, and gay professional organizations. These subjects were predominately Caucasian males with a mean age of 28.8 years old and a median income slightly below the national average. Using the Kuder-Richardson formula, they obtained interitem consistency scores. The score values were as follow: stage three (Identity Tolerance),  $r = .76$ ; stage four (Identity Acceptance),  $r = .71$ ; stage five (Identity Pride),  $r = .44$ ; and stage six (Identity Synthesis),

$r = .78$ . Ten percent of the sample ( $n = 24$ ) received a dual stage designation. This sample, as in the pilot samples, did not have enough subjects with designations in the first two categories, and interitem consistency scores were not obtained for these categories (Identity Confusion and Identity Comparison). After review of the data obtained from this sample, Brady and Busse suggested that homosexual identity formation may be a two-stage process rather than a six-stage process. The two stage model includes a stage I which combines HIF stages 1-3 (Identity Confusion, Identity Comparison, Identity Tolerance), and a stage II, which combines HIF stages 4-6 (Identity Acceptance, Identity Pride, Identity Synthesis). They argue that the key differences between the two stages are one's resolution of a coherent self identity as homosexual, and a personal sense of where one belongs as homosexual. Although Cass has suggested that the most evolved gay people are those who fully integrate into both the homosexual and heterosexual communities, Brady and Busse did not find significant differences among subjects in the later three stages of HIF regarding their psychological well-being and psychosocial adjustment to a homosexual identity (Brady & Busse, 1994).

#### Gay Identity and HIV Risk Taking

Although there are no studies that have assessed the relationship of a gay identity to HIV risk taking among MSM, several studies have suggested that factors such as social support and disclosure comfort have a significant relationship to risk-taking behaviors. According to Turner, Hays, and Coates (1993), personal acceptance of one's gay identity and discussion with family members about AIDS show the strongest associations with measures of support and support satisfaction.

In 1991 the Dallas County Health Department (DCHD) conducted a study in which men attending DCHD clinics for anonymous HIV testing were asked to complete a questionnaire (Seibt et al., 1993). The sample consisted of 229 men who reported having sex with men. Participants reported on sexual behaviors, frequency of seeking information about HIV/ AIDS, self-perceived sexual orientation, exposure to print media addressing homosexual issues, and comfort in disclosing homosexual behaviors and feelings to family members. The study suggests that MSM who are not gay identified are less likely to consistently use condoms than MSM who identify as gay or bisexual. The mean frequency of condom use for men who self identified as gay or bisexual ( $M=2.7$ ;  $95\% \text{ CI} = 2.5 - 2.9$ ) was significantly higher than for those men who had sex with men and identified as straight ( $M = 0.9$ ;  $95\% \text{ CI} = 0.4 - 1.5$ ) ( $p < 0.0001$ ). In addition, Seibt and associates reported a negative correlation between condom use and reported comfort in disclosing to family members ( $r = -0.16$ ,  $p > 0.02$ ). These findings suggest that MSM who do not identify as gay or bisexual are at a greater risk for HIV infection than those MSM who identify as gay or bisexual.

Social dimensions such as peer safer sex norms and frequency of conversations with peers about AIDS have been considered important determinants of HIV risk taking among certain sub-populations of gay and bisexual men (Kelly et al., 1995). Kelly and associates argue that individuals behave in concordance with perceived safer sex norms of their peer reference group. Furthermore, frequent conversations with friends about HIV reflect the concern about the disease within the individuals' social network. These conversations may serve as a reminder for the individuals to behave safely (Kelly et al.,

1995). Kelly and associates obtained data from a questionnaire completed by 5,939 men entering gay bars in 16 small cities across the United States. Twenty seven percent of the participants who were in a nonexclusive relationship reported engaging in unprotected anal intercourse during the two months prior to survey completion. The men who reported unsafe sex during the past two months reported lower perceived social and peer norms favoring safer sex than those men who did not have unprotected anal intercourse. Kelly and associates reported that safer sex peer norms was one of the variables distinguishing between safe and unsafe men (Effect size = .192).

### Sensation Seeking

Zuckerman and colleagues (1972) suggest that there are significant differences in the “optimal levels” of stimulation or arousal needed by individuals. These differences are based on basic personality dimensions included in sensation seeking. They argue that sensation seekers need “varied, novel, and complex sensations and experiences to maintain an optimal level of arousal.” Sensation seeking is a multidimensional construct that encompasses four primary aspects: (1) the search for sensation through risky physical activities and involve sensations produce by speed or danger (Thrill and adventure seeking); (2) the search of experiences through the senses and the mind which include arts, music, drugs and unconventional lifestyles (Experience Seeking); (3) the search of excitement through people, parties, sexual variety and social drinking (Disinhibition); (4) the avoidance to the lack of change and routine (Boredom Susceptibility) (Zuckerman, & Myers, 1983). Some recent studies have suggested that sensation seekers have lower concerns with the consequences of personal behaviors than low sensation seekers

(Kalichman, Johnson, Adair, Rompa, Multhauf, & Kelly, 1994). Therefore, sensation seeking may constitute a strong predictor for HIV risk-taking behaviors such as unprotected anal sex.

### Measuring Sensation Seeking

Prior to Zuckerman and colleagues work sensation seeking was considered to be a component of other traits such as extroversion, psychopathy and hypomania (Zuckerman, Bone, Neary, Mangelsdorff, & Brustman, 1972). The General Sensation Seeking Scale (General SSS) was developed to assess the overall sensation seeking patterns of individuals. In a series of studies conducted with college students, Zuckerman and colleagues (1972) obtained substantial evidence for the reliability and validity of the general Sensation Seeking Scale. Studies conducted to assess the construct validity of the instrument suggest that sensation seeking scores positively correlate with autonomy, change, and exhibitionism need scores, and negatively correlate with deference, nurturance, orderliness, and affiliation need scores (Zuckerman et al., 1972). In a study conducted with college students ( $n = 41$ ) a factor analysis of the 113 forced-choice items suggested the presence of four non orthogonal specific factors (Thrill and adventure seeking, Experience seeking, Dishinibition, Boredom susceptibility). These individual items were correlated with the general scale scores to produce high correlations between the general scale and the “Thrill and Adventure Seeking,” and “Experience Seeking” scales. The same sample was used to determine test-retest reliabilities based on the total group: General = .89; Thrill and adventure seeking = .94; Experience Seeking = .92; and Boredom susceptibility = .82.

The General Sensation Seeking Scale has been used to predict sexual activities among MSM. In a study conducted by Schroth (1996) 100 gay men were asked to complete the general Sensation Seeking Scale and to report the number of sexual partners and frequency of homosexual sexual behaviors of the past six months. The numbers of sexual activities and sexual partners correlated significantly with sensation seeking scores .33 and .32, respectively.

Recently, some researchers argued that although sensation seeking continues to be a viable predictor of high-risk sexual behaviors, many of the items of the Sensation Seeking Scale developed by Zuckerman are culturally outdated (Kalichman et al., 1994). Terms such as “hippies” or “far-out” are not representative of the current culture and may limit the reliability of the instrument. In addition, scale items such as “I would like to meet some persons who are homosexuals” and “I like to date members of the opposite sex who are physically exciting” limit the use of the scale with homosexually active individuals. In an attempt to create a measurement that predicts high-risk sexual behaviors Kalichman and colleagues developed a measurement of sensation seeking specific to sexual behaviors. They examined the general Sensation Seeking Scale and selected a set of items with high factor loading for each of the four aspects of Sensation Seeking reported by Zuckerman. Kalichman and associates conducted discussion with groups of culturally diverse gay men and refine their terminology. Finally, the 10-item Sexual Sensation Seeking Scale was pilot tested for feedback concerning clarity and item-to-total correlations were obtained. Results also showed that the scale was internally consistent ( $\alpha = .75$ ).

### Sexual Sensation Seeking and HIV risk-taking

As previously mentioned, sexual sensation seeking has been associated with high risk-taking behaviors. In a study conducted by Kalichman and Rompa (1995) a sample of gay men (n = 296) completed the Sexual Sensation Seeking Scale, Sexual Compulsivity Scale and reported sexual behaviors. Sensation seekers reported significantly higher frequencies of unprotected anal sex and a greater number of sexual partners. Kalichman and Rompa reported demonstrating internal consistency for the Sexual Sensation Seeking Scale (alpha = .79). The Sexual Sensation Seeking Scale also positively correlated with relevant constructs such as drug use and unprotected sex.

#### Summary

Although there is limited research addressing ethnic identity and HIV risk taking, available data suggest that men of color MSM are at a higher risk for HIV than Caucasian MSM. Research targeting ethnic groups such as Latinos, African Americans, and Asians/Pacific Islanders indicates that there are specific psychosocial predictors of HIV risk taking among these groups. Cultural norms, beliefs and traditions of people of color (e.g. Machismo), negative views about sexuality, lack of trust, and homophobia may facilitate HIV risk taking. Factors associated with a positive gay identity, such as social support and acceptance of one's sexuality, may provide individuals with the needed tools to practice safe sex. However, the interaction of gay identity and ethnic identity and their impact on HIV risk-taking behaviors have yet to be assessed. Another predictor of HIV risk taking among MSM is sexual sensation seeking. Previous research suggests that sensation seekers engage in high risk sexual behavior such as unprotected anal sex. In

addition, sensation seekers reported significantly higher frequencies of substance use than low sensation seekers. An adaptation of the general Sensation Seeking Scale has been created to predict HIV risk taking behaviors among MSM. This culturally sensitive and valid instrument has demonstrated internal and external reliability.

## CHAPTER 3

### METHOD

A descriptive design using a questionnaire was used to investigate the relationship between HIV risk-taking behaviors and psychosocial variables, including gay identity, ethnic identity and sexual sensation seeking, among a sample of men of color who have sex with men. This chapter includes a description of the study design, instruments, sample, method of data collection, and data analysis.

#### Variables

##### Independent Variables

This descriptive research design used a questionnaire to assess levels of ethnic and gay identity, as well as sexual sensation seeking, in a sample of MSM of color. The three independent variables for this study include:

1. Ethnic identity - as measured by the Multi Group Ethnic Identity Measure (MEIM) (Appendix A).
2. Gay identity- as measured by the adapted Homosexual Identity Questionnaire (HIQ) (Appendix B).
3. Sexual Sensation Seeking- as measured by the Sexual Sensation Seeking Scale (SSSS) (Appendix C).

In addition, in order to control for potential confounding variables, the questionnaire collected demographic information such as age, HIV status, relationship status, length of residency in the United States, education and ethnicity.

#### Dependent Variable

1. HIV risk-taking behavior- as measured by the HIV Risk-taking Behavior Scale (HRBS) (Appendix D).

#### Instruments

The survey questionnaire contains four scales: (1) MEIM, (2) adapted HIQ, (3) SSSS, and (4) HRBS (Appendix E).

##### 1). The Multigroup Ethnic Identity Measure (MEIM)

This scale was designed to be used with diverse groups. According to Phinney (1992), even when groups have unique histories and traditions, there are general components of ethnic identity that are common to all human beings. This instrument is a 14-item scale that assesses three general aspects of ethnic identity: positive ethnic identity and sense of belonging (5 items), ethnic identity achievement (7 items), and ethnic identity behaviors and practices (2 items). In addition, an overall score for ethnic identity can be obtained, ranging from 4 (high ethnic identity) to 1 (low ethnic identity). The total score is derived by reversing the values of the negatively worded items, summing across items and obtaining the mean. Items are rated using a Likert scale from strongly agree (4) to strongly disagree (1). The instrument has a six-item scale to assess other-group orientation. Although this is not an aspect of ethnic identity, Phinney suggests that other group orientation may interact with ethnic identity as an aspect of an individual's social

identity in the larger society. Phinney (1992) found overall reliability scores for MEIM to be .90 when used with college students and .81 when used with high school students. He also calculated individual reliability scores for two of the three sub-scales. For the 5-item Affirmation/Belonging sub-scale, reliabilities were .75 for the high school sample, and .86 for college samples. For the 7-item Ethnic Identity Achievement sub-scale reliability scores were .69 and .80 for the high school and college sample, respectively. Since reliability cannot be calculated with only two items, a reliability coefficient was not given for the Ethnic Behaviors sub-scale.

## 2. Adapted Homosexual Identity Questionnaire (HIQ)

This study used an adaptation of the Homosexual Identity Questionnaire (HIQ) designed by Brady and Busse (1994). HIQ consists of 42 true and false questions used to assign subjects to one of the six stages of the Homosexual Identity Formation (HIF) Model. Three additional items are used to verify that the subjects have homosexual thoughts, feelings, and behaviors. Adding a point for each true statement and summing points for each subset scores the instrument. The subset with the highest score represents the subjects' HIF stage. Brady and Busse reported internal reliability scores ( $r$ ) of .76 for stage three (Identity Tolerance), .71 for stage four (Identity Acceptance), .44 for stage five (Identity Pride), and .78 for stage six (Identity Synthesis). Reliability scores were not obtained for the first two stages, as there were not enough subjects with those designations.

A limitation of HIQ is the length of the instrument, especially if used in conjunction with other scales. Since data collection took place in a natural uncontrolled

setting, considerations for time were needed. In addition, Brady and Busse (1994) suggest that the stages of HIF can be condensed into a two-stage model. This condensed model (CHIF) includes a stage I (HIF stages 1-3) and a stage II (HIF stages 4-6).

Given time limitation considerations, a shorter version of the scale has been designed as suggested by Brady and Busse. The HIQ was administered to a sample (n=20) of MSM recruited at programs and outreach efforts of the Resource Center of Dallas. The responses were used to complete an analysis of the individual items representing a given stage. To be considered representative of a given stage of the adapted HIQ, an item needed to be selected by at least 90 % of the sample assigned to that stage. Furthermore, the item should not have been selected by more than 33% of the sample representing other stages. The adapted HIQ consists of an 18-item true/false scale representing the two stages of the condensed model. The final scores will be calculated by adding a point for all true responses. An individual stage designation will be based on the stage with the highest number of points.

### 3. Sexual Sensation Seeking Scale (SSSS)

This study used the Sexual Sensation Seeking Scale developed by Kalichman and Rompa (1995). This scale is an adaptation of the General Sensation Seeking Scale designed by Zuckerman. Although sensation seeking continues to be a viable construct to predict high risk behaviors, many researches suggest that the original scale was culturally outdated (Kalichman et al., 1994). Terms such as “hippies” or “far-out” are not representative of the current culture and may limit the validity of the instrument. In addition, scale items such as “I would like to meet some persons who are homosexuals”

and “I like to date members of the opposite sex who are physically exciting” limit the use for homosexually active individuals. To address these concerns Kalichman and colleagues developed a measurement of sensation seeking specific to sexual behaviors and culturally competent for gay men samples. They examined the Zuckerman’s general Sensation Seeking Scale and selected a set of items with high factor loading for each of the four aspects of Sensation Seeking (“Thrill and adventure seeking”, Experience Seeking”, Disinhibition”, “Boredom Susceptibility”). Kalichman and associates conducted discussion with groups of culturally diverse gay men to refine terminology used in the scale. Finally, the 10-item Sexual Sensation Seeking Scale was pilot tested for clarity and item-to-total correlations were obtained. Results also showed that the scale was internally consistent ( $\alpha = .75$ ). In a study conducted by Kalichman and Rompa (1995) a sample of gay men ( $n = 296$ ) completed the updated Sexual Sensation Seeking Scale, Sexual Compulsivity Scale and reported sexual behaviors. Sensation seekers reported significantly higher frequencies of unprotected anal sex and a greater number of sexual partners. Kalichman and Rompa reported demonstrating internal consistency for the Sexual Sensation Seeking Scale ( $\alpha = .79$ ). The Sexual Sensation Seeking Scale also positively correlated with relevant constructs such as drug use and unprotected sex. Scores from this 10-item Likert Scale range from 4 (high Sensation Seeking) to 1 (low Sensation Seeking) and are obtained by summing across items and obtaining the mean. Individual items are rated from “not at all like me” (1) to “very much like me” (4).

#### 4. HIV Risk-Taking Behaviors Scale (HRBS)

Siegel and associates (1994) suggest that participants are more likely to report information regarding sexual risk taking in a self-report questionnaire than in an interview. They designed an instrument to recall sexual risk-taking behaviors. This 40-item instrument asks participants to recall the frequency of specific sexual behaviors in a six-month period. However, as suggested by researchers (Stall et al., 1992; Cochran, Leeuw, & Mays, 1995), in order to increase the likelihood of accurate recall and to decrease the recall bias, participants were only asked to report behaviors that occurred a month prior to the survey. A final question was added to identify whether or not the reported behaviors were representative of the participants' usual behaviors.

The survey questionnaire was available in Spanish and English. The Spanish version was developed in collaboration with Mr. Antonio Caraballo, professor at the Modern Language Department of Texas A&M University. First, the survey questionnaire was translated into Spanish by the investigator. The back translation method then was used by Mr. Caraballo to translate the survey into English. Finally, both individuals assessed any discrepancies and finalized the translation. An additional step was taken to ensure the generalizability of the translated survey. Four Latino MSM, representing various Latin American countries (Puerto Rico, Mexico, and Venezuela) and diverse educational backgrounds, read the survey, and suggested changes needed to ensure the language and terms used were understood across countries.

## Sample

There is a great variance in sample size in previous research using a similar design and assessing similar variables. Cochran, Mays and Leung (1991) found significant differences in a survey design with a sample of 153 individuals. Similarly, Siegel and associates obtained significant data from a sample of 154 MSM using a self-report questionnaire (Siegel, Krauss, & Karus, 1994). In contrast, a study assessing attitudes and behaviors related to HIV risk taking in adolescents obtained data from a sample of 1720 ninth graders (Basen-Engquist, & Parcel, 1992).

A calculation of sample size based on the recommended power of .8 and a moderate effect size of .5 suggests a sample size of 230 participants (Thomas, & Nelson, 1996). The convenience sample (N=302) consisted of men who met the inclusion criteria of reporting sexual contact with other men, and were able to read English and/or Spanish, as the questionnaire was be available in these two languages.

## Data Collection

Subjects were recruited from locations where MSM of color congregate. The HIV Prevention and Education staff and outreach peer educators from the Resource Center of Dallas were consulted to identify locations in Dallas County. The Resource Center of Dallas is one of the largest HIV service providers in North Texas, and have been conducting outreach efforts targeting MSM for more than eight years. The locations where subjects were recruited included:

1. Gay bars - Gay-identified bars in the Dallas County that either cater to a specific ethnic group or where MSM of color frequent.

2. Bathhouses - These private clubs provide a setting for casual sex among MSM. Data was collected primarily from the bathhouse favored by MSM of color as well as the non-gay identified.

3. Gay-oriented agencies and organizations- MSM of color were recruited from various organizations and agencies that provide services and programs to gay and bisexual men. Data was collected at the John Thomas Gay and Lesbian Community Center in Dallas, Renaissance III (provides HIV-related services to African Americans in Dallas), Dragonflies (Asians/Pacific Islanders social organization in Dallas) and Dallas Independent Volleyball Association (D.I.V.A) tournaments.

4. Professional Conferences - MSM of color were recruited during the Annual United States Conference on AIDS held in Dallas on November, 1998.

Data was collected in a ten-month period (May 1998- February 1999) at various locations where MSM of color congregate. Efforts conducted at the bars, and bathhouses were done in conjunction with the outreach staff of the HIV Prevention and Education Department of the Resource Center of Dallas. Because MSM at these locations trust the staff of the Resource Center, it is believed that this rapport between the agency staff and patrons increased the likelihood of participation in the study. Although the outreach staff and volunteers were present, the investigator only conducted recruitment and data collection.

MSM of color at these locations were asked to complete the anonymous and confidential questionnaire on site, and to place the completed, sealed survey in a designated receptacle. Questionnaires were color coded to represent each of the targeted

locations. Locations were targeted more than once to ensure adequate representation. In order to ensure adequate representation of non-gay identified MSM, over sampling took place at the bathhouses, where these men frequently congregate. A total of 30 individuals refused to complete the questionnaire, representing 9% of all men asked to complete the survey.

Participants also were recruited at meetings and programs of organizations and agencies serving MSM of color and at professional conferences (The US Conference on AIDS held in Dallas was attended by many MSM of color and served as another convenient collection site). As with other targeted locations, participants were asked to complete the questionnaire on site. Completion of the instrument was voluntary, and no incentives were provided for completion. To avoid duplication, participants were asked if they had previously completed the questionnaire. Individuals who do not meet the inclusion criteria were not asked to participate.

#### Data Analysis

The Statistical Package for the Social Science (SPSS) was used to analyze data collected. A Logistic Regression Model was used to measure the contribution of each independent variable to variations in the nominal dependent variable (sexual risk taking behaviors).

#### Summary

This cross sectional research design used a questionnaire to assess levels of ethnic and gay identity, as well as sexual sensation seeking, in a sample of MSM of color. The convenience sample was selected from various public locations and from agencies and

organizations serving MSM of color. Data was analyzed to assess the relationship among the independent variables and HIV risk-taking behaviors.

## CHAPTER 4

### RESULTS

This chapter reports on the findings of the study. We will first present demographic information on the study sample, categorized by ethnicity. Next we will present findings related to the independent variables of Ethnic Identity, Sexual Sensation Seeking, and Gay Identity, categorized by ethnicity. This will be followed by a presentation on reported sexual behaviors from the previous month, categorized by ethnicity and demographic variables. The chapter will conclude with results of a logistic regression on contribution of the independent variables on reported unprotected anal sex.

#### Sociodemographic Characteristics

The questionnaire was completed by 302 men who met the inclusion criteria. The sample consisted of 24% African American, 28% Latino, 25% Asians / Pacific Islander, 19% Caucasian, 1% American Indian, and 3% other ethnicity. Based on their limited representation, American Indian subjects ( $n = 3$ ) and subjects who selected the “other” ethnic category ( $n = 10$ ) were excluded from data analysis. Subjects were recruited from four sources: community events/ programs (35%), bathhouses (10%), gay bars (21%), conferences (34%). The sample was highly educated (87% with more than High School education), and predominately non-sexually exclusive (77%). Twenty three percent of the sample reported being HIV positive and 9% did not know their HIV status. The prevalence of HIV was the highest among African Americans (30%) followed by Asians /

Pacific Islanders (27%), Latinos (23%), and Caucasians (16%). Although all men resided in the United States, 29% were not born in the country. Of those born overseas, the majority was Asians/ Pacific Islanders (61%) and Latinos (29%), respectively.

Sociodemographic characteristics by ethnicity are provided in Table 1.

Participants completed three validated instruments measuring ethnic identity, sexual sensation seeking, and gay identity. The Ethnic Identity Scale consisted of three sub-scales measuring affirmation and belonging, ethnic identity achievement, and ethnic behaviors. Overall alpha reliability coefficient for the entire 14-item ethnic identity scale was .88, .86 for Affirmation and Belonging and .60 for Ethnic Achievement. No coefficients were reported for the Ethnic Behavior subscale because insufficient test items. The reliability of the Sexual Sensation Seeking and Gay Identity scales were .80 and .57, respectively.

#### Descriptive Statistics for Independent Variables

Table 2 presents mean scores of the independent variables by ethnicity. The Ethnic Identity Scales scores ranked from 1 (Strongly disagree) to 4 (Strongly Agree). Similarly, the Sexual Sensation Seeking Scales scores ranked from 1 (Not at all like me) to 4 (very much like me). African Americans reported the highest ethnic identity ( $M = 3.53$ ) while Asians / Pacific Islanders reported the highest sexual sensation seeking scores ( $M = 2.85$ ). Overall, the sample was highly ethnic identified and with moderate sensation seeking scores. A defined gay identity was reported by 78% of the sample. An undefined gay identity was reported by 32% of African American, 31% of Asians/ Pacific Islanders, 20% of Latinos and 7% of Caucasians.

Table 1

	Ethnicity			
	African American	Latino	Asian/Pacific Islander	Caucasian
N	73	84	76	55
Mean Age	34	31	32	34
Range	18-53	19-46	20-55	20-54
Education				
≤ HS	8	14	11	4
>HS	65	70	65	52
Relationship				
Sexually exclusive	13	20	18	13
No sexually exc.	60	64	58	43
HIV Status				
HIV -	45	56	52	46
HIV +	22	19	14	9
HIV unk.	6	9	10	1
Born in U.S.				
Yes	72	59	24	53
No	1	25	52	3
Gay Identity				
Defined	50	67	53	52
Undefined	23	17	23	4

#### Descriptive Statistics for the Dependent Variable

Participants were asked to report frequency of sexual behaviors during the previous month. Table 3 displays the incidence of sexual behavior (without condoms) by ethnicity. Sexual behavior frequencies rank from 0 (not at all this month) to 3 (5 or more times this month). In order to ensure that reported behaviors were an accurate representation of participants' typical behaviors, men were asked specifically to indicate if sexual behaviors from the previous month were representative of their usual behaviors.

Eighty-two percent of the sample indicated that reported behaviors represented their usual sexual behaviors, enhancing the validity of data collected.

Table 2

Independent Variables by Ethnicity

	Ethnicity			
	African American	Latino	Asian/Pacific Islander	Caucasian
Ethnic Identity <sup>a</sup>	3.53	3.33	3.48	2.97
Affirmation and Belonging <sup>a</sup>	3.74	3.59	3.61	3.09
Ethnic Iden. Achievement <sup>a</sup>	3.36	3.11	3.37	2.82
Ethnic Behaviors <sup>a</sup>	3.27	2.99	3.41	2.68
Sexual Sensation Seeking <sup>a</sup>	2.42	2.61	2.85	2.72

Note. <sup>a</sup>Scores could range from 1 to 4 (the higher the score the higher the ethnic identity or sensation seeking).

The most frequently reported sexual behaviors among men of color were mutual masturbation and insertive oral sex without ejaculation . In contrast, Caucasian men’s most frequently reported sexual behaviors included mutual masturbation and receptive oral sex without ejaculation. At least one instance of unprotected anal sex was reported by 51% of the sample (N = 302).

The risk of infection after exposure of one episode of penile-anal intercourse with an HIV positive partner is 0.1% to 3% (CDC, 1998). Although the CDC reports that the risk of transmission after exposure of one episode of receptive oral sex unknown, it is expected to be very low. Since unprotected anal sex continues to be the most efficient mode of sexual transmission of HIV among MSM, data was analyzed by transforming the multilevel dependent variable (reported sexual behaviors) into a two level categorical variable (unprotected anal sex). As individuals were asked to only report on their

frequency of unprotected anal intercourse, the anal sex data was subdivided into two mutually exclusive categories: “No unprotected anal sex reported” and “Unprotected anal sex reported. Tables 4 and 5 present sociodemographic characteristics and descriptive statistics of the independent variables by reported unprotected anal sex.

In order to control for confounding effects, logistic regression was performed including all independent variables and sociodemographic variables. Results of the logistic regression model are presented in Table 6.

With reference to Table 6, it is evident that MSM reporting unprotected anal sex intercourse scored significantly higher on sexual sensation seeking ( $M = 2.82$ ) than their counterparts reporting no unprotected anal sex ( $M = 2.45$ ). The logistic regression analysis identified sexual sensation seeking as a predictor of unprotected anal sex ( $OR = 4.22$ ,  $p = 0001$ ,  $CI = 2.39, 7.45$ ). In other words, moving upward in the sexual sensation seeking scale increases odds by 4.2 times. For example, an individual who obtained a score of 4 (highest sexual sensation seeking) is 12.7 ( $4.22 \times 3$  units) times more likely to engage in unprotected anal sex than someone who scored 1.

Table 3

Percent of Reported Sexual Behaviors from Previous Month by Ethnicity

	Ethnicity			
	African American	Latino	Asian / Pacific Islander	Caucasian
<b>Mutual Masturbation</b>				
Not at all	25	17	17	14
At least once	75	83	83	86
<b>Receptive Oral (no ejaculation)</b>				
Not at all	43	35	18	16
At least once	58	66	82	84
<b>Receptive Oral (ejaculation)</b>				
Not at all	89	63	54	66
At least once	11	37	46	34
<b>Insertive Oral (no ejaculation)</b>				
Not at all	25	26	16	21
At least once	75	74	84	79
<b>Insertive Oral (ejaculation)</b>				
Not at all	81	68	46	59
At least once	19	32	54	41
<b>Receptive Anal (no ejaculation)</b>				
Not at all	77	70	47	61
At least once	23	30	53	39
<b>Receptive Anal (ejaculation)</b>				
Not at all	82	82	66	80
At least once	18	18	34	20
<b>Insertive Anal (no ejaculation)</b>				
Not at all	69	66	53	61
At least once	31	34	47	39
<b>Insertive Anal (ejaculation)</b>				
Not at all	81	70	66	77
At least once	19	30	34	23

Note. These are behaviors where condoms were not used.

Table 4

	Anal Sex <sup>b</sup>	
	Unprotected Anal Sex	No Unprotected Anal Sex
N	155	147
Ethnic Identity <sup>a</sup>	3.30	3.40
Affirmation and Belonging <sup>a</sup>	3.47	3.58
Ethnic Iden. Achievement <sup>a</sup>	3.14	3.22
Ethnic Behaviors <sup>a</sup>	3.08	3.13
Sexual Sensation Seeking <sup>a</sup>	2.82	2.45

Note. <sup>a</sup>Scores could range from 1 to 4 (the higher the score the higher ethnic identity or sensation seeking). <sup>b</sup>At least one instance of unprotected anal sex during the past 30 days.

Table 6 indicated that MSM reporting an undefined gay identity engaged in more unprotected anal sex than those having a defined gay identity. Based on the results from the Gay Identity scale, only 23% of participants reported not having a defined gay identity. At least one instance of unprotected anal sex in the previous month was reported by 69% of men with an undefined gay identity. In contrast 45% of the men with a defined gay identity reported participating in unprotected anal sex. The logistic regression analysis suggests that not having a define gay identity was a significant predictor of unprotected anal sex (OR = 3.63,  $p = .0007$ , CI = 1.73,7.65). In other words, MSM who are not gay identified are 3.6 times more likely to engage in unprotected anal sex.

The MSM of color sample reported fairly high ethnic identity mean scores that ranged from 3.53 (African Americans), 3.48 (Asians / Pacific Islanders) to 3.33 (Latinos) (see table 2). The Caucasian sample score 2.97 out of a 4-point scale. The logistic

regression analysis confirm that Ethnic Identity and its three main components (Affirmation and Belonging, Ethnic Identity Achievement, and Ethnic Behaviors) were not significant predictors of unprotected anal sex among the sample.

As evident in Table 6, MSM reporting being in a sexually exclusive relationship had significantly more unprotected anal sex (62%) than those reporting a non-sexually exclusive status (58%). The logistic regression analysis confirmed that a sexually exclusive relationship status predicted unprotected anal sex (OR = 2.94,  $p = .0016$ , CI = 1.51,5.73). In other words, those MSM who reported being in a sexually exclusive relationship are 2.94 times more likely to engage in unprotected anal sex.

In the study, 79% of the men with a high school or lower education reported at least one instance of unprotected anal sex. In contrast, 47% of men with more than a high school education reported engaging in unprotected anal sex. However, the logistic regression results suggest that education is not a significant predictor of unprotected anal sex among the sample (OR = 2.73,  $p = .0555$ , CI = 0.97,7.64).

Table 5

Sociodemographic Characteristics by Reported  
Sexual Behaviors

	Unprotected <sup>a</sup> Anal Sex		No Unprotected Anal Sex
N	155	(51%)	147
Mean Age	32	-	34
Range	18-55	-	20-55
Education			
≤ HS	31	(79%)	8
> HS	124	(47%)	139
Relationship			
Sexually exclusive	43	(62%)	26
Non-sexually exc.	112	(58%)	82
HIV Status			
HIV -	96	(46%)	111
HIV +	39	(57%)	30
HIV unk.	20	(77%)	6
Born in U.S.			
Yes	102	(47%)	113
No	53	(61%)	34
Gay identity			
Defined	104	(45%)	126
Undefined	47	(69%)	21

Note. <sup>a</sup>At least one instance of unprotected anal sex during the past 30 days.

Table 6.

Independent Variables Contributing to Reported Unprotected Anal Sex by Logistic Regression

Variable	B <sup>a</sup>	SE	Wald	Prob.	95% CI <sup>c</sup>
Age	.9724	.0189	2.1846	.1394	0.94,1.01
Ethnicity					
African American	.9730	.5042	.0029	.9567	0.36,2.61
Latino	.5454	.4434	1.8685	.1716	0.23,1.30
Asian / PI	.4774	.7197	1.0557	.3042	0.25,1.85
Caucasian	.7604	.5285	.2685	.6043	0.27,2.14
Education ( ≤ HS)	2.7310	.5247	3.6660	.0555	0.97,7.64
Relationship (sexually exclusive)	2.9390	.3406	10.0180	.0016 <sup>b</sup>	1.51,5.73
HIV Status					
Negative	.2676	.5593	5.5561	.0184 <sup>b</sup>	0.09,0.80
Positive	.3581	.6268	2.6842	.1013	0.10,1.22
Unknown	.4520	.6129	1.6782	.1952	0.19,1.30
Ethnic Identity	.0449	1.8718	2.7485	.0973	0.01,1.76
Affirmation and Belonging	1.7744	.7545	.5778	.4472	0.40,7.78
Ethnic Achievement	3.2219	.8920	1.7205	.1896	0.56,18.5
Ethnic Behaviors	1.7437	.4003	1.9297	.1648	0.80,3.82
Not defined gay identity	3.6345	.3799	11.5413	.0007 <sup>b</sup>	1.73,7.65
Sexual Sensation Seeking	4.2175	.2906	24.5259	.0001 <sup>b</sup>	2.39,7.45

<sup>a</sup> Estimated Odds Ratio <sup>b</sup> Statistical Significance ( $p \leq .05$ ) <sup>c</sup> Confidence Interval

Reported HIV status is another significant predictor of unprotected anal sex among the sample. Men with unknown HIV status reported the highest frequency of unprotected anal sex (77%) followed by HIV positive men (46%) and HIV negative men (46%). The logistic regression analysis suggest that HIV negative men are 73% less likely to engage in unprotected anal sex (OR = .27,  $p = .0184$ , CI = 0.09,0.80) than others.

Of all ethnic groups Asians / Pacific Islanders reported the highest frequency of unprotected anal sex (66%) followed by Caucasians, (48%); African Americans (47%);

and Latinos, (45%). Although there are some noted differences among the ethnic groups, ethnicity was not a significant predictors of unprotected anal sex.

Because there was some suggestive evidence in the literature that being foreign born could correlate with participation in risky sexual behaviors, we performed a logistic regression analysis on the sample of MSM who were not born in the United States (N = 89). Results suggest a negative correlation between unprotected anal sex and length of residence (years) in the United States. In other words, the shorter their stay in the United States the more likely they are to engage in unprotected anal sex for the sample (OR = .94,  $p = .0436$ , CI = .86, .98).

From our sample of 302 MSM, more than 50% of the men in the study reported engaging in at least one instance of unprotected anal sex in the previous month. Among all groups, Asians / Pacific Islanders reported a highest frequency of unprotected anal sex. Not surprisingly, they reported the highest tendency toward sexual sensation seeking. Logistic regression results suggest that not having a defined gay identity, being in a sexually exclusive relationship, being a sexual sensation seeker and not being HIV negative were significant predictors of unprotected anal sex. For the MSM who were not born in the United States, years living in the States had a negative correlation with reported unprotected anal sex.

## CHAPTER 5

### DISCUSSION, CONCLUSIONS AND IMPLICATIONS

This chapter reports on the results of the study with the goal of highlighting implications for HIV prevention programming and research. First, the author will present an overview of study design to provide a context in which to interpret results, particularly as they relate to sexual sensation seeking, gay identity, ethnic identity, HIV status and relationship status. Next, the author will present conclusions and limitations of the study. This will be followed by a discussion of the implications for HIV prevention programs. Finally, the investigator will conclude with recommendations for program development, and recommendations for future research.

#### Overview of Study

This study compares the ethnic identity, sexual sensation seeking and gay identity scales scores among men who have sex with men from different ethnic groups, and assesses their contribution to self-reported unprotected anal intercourse among the sample. Participants were recruited at numerous locations where MSM of color congregate. Bars and bathhouses were targeted several times during the 10-month period that data was collected. Men who were recruited at the bars and bathhouses represented 25% and 10% of the sample, respectively. One third of the sample was recruited at the United States Conference on AIDS held in Dallas. The remaining men were recruited at various community activities and at agencies or programs that provide services to gay

men of color. Although the study targeted men of color, 56 Caucasian men (18%) completed the questionnaire, and their data were included to provide a backdrop for multiethnic comparisons. The University of North Texas Institutional Review Board approved the study. Data were collected between May 1998 and February 1999.

### Limitations

Before beginning a discussion of the major findings of this investigation and their implications, we should address the generalizability of these data. Although the results suggest that sexual sensation seeking, not having a defined gay identity, being in a sexually exclusive relationship and the individual's HIV status are significant predictors of unprotected anal sex, some cautions are in order. The following are limitations that encompass this study:

- 1 This was a convenience sample and generalizability of the results may be limited. An attempt was made to increase the sample variance by collecting data in multiple and diverse settings where men who have sex with men congregate.
- 2 Findings are based on self-reports; therefore, some effect due to social desirability should be expected. To decrease this effect, surveys were completed anonymously and confidentially.
- 3 The cross-sectional nature of the study precluded inferring causal relationships between the hypothesized independent variables and self-reported participation in unprotected anal intercourse. However, within the limitations of the study design, findings provide valuable insights regarding the determinants of unprotected anal intercourse among MSM of color participants.

- 4 The sexual behavior scale is prone to recall bias; therefore, the accuracy of the responses may be affected. In an effort to maintain the accuracy of the respondents' recall, the questionnaire asked for behaviors occurring only during the previous month. In addition, men were asked to indicate whether or not the reported behaviors represented their usual sexual behaviors. As previously mentioned, 82% of the sample indicated that the reported behaviors were representative of their usual behaviors.
- 5 Questionnaires were available only in English and Spanish. Therefore, study participation for Asian and Pacific Islanders were limited to English-speaking men. However, the use of a Spanish language questionnaire in our study is unique, as it is an approach rarely used in previous studies targeting MSM of color.
- 6 Because completing the survey may represent gay identification, participation of nongay identified men may have been limited. However, every attempt was made to reach this population by oversampling participants at locations where predominately nongay identified MSM of color congregate.

Although some individuals approached chose not to complete the questionnaire, several steps were taken to decrease the non-respondent bias. Data was collected at the same location on more than one occasion to provide first-time non-respondents with additional opportunities to participate. Participants were reassured that their privacy and confidentiality will be respected.

## Discussion

### Sexual Sensation Seeking and Unprotected Anal Intercourse

In agreement with previous studies (Diaz, 1999; Kalichman & Rompa, 1995; Zuckerman et al., 1972) sexual sensation seeking was a strong predictor of unprotected anal intercourse among the sample (OR = 4.22,  $p = .0001$ , CI = 1.73,7.65). The men who report high sexual sensation seeking (score = 4) are 12.7 times more likely to engage in unprotected anal sex than those who report low sexual sensation seeking (score = 1). These findings are similar to those obtained by Kalichman and Rompa (1995) where high sexual sensation seeking gay men reported significantly higher frequencies of unprotected anal sex and a greater number of sexual partners. Gold and Skinner (1992) found that young men who engaged in unprotected anal intercourse with anonymous male partners frequently endorsed statements that reflect sensation seeking: one third of men who had sex with anonymous partners reported that they did so because they were bored, wanted some excitement, and desired an emotional boost. In addition, research from the Coping and Change cohort in Chicago reported that sexual adventurousness was significantly related to the repeated practice of unprotected anal intercourse over time (Ostrow, DiFranchisco & Kalichman, 1997). Using a 75<sup>th</sup> percentile cutoff, 50% of seroconverters (men who became HIV positive during the study) among gay men were adventure seekers compared to 20% of controls, representing a 3.9 times greater risk for seroconversion for men at this high range of sexual adventurousness. As suggested by Zuckerman and colleagues (1972), sensation seekers have significantly different optimal levels of arousal. High sexual sensation seekers may need to engage in risky sexual behaviors to achieve desired levels of sexual excitement. According to Zuckerman, one way of achieving this excitement is through "disinhibition," which includes the search of excitement through sexual variety.

Another aspect of sexual sensation seeking is "experience seeking," which may include drug and alcohol use. Although alcohol and drug use was not reported, it is suspected that sensation seekers also may use drugs to enhance their sexual experiences. Substance use has been correlated with participation in HIV risk-taking behaviors such as unprotected anal sex among MSM of color (Diaz, 1999).

### Gay Identity and Unprotected Anal Intercourse

As hypothesized, an undefined gay identity was another significant predictor of unprotected anal sex among the sample. Men who report an undefined gay identity are 3.6 times more likely to engage in unprotected anal intercourse than those with a defined gay identity (OR = 3.60,  $p = .0007$ , CI = 1.73,7.65). Brady and Busse (1994) suggested that the homosexual identity formation could be divided into two stages, which include an undefined gay identity (Stage I), and a defined gay identity (Stage II). The main differences between these two stages are one's resolution of a coherent self-identity as homosexual and a personal sense of where one belongs as homosexual. Social support has been associated with reduction of risk-taking behaviors among gay men (Kelly et al., 1995; Seibt et al., 1993). According to Turner and associates (1993), personal acceptance of one's gay identity is most strongly associated with measures of support and support satisfaction. Therefore, it was not surprising to find that men with a defined gay identity, who may enjoy a strong support system, reported significantly lower frequencies of unprotected anal sex than men with an undefined identity. Kelly and colleagues (1995) have suggested that social dimensions such as peer safer sex norms and frequency of conversations about HIV/AIDS are important determinants of HIV risk-taking among gay

and bisexual men. MSM of color with a defined gay identity may interact more often with the mainstream gay community, and may be exposed to HIV prevention messages more often than those without a defined gay identity or who do not participate in gay identified social activities. In addition, these men with a defined gay identity are more likely to develop close associations with other gay men and are more likely to behave in concordance with perceived safer sex norms of their peer reference group (Kelly et al., 1995). Other studies have found similar relationships between gay identity and HIV risk-taking behaviors. In 1991 staff from the Dallas County Health Department conducted a study with 229 MSM, and their findings have suggested that non gay-identified MSM were less likely to consistently use condoms than those with an identified gay identity (Seibt et al., 1993). Furthermore, that study found a negative correlation between condom use and reported comfort in disclosing one's sexuality to family members. According to the Homosexual Identity Formation (HIF) Theory, the MSM with an undefined gay identity are in a stage of confusion and comparison. In contrast, men with a defined gay identity have accepted and are proud of their gay identity (Brady & Busse, 1994). During the stage of confusion and comparison, men who do not identify as gay may not perceive themselves at risk for HIV and may continue to engage in risky sexual behaviors. Many nongay identified MSM interactions with other MSM are within the context of casual and anonymous sex where a code of silence is enforced, and where there are limited opportunities to negotiate for safer sex practices.

#### Ethnic Identity and Unprotected Anal Intercourse

Previous research suggests that factors associated with ethnic identification, such as acculturation, machismo, homophobia and religious beliefs are associated with HIV risk-taking behaviors among some MSM of color. Diaz (1998) has suggested that one of the three major predictors of unprotected anal sex was being Latino. Current epidemiological data confirms that there is an increased number of AIDS cases among the Latino and African American men (DCHHS, 1998). More than 22% of the MSM of color in this study reported being HIV seropositive. Fifty-one percent of this sample reported at least one instance of unprotected anal intercourse during the past month. This data suggests that among this sample of MSM of color, HIV is a reality and that unprotected anal intercourse is a common behavior. This study attempted to identify a relationship between ethnic identification and unprotected anal sex. As previously reported, based on the Multi group Ethnic Identity Measure (MEIM) scores, this sample was highly ethnic identified. However, data analysis suggests that these scores were not significant predictors of unprotected anal sex among the sample. When measuring ethnic identity among a diverse group of individuals, Phinney (1992) suggests that there are three main factors to consider: ethnic affirmation and belonging, ethnic identity achievement, and ethnic behaviors and practices. These general factors are common in all human beings and in all ethnic groups. However, there are specific factors associated with each individual ethnic group such as homophobia, machismo, family loyalty and religious beliefs. Diaz (1998) has suggested that these ethnic-specific factors are strong predictors of HIV risk-taking among Latino gay men. Similarly, Peterson and Marin (1988) have suggested that among African Americans, cultural attitudes about HIV and condom use

are predictors of HIV risk-taking behaviors. In an attempt to use an uniform measurement of ethnic identity that was applicable across all ethnic groups, this study might have failed in measuring ethnic-specific attitudes associated with HIV risk taking. Based on findings from previous research, it is expected that ethnic-specific attitudes would be a strong predictor of unprotected anal sex among this sample.

#### HIV status, Relationship Status and Unprotected Anal Intercourse

Logistic Regression results suggest that HIV status and relationship status are predictors of unprotected anal intercourse. MSM with unknown HIV status reported the highest frequency of unprotected anal sex (77%), followed by HIV positive men (57%). Men who reported being HIV negative were 73% less likely to engage in unprotected anal sex than those with an HIV positive or unknown sero-status (OR = .27,  $p = .0184$ , CI = 0.09,0.08). Apparently, for MSM of color, there is value in knowing one's HIV sero-status. Not only does it initiate an early entry into treatment of HIV disease if one is infected, but simply knowing one's sero-status appears to protect the man from becoming infected. Men who tested and learn they are not HIV infected may initiate changes in their behaviors that could protect them from subsequently becoming infected. Prevention messages routinely emphasize the importance of a known HIV status, making HIV testing and consistent safer sex practices as important self-protective behaviors. Bandura (1986) suggested that there are four major conditions needed for behavior change: information, development of self-protective skills and controlling self-efficacy. Individuals who are able to control their self-efficacy and who have initiated self-protective behaviors such as testing for HIV antibodies may be able to implement and maintain other protective

behaviors such as consistent use of condoms. In contrast, MSM with low self-efficacy and with undeveloped self-protective skills may not be able to identify the need for testing or to initiate consistent use of condoms. In our sample 57% of HIV sero-positive men continue to engage in unprotected anal sex, a rate even higher than that reported in the Multicenter AIDS Cohort Study (Robins, Dew, Davidson, Penkower, & Becker, 1994) where 35% of HIV sero-positive men had engaged in insertive anal intercourse in the previous 6 months. Obviously, as the number of men who become infected with HIV grows and as they continue to survive longer, there is an increasing need to develop effective interventions supporting the long-term behavioral changes required of HIV seropositive MSM.

Twenty eight percent of the sample reported being in a sexually exclusive relationship. These men are 2.94 times more likely to engage in unprotected anal intercourse than men with a non-sexually exclusive status (OR = 2.94,  $p = .0016$ , CI = 1.51,5.73). The relationship contexts in which sexual behaviors occur are an important aspect of understanding sexual behavior of MSM. Sexual behaviors connote disparate meanings in different types of relationships. Several studies suggest that risky sexual behavior is more frequent in primary sexual relationships than in casual relationships (Doll, Harrison, Frey, McKirnan, Bartholow, Douglas, Joy, Blan, & Doetsch.,1994). MSM in sexually exclusive relationships may not perceive themselves at risk for HIV since trust and comfort are factors commonly associated with sexually exclusive unions. Moreover, the termination of condom use may be perceived as an important step in achieving trust between partners. However, there is evidence to suggest that many

individuals in a “sexually exclusive relationship” often engage in sexual behaviors outside their primary union (Doll et al., 1994). Therefore, there is an increased potential risk in engaging in unprotected anal intercourse within the context of a sexually exclusive relationship. In addition, HIV infected men may also negotiate safety in their relationship by selecting seroconcordant relationship partners regardless of whether they practice safe sex (Kippax et al., 1997).

Eighty-nine MSM in the sample were born overseas. Logistic regression results suggest that for these men the number of years living in the United States have a negative correlation with unprotected anal intercourse (OR = .94,  $p = .0436$ , CI = .86, .98). In other words, for men born overseas, the longer they have lived in the country, the less likely they are to engage in unprotected anal intercourse with other men. Marin and associates (1993) have suggested that high acculturation levels and exposure to mainstream gay community are factors associated with consistent use of condoms among MSM of color. Similarly, Diaz (1998) argues that less acculturated Latino MSM are more likely to engage in unprotected anal intercourse than highly acculturated MSM. For many immigrants, time spent in the United State is positively correlated to acculturation levels and exposure to mainstream culture. As suggested by these findings, many immigrant MSM may not have access to HIV prevention messages until the are exposed to the main gay culture. Prevention programs targeting MSM of color need to develop interventions targeting MSM of color who are not highly acculturated and who do not have access to the dominant culture.

## Conclusions

Based on the study findings, we make the following conclusions:

- 1 There is a significant level of high-risk sexual behaviors being reported among MSM of color. (More than half of our sample reported engaging in at least one incident of unprotected anal intercourse in the previous month).
- 2 Not having a defined gay identity could put a MSM at greater risk for participation in unprotected anal intercourse. Put another way, developing a well-defined gay identity and by implication becoming more integrated into the mainstream gay community, could decrease the risk of a MSM for HIV infection through unprotected anal sex.
- 3 Being in a "sexually exclusive" relationship could increase the risk of a MSM engaging in more unprotected anal intercourse.
- 4 Being a high sexual sensation seeker could increase the risk of a MSM in more unprotected anal intercourse.

For MSM who were not born in the United States, the length of time they live in United States has a negative effect of their self-reported participation in unprotected anal intercourse.

## Implications for HIV Prevention Programs

A key finding was that having a defined gay identity appears to be protective for the man, whereas not having a defined gay identity could increase his risk of becoming HIV infected. Apparently, having a gay identity may be an important factor in developing and maintaining safer sex behaviors among MSM of color. A valid aim of HIV education would, therefore, be to help so-called "men who have sex with men" (MSM) develop a

confident gay identity. However, it is important to appreciate that even those MSM who identify as heterosexual will, in practice, have sexual encounters with gay and bisexual men. The advantage of a clear focus upon gay men, as opposed to the MSM model, is that self-identified gay men are easy to reach, while at the same time they are capable of outreaching to MSM, an often hard-to-reach population. There is no evidence to suggest that anyone else can influence these men "on the margin" any more effectively (Scott, 1991). Programs should provide services and information that are sensitive for both gay and nongay identified MSM. Men with an undefined gay identity may not relate to prevention messages targeting the mainstream gay community. Ongoing self-esteem and "coming-out" support programs need to be implemented to assist individuals dealing with self-identity issues. These programs should provide an environment where safer sex norms are promoted and reinforced.

Sexual sensation seeking is another important factor to consider when developing HIV prevention programs targeting MSM. Factors such as disinhibition and experience seeking may lead men to engage in high-risk behaviors such as substance use and unprotected anal sex. Prevention efforts should emphasize individual risk perceptions and should incorporate harm reduction principles to address drugs and alcohol use. Sexual sensation seekers may require ongoing individualized interventions to replace high-risk sexual behaviors with equally exciting healthier behaviors.

In addition, programs need to continue to use HIV testing as an effective prevention tool. In our sample, knowing one's HIV status was significantly related to a lower rate of self-reported unprotected anal sex. Current prevention messages promote

testing as a step of early treatment interventions for those who test positive. However, as suggested by this study, testing among MSM may serve as the initial step in developing self-protective skills. Men with a known negative status may feel invested in maintaining that status and may choose to use condoms on a consistent basis.

As described earlier, MSM in sexually exclusive relationships have consistently reported more unprotected anal intercourse than men with casual partners. There are at least two important implications. First, it means that it is near impossible to accurately interpret data on gay men's sexual behavior, which fails to consider participants' relationship status, and ideally their sero-status as well as those of their partners. Second, it become imperative for health educators to explore the motivation behind unprotected anal intercourse in relationships, and to incorporate appropriate responses to help these men minimize their chances of giving and getting HIV.

#### Implications for Future Studies

Although this study has certain limitations, it provides valuable information about sexual behaviors of MSM of color and their relationship with significant predictors such as sensation seeking, gay identity, relationship status, and HIV status. These findings provide some explanation to risky behaviors among the sample and provide a framework for future research. An important area in future research is the relationship between ethnic-specific factors among MSM of colors, (such as acculturation levels, family loyalty, religious beliefs) and attitudes toward condom use.

As suggested by Zuckerman (1972), sensation seekers searching for new levels of arousal may engage in drugs and substance use. There is evidence to suggest that alcohol

and drug use during sex may distort risk appraisal, encouraging the individual to participate in riskier sexual conduct. Future sexual sensation seeking research should explore the relationship between substance use, sexual sensations seeking and unprotected anal intercourse.

### Summary

Among this sample of MSM, sexual sensation seeking, undefined gay identity, and a sexually exclusive relationship status were strong predictors of unprotected anal intercourse. These findings are supported by previous research and by health promotion theories such as the Health Belief Model and Social Learning Theory. HIV prevention programs targeting MSM need to emphasize the development of a gay-identified social network that reinforces safer sex norms. However, these programs need to be sensitive to both nongay-identified and gay-identified MSM, and develop interventions addressing self-esteem and "coming-out" issues. HIV testing is a significant step in developing self-protective skills for MSM, and should be utilized as an HIV prevention tool in programs targeting this population. Additional studies with larger sample sizes and more sophisticated analytical processes are required to confirm these findings in MSM of color in the United States.

APPENDIX A  
MULTI GROUP ETHNIC IDENTITY MEASURE (MEIM)

**Part II: Check the box that closely indicates how much you agree or disagree with the following statements:**(SA = Strongly Agree, SWA = Somewhat Agree, SWD = Somewhat Disagree, SD = Strongly Disagree)

SA SWA SWD SD

11. I have spent time trying to find out more about my own ethnic group, such as its history, traditions and customs.
12. I am active in organizations or social groups that include mostly members of my own ethnic group.
13. I have a clear sense of my ethnic background and what it means for me.
14. I like meeting and getting to know people from ethnic groups other than my own.
15. I think a lot about how my life will be affected by my ethnic group membership.
16. I am happy that I am a member of the group I belong to.
17. I sometimes feel it would be better if different ethnic groups don't try to mix together.
18. I am not very clear about the role of my ethnicity in my life.
19. I often spend time with people from ethnic groups other than my own.
20. I really have not spent much time trying to learn about the culture and history of my ethnic group.
21. I have a strong sense of belonging to my own ethnic group.
22. I understand pretty well what my ethnic group membership means to me, in terms of how to relate to my own group and other groups.
23. In order to learn more about my ethnic background I have often talked to other people about my ethnic group.
24. I have a lot of pride about my ethnic group and its accomplishments.

SA SWA SWD SD

25. I don't try to become friends with people from other ethnic groups.
26. I participate in cultural practices of my own group, such as special food, music, or customs.
27. I am involved in activities with people from other ethnic groups.
28. I feel a strong attachment towards my own ethnic group.
29. I enjoy being around people from ethnic groups other than my own.
30. I feel good about my cultural or ethnic background.

APPENDIX B  
ADAPTED HOMOSEXUAL IDENTITY QUESTIONNAIRE (AHIQ)

**Part III. Read each item carefully and circle whether you feel the statements are true (T) or false (F) for you at this point in time. An item is circled as true if the entire statement is true, otherwise it is circled false.**

- |   |   |   |
|---|---|---|
| 31. I have little desire to be around most heterosexuals.   | T | F |
| 32. I doubt that I am homosexual, but still am confused about who I am sexually.  | T | F |
| 33. I do not want most heterosexuals to know that I am definitely homosexual.   | T | F |
| 34. I have disclosed to 1 or 2 people (very few) that I have homosexual feelings, although I'm not sure I'm homosexual. | T | F |
| 35. I don't mind if homosexuals know that I have homosexual thoughts and feelings, but I don't want others to know.     | T | F |
| 36. I'm probably homosexual, but I'm not sure yet.  | T | F |
| 37. I am openly gay and fully integrated into heterosexual society.   | T | F |
| 38. I don't feel I'm heterosexual or homosexual.  | T | F |
| 39. I don't want people to know that I may be homosexual, although I'm not sure if I am homosexual or not.              | T | F |
| 40. The topic of homosexuality does not relate to me personally.  | T | F |
| 41. I frequently confront people about their irrational, homophobic (fear of homosexuality) feelings.                   | T | F |
| 42. I probably am heterosexual, or non-sexual.  | T | F |
| 43. I accept but would not say I am proud of the fact that I am definitely homosexual.                                  | T | F |
| 44. Most heterosexuals are not credible source of help for me.  | T | F |
| 45. I am openly gay around gays and heterosexuals.  | T | F |
| 46. I tolerate rather than accept my homosexual thoughts and feelings.  | T | F |

47. My heterosexual friends, family and associates think of me as a person who happens to be gay, rather than as a gay person.

**T**

**F**

48. Even though I am definitely homosexual, I have not told my family.

**T**

**F**

APPENDIX C  
SEXUAL SENSATION SEEKING (SSSS)

**Part IV: Circle the number that closely indicates how much you like or not like the following statements:**

	Not at all like me		Very much like me	
49. I like wild "uninhibited" sex.	1	2	3	4
50. The physical sensations are the most important things about having sex.	1	2	3	4
51. I enjoy the sensation of intercourse without a condom.	1	2	3	4
52. My sexual partners probably think that I am a risk taker.	1	2	3	4
53. When it comes to sex physical attraction is more important to me than how well I know the person.	1	2	3	4
54. I enjoy the company of "sensual" people.	1	2	3	4
55. I enjoy watching "X rated" videos.	1	2	3	4
56. I have said things that were not exactly true to get a person to have sex with me.	1	2	3	4
57. I am interested in trying out new sexual experiences.	1	2	3	4
58. I feel like exploring my sexuality.	1	2	3	4
59. I like to have new and exciting sexual experiences and sensations.	1	2	3	4

APPENDIX D  
HIV RISK-TAKING BEHAVIOR SCALE (HRBS)

**Part V:**

**Think of all your sexual experiences in the previous month and indicate how often you engaged in each of the following activities. (Circle the answer which comes closest to your experience).**

	Not at All	Once a month or less	2 to 4 times a month	5 or more times a month
60. You and your partner engaged in mutual masturbation (jerked each other off)?	0	1	2	3
61. You put your penis in your partner's mouth without a condom but did not ejaculate (come)?	0	1	2	3
62. You ejaculated (came) in your partner's mouth without a condom?	0	1	2	3
63. You put your penis into your partner's rectum without a condom but did not ejaculate (come)?	0	1	2	3
64. You ejaculated (came) in your partner's rectum without a condom?	0	1	2	3
65. You licked your partner's anus or rectum with your tongue (rimming)?	0	1	2	3
66. You inserted your finger(s) but not your whole hand into your partner's rectum?	0	1	2	3
67. You put your whole hand or fist into your partner's rectum (fisted)?	0	1	2	3
68. You put your partner's penis in your mouth without a condom but he did not ejaculate (come)?	0	1	2	3
69. Your partner ejaculated in your mouth without a condom?	0	1	2	3
70. Your partner put his penis into your rectum without a condom but did not ejaculate (come)?	0	1	2	3
71. Your partner ejaculated (came) in your rectum without a condom?	0	1	2	3

	Not at All	Once a month or less	2 to 4 times a month	5 or more times a month
72. Your partner licked your anus or rectum with his tongue (rimming)?	0	1	2	3
73. Your partner put his finger(s) but not his whole hand into your rectum?	0	1	2	3
74. Your partner put his whole hand or fist into your rectum (fisted)?	0	1	2	3
75. You and your partner only hugged and kissed?	0	1	2	3
76. You shared needles when injecting drugs?	0	1	2	3
77. Are the behaviors reported from last month representative of your usual behaviors?				
Yes	_____			
No	_____			

APPENDIX E  
SURVEY QUESTIONNAIRE

**Part I: Complete the following questions.**

1. In terms of ethnic group, I consider myself to be:
  - (1) Caucasian (not Hispanic / Latino)
  - (2) African American (not Hispanic / Latino)
  - (3) Latino / Hispanic
  - (4) Asian / Pacific Islander
  - (5) American Indian / Native American
  - (6) Other \_\_\_\_\_
  
2. Your father's ethnicity is (use numbers above) \_\_\_\_\_
3. Your mother's ethnicity is (use numbers above) \_\_\_\_\_
  
4. Were you born in the United States: \_\_\_\_ yes \_\_\_\_ no
  
5. If no, for how long have you lived in the U.S.? \_\_\_\_ years
  
6. How old are you? \_\_\_\_\_ years
  
7. Are you currently:
  - (1) single, not dating.
  - (2) single, and dating.
  - (3) in a sexually exclusive relationship
  - (4) in a sexually non-exclusive relationship
  
8. Your HIV status is:
  - (1) HIV negative
  - (2) HIV positive
  - (3) unknown
  
9. If you are in a sexually exclusive relationship, what is your partner's HIV status:
  - (1) HIV negative
  - (2) HIV positive
  - (3) unknown
  
10. Your highest level of education is:
  - less than high school
  - some high school
  - high school graduate
  - some college
  - college graduate
  - post graduate degree

**Part II: Check the box that closely indicates how much you agree or disagree with the following statements:** (SA = Strongly Agree, SWA = Somewhat Agree, SWD = Somewhat Disagree, SD = Strongly Disagree)

SA SWA SWD SD

11. I have spent time trying to find out more about my own ethnic group, such as its history, traditions and customs.
12. I am active in organizations or social groups that include mostly members of my own ethnic group.
13. I have a clear sense of my ethnic background and what it means for me.
14. I like meeting and getting to know people from ethnic groups other than my own.
15. I think a lot about how my life will be affected by my ethnic group membership.
16. I am happy that I am a member of the group I belong to.
17. I sometimes feel it would be better if different ethnic groups don't try to mix together.
18. I am not very clear about the role of my ethnicity in my life.
19. I often spend time with people from ethnic groups other than my own.
20. I really have not spent much time trying to learn about the culture and history of my ethnic group.
21. I have a strong sense of belonging to my own ethnic group.
22. I understand pretty well what my ethnic group membership means to me, in terms of how to relate to my own group and other groups.
23. In order to learn more about my ethnic background I have often talked to other people about my ethnic group.
24. I have a lot of pride about my ethnic group and its accomplishments.

SA SWA SWD SD

- 25. I don't try to become friends with people from other ethnic groups.
- 26. I participate in cultural practices of my own group, such as special food, music, or customs.
- 27. I am involved in activities with people from other ethnic groups.
- 28. I feel a strong attachment towards my own ethnic group.
- 29. I enjoy being around people from ethnic groups other than my own.
- 30. I feel good about my cultural or ethnic background.

**Part III. Read each item carefully and circle whether you feel the statements are true (T) or false (F) for you at this point in time. An item is circled as true if the entire statement is true, otherwise it is circled false.**

- |   |   |   |
|---|---|---|
| 31. I have little desire to be around most heterosexuals.   | T | F |
| 32. I doubt that I am homosexual, but still am confused about who I am sexually.  | T | F |
| 33. I do not want most heterosexuals to know that I am definitely homosexual.   | T | F |
| 34. I have disclosed to 1 or 2 people (very few) that I have homosexual feelings, although I'm not sure I'm homosexual. | T | F |
| 35. I don't mind if homosexuals know that I have homosexual thoughts and feelings, but I don't want others to know.     | T | F |
| 36. I'm probably homosexual, but I'm not sure yet.  | T | F |
| 37. I am openly gay and fully integrated into heterosexual society.   | T | F |
| 38. I don't feel I'm heterosexual or homosexual.  | T | F |
| 39. I don't want people to know that I may be homosexual, although I'm not sure if I am homosexual or not.              | T | F |
| 40. The topic of homosexuality does not relate to me personally.  | T | F |

41. I frequently confront people about their irrational, homophobic (fear of homosexuality) feelings.	T	F
42. I probably am heterosexual, or non-sexual.	T	F
43. I accept but would not say I am proud of the fact that I am definitely homosexual.	T	F
44. Most heterosexuals are not credible source of help for me.	T	F
45. I am openly gay around gays and heterosexuals.	T	F
46. I tolerate rather than accept my homosexual thoughts and feelings.	T	F
47. My heterosexual friends, family and associates think of me as a person who happens to be gay, rather than as a gay person.	T	F
48. Even though I am definitely homosexual, I have not told my family.	T	F

**Part IV: Circle the number that closely indicates how much you like or not like the following statements:**

	Not at all like me		Very much like me	
	1	2	3	4
49. I like wild "uninhibited" sex.	1	2	3	4
50. The physical sensations are the most Important things about having sex.	1	2	3	4
51. I enjoy the sensation of intercourse without a condom.	1	2	3	4
52. My sexual partners probably think that I am a risk taker.	1	2	3	4
53. When it comes to sex physical attraction is more important to me than how well I know the person.	1	2	3	4
54. I enjoy the company of "sensual" people.	1	2	3	4

	Not at all like me		Very much like me	
	1	2	3	4
55. I enjoy watching "X rated" videos.	1	2	3	4
56. I have said things that were not exactly true to get a person to have sex with me.	1	2	3	4
57. I am interested in trying out new sexual experiences.	1	2	3	4
58. I feel like exploring my sexuality.	1	2	3	4
59. I like to have new and exciting sexual experiences and sensations.	1	2	3	4

**Part V:**

**Think of all your sexual experiences in the previous month and indicate how often you engaged in each of the following activities. (Circle the answer which comes closest to your experience).**

	Not at All	Once a month or less	2 to 4 times a month	5 or more times a month
60. You and your partner engaged in mutual masturbation (jerked each other off)?	0	1	2	3
61. You put your penis in your partner's mouth without a condom but did not ejaculate (come)?	0	1	2	3
62. You ejaculated (came) in your partner's mouth without a condom?	0	1	2	3
63. You put your penis into your partner's rectum without a condom but did not ejaculate (come)?	0	1	2	3
64. You ejaculated (came) in your partner's rectum without a condom?	0	1	2	3
65. You licked your partner's anus or rectum with your tongue (rimming)?	0	1	2	3
66. You inserted your finger(s) but not your whole hand into your partner's rectum?	0	1	2	3

	Not at All	Once a month or less	2 to 4 times a month	5 or more times a month
67. You put your whole hand or fist into your partner's rectum (fisted)?	0	1	2	3
68. You put your partner's penis in your mouth without a condom but he did not ejaculate (come)?	0	1	2	3
69. Your partner ejaculated in your mouth without a condom?	0	1	2	3
70. Your partner put his penis into your rectum without a condom but did not ejaculate (come)?	0	1	2	3
71. Your partner ejaculated (came) in your rectum without a condom?	0	1	2	3
72. Your partner licked your anus or rectum with his tongue (rimming)?	0	1	2	3
73. Your partner put his finger(s) but not his whole hand into your rectum?	0	1	2	3
74. Your partner put his whole hand or fist into your rectum (fisted)?	0	1	2	3
75. You and your partner only hugged and kissed?	0	1	2	3
76. You shared needles when injecting drugs?	0	1	2	3
77. Are the behaviors reported from last month representative of your usual behaviors?				

Yes \_\_\_\_\_

No \_\_\_\_\_

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