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An Examination of HIV/AIDS Complacency, Attitudes and Sexual Risk Behavior Among Men Who Have Sex with Men: Implications for Community Based Prevention Efforts, Practitioners and Social Work Education

Michael Richard Lloyd
Loyola University Chicago

LOYOLA UNIVERSITY CHICAGO

AN EXAMINATION OF HIV/AIDS COMPLACENCY, ATTITUDES AND SEXUAL RISK BEHAVIOR AMONG MEN WHO HAVE SEX WITH MEN: IMPLICATIONS FOR COMMUNITY BASED PREVENTION EFFORTS, PRACTITIONERS AND SOCIAL WORK EDUCATION

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MICHAEL RICHARD LLOYD

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The following dissertation was initially formulated based on a personal conversation I had ten years ago with a very dear friend, Carl Haan. The conversation revolved around whether or not gay men should be concerned about HIV anymore. Ten years later I was sitting in my first Ph.D. course and Dr. Michael P. Dentato was filling in as professor. I remember vividly when Dr. Dentato told my cohort, "pick a topic, stick with it." I approached Dr. Dentato after class and told him I've always wanted to research whether people were as concerned about HIV/AIDS as they were when the epidemic began. Dr. Dentato said, "Great, find literature to support your ideas and talk to me next week." Beginning that day my topic was set, and Dr. Dentato was with me every step of the way, sometimes literally when in a walking boot and cane, from question formation, literature reviews, methodology, assisting with obtaining permission from the bathhouse for data collection, and data collection for a pilot study as well as this dissertation. To say none of this would be possible without his mentorship and guidance is an understatement, and I am so lucky to call him a friend and mentor.

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Haymes told me during the first year of my MSW that I should consider applying for the Ph.D. program. My response was laughter. I only hope she is smiling reading this now, because my entire academic career is due to her mentorship, friendship and guidance. Thank you is not even close to sufficient however I thank you so much!

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ABSTRACT

The following study examines the role of HIV/AIDS complacency and substance use on sexual risk behavior among men who have sex with men. The study analyzes data collected at a bathhouse over a seven day period beginning on June 9, 2014 and ending on June 15, 2014. The independent variables of HIV/AIDS complacency and substance use, along with the dependent variable of sexual risk behavior are examined through the lens of protection motivation theory. Protection motivation theory posits that response efficacy and threat appraisal influence how a person makes decisions. The implications and findings of the study related to direct community prevention and evidence informed social work practice and education are discussed.

CHAPTER ONE

STATEMENT OF THE STUDY ISSUE

Purpose

This study focuses on the influence of HIV/AIDS complacency and substance use on sexual risk behavior among men who have sex with men (MSM) in a non-traditional research setting. The study employs protection motivation theory as a theoretical framework and correlation and regression as the analytic methodology.

Significance of the Study

The Centers for Disease Control and Prevention published its most recent findings on HIV/AIDS transmission in May, 2012. The report highlighted men who have sex with men (MSM) as accounting for 61% of new HIV infections in the United States and 79% of infections among all newly infected men overall (Centers for Disease Control and Prevention, 2012). This study also indicated that the MSM population reported the largest numbers of new HIV infections since 2009. Numerous studies have focused on MSM sexual risk behavior (Bruce, Harper, & Suleta, 2013; Bowers, Branson, Fletcher, & Reback, 2012), as well as several studies examining the intersections of MSM, sexual risk behavior and substance use (Boone, Cook, & Wilson, 2013; Fendrich, Mackesy-Amiti, Johnson, & Pollack, 2010). The Henry J Kaiser Family Foundation (2014) report on HIV/AIDS notes that HIV is the primary health concern for gay and bisexual men. The report mentions that only 30% of gay and bisexual men have been tested for HIV in the past year, while 30% of the men sampled had never been tested. The report further

cites a survey result mentioning a “troubling complacency” within the research sample related to perceptions of HIV transmission. Finally, the report mentions that only 26% of gay and bisexual men are aware that a daily treatment to prevent HIV infection known as pre-exposure prophylaxis (PrEP) exists. The following study examines significant implications related to social work service delivery systems and professional approaches to working with the MSM population that may be impacted by HIV/AIDS complacency. The findings of this study allow the social work profession to contribute to the literature regarding MSM HIV/AIDS complacency, sexual risk behavior, and substance use, while also providing opportunities to increase practitioner competency and lay groundwork for potential intervention and advocacy. Prior to reviewing the literature, a definition of concepts is presented.

Definition of Concepts

For the purpose of this study **MSM** is defined as men who have sex with men. This includes, but is not limited to, men identifying as gay, queer, questioning, straight/heterosexual, and bisexual.

Sexual risk behavior is defined as any sexual activity that can lead to HIV/AIDS infection. This includes oral sex and unprotected anal intercourse (UAI).

HIV/AIDS complacency is defined as minimizing, discounting, or discrediting the threat of HIV/AIDS due to the advent of antiretroviral medications such as ART and PrEP (MacKellar et al., 2011; Valdiserri, 2004)

Substance use is defined as the use of alcohol or illicit substances, such as crystal methamphetamine, cocaine, heroin, GHB, ketamine or ecstasy.

HAART is defined as combination HIV treatment therapies available since the late 1990s and initially known as highly active antiretroviral therapy (HAART).

ART is defined as the current combination antiretroviral HIV treatment therapies available, previously referred to as HAART.

PrEP is defined as a low dose of ART medication and stands for pre-exposure prophylaxis, prescribed to those that are HIV negative and sexually active to lower the potential for HIV infection.

The following literature review summarizes previous research on these concepts.

CHAPTER TWO

LITERATURE REVIEW

The review of the literature for this study begins with an examination of sexual risk behavior, followed by substance use and HIV/AIDS complacency associated with the MSM population. Literature regarding protection motivation theory is examined next. Finally, the review concludes with literature pertaining to settings in which MSM engage in sexual risk behavior, such as a bathhouse.

Initial reports and scholarly articles regarding HIV/AIDS, sexual risk behavior and the MSM population were found in documents and research conducted by government agencies, such as the Centers for Disease Control and Prevention (CDC). The first journal article published referencing MSM and what would become HIV/AIDS was from the New England Journal of Medicine, on December 10, 1981. The article was titled: Pneumocystis Carinii Pneumonia and Mucosal Candidiasis in previously healthy homosexual men — Evidence of a new acquired cellular immunodeficiency. The authors were researching four "previously healthy homosexual men" who contracted pneumocystis carinii pneumonia and found that "a high level of exposure of male homosexuals to cytomegalovirus-infected secretions may account for the occurrence of this immune deficiency" (Gottlieb, 1981, p. 1425). The first journal article referencing gay men, substance use, and AIDS can be found in the *Health Education and Behavior Journal*, published in 1986. The article is titled: Alcohol and drug use during sexual activity and compliance with safe sex guidelines for AIDS. The authors found a strong

relationship between substance use during sex and a lack of compliance with safer sex techniques such as condom usage to prevent the spread of AIDS (Stall, McKusick, Wiley, Coates, & Ostrow, 1986). The first article substituting MSM for gay men was found in the *American Journal of Public Health* in May, 1996. The article was titled: The estimated prevalence and incidence of HIV in 96 large U.S. metropolitan areas, and focuses on three populations: intravenous drug users, men who have sex with men, and heterosexual persons, who were found to have the highest numbers of new HIV infections (Holmberg, 1996).

Fewer articles were published in the mid-1990s referencing HIV/AIDS and MSM. Beginning in 1999, the education and prevention literature specifically regarding MSM focuses almost exclusively on condom usage and unprotected anal intercourse (Crepaz et al., 2009; Drumright et al., 2006). The Centers for Disease Control and Prevention (2001) published a compendium of HIV prevention interventions with evidence of effectiveness in 1999 and this report was updated in 2001. The report was published "to respond to prevention service providers, planners, and others who request science-based interventions that work to prevent HIV transmission" (p. vii). The compendium identifies 24 interventions, including five specifically tailored to the MSM population. The last available published print version of the compendium is from 2001.

Sexual Risk Behavior

The examination of sexual risk behavior among members of the MSM population is found in the literature since the beginning of the HIV/AIDS epidemic in the 1980's (Holmberg, 1996; Stall et al., 1986). Kalichman (2000) provided a review of studies spanning seven years from 1993 to 2000 regarding risk behaviors associated with HIV

transmission. Twenty-two studies were identified, eight of which examined community samples of the MSM population. The author identifies unprotected anal intercourse (UAI) as the most common form of sexual risk behavior (Kalichman, 2000). UAI refers to anal intercourse without condom usage. Receptive UAI is identified as the primary risk behavior associated with HIV transmission among MSM when compared to insertive UAI. The review also identified that sexual risk behavior is influenced by a partner's HIV status, one's relationship status, as well as the perception of risk. Kalichman found that UAI occurred more frequently with casual sex partners. Van Kestern, Hospers, and Kok (2007) examined the literature published following the Kalichman review. Fifty-three additional studies were identified, 29 of which identified UAI and rates of HIV positive MSM over 40%. The majority of longitudinal studies examined in Van Kestern et al.'s review of the literature demonstrated an increase in UAI and sexual risk behavior in the MSM population. Van Kesteren et al. identify the concept of complacency, citing the availability of highly active antiretroviral therapies (HAART) as having a direct impact on the increase of sexual risk behavior and HIV seroconversions among MSM. Seroconversion refers to the process of one's HIV status changing from HIV negative to HIV positive. An HIV status can also seroconvert from HIV positive to HIV undetectable by utilizing antiretroviral therapies (ART) through which one's HIV viral load has been lowered and one's t-cells have been increased to meet the definition of undetectable (National Institutes of Health, 2014). The definition of HIV viral load pertains to the level of the HIV virus present in one's body (National Institutes of Health, 2014). The lower a viral load, the less amount of virus is present; the higher the viral load, the more amount of virus is present. Similarly, t-cells or t-lymphocytes, refers to

the amount of healthy "fighter" cells in one's body. The higher amount of t-cells present provides evidence of an ability to fight off any infections present in the body. The lower amount of t-cells present provides less of a defense against infections such as HIV (National Institutes of Health, 2014).

Beidas, Birkett, Newcomb, and Mustanski (2012) discuss the association between psychiatric disorders and sexual risk taking behaviors. The authors found that ethnicity, post-traumatic stress disorder and major depressive disorder all negatively influenced sexual risk behavior, defined as sex with multiple partners and a prevalence of UAI (Beidas et al., 2012). Bowers, Branson, Fletcher, and Reback (2012) found that UAI occurred more frequently between main partners than casual or anonymous partners suggesting UAI as a primary form of intimacy. Hoff, Chakravarty, Beougher, Neilands, and Darbes (2012) studied a sample of 566 MSM couples and also found that UAI was more prevalent in couples who reported stronger levels of attachment and intimacy. The study noted that 22% of the men reported UAI with outside partners, regardless of HIV status. Pines et al. (2014) found that 37% of 419 MSM interviewed were classified along a moderate or high-risk trajectory for sexual risk behaviors. Moderate risk included unprotected insertive anal intercourse and unprotected receptive anal intercourse with a partner identified as HIV negative. High risk included condom serosorting and seropositioning, as well as no seroadaptive behaviors. Serosorting, seropositioning and seroadaptive behaviors refer to considering one's own HIV status when making decisions related to sexual risk behavior in order to reduce the risk for infection (Eaton, Kalichman, O'Connell, & Karchner, 2009). The authors found that participants who identified as white, depressed, substance users, and reported an income level of greater than $20,000

annually were at a higher level of sexual risk. Newcomb and Mustanski (2014) conducted an analysis of MSM and utilized Fisher's Information Motivation Belief (IMB) model, which examines how one's knowledge about risk and motivation leads to beliefs and behaviors, to consider cognitive influences on risk behavior. The authors found that self-efficacy of condom use was directly linked to sexual risk behavior, yet they found moderating variables of HIV knowledge and social norms of condom use had an indirect effect on increased levels of UAI. Landovitz et al. (2012) utilized a 37 item questionnaire to assess sexual risk behavior and HIV testing behaviors. The sample of 375 young men who have sex with men focused on the use of Grindr, an online app used primarily for arranging sexual encounters. The authors found that a majority of respondents (70%) reported unprotected anal sex and low perceptions of HIV-acquisition risk.

Following the Van Kestern et al. (2007) review, other authors have identified use of combination HIV treatment therapies available since the late 1990s initially defined as highly active antiretroviral therapy (HAART) – now presently defined as antiretroviral therapies (ART) – as a potential contributing factor when assessing sexual risk behavior and attitudes among MSM. Raymond et al. (2013) studied the MSM population in San Francisco from 2004 through 2011. The authors found stable HIV infection rates, with a high frequency of testing resulting in fewer diagnosed infections. The authors found a higher use of ART, yet also a higher level of sexual risk behavior defined by multiple sex partners, in addition to methamphetamine use, and self-reported gonorrhea infections. Bruce, Harper, and Suleta (2013) surveyed 200 HIV positive MSM between the ages of 16 and 24. Through regression analysis, the authors found a significant association

between having an undetectable viral load and engaging in UAI with HIV negative or unknown partners. Forty-seven percent of the sample was on ART, while only 39% were aware of their viral load. Joseph, Flores, Parson, and Purcell (2010) found the belief that a low viral load reduces transmission risk was positively associated with discordant sex with non-primary partners. Partners of the same HIV status are referred to as concordant or seroconcordant (HIV negative and HIV negative; or HIV positive and HIV positive), while those of opposite HIV status (HIV negative and HIV positive) are referred to as discordant or serodiscordant (Eaton et al., 2007). Ultimately the researchers in this study found that vulnerability beliefs such as: "Once you have HIV, getting another sexually transmitted infection (STI) is no big deal" and "STIs can have a serious health impact on the health of someone living with HIV," were associated with sexual risk among MSM of discordant status (Joseph et al., 2010).

Current literature regarding sexual risk behavior also examines the use of pre-exposure prophylaxis (PrEP) as an effective treatment option to reduce the likelihood of HIV transmission (Juusola, Brandeau, Owens, & Bendavid, 2012). PrEP is a low dose of ART medication prescribed to those that are HIV negative and sexually active to lower the potential for HIV infection. PrEP is most effective when used on a daily basis and monitored by a doctor (Liu et al., 2013). Bauermeister, Meanley, Pingel, Soler, and Harper (2013) discuss PrEP awareness among young MSM. The authors found that 27% of their 1,507 participant sample reported PrEP awareness, while only 1% of the sample had used PrEP prior to sexual encounters. The single and young MSM (YMSM) examined in this study were between the ages of 18-24. The YMSM sample was identified by the authors as having a lack of awareness regarding the effective use of

PrEP. Liu et al. (2013) studied a group of 400 HIV negative MSM enrolled in a PrEP trial. The authors reported no evidence of risk compensation in reference to PrEP adherence, meaning sexual risk behaviors stayed stable or were reduced during the trial period of 24 months. Marcus et al. (2013) studied a group of MSM and transgendered men who were in a pre-exposure prophylaxis trial. The authors found no increase in sexual risk behavior due to PrEP adherence, and actually found those on the medication practiced safer sexual behaviors, defined by lower HIV transmissions and syphilis infections.

While preceding literature explored several factors impacting sexual risk behavior among MSM, additional contributing factors may increase the likelihood of deleterious sexual health behaviors among this population. Such factors may include those related to substance use pertaining to alcohol or other drug use, such as marijuana, cocaine, methamphetamine, ketamine, GHB and ecstasy, and other substances either used singularly or in combinations (Hirshfield, Remien, Humberstone, Walavalkar, & Chiasson, 2004; Dentato, Halkitis, & Orwat, 2013; Halkitis & Parsons, 2003).

Substance Use in the MSM Population

Bruce, Kahana, Harper, and Fernandez (2013) found that alcohol use among young men who have sex with men (YMSM) resulted in more frequent unprotected anal intercourse (UAI). The authors noted an increase in failure to use a condom after drinking among YMSM who are HIV positive during sexual intercourse with HIV negative or unknown status partners. Dyer et al. (2013) focused on black MSM and found higher rates of substance use, particularly alcohol use, among black MSM and black men who have sex with men and women. The authors also reported a high rate of

sexual risk behavior, defined by UAI, while under the influence of alcohol. Jones-Webb, Smolenski, Brady, Wilderson, and Rosser (2013) studied MSM and categorized them as general or social drinkers. The authors distributed an online survey to 2,305 MSM identified individuals, and 1,725 completed the survey to create the sample. General drinkers were more likely to drink at home and in social settings such as bars/clubs. The authors found that general drinkers were more likely to engage in UAI while intoxicated.

In addition to alcohol, illicit drug use influences sexual risk behavior among MSM (Centers for Disease Control and Prevention, 2012; Kalichman, 2000; Kalichman & Cain, 2004; Peterson, Miner, Brennan, & Rosser, 2012). Carey et al. (2009) utilized a semi-structured interview to assess drug use and sexual risk behavior with a sample of 444 MSM in Chicago and Los Angeles. The authors found high levels of drug use during UAI, particularly in the six months prior to their infection. Methamphetamine, ketamine, gamma-hydroxybutyric acid (GHB), amyl nitrate (poppers) and Viagra were all found to contribute to HIV seroconversion. Boone, Cook, and Wilson (2013) researched a sample of HIV positive MSM and found that inhalant use (including amyl nitrate) and stimulants (including methamphetamine), along with multiple drug use increased the frequency of UAI among MSM. In addition to concerns related to sexual risk behavior and substance use correlated with HIV/AIDS infection among MSM, recent studies have focused on the concept of complacency and sexual health attitudes regarding HIV/AIDS transmission within the MSM population (Jaffe, Valdiserri, & De Cock, 2007; MacKellar et al., 2011).

HIV/AIDS Complacency

The definition of HIV/AIDS complacency utilized in this study is "minimizing, discounting, or discrediting the threat of HIV/AIDS" (Valdiserri, 2004, p. 427). Due to

the advent of anti-retroviral therapies (ART) in the mid-1990s, the fear of HIV infection has lessened among some members of the MSM population (Jaffe et al., 2007; MacKellar et al. 2011). The concept of HIV/AIDS complacency appears throughout popular media as well. A 2013 *New York Times* article showcased the current health crisis confronting MSM in America, identifying a lack of fear among young MSM in particular. The article also underscores that HIV is often now considered a chronic disease and behavior modification is challenging, similar to other health issues such as smoking cigarettes or eating trans-fats (McNeil, 2013). Furthermore, the concept of HIV/AIDS complacency is often synonymous with treatment optimism within the literature. Treatment optimism is defined as a conveyance of hope associated with HIV treatment efficacy – and such perceptions of optimism have increased substantially among MSM since the advent of ART in the mid-1990s (Lert, 2000). Peterson et al. (2012) discuss the concept of treatment optimism and sexual risk behavior within a group of HIV positive African American MSM. The authors found that their sample was less motivated to use condoms because they were being treated for HIV, and more likely to engage in unsafe sexual behaviors. The men who felt less prone to transmitting HIV were more likely to engage in UAI. Fendrich et al. (2010) compared a sample of adult MSM in Chicago from 1997 and 2002. The 216 men that comprised the sample were interviewed twice, five years apart, and the researchers found an increase in sexual risk behavior among HIV negative MSM, yet a decrease in serodiscordant sex and substance abuse. However, the authors also found an increase in of serodiscordant sex when combined with substance use.

In summary, HIV/AIDS complacency refers to minimizing, discounting, or discrediting the threat of HIV/AIDS due to the advent of antiretroviral medications such

as ART and PrEP (Valdiserri, 2004). Ronald Roger's (1975) protection motivation theory may provide further insight regarding why individuals are more likely to engage in sexual risk behavior when levels of fear and concerns are lessened.

Protection Motivation Theory

The literature regarding HIV/AIDS complacency suggests protection motivation theory as a useful lens to understand sexual health and risk behavior (MacKellar et al., 2011). Protection motivation theory works to promote health benefits and reduce risk behaviors. Most research regarding protection motivation focuses on health risks, such as smoking cessation in relation to heart disease and HIV/AIDS transmission (Norman, Boer, Seydel, Connor, & Norman, 2005). Ronald Rogers (1975) developed concepts related to protection motivation theory utilizing the concept of fear appeals and its influence upon attitudinal change. Rogers noted: "A basic postulate is that protection motivation arises from the cognitive appraisal of a depicted event as noxious and likely to occur, along with the belief that a recommended coping response can effectively prevent the occurrence of the aversive event" (p. 99). Rogers identified that some negative behaviors can be rewarding, giving the example of smokers who feel a relaxing sensation when they inhale, which may ultimately undermine protective factors.

Floyd, Prentice-Dunn, and Rogers (2000) found that increases in the recognition of threat severity, vulnerability, response efficacy, and self-efficacy increased adaptive health behaviors. The concept of threat severity relates to questions surrounding whether or not a health risk is truly severe, or noxious in the words of Ronald Rogers. The concept of vulnerability relates to severity, yet expands the idea to examine whether or not one is vulnerable to the perceived health risk. Once a person has processed the

severity and vulnerability of a risk, the locus of control turns to the individual. Response efficacy is initiated when one decides whether or not a health behavior will actually reduce the risk. And finally, self-efficacy builds off of response efficacy to analyze whether the individual is capable of adopting the health behavior. Rogers finalized his protection motivation model in 1983, expanding coping appraisals to include self-efficacy (Maddux & Rogers, 1983).

Hodgkins and Orbell (1998) examine protection motivation and reiterate the concept that a person will adopt protective behaviors based on perceived severity and likelihood of negative health occurrences. These behaviors must be deemed low in personal cost, be perceived as effective, and able to be carried out (Maddux & Rogers, 1983). Floyd et al. (2000) conducted a meta-analysis of studies utilizing protection motivation theory and health behaviors. The authors identified 65 studies utilizing protection motivation to explain various health behavior changes such as smoking cessation in relation to heart disease, applying sunscreen to prevent skin cancer and other examples of healthy behavior changes. The findings of the meta-analysis reported healthier, adaptive behaviors occurred with an increase in threat severity, threat vulnerability, response efficacy, and self-efficacy. Adaptive behaviors were also reported with decreases in negative response rewards and decreases in adaptive response costs. Hodgkins and Orbell (1998) utilized this theory in a longitudinal study of breast self-examination for breast cancer, finding that the variable of self-efficacy significantly impacted whether self-examination occurred. The authors concluded further study is required to test the other protection motivation variables.

Protection motivation theory has been widely applied to health behaviors (Floyd et al., 2000). It is relevant to the discussion of HIV/AIDS, since contracting HIV is often greatly impacted by health behaviors. Dinoff and Kowalski (1999) utilized protection motivation theory in their study regarding HIV/AIDS risk behaviors. The authors found that those who had a higher level of protection motivation were more likely to use condoms when given information regarding HIV/AIDS transmission and the efficacy of condom usage in prevention. The study focused on heterosexual couples and also identified that females were more likely to influence positive behavioral changes. Boer and Seydel (1996) identify the main concepts of protection motivation as related to HIV/AIDS: 1. Severity: *How severe a disease is HIV/AIDS?*; 2. Vulnerability: *How likely is it that one can contract HIV/AIDS?*; 3. Response Efficacy: *How effective are behaviors which could reduce my risk?*; and 4. Self-Efficacy: *Can I perform these behaviors?*

Settings for MSM Sexual Behavior

MSM sexual risk behavior can occur in both private and public settings (Frankis & Flowers, 2005). There exists a long history of MSM being persecuted by laws outlawing sexual contact (Berube, 1996) in settings such as one's own home (i.e., sodomy laws) as well as more public venues. The impact of such societal oppression led MSM to seek refuge, socialize and establish connections within public settings (i.e., bars, clubs, parks, bookstores, bathhouses) (Binson, Pollack, Blair, & Woods, 2010; Berube, 1996). The bathhouse setting provides a confidential and affirming space for MSM socialization and potential sexual behaviors while providing an important venue to examine MSM culture (Frankis & Flowers, 2005).

Bathhouse Settings

The bathhouse venue has been identified in the literature as a location where MSM and sexual risk behavior often intersect (Binson, Blea, Cotten, Kant, & Woods, 2005; Binson et al., 2010; Huebner, Binson, Pollack, & Woods, 2012). Frankis and Flowers (2005) conducted a review of bathhouse literature. The authors found eight articles which fit the review criteria of MSM sexual behavior in a public setting. The authors reported that HIV testing rates in the public setting were similar to general HIV testing rates among MSM, yet twice the number of HIV positive results was reported in the group which included the public settings for sexual behavior. Reidy et al. (2009) surveyed patrons of two Seattle MSM commercial sex venues and found identifiable risk behavior. As a result of this study, a sexual risk behavior exit survey was created to measure risk variables among MSM. Similar research supports the risk of HIV infection and unprotected sex within a bathhouse environment (Binson et al., 2010; Reidy et al., 2009). A descriptive article by Binson et al. (2005) details the collaboration between a bathhouse on the West Coast of the U.S., the local health department and university researchers to implement an HIV testing program within the bathhouse setting. Binson et al. (2010) utilized the Urban Men's Health Survey, which was a phone survey to examine information about sex in public venues, including the bathhouse. The authors used patterns of sex venue use and frequency of visits as independent variables and unprotected anal intercourse (UAI), as the dependent variable. Results demonstrated that bathhouse users were more likely to engage in UAI and respondents who reported frequent drug use, as well as those who were HIV positive, were more likely to engage in UAI in a public setting (Binson et al., 2010). Ko et al. (2009) discuss structural

interventions to increase condom use and availability in bathhouse settings in Taiwan. The authors found that their interventions increased condom accessibility from 82% to 93%, and consistent condom use during anal intercourse from 71% to 75.4 %. A bathhouse setting was used to collect data for this study examining HIV/AIDS complacency, attitudes and sexual risk behavior among MSM.

Summary

The preceding literature review examined the research regarding men who have sex with men in relation to sexual risk behavior, HIV/AIDS complacency, and substance use. The review illustrated many challenges related to sexual health and risk factors among MSM. The importance of understanding correlations related to substance use and risk behavior as well as the public and private venues in which MSM sexual risk behavior occurs was also discussed. Further inquiry is necessary to consider relevant factors that contribute to HIV/AIDS complacency and whether or not the concept truly impacts sexual risk behavior among MSM and other minority communities. The role of protection motivation theory was also reviewed as a potential lens through which to understand MSM risk behavior, attitudes and decision making processes. Additional research is required to examine the unique implications that such theories as well as public and private settings have on sexual health, attitudes and risk behavior among MSM. In sum, a dearth of literature exists that examines the intersection of HIV/AIDS complacency, sexual risk behavior, and substance use among MSM within unique settings. Another notable gap is the lack of social work contributions to this body of research and literature. This study focuses on the intersection of HIV/AIDS complacency, sexual risk behavior, and substance use among MSM in a bathhouse

setting. The next chapter will examine methods of the study as well as conceptual definitions.

CHAPTER THREE

METHODOLOGY

The following study focuses on the influence of HIV/AIDS complacency and substance use on sexual risk behavior among MSM in a non-traditional research setting. The study employed protection motivation theory for the theoretical framework and correlation and regression as the analytic techniques. This chapter presents the research questions and outlines the operational definitions of concepts. The balance of the chapter presents the study design including the population of study, sampling, instrumentation, and methods of data analysis.

Definition of Concepts

MSM is defined as men who have sex with men. This includes, but is not limited to, men identifying as gay, queer, questioning, straight/heterosexual, and bisexual.

Sexual risk behavior is defined as any sexual activity that can lead to HIV/AIDS infection. This includes oral sex and unprotected anal intercourse (UAI).

HIV/AIDS complacency is defined as minimizing, discounting, or discrediting the threat of HIV/AIDS due to the advent of antiretroviral medications such as ART and PrEP (MacKellar et al., 2011; Valdiserri, 2004)

Substance use is defined as the use of alcohol or illicit substances, such as crystal methamphetamine, cocaine, heroin, GHB, ketamine or ecstasy.

HAART is defined as combination HIV treatment therapies available since the late 1990s and initially defined as highly active antiretroviral therapy (HAART).

ART is defined as the current combination antiretroviral HIV treatment therapies available, previously referred to as HAART.

PrEP is defined as a low dose of ART medication which stands for pre-exposure prophylaxis, prescribed to those that are HIV negative and sexually active to lower the potential for HIV infection.

Research Questions

Question 1: What is the relationship between HIV/AIDS complacency and sexual risk behavior among MSM in a bathhouse setting following the advent of ART and PrEP treatments?

Question 2: What is the relationship between substance use and sexual risk behavior among MSM in a bathhouse setting?

Question 3: How does HIV/AIDS complacency related to ART and PrEP combined with substance use impact sexual risk behavior among MSM in a bathhouse setting?

Research Model and Design

The following figure illustrates the conceptual model for this research project. The project examines the influence of the independent variables of HIV/AIDS complacency and substance use on the dependent variable of sexual risk behavior, while controlling for sociodemographic characteristics.

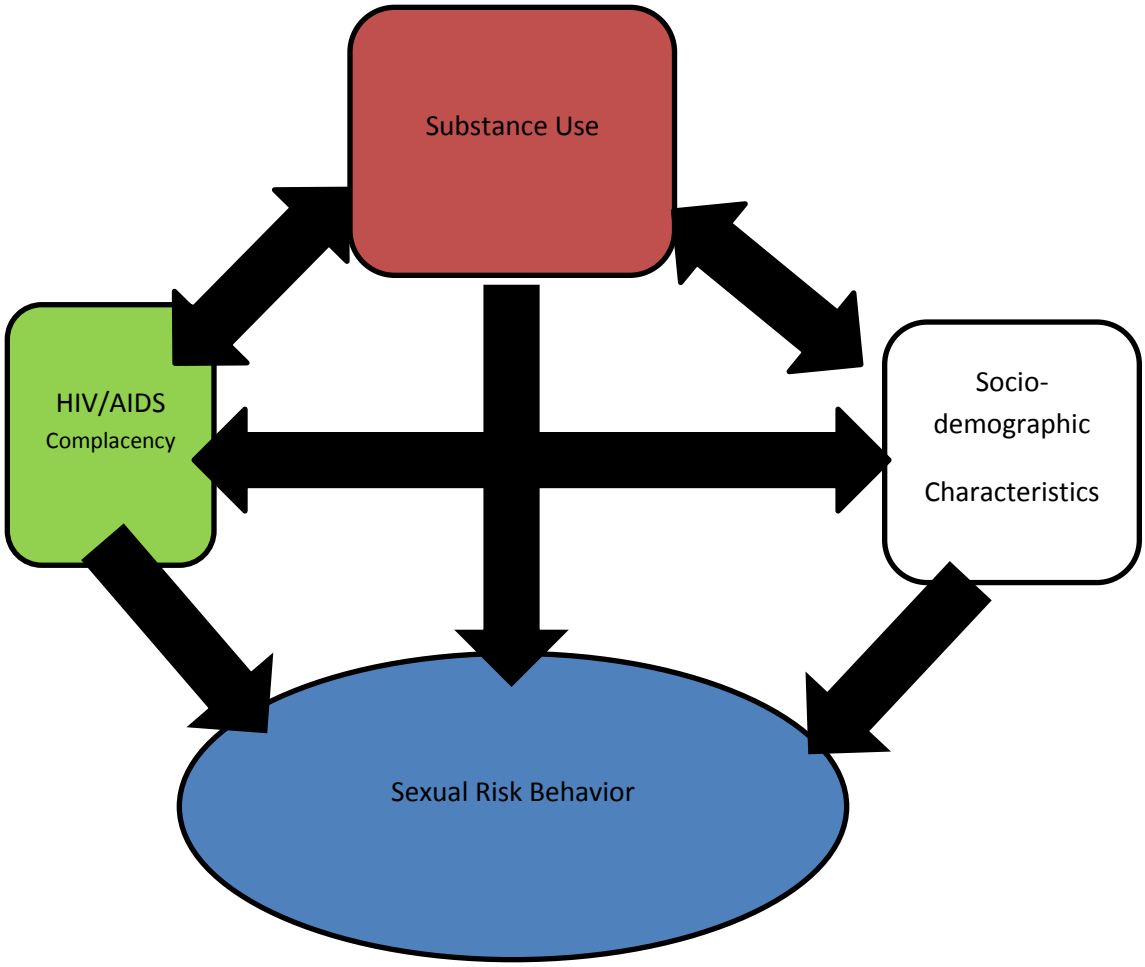

Figure 1. Research Design and Model

Population of Study

Criteria for participation in the study included the following: self-identification as a member of the MSM population (gay, bisexual, etc.), 18 years or older, the ability to speak, read and write English fluently, and consent to participate in the study.

Instrumentation

The instrument used for this study was the MSM HIV/AIDS Complacency Survey. The survey consists of 46 multiple choice questions, comprised of four sections: (1) demographic/personal information; (2) sexual health attitudes; (3) alcohol and

substance use; and (4) HIV/AIDS complacency. The survey was piloted during the summer of 2013 in the bathhouse setting. The only significant change made after piloting the survey was the addition of an HIV status question to the sociodemographic section.

During the pilot study content validity was tested utilizing face validity to examine instrument content and construct validity was tested by relating protection motivation theory to the instrument. Reliability was tested utilizing test-retest reliability by comparing the 2013 pilot results and the results of this current study. The first section of the survey consists of 10 questions which pertain to demographic and sociodemographic information. Examples of questions from this section are: Marital/ Relationship Status; Sexual Orientation; and HIV Status.

The second survey section includes 14 questions related to sexual health attitudes. These questions were added from the Explore Risk Survey by Koblin et al. (2003). The Explore Risk Survey project was active from January 1999 to February 2001. The project interviewed over 4,000 MSM who identified as HIV negative in the following cities: Boston, Chicago, Denver, New York, San Francisco and Seattle. MSM over 16 who reported having anal sex with one or more partners were asked to complete questionnaires regarding sexual behaviors, alcohol and drug use, and sexually transmitted diseases. The sexual attitude questions taken from the survey were pared down to be appropriate for this study's setting and time constraints. Examples of questions from this section are: "I am able to avoid behavior that may put me at risk of HIV infection"; "I can choose safer sex with a man I have sex with regularly"; and, "Most gay men are using condoms these days."

The third section of the survey contains two questions relating to alcohol and substance use. These questions were also taken from the Explore Risk Survey by Koblin et al. (2003). The questions included: "In the last six months about how often did you get high or have a few drinks immediately before or during sex?"; and "In the last six months how often would you say that alcohol or other drug use made it more difficult for you to have safer sex?"

The fourth section of the survey is split into questions related to PrEP complacency and ART complacency. The ART questions were taken directly from the MacKellar et al. (2011) complacency instrument. In their study, MacKellar et al. analyzed results from the Young Men's Survey (YMS) which focused on 23-29 year old MSM who participated in a six-city, venue-based, cross-sectional survey. The YMS study was conducted between 1998 and 2000 and the authors utilized the survey results to analyze the relationship between sexual risk behavior and HIV/AIDS and complacency, measured as reduced HIV/AIDS concern because of HAART. The six cities surveyed included Baltimore, Dallas, Los Angeles, Miami, New York and Seattle. A 14-question complacency scale was created through the YMS study, yet not tested in the field. For the purpose of this study, these 14 questions were examined to test the complacency variable. The MacKellar et al. (2011) complacency instrument has been tested for reliability and validity, and factor analysis was performed with all questions loading .90 or higher. Examples of questions from this section included: "If I became infected with HIV today, I probably wouldn't get AIDS given the combination drug treatments that are available"; and "HIV is now a manageable disease much like diabetes."

The PrEP questions were adapted from the PEP questions found in the Explore Risk Survey (Koblin et al., 2003). The original survey asked six questions related to medications taken post-exposure to HIV known as PEP. More recently, PrEP has become an additional option for pre-exposure prophylaxis. Current literature in the field of HIV/AIDS focuses strongly on PrEP (Bauermeister et al., 2013; Marcus et al., 2013; Liu et al., 2013). For the purpose of this study, the PEP questions were adapted to reflect attitudes related to PrEP. Five questions were included such as: "Do you personally know any HIV-negative persons who have taken anti-HIV medications to prevent HIV infection?"; and "If you had unprotected receptive anal sex with an HIV-positive partner, how likely would you be to try anti-HIV medications to prevent HIV infection?" The PrEP questions were not analyzed as a part of the current study, but reserved for future analysis.

Sampling and Data Collection Procedures

This study analyzed venue-based data collected at a bathhouse. Muhib et al. (2001) identify venue-based sampling as an effective method for studying hard-to-reach or "hidden" populations. The sample for the study was obtained utilizing availability/convenience sampling. Upon check-in at the bathhouse, patrons were given a sheet of paper which stated: Free locker for your next visit! Loyola University is conducting an online, confidential eight minute survey examining sexual behavior and HIV/AIDS complacency. Should you participate you will receive a free locker pass for use upon your next visit to (name withheld). Please ask attendant for more information. Patrons who were interested in participating alerted the attendant at the desk and were

directed to one of the research assistants on the first floor of the bathhouse. The research assistants were equipped with IPad Mini tablets which were loaded with the survey.

Prior to participating in the study, potential participants were told about the study's intent to examine complacency regarding HIV/AIDS, substance use, and sexual risk behavior among MSM. Survey participants completed a short Opinio survey on site using an IPad Mini and received an incentive for their participation that consisted of a free locker pass for their next visit to the bathhouse. Opinio is a secured, on-line survey platform utilized for data collection. All responses were confidential, with participants given a respondent ID number to protect their identity. The data collected was used to test the research questions. IRB approval was received from Loyola University Chicago, the primary institution of this study (Project #2478).

Dependent Variable

The dependent variable, sexual risk behavior, was measured by the sexual health attitude questions found in Section 2 of the survey. The dependent variable of sexual risk behavior was defined as any sexual activity that can lead to HIV/AIDS infection. This includes oral sex and unprotected anal intercourse (UAI). The six-point Likert scale responses were coded for analysis so that higher numbered responses signified higher sexual health among participants. A factor analysis was performed on the 14 questions included in the survey related to sexual health attitudes. Questions 16 and 17 loaded as a separate factor than the other 12 questions regarding health attitudes. For uniformity of analysis these questions were removed. Of the remaining 12 questions, questions 12, 20 and 23 were reverse coded for uniformity of analysis. The responses were recorded utilizing a Likert scale format as follows: Strongly Disagree, Somewhat Disagree,

Slightly Disagree, Slightly Agree, Somewhat Agree, and Strongly Agree. After reverse coding of necessary variables, the six part Likert scale was scored from 0-5, with 5 indicating the highest level of sexual health, and 0 being the lowest.

Independent Variables

The independent variable of substance use was measured by the two substance use questions found in Section 3 of the survey. The independent variable of substance use was defined as the use of alcohol or illicit substances, such as crystal methamphetamine, cocaine, heroin, GHB, ketamine or ecstasy. The two questions regarding substance use consisted of four-point Likert scale responses and were coded for analysis so that the higher the numbered response, the greater the substance use. The possible responses for this section were: Never, Occasionally, Often, All the Time. The questions were analyzed utilizing the four part Likert scale, where 0-1 indicated low levels of substance abuse, and with 2-3 indicating higher levels of substance abuse.

The independent variable of complacency was measured with the ART complacency questions found in Section 4 of the survey. The independent variable of HIV/AIDS complacency was measured with 14 questions and was defined as minimizing, discounting, or discrediting the threat of HIV/AIDS due to the advent of antiretroviral medications such as ART and PrEP. The five-point Likert scale responses were coded for analysis so that the higher numbered response signified the higher level of complacency among study participants. A factor analysis was performed on the 14 questions included in the survey related to complacency to test for construct validity. All questions loaded on the same factor, leaving the question set complete for analysis. Of the 14 questions, question 41 was reverse coded for uniformity of analysis. The

response options for the items in this section are: Strongly Disagree, Disagree, Neither Disagree or Agree, Agree, Strongly Agree. The five-part Likert scale was scored from 0-4, where 0-1 indicated low levels of HIV complacency, 2 indicated a neutral level, and 3-4 indicated a higher level of HIV complacency.

Data Analysis

To investigate the effect of HIV/AIDS complacency and substance use on sexual risk behavior among MSM, irrespective of age, race and other sociodemographic characteristics, various analyses were performed. Initial analysis consisted of descriptive statistics and frequencies. Second, correlative analyses were conducted to examine relationships between variables. Finally, regression analysis was utilized to examine the various ways that the two independent variables of substance use and complacency impact the dependent variable of sexual health attitudes, while controlling for sociodemographic variables including age, race/ethnicity, and HIV status. Regression analysis can be used to examine linear relationships between the dependent variable and multiple independent or control variables. Regression is the appropriate analysis for determining the extent of these relationships (Frankfort-Nachmias & Nachmias, 1996). All data was imported from Opinio, a web-based survey instrument, to the Statistical Package for the Social Sciences SPSS for statistical analysis (SPSS Inc., 1998).

CHAPTER FOUR

FINDINGS

This study focuses on the influence of HIV/AIDS complacency and substance use on sexual risk behavior within the MSM population in a non-traditional research setting. The following chapter presents findings related to the sample of the study and the correlation between sociodemographics and the variables of HIV/AIDS complacency, substance use, and sexual risk behavior. Concluding sections report correlations between the variables utilizing regression analysis examining multivariate relationships.

Sample Description

The sample of the study consists of 168 MSM. The majority of the sample identified as 38-47 years old, with a sexual orientation of gay and a relationship status of single. The majority of the sample also self-identified as HIV-negative with a racial identification of white, non-Hispanic. A majority of participants identified as educated, with two-thirds of the sample having a completed an advanced degree. In addition to a higher educated sample, a majority of participants reported mid to high-level incomes. See Table 1 for a summary of sociodemographic information.

Table 1. Participant Sociodemographic Characteristics (*N*=168)

Characteristics	*n*	Valid %
Level of Education		
Less than High School	2	1.2
High School or GED	11	6.5
Some College	32	19.0
Completed Degree	62	36.9
Advanced Degree	61	36.3
Marital/Relationship Status		
Married/Civil Union/Domestic Partnership	16	9.5
Partnered	29	17.3
Single	114	67.9
Divorced	8	4.8
Widowed	1	.6
Race		
Black, Hispanic	19	11.3
Black, Non-Hispanic	14	8.3
White, Hispanic	26	15.5
White, Non-Hispanic	74	44.0
Native American/Alaskan	2	1.2
Asian/Pacific Islander	14	8.3
Multi-Racial	7	4.2
Other	8	4.8
Sexual Orientation		
Gay	128	76.2
Straight/Heterosexual	2	1.2
Bisexual	31	18.5
Queer	2	1.2
Questioning	3	1.8
Other	2	1.2
Annual Salary		
Below $25K	25	14.9
Between $26K-$50K	48	28.6
Between $51K-$75K	39	23.2
Between $76K-$100K	24	14.3
Between $101K-$125K	14	8.3
Greater than $125K	14	8.3
HIV Status		
HIV Negative	130	77.4
HIV Positive	29	17.3
HIV Status Unknown	7	4.2

Descriptive Statistics and Bi-Variate Analysis of Study Variables

Dependent Variable

The dependent variable, sexual risk behavior, was measured by 12 sexual health attitude questions found in Section 2 of the survey. The dependent variable of sexual risk behavior was defined as any sexual activity that can lead to HIV/AIDS infection. This includes oral sex and unprotected anal intercourse (UAI). The responses were recorded utilizing a Likert scale format as follows: Strongly Disagree, Somewhat Disagree, Slightly Disagree, Slightly Agree, Somewhat Agree, and Strongly Agree. The six part Likert scale was scored from 0-5, with 5 indicating the highest level of sexual health, and 0 being the lowest level of sexual health.

Independent Variables

The independent variable of substance use was measured by the two substance use questions found in Section 3 of the survey, and defined as the use of alcohol or illicit substances, such as crystal methamphetamine, cocaine, heroin, GHB, ketamine or ecstasy. The two questions regarding substance use consisted of four-point Likert scale responses and were coded for analysis so that the higher the numbered response, the greater the substance use. The possible responses for this section were: Never, Occasionally, Often, All the Time. The questions were analyzed utilizing the four part Likert scale, where 0-1 indicated low levels of substance abuse, and with 2-3 indicating higher levels of substance abuse.

The independent variable of complacency was measured with the 14 ART complacency questions found in Section 4 of the survey, was defined as minimizing, discounting, or discrediting the threat of HIV/AIDS due to the advent of antiretroviral

medications such as ART and PrEP. The response options for the items in this section were: Strongly Disagree, Disagree, Neither Disagree or Agree, Agree, Strongly Agree. The five-part Likert scale was scored from 0-4, where 0-1 indicated low levels of HIV complacency, 2 indicated a neutral level, and 3-4 indicated a higher level of HIV complacency.

For the entire sample, sexual health attitudes on a scale of 0-5 were a bit above average, (M=2.75. S.D.=.70, Min.=.92, Max.=4.58). HIV/AIDS complacency scores for the entire sample on a scale of 0-4 were lower than average, (M=1.94, S.D.=.78, Min.=.00, Max.=3.71). Finally, substance use scores for the entire sample were lower than average, scaled from 0-3, (M=.65, S.D.=.66, Min.=.00, Max.=3.00)

In order to understand the dependent variable of sexual risk behavior and the independent variables of complacency and substance use more clearly, bivariate analysis was executed with the seven sociodemographic variables.

The following figure presents the mean scores of the three variables in relation to age. The age group with the highest level of sexual health was 68+, followed by 48-57. The age group with the lowest sexual health scores (highest sexual risk) was 28-37. The age group with the highest level of complacency was 48-57, followed by both 18-27 and 28-37, and the age group with the lowest level of complacency was 68+. The age group with the highest level of substance use was 18-27, followed by 48-57, and the lowest level of substance use was aged 68+ (see Figure 2 below).

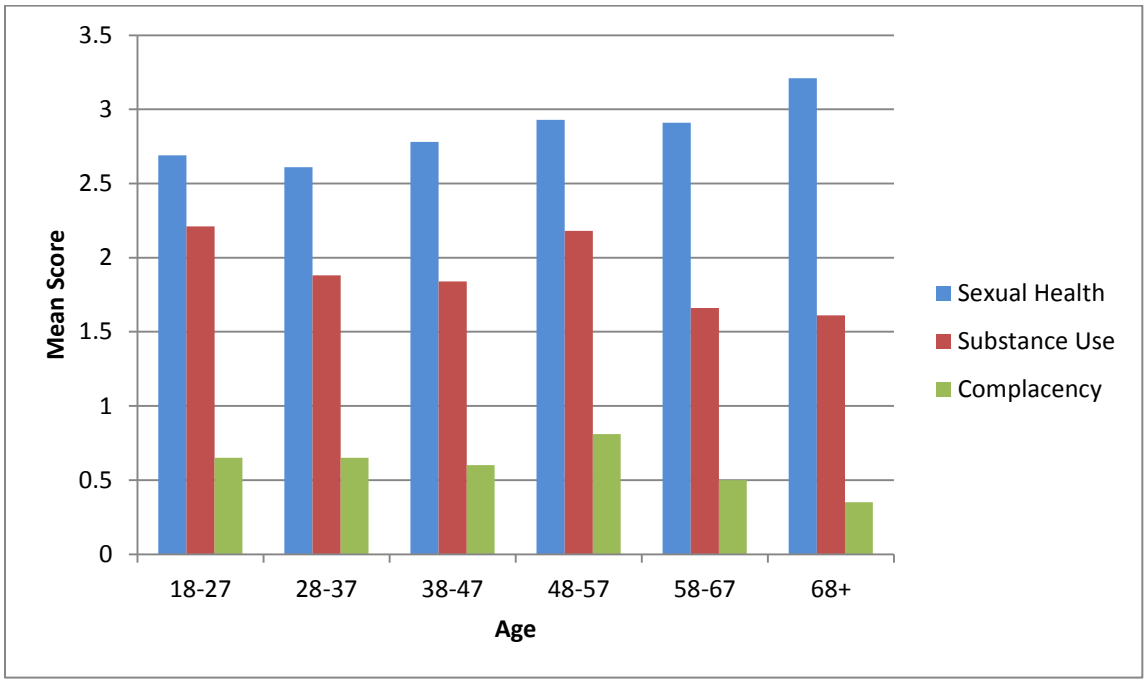

Figure 2. Mean Sexual Health, Substance Use and HIV/AIDS Complacency Scores by Participant Age Group

The following figure presents the mean scores of the three variables in relation to level of education. The level of education of study participants with the highest level of sexual health was high school or GED. The level of education of participants with the lowest sexual health scores (highest sexual risk) was less than high school. The level of education of study participants with the highest level of complacency was high school or GED, and the level of education with the lowest level of complacency was less than high school. The level of education of participants with the highest level of substance use was high school or GED, while the level of education of those with the lowest level of substance use was an advanced degree (see Figure 3 below).

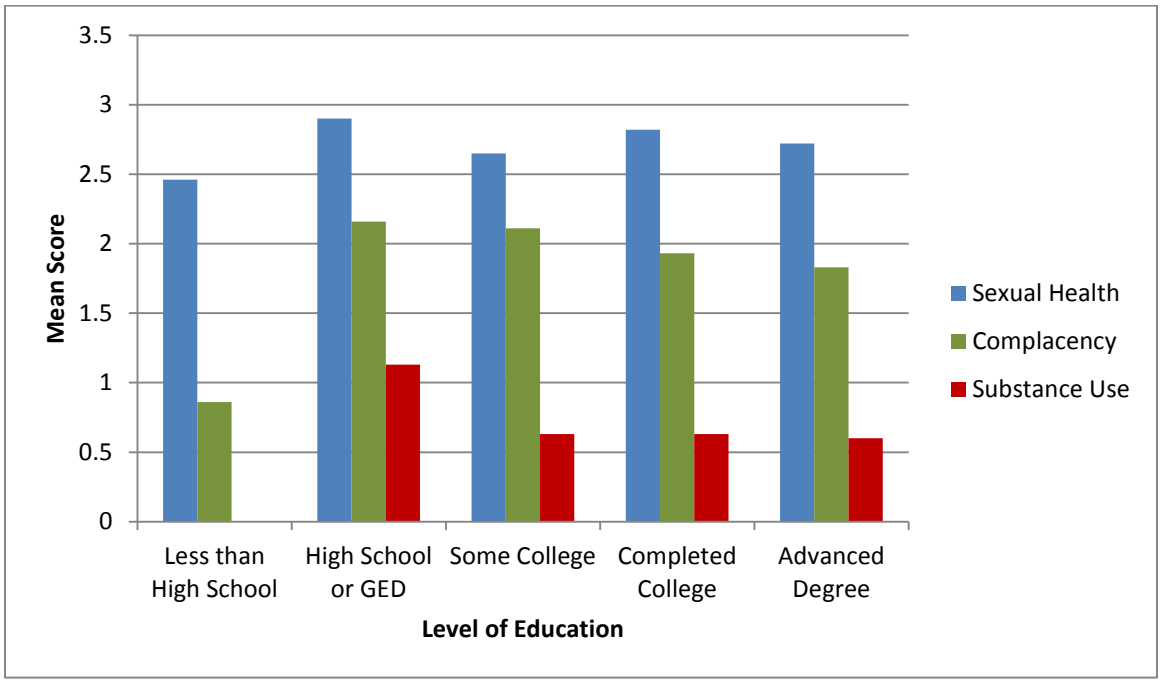

Figure 3. Mean Sexual Health, Substance Use and HIV/AIDS Complacency Scores by Participant Level of Education

The following figure illustrates the mean scores of the three variables in relation to sexual orientation. Respondents with the highest level of sexual health identified as heterosexual, while respondents with the lowest sexual health scores (highest sexual risk) identified as questioning. Respondents with the highest level of complacency identified as queer, while those with the lowest level of complacency identified as bisexual. Respondents with the highest level of substance use identified as bisexual, while those with the lowest level of substance use identified as questioning (see Figure 4 below).

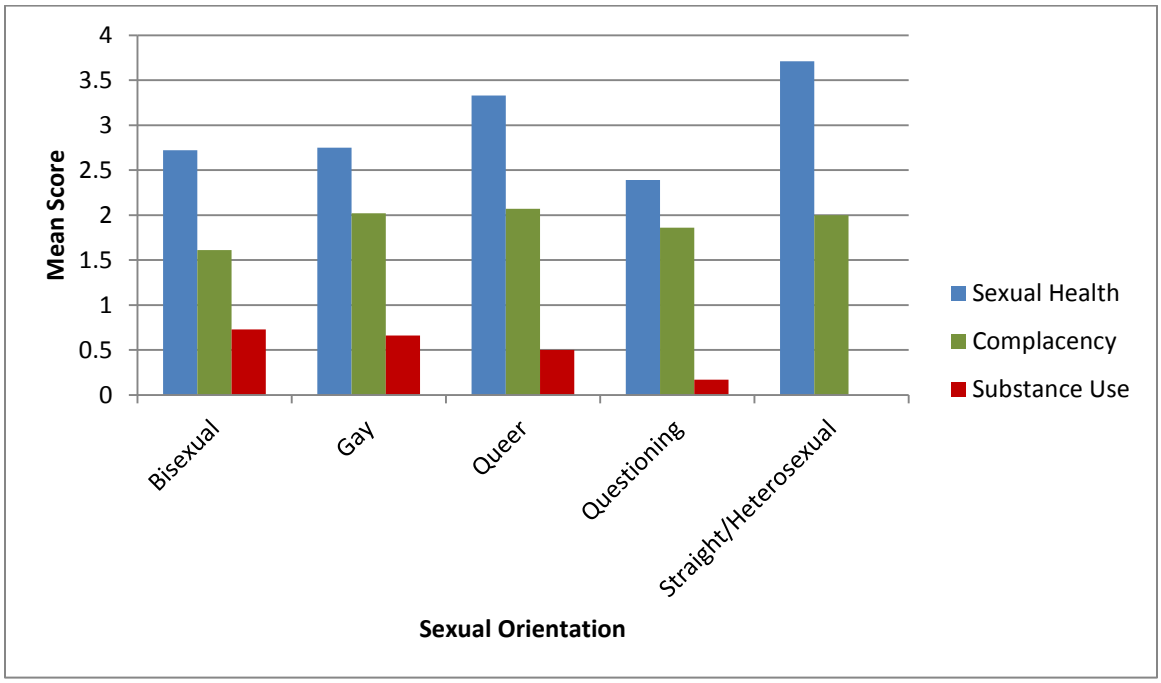

Figure 4. Mean Sexual Health, Substance Use and HIV/AIDS Complacency Scores by Participant Sexual Orientation

The following figure presents the mean scores of the three variables in relation to marital/relationship status. Respondents with the highest level of sexual health identified as single, while respondents with the lowest sexual health scores (highest sexual risk) identified as widowed. Respondents with the highest level of complacency identified as widowed or partnered, while those with the lowest level of complacency identified as divorced. Respondents with the highest level of substance use identified as widowed, while those with the lowest level of substance use identified as single (see Figure 5 below).

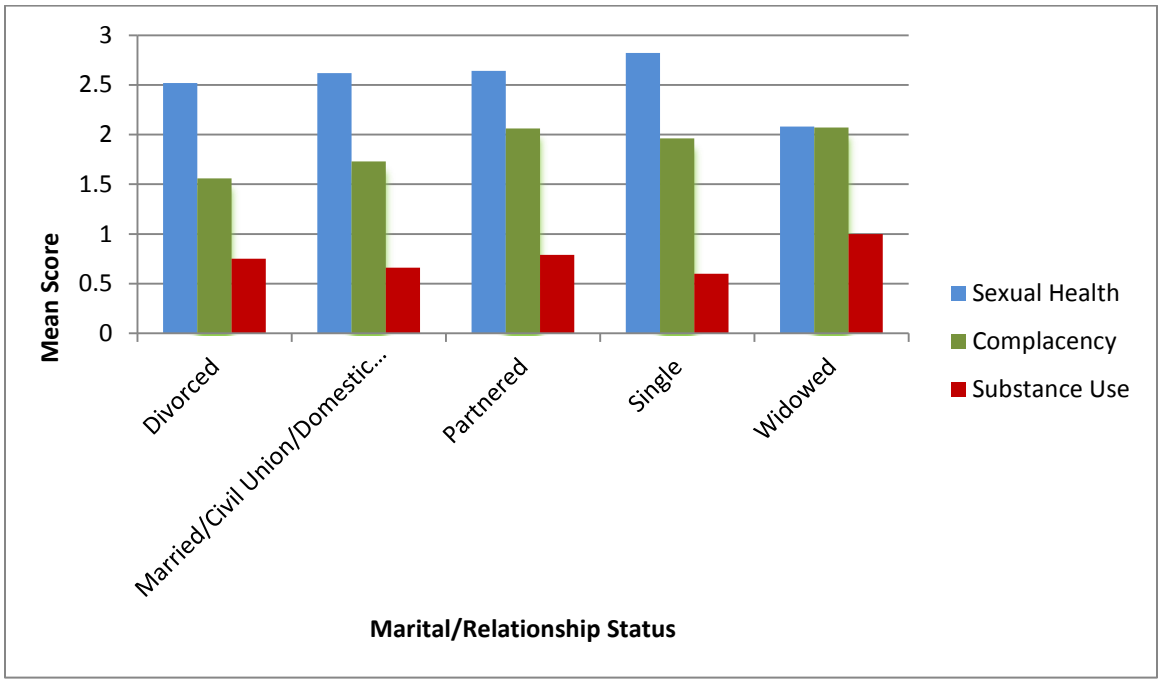

Figure 5. Mean Sexual Health, Substance Use and HIV/AIDS Complacency Scores by Participant Marital/Relationship Status

The following figure presents the mean scores of the three variables in relation to race. As displayed, respondents with the highest level of sexual health identified as black, non-Hispanic, while respondents with the lowest sexual health scores (highest sexual risk) identified as white, non-Hispanic. Respondents with the highest level of complacency identified as black, non-Hispanic, while those with the lowest level of complacency identified as Asian, Pacific Islander. Respondents with the highest level of substance use identified as Native American, Alaskan, while those with the lowest level of substance use identified as multi-racial (see Figure 6 below).

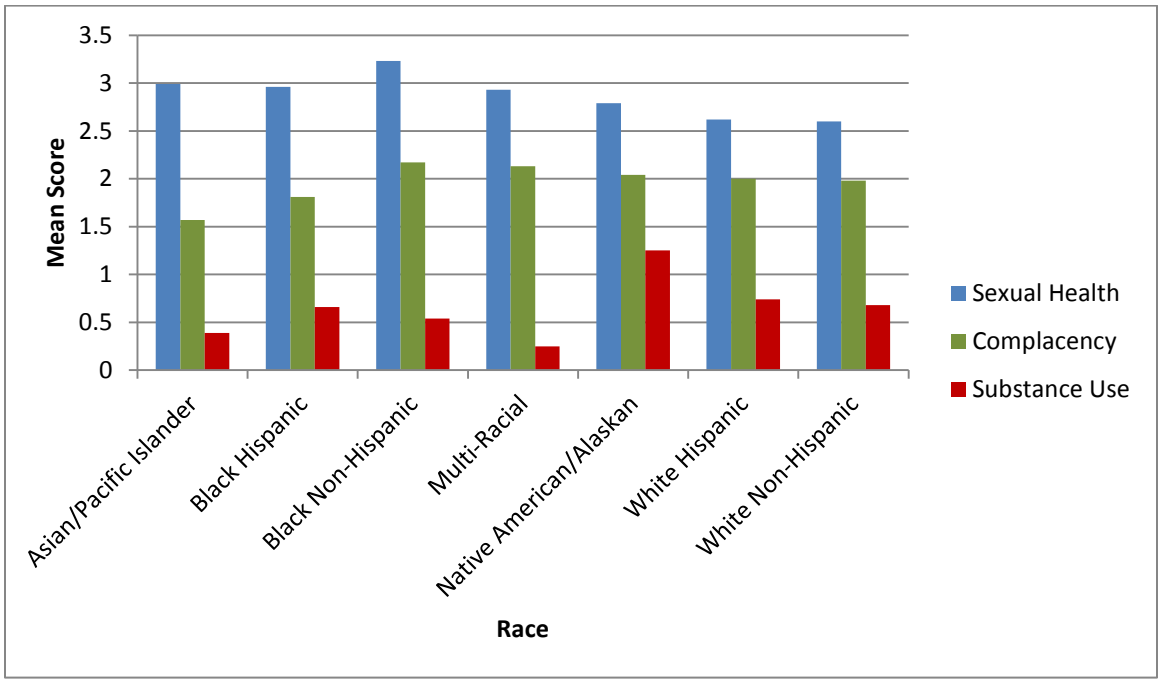

Figure 6. Mean Sexual Health, Substance Use and HIV/AIDS Complacency Scores by Participant Race

The following figure displays the mean scores of the three variables in relation to HIV-status. Respondents with the highest level of sexual health identified as HIV-negative, while respondents with the lowest sexual health scores (highest sexual risk) identified as HIV-positive. Respondents with the highest level of complacency identified as HIV-positive, while those with the lowest level of complacency identified as HIV-negative. Respondents with the highest level of substance use identified as HIV-status unknown, while those with the lowest level of substance use identified as HIV-positive (see Figure 7 below).

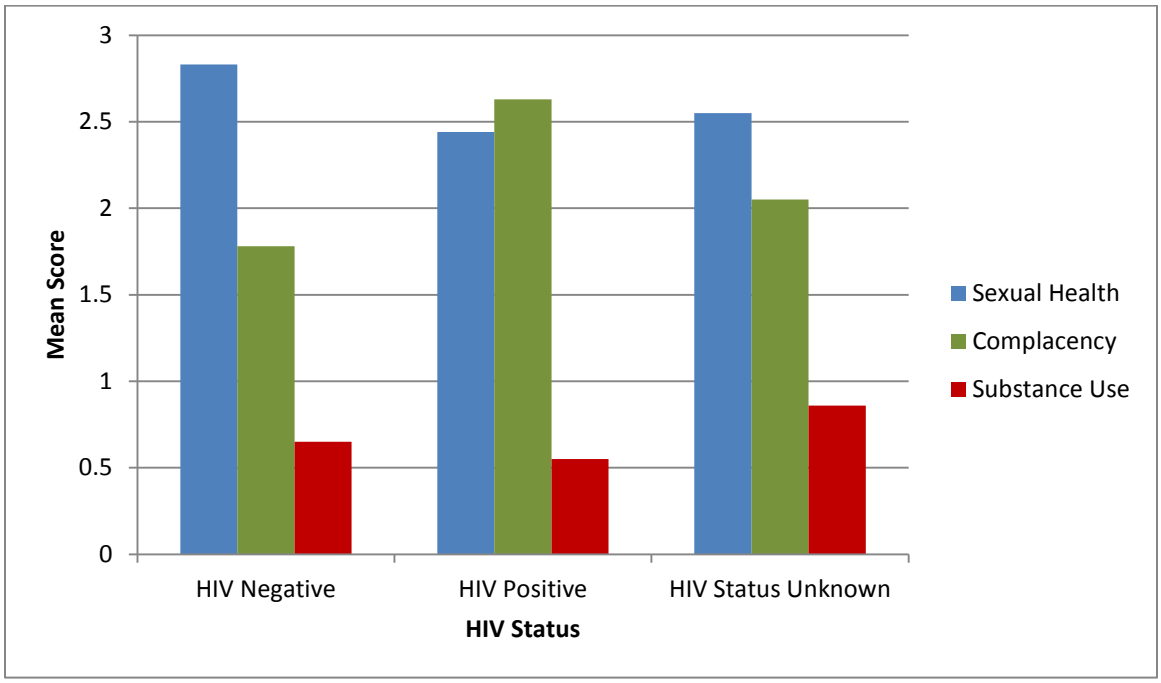

Figure 7. Mean Sexual Health, Substance Use and HIV/AIDS Complacency Scores by Participant HIV Status

The following figure exhibits the mean scores of the three variables in relation to annual salary. The annual salary of study participants with the highest level of sexual health was below $25K. The annual salary of respondents with the lowest sexual health scores (highest sexual risk) was between $76K-$100K. The annual salaries of respondents with the highest levels of complacency were between $26K-$50K, closely followed by between $101K-$125K. The annual salaries of respondents with the lowest levels of complacency were $76K-$100K, closely followed by greater than $125K. The annual salary of participants with the highest level of substance use was between $76K-$100K, while the annual salary of respondents with the lowest level of substance use was between $101K-$125K (see Figure 8 below).

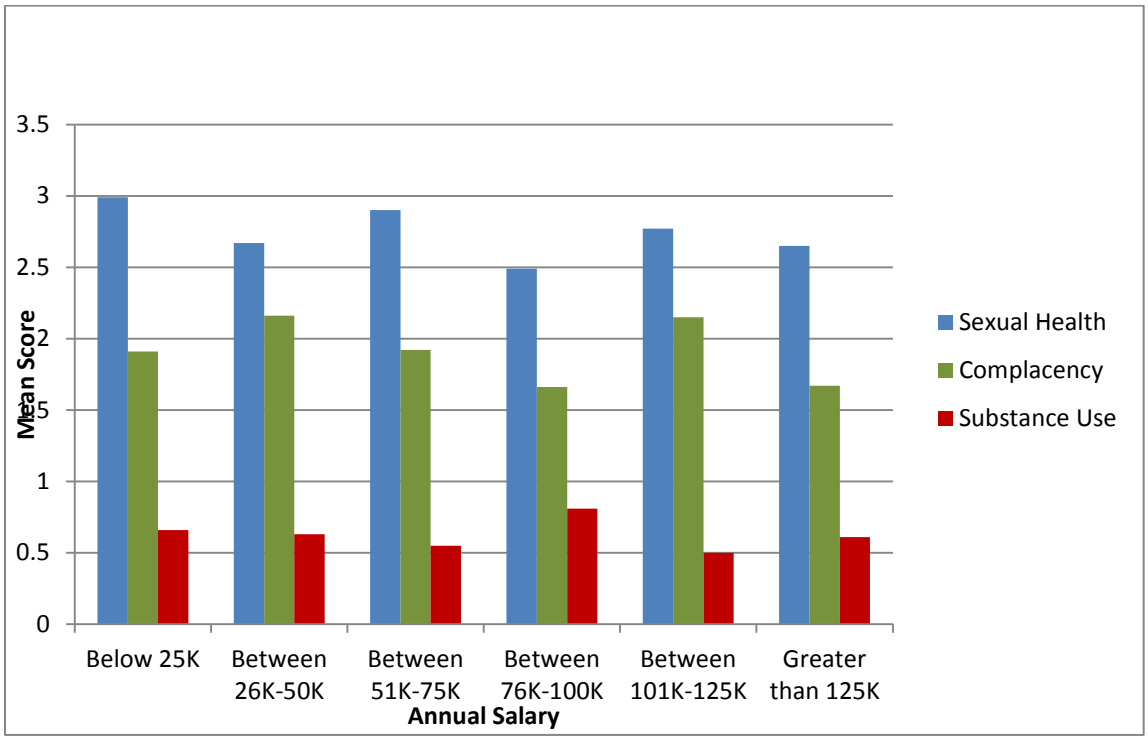

Figure 8. Mean Sexual Health, Substance Use and HIV/AIDS Complacency Scores by Participant Annual Salary

Correlational Analysis Findings

Correlative analyses were conducted to examine relationships between variables. Subsequently, a regression analysis was executed to examine the various ways that the two independent variables of substance use and complacency impact the dependent variable of sexual health attitudes, while controlling for sociodemographic variables including age, race/ethnicity, and HIV status. The results are presented in this section by research question.

HIV/AIDS Complacency

The first research question, What is the relationship between HIV/AIDS complacency since the advent of ART and PrEP treatments and sexual risk behavior among MSM in a bathhouse setting?, was answered by running correlations between the

two variables. Because the data was not normally distributed, Spearman's Rho was utilized for non-parametric analysis. The following table shows there is a non-significant, negative correlation (*rs*=-0.115, *p*=0.154) between HIV/AIDS complacency and sexual health. This analysis shows that higher levels of HIV/AIDS complacency correlate to lower levels of sexual health, yet not in a statistically significant manner (see Table 2).

Table 2. Spearman's Rho Correlations between Measures of HIV/AIDS Complacency and Sexual Health

Spearman's Rho			
		Complacency	Sexual Health
Complacency	Correlation Coefficient	1	-0.115
	Sig. (2-tailed)		0.154
	N	160	154
Sexual Health	Spearman Correlation	-0.115	1
	Sig. (2-tailed)	0.154	
	N	154	161
	Correlation is significant at the p<0.05 level.		

Substance Use and Sexual Risk Behavior

The second research question, What is the relationship between substance use and sexual risk behavior among MSM in a bathhouse setting?, was answered by running correlations between these two variables. Spearman's Rho was utilized for non-parametric analysis because the data did not have a normal distribution. The following table shows that there exists a negative (*rs*=-.167), significant (*p*=.035) correlation between substance use and sexual risk behavior among MSM in a bathhouse setting. This analysis shows that higher levels of substance use significantly correlate to lower levels of sexual health (see Table 3).

Table 3. Spearman's Rho Correlations between Measures of Substance Use and Sexual Health

Spearman's Rho			
		Substance Use	Sexual Health
Substance Use	Correlation Coefficient	1	-.167*
	Sig. (2-tailed)		0.035
	N	166	160
Sexual Health	Correlation Coefficient	-.167*	1
	Sig. (2-tailed)	0.035	
	N	160	161
	Correlation is significant at the p<0.05 level.		

Regression Analysis Findings

A regression analysis was conducted to answer the third research question, How does HIV/AIDS complacency related to ART and PrEP along with substance use impact sexual risk behavior among MSM in a bathhouse setting? Before regressing the research model, multicollinearity among independent variables was tested. The result indicates that there is no multicollinearity problem with all of the VIF values at 1.005 (see Table 4).

Table 4. Coefficient Correlations for Independent Variables: HIV/AIDS Complacency and Substance Use

Model		Complacency	Substance Use
Correlations	Complacency	1.000	-.070
	Substance Use	-.070	1.000
Covariances	Complacency	.005	.000
	Substance Use	.000	.007

The adjusted *R2* is .03, demonstrating that this model explains 3% variation of sexual health attitudes. Substance use has a significant, negative relationship with sexual

health attitudes (*B*=-.197, *t*=-2.286, *p*=.024) while controlling for HIV/AIDS complacency. The inference of these findings shows that the higher the substance use score, the lower the sexual health scores. HIV/AIDS complacency has a negative effect, yet is not statistically significant (*B*=-.089, *t*=-1.239, *p*=.217) (see Table 5).

Table 5. Summary of Simple Regression Analyses for Variables Predicting Sexual Health Scores

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	3.063	.156		19.668	.000
Substance Use	-.197	.086	-.182	-2.286	.024
Complacency	-.089	.072	-.099	-1.239	.217

Summary

In summary the research findings indicate that there is a negative correlation between complacency and sexual health attitudes. This finding demonstrates higher levels of complacency correlate to lower levels of sexual health, yet this correlation did not reach statistical significance. A significant negative correlation was found between substance use and sexual health attitudes among MSM in a bathhouse setting. This indicates that higher levels of substance are significantly associated with lower levels of sexual health. When controlling for HIV/AIDS complacency, substance use was found to have a significant negative relationship with sexual health attitudes. The concluding chapter presents a discussion and implications of these findings.

CHAPTER FIVE

DISCUSSION AND IMPLICATIONS OF FINDINGS

The previous chapter presented study findings, results of which both support and challenge previous research studies in this area. This chapter expands upon these results and explores the relevance for the field of social work. To review, the three major research questions examined in this study are: (1) What is the relationship between HIV/AIDS complacency since the advent of ART and PrEP treatments and sexual risk behavior among MSM in a bathhouse setting?; (2) What is the relationship between substance use and sexual risk behavior among MSM in a bathhouse setting?; and (3) How does HIV/AIDS complacency related to ART and PrEP along with substance use impact sexual risk behavior among MSM in a bathhouse setting? Other aims of this study included a focus on the MSM population and sexual health behavior within a bathhouse setting while assessing the relationship between various sociodemographic characteristics and sexual risk behavior, HIV/AIDS complacency and substance use. This chapter explores these concepts in more detail and within the context of relevant literature. Furthermore, the implications for social work, contribution to theory, limitations of the study and conclusions are presented.

Sexual Risk

MSM sexual risk behavior was examined in relation to HIV/ AIDS complacency, substance use, and various sociodemographic characteristics including age, education, and HIV status, among others. Correlations among these factors, as well as an

assessment of the unique research setting, clearly provide room for a robust discussion. Research on the MSM population can be challenging, and is often venue-based because of the difficulty in accessing this population. Frequent venues utilized include bars, clubs and bathhouses. The gay bathhouse context is a space where men can go to engage in sexual activity. Research indicates heightened risk of HIV infection and unprotected sex in this environment (Binson et al., 2005; Reidy et al., 2009). Access to the bathhouse venue allowed for an examination of sexual attitudes and behaviors in a setting where sexual behavior is occurring. Researchers such as Ko et al. (2009) have found higher UAI in bathhouse settings. Their findings, in addition to the reporting of the highest levels of HIV infection among MSM since 2009 (Centers for Disease Control and Prevention, 2012), underscore the timeliness and relevance of the current study. One explanation for rising HIV infection levels is increased sexual risk behavior such as UAI. Would the current study findings support those of previous researchers such as Binson et al. (2005) and Ko et al. (2009) who found that UAI in the bathhouse was common?

Results of the sexual health findings from this study demonstrated that a majority of the participants were above average in their sexual health scores, meaning that most demonstrated healthier attitudes about sex and risk behavior in comparison with the participants of other studies conducted in a similar setting. While the current study is not comparative and did not solely measure UAI, it is important to note that the sexual health scores found in this study were above average. These results diverge from common assumptions and earlier findings regarding the sexual behavior of MSM in a bathhouse setting. The current study may potentially address some of the stereotypes associated with frequenting a gay bathhouse identified by Van Beneden et al. (2002), such as the

bathhouse setting being a venue where unsafe sexual practices frequently occur between HIV positive men that have casual sex with multiple sex partners. The findings of the current study may provide alternative narratives about the bathhouse and assist in reducing stigma by highlighting healthier sex attitudes among the MSM in the sample. In the same regard, stigma remains high among MSM and within the larger LGBT community regarding bathhouse attendance. Decreasing such stigma can have important psychological and health benefits since other research has indicated that stigma among MSM can lead to unsafe sexual behavior (Preston et al., 2004).

Relationship Status

In addition to above average sexual health attitudes, another finding in the current study may challenge existing literature. In regard to relationship status, the majority of this sample (74%) identified as single or divorced. Kalichman (2000) reported in his review of HIV/AIDS literature that UAI occurred more frequently with casual sex partners and that MSM sexual risk behavior is influenced by a partner's HIV status and one's relationship status. Another example from the literature lies in the original EXPLORE risk study, which found that men with multiple partners were more likely than men with a single partner to report sexual risk behavior (Koblin et al., 2003). The current study reports that the highest sexual health scores were found among those who identified as single (2.83/5.00). It is important to note that the instrument utilized to measure sexual health in this study does not solely focus on UAI, therefore it is not possible to draw a conclusion exclusively about UAI and the sample. The findings do, however, showcase the healthier sexual attitudes among single MSM. As reported previously, the gay bathhouse is a venue where sex with multiple partners can occur. The current study

found that in this environment, the single MSM were the least likely to participate in sexual risk behaviors. Lower sexual health attitudes were present in the married and partnered MSM. Further research is suggested to examine additional contributing factors that may influence MSM sexual risk behavior and relationship status.

Age

Numerous scholarly articles and grey literature highlight the growing number of young men who have sex with men (YMSM) that have been diagnosed with HIV (Centers for Disease Control and Prevention, 2012; Bruce, Harper, & Suleta, 2013; Landovitz et al., 2012). Results of this study indicate the need for further research regarding complacency and sexual risk behavior among the YMSM population, especially those within the 18-27 and 28-37 year old age cohorts. In the present study, increases in sexual health attitude scores corresponded with an increase in participant age. The one notable exception to this was the 28-37 year old cohort, who had the lowest sexual health attitudes. Additionally, this age group was among those with the highest levels of both substance use and HIV/AIDS complacency when compared with study participants in other age groups. The current study finding that substance use influences sexual risk behavior suggests the importance of combating substance use in general, but specifically among 18-27 year olds. Another interesting finding regarding age was that those respondents aged 48-57 were the most complacent regarding HIV/AIDS. This age group was in their late teens and twenties when the epidemic began. Further research to investigate this higher complacency in the 48-57 year old age group is warranted.

Race

Examining the role of race and ethnicity as correlating factors that may impact sexual risk behavior among MSM frequenting a bathhouse may provide additional insight for practitioner consideration and suggest areas for future research in the field. In this study, a majority of participants (56%) identified as members of racial groups other than white, non-Hispanic. The implications of a majority non-white sample are many. The Centers for Disease Control and Prevention (2014) found that gay and bisexual men of black/African American racial identity are most affected by HIV. The report states that despite differences in population size, African American gay and bisexual men accounted for almost as many new HIV infections as white gay and bisexual men. While the total number of participants identifying as black/non-Hispanic MSM in the present study was only 8.3% of the sample, the finding that this group has the healthiest sexual attitudes offers an interesting counterpoint to the Centers for Disease Control and Prevention report.

Contrasting findings from the Millett, Peterson, Wolitski, and Stall (2006) critical literature review of HIV risk and black MSM found "high rates of HIV infection for black MSM were partly attributable to a high prevalence of sexually transmitted diseases that facilitate HIV transmission and to undetected or late diagnosis of HIV infection; they were not attributable to a higher frequency of risky sexual behavior, non-gay identity, or sexual nondisclosure, or to reported use of alcohol or illicit substances" (p. 1007). The current study findings suggest a closer alignment with the conclusion drawn in the Millett et al. review. Further research regarding the racial differences regarding sexual health attitudes is indicated.

HIV/AIDS Status

As reported earlier in this study, 77.4% of the sample self-identified as HIV-negative, while 17.3% were HIV-positive and 4.2% reported their HIV status as unknown. The Centers for Disease Control and Prevention (2014) reported that approximately 20% of MSM in the United States are HIV positive, while 44% of MSM are not aware of their status. The results of the current study are not readily comparable to such national studies, yet the prevalence of HIV positive participants found in this study sample was less than the national average of individuals frequenting a bathhouse, (17.3%) and (20%) respectively. Additionally, the Frankis and Flowers' (2005) review of bathhouse literature found twice the number of HIV positive test results among MSM who frequented bathhouses (12%) when compared to the national average (6%). While the current study utilized convenience sampling and therefore the results cannot be generalized to an entire population, the dearth of bathhouse literature allows for a comparison and identification of differing results in the sample regarding HIV status.

This study found interesting correlations with regard to the impact of participant's HIV status when compared to sexual health attitudes, HIV/AIDS complacency and substance use. For example, those respondents with the healthiest sexual health attitudes identified as HIV negative, while respondents with the lowest sexual health attitudes (highest potential for sexual risk behavior) identified as HIV positive. Similar results were found among study participants regarding complacency associated with HIV/AIDS. Those with the highest levels of complacency identified as HIV positive, while those with the lowest levels of complacency identified as HIV negative.

Parsons, Halkitis, Wolitski, and Gomez (2003) discuss harm reduction practices among a sample of HIV positive men. The authors reported that HIV positive persons engaging in UAI were more likely to engage in harm reduction strategies such as utilizing condoms to lessen potential HIV transmission. The findings of the current research study do not refute such findings, yet the intersection of such factors related to MSM HIV status and harm reduction strategies within a bathhouse setting raises relevant and pertinent questions to be further explored. Are HIV positive bathhouse patrons less likely or more likely to engage in harm reduction strategies and behaviors with other MSM than those who do not frequent such establishments? Does setting play a vital role for HIV positive MSM navigating sexual health behavior, risk negotiation and condom use? While no significant correlation between HIV/AIDS complacency and risk behavior was discovered among study participants, a significant relationship was found between substance use and sexual risk behavior. Participants with HIV status unknown had the highest levels of substance use followed by those identifying as HIV negative. The intersection of all of these results is fascinating. In this study, those identifying as HIV positive engaged in riskier sexual behavior, while HIV negative or unknown status participants had higher substance use rates, which was found to be significantly associated with higher sexual risk behavior. This dynamic may suggest that those with HIV negative or unknown status in this bathhouse sample are potentially at heightened risk for HIV transmission if they are substance users. Further information can be found in the literature.

Binson et al. (2010), in their study of patrons at a San Francisco bathhouse found that 16.7% of the respondents identified as HIV positive. The current study found 17.3%

of the respondents identified as HIV positive. The authors also found "the risk of sexual transmission of HIV during the bathhouse visit was typically within isolated dyads rather than patterns of multiple sexual encounters that might put many men at risk during a single visit, and men who did engage in UAI tended to withdraw prior to ejaculation, potentially mitigating the risk of HIV transmission" (p. 1). While the current study does not examine such specific factors surrounding the number of sexual partners in the bathhouse, UAI and correlations with sexual risk-the Binson et al. study remains one of few which examines HIV status in relation to sexual risk behavior and number of sexual encounters. The consideration of substance use in the current study identifies additional factors that may contribute to sexual risk behavior among HIV positive bathhouse patrons. Continued research within bathhouse settings is suggested regarding MSM HIV status and sexual risk behavior.

Substance Use and Sexual Risk

The Centers for Disease Control and Prevention (2013) found that gay and bisexual men have higher rates of substance use and abuse than those within the general population. The CDC also reported that alcohol and illegal drug use contributes to increased risk for HIV transmission and other sexually transmitted infections among MSM. Reasons for this increased risk stem from the impairment in judgment caused by drug and alcohol use which typically contributes to riskier sexual encounters as well as other avenues for infection, such as intravenous needle sharing. The current study found the connection between substance use and sexual risk behavior to be significant. In fact, participants engaging in substance use in this study were found to have significantly riskier sexual health attitudes. Thus a conclusion may be drawn that the more one drinks

alcohol or uses drugs, the greater the risk for sexually transmitted infections due to increased sexual risk behaviors. This finding has some support in the literature (Dentato, Halkitis, & Orwat, 2013; Halkitis & Parsons, 2003). Other research has been inconsistent on whether or not substance use and sexual risk behavior have an interactive effect (Stall & Purcell, 2000). Inconsistent findings in the literature concerning the association of MSM substance use and sexual risk behavior indicate a need for continued study, particularly within unique sexual environments such as the bathhouse.

The first article referring to gay men and the intersection of substance use and HIV/AIDS was published in 1986 underscoring a strong relationship between substance use during sex and a lack of compliance with safer sex techniques and behaviors (Stall et al., 1986). Twenty seven years later, Bruce et al. (2013) found that alcohol use among young men who have sex with men (YMSM) resulted in more frequent unprotected anal intercourse (UAI). Perhaps it is fair to state that another form of complacency among MSM may relate to continued substance use and sexual risk behavior. Further study related to effective intervention techniques is required to lessen substance use and reduce harm in the MSM population.

Complacency and Sexual Risk

The first research question presented in this study focused on discerning the relationship between HIV/AIDS complacency since the advent of ART and PrEP and sexual risk behavior among MSM in a bathhouse setting. Various scholarly articles and grey literature have stated that the advent of ART has negatively impacted beliefs and actions related to behaviors which impact the spread of HIV/AIDS (Jaffe, Valdiserri, & De Cock, 2007; MacKellar et al., 2011; Valdiserri, 2004). Results from this study

demonstrated a negative, nonsignificant correlation between sexual health and complacency among MSM in the bathhouse. The negative relationship between variables is supported by Valdiserri et al. (2004) and MacKellar et al. (2011), indicating that the more complacent the respondent, the lower the sexual health scores. However the nonsignificance of the correlation does not allow for definitive conclusions to be drawn. Much remains to be understood regarding the impact of ART and PrEP, if any, among MSM attitudes related to HIV/AIDS complacency. Of particular importance is any potential contribution of HIV/AIDS complacency to the higher rates of HIV infection among minority communities. This is most alarming considering minority communities have the highest levels of HIV infection since 2009 (Centers for Disease Control and Prevention, 2014). While complacency on the individual, micro-level remains uncertain, evidence beyond the current study indicates that complacency can influence MSM on the macro-level.

The Kaiser Family Foundation (2014) published information regarding federal funding for HIV/AIDS beginning in FY 2009 and ending in FY 2015. As stated earlier, the Centers for Disease Control and Prevention (2012) identifies that the MSM population reported the largest numbers of new HIV infections since 2009. When one looks at the levels of federal funding for HIV prevention or care, the numbers seem encouraging with budget increases each year, from $25 billion dollars in FY 2009 to $30.4 billion dollars proposed in FY 2015. When one drills down deeper into the numbers, it becomes apparent that the increased dollars are not allocated to prevention or research. Monies for HIV/AIDS care have increased from $12.5 billion dollars to $17.5 billion dollars in FY 2015. This money is spent domestically on those living with

HIV/AIDS. The amount of money allocated for HIV/AIDS prevention in FY 2009 and FY 2015 is $0.9 billion dollars. The amount of money allocated for research in FY 2009 was $2.7 billion dollars and in FY 2015 is $2.8 billion. It is important to note that prevention funds are the lowest level of allocation, and this low level has remained static for the past seven years. Research funding has essentially remained static as well, with an increase of only $0.1 billion. When funding is examined in this way, it becomes clear that prevention and research are not priorities, and this could be identified as macro-level HIV/AIDS complacency.

A Return to Theory

Protection motivation theory was offered as a potential lens through which to consider the unique correlations among HIV/AIDS complacency, substance use and MSM sexual health. The four tenets of the theory relate to the concepts of threat severity, vulnerability, response efficacy and self-efficacy. While various components of protection motivation theory assist in understanding and explaining MSM sexual risk behavior, results of this study did not demonstrate complacency as a significant contributor to risk behavior. This researcher postulated that HIV/AIDS complacency would specifically intersect with the concepts of threat severity and vulnerability. Even without the finding of a significant relationship in this study between sexual risk and complacency, the theory still offers a possible explanation regarding why some may or may not adopt protective health behaviors.

An interesting observation regarding this theory can be drawn by examining the remaining two tenets of protection motivation theory of response efficacy and self-efficacy. Both response efficacy and self-efficacy may be a consideration when

examining the impact of substance use upon sexual risk behavior. A person's response and self-efficacy is greatly impacted by their impairment due to alcohol or drug use. Inaba and Cohen (2014) detail various substances including alcohol and their effects on decision making processes. Any impairment in decision making can negatively impact sexual health behaviors. When considering that protection motivation is activated when all four tenets of the theory are present, the impact of substance use on sexual behavior decision making becomes clear and concerning.

Limitations

The current study has several limitations. The first pertains to the fact that the study results cannot be generalizable to all MSM. This non-scientific, venue-based sample of 168 MSM, collected during a one-week period, cannot be generalized to the bathhouse population as a whole, nor to the wider MSM population. An additional limitation pertains to the timing of data collection, as it was conducted between the hours of 10PM and 2AM. Varying the hours of data collection may have provided a more diverse sample for this study as the MSM frequenting the bathhouse may be significantly different during daytime hours. Another important limitation is that the bathhouse setting utilized in this study requires a monetary fee for admission and thus limits those participating in this study to a specific socioeconomic status that is able to afford such entry fees. In fact, the majority of respondents reported an income of $51,000 or above. Also, participants utilized an IPad to complete the survey and some participants were not familiar with the technology and struggled with completing the survey.

Weinhardt, Forsyth, Carey, Jaworski, and Durant (1998) identify limitations regarding self-reporting of sexual behaviors. The authors state that the potential for

misrepresentation of sexual behavior can be influenced by participant desire for social acceptability. The current study would potentially have the same issues due to client self-report of sexual health attitudes. The IPad technology that allowed for privacy and confidentiality in survey completion and the use of identification numbers, rather than the solicitation of participant names, were intentional measures taken to decrease this potential bias, yet the possibility remains.

The sampling scheme was not scientific. The utilization of a convenience sample was appropriate for the setting and timing, however does not allow for the generalization of the findings beyond the current participant population. Another limitation was the population of the bathhouse. While a single bathhouse was utilized in a major metropolitan area, the participants of this study came from many areas of the country. This limits generalizability for the bathhouse setting both regionally and nationally.

Implications for Social Work

This study may provide significant implications for social work service delivery systems and professional approaches to HIV/AIDS prevention practices for the MSM population. Social work practice maintains a focus on service with disenfranchised or marginalized populations and the MSM population has been identified as a marginalized group. Ongoing training and professional development is essential for social workers to heighten their sensitivity regarding relevant factors and their capacity to address potential barriers to effective practice with the MSM population. The results of the current study indicate that substance use is associated with sexual risk taking behaviors. The current study found that an increase in substance use contributed to decreased sexual health attitudes. The social work profession provides clinical interventions to assist a client in

making changes in their life, including substance use disorders, and behaviors that promote health and well-being. The National Association of Social Workers (2013) state in their standards for social work and substance use disorders that "social work practice values the importance of education, early intervention, and prevention of substance use disorders". The current study contributes to the literature and provides information for education regarding the MSM population regarding sexual risk and substance use. Clinical interventions are required to prevent and treat substance use disorders and in turn limit sexual risk behavior.

This researcher posits that motivational interviewing can be utilized as a practice technique to work with those who have expressed complacency regarding HIV/AIDS, experienced substance abuse, and engaged in risky sexual behaviors. Rollnick (2008) emphasizes the importance of health behavior change, stating that 21st Century health care is focusing more on behavior change and long-term symptom management. Protection motivation theory and motivational interviewing are complementary explanatory and practice theories that have strong potential for effective HIV/AIDS prevention with MSM. Motivational interviewing is considered an effective style of treatment based on empirical evidence. In their systematic review, Dunn, Deroo, and Rivara (2001) studied 29 randomized trials which used motivational interviewing interventions. The four categories of behavioral domains researched were smoking cessation, diet/exercise, substance abuse, and most relevant in this context, for HIV risk behavior. Regarding the latter, four studies with mixed results were examined. Two studies reported improved condom use with at-risk women using motivational interviewing, while two other studies involving intravenous drug users did not have

measurable successful results. The authors stated the necessity of further HIV related studies to examine the efficacy of motivational interviewing on HIV risk reduction.

Rubak, Sandbaek, Lauritzen, and Christensen (2005) cite 72 studies in which motivational interviewing was used in their systematic literature review between 1991 and 2004. The studies were performed by psychologists (n=42), doctors (n=23), and other health care providers (n=11). Areas of intervention included: diabetes/asthma (n=3), smoking cessation (n=12), weight loss/physical activity (n=10), alcohol abuse (n=28) and psychiatrics/addiction (n=19). Motivational interviewing was found to be a more effective intervention than traditional treatment, identified as "advice giving", in 80% of the studies. It is appropriate to state that interventions utilizing motivational interviewing have a strong potential to impact all of the variables in the current study. Further research is necessary, and the social work profession can contribute to the generation of effective interventions that incorporate motivational interviewing.

Most of the relevant literature for this study was found in professional journals from the fields of psychology and medicine. The need to address practice interventions when discussing MSM is of vital responsibility for the social work profession. This current study concerning MSM HIV/AIDS complacency contributes to the social work knowledge base, offering insights to increase education and begin to consider appropriate interventions. The dearth of social work literature regarding HIV/AIDS complacency, sexual risk and substance use identifies a gap in research which the social work profession can and must fill. The social work profession must have a place at the table so that our core values can broaden the lens through which practitioners and researchers observe and treat risk behavior among MSM.

Conclusion

This study addressed the ongoing public health challenge faced by the MSM population regarding sexual health and HIV/AIDS. From the beginning of the HIV/AIDS epidemic in the 1980s to the present day, the MSM population has been affected on a grand and disproportunate scale. Effective long-term treatments for HIV/AIDS have improved dramatically since the beginning of the epidemic and what was once a death sentence has become a more manageable and chronic disease. Yet a disease as complicated as HIV/AIDS is still a disease that needs better understanding and continued study. For example, the long-term effects of ART are unknown and taking the medication can be difficult to adhere to, not to mention the economic and health burdens. Similarly, use of PrEP on a daily basis by those engaging in sexual risk with an HIV negative status may have long term health repercussions yet to be known. Complacency has the potential to impact sexual risk behaviors, but further research is needed to more fully understand its impact on MSM and other populations. We know from this study and many others that substance use and addiction are strong predictors of risky sexual behaviors. It is critical to develop effective education and prevention strategies and programs targeting MSM relating to substance use and sexual risk behavior.

In addition to the preceding suggestions, more research must be done in non-traditional settings. The present study contributes to the bathhouse literature, yet limited research remains in this other nontraditional settings. In conclusion, further research regarding the transmission of HIV/AIDS and sexual risk behavior among underserved populations such as the MSM population has the potential to positively impact the community by reducing substance use, sexual risk behavior, and HIV transmission. This

study challenges preconceived notions based on race, age, HIV-status, sexual behaviors and the bathhouse itself. Continued research in this area is vital.

APPENDIX A

EXPLORE BASELINE RISK ASSESSMENT: ATTITUDE QUESTIONS

EXPLORE Baseline Risk Assessment – Attitude Questions

Using the scale on this card, please indicate how much you agree or disagree with each of the following statements: *Strongly Disagree, Somewhat Disagree, Slightly Disagree, Slightly Agree, Somewhat Agree, Strongly Agree.*

A2. Most gay men I meet only engage in safer sex practices.

A3. I have trouble letting a sex partner know that I want to have safer sex.

A4. I am able to avoid behavior that may put me at risk of HIV infection.

A5. My friends think it is important to use condoms.

A6. I can choose safer sex with a man I have sex with regularly.

A7. I find it difficult to have safer sex with a man I have very strong sexual feelings for.

A8. I find it difficult to have safer sex when high or drunk.

A9. I am less concerned about having anal sex without a condom now that new anti-HIV drug combination treatments are available.

A10. I never lose sight of what I consider safers sex, no matter what I am feeling.

A11. My friends use condoms.

A12. I feel confident that I will never slip from safer sex.

A13. Someone can talk me out of safer sex by persuading me they are HIV-negative.

A14. Most gay men are using condoms these days.

A15. If I ever did something risky, I am confident that I would go back to having safer sex right away.

A16. I find it difficult telling a sex partner not to do something I think is risky.

A17. I can avoid situation that I consider sexually risky.

A18. I am confident that I can have safer sex even if my partner really doesn't want to.

A19. I find it difficult telling a sex partner not to do something I think is risky.

A20. I can choose safer sex with a man I have never had sex with before.

A21. By taking the new drug combinations, an HIV-positive man decreases the chances that he will infect his partner with HIV.

A22. I can use condoms with any sexual partner I might have.

A23. My friends encourage me to practice safer sex.

APPENDIX B

EXPLORE BASELINE RISK ASSESSMENT:

SUBSTANCE USE AND SEX QUESTIONS

EXPLORE Baseline Risk Assessment – Substance Use and Sex Questions

The next set of questions is about alcohol and drug use. Please remember that this information will not be disclosed to any agency, program, or individual. All data are stricltly confidential and participants are protected by our Certificate of Confidentiality.

C1. In the last six months, about how often did you get high or have a few drinks immediately before or during sex? *Never, Occasionaly, Often, All the Time*

C2. In the last six months, about how often would you say that achohol or drug use made it more difficult for you to have safer sex? *Never, Occasionaly, Often, All the Time*

APPENDIX C

COMPLACENCY QUESTIONS

Complacency questions for MSM who were aware of HAART and who had never HIV tested or last tested HIV-negative, six U.S. cities, 1998-2000 (MacKellar et al., 2011).

HAART mitigates HIV/AIDS belief

1. If I became infected with HIV today, I probably wouldn't get AIDS given the combination drug treatments that are available

2. If I got infected with HIV today I could live a long and healthy life by taking the combination drug treatments that are available

3. HIV is now a manageable disease much like diabetes

4. If I became HIV infected today, the combination drug treatments would prevent me from getting AIDS for many years

HAART mitigates HIV susceptibility belief

5. I would be less likely to get infected by an HIV positive partner with undetectable virus than a HIV positive partner with detectable virus

6. If I were having anal sex with an HIV-positive man and his condom broke, it would be less risky for me if he had no detectable virus

7. If my partner had a low viral load it would be less risky for me to have receptive anal sex with him than if he had a high viral load

Reduced susceptibility concern

8. If I had an HIV positive sex partner who was taking the new combination drug treatments for HIV, I would be less worried about getting infected by him

9. If I had an HIV positive sex partner who had a low viral load, I would be less worried about getting infected by him

10. If my partner had a high viral load I would worry about having sex with him (reverse coded)

Reduced HIV/AIDS concern

11. Because of the combination drugs available for HIV, I am less concerned about becoming infected

12. Because of the combination drugs available for HIV, I'm not as concerned about slipping and having unsafe sex

13. With the good news about combination drugs for HIV, I worry less about having sex with partners that might be HIV-positive

14. I'm not as concerned about HIV infection now that there are combination drugs available for HIV

APPENDIX D

THE CHICAGO MSM HIV/AIDS COMPLACENCY SURVEY

The Chicago MSM HIV/AIDS Complacency Survey

Participants: The purpose of the following qustions is to understand how complacency may impact HIV/AIDS risk among men who have sex with men (MSM). We appreciate your openness and honesty. Please provide the best answeres possible. Because this is a confidential survey, please do not writh your name or any other identifying information on the survey document. You may choose to selectively participate or withdraw your participation at any time. We are grateful for your particpation and look forward to your responses.

The survey is divided into 4 sections as follows:

1. Demographic/personal information
2. Attitudes
3. Alcohol and substance use
4. Complacency

Interview Questions

Demographic/Personal Information

1. Age _____

2. Marital/Relationship Status
   Married/civil union/domestic partnership
   Partnered
   Single
   Divorced
   Widowed

3. Gender/Gender Identity
   Male
   Transgender-female to male
   Other, please specify _____

4. Sexual Orientation
   Gay
   Bisexual
   Queer
   Questioning
   Straight/heterosexual

Other, please specify _____

5. Race
   Black, Hispanic
   Black, Non-Hispanic
   White, Hispanic
   White, Non-Hispanic
   Native American/Alaskan
   Asian/Pacific Islander
   Multi-racial
   Other, please specify _____

6. HIV Status
   HIV Negative
   HIV Positive
   HIV Status Unknown

7. Level of Education
   Less than high school
   High school of GED
   Some college
   Completed college
   Advanced degree

8. Annual Salary
   Below $25K
   Between $26K-$50K
   Between $51K-$75K
   Between $76K-$100K
   Between $101K-$125K
   Greater than $125K

9. Your current zip code _____

10. Location where you completed this survey
    Steamworks
    TPAN
    Other

Attitude Questions

The following set of questions pertain to your attitudes and thoughts about your sexual health and behaviors. Regardless of your HIV status, please answer the following questions to the best of your ability.

(Strongly Disagree, Somewhat Diagree, Slightly Disagree, Slightly Agree, Somewhat Agree, Strongly Agree)

11. Most gay men I meet only engage in safer sex practices.
12. I have trouble letting a sex partner know that I want to have safer sex.
13. I am able to avoid behavior that may put me at risk of HIV infection.
14. My friends think it is important to use condoms.
15. I can choose safer sex with a man I have sex with regularly.
16. I find it difficult to have safer sex with a man I have very strong sexual feelings for.
17. I find it difficult to have safer sex when high or drunk.
18. I feel confident that I will never slip from safer sex.
19. Most gay men are using condoms these days.
20. I find it difficult telling a sex partner not to do something I think is risky.
21. I can avoid situation that I consider sexually risky.
22. I am confident that I can have safer sex even if my partner really doesn't want to.
23. I find it difficult telling a sex partner I won't have anal intercourse without a condom.
24. My friends encourage me to practice safer sex.

Alcohol and Substance Use

The next set of qustions will pertain to your use of alcohol and/or other drugs (including cocaine, crystal methamphetamine, marijuana, heroin, ecstacy, or ketamine) before or during sexual encounters.

(Never, Occasionally, Often, All the Time)

25. In the last six months, about how often did you get high or have a few drinks immediately before or during sex?

26. In the last six months, about how often would you say that achohol or drug use made it more difficutl for you to have safer sex?

Complacency (PrEP)

The next set of questions will relate to your understanding of anti-HIV medications to prevent HIV infection known as pre-exposure prophalaxis (PrEP). Regardless of your HIV status, please answer the following questions to the best of your ability.

(Yes, No)

27. Do you personally know any HIV-negative persons who have taken anti-HIV medications to prevent HIV infection?

28. Have you ever used anti-HIV medications to prevent HIV infection either before or after a high-risk sexual or drug use exposure?

(Very Likely, Somewhat Likely, Not at All Likely)

29. If you had unprotected receptive anal sex with an HIV-positive partner, how likely would you be to try anti-HIV medications to prevent HIV infection?

30. If you had a high-risk exposure and wanted to get anti-HIV medications to try to prevent HIV infection and cost was not an issue, do you think you would be able to easily obtain the drugs?

31. Easy access to PrEP will increase unsafe sex among people I know.

Complacency (ART)

The next set of questions will relate to your understanding of Antiretroviral Treatment (ART) which are medications used to treat HIV infection, lower viral load counts often to the undetectable level, and assist with increasing t-cell counts. Regardless of your HIV status, please answer the following questions to the best of your ability.

(Strongly Disagree, Disagree, Neither Disagree or Agree, Agree, Strongly Agree)

32. If I became infected with HIV today, I probably wouldn't get AIDS given the combination drug treatments that are available.

33. If I got infected with HIV today I could live a long and healthy life by taking the combination drug treatments that are available.

34. HIV is now a manageable disease much like diabetes.

35. If I became infected with HIV today, the combination drug treatments would prevent me from getting AIDS for many years.

36. I would be less likely to get infected by an HIV positive partner with undetectable virus than an HIV positive partner with detectable virus.

37. If I were having anal sex with an HIV-positive man and the condom broke, it would be less risky for me if he had an undetectable virus.

38. If my partner had a low viral load, it would be less risky for me to have anal sex with him, than if he had a high viral load.

39. If I had an HIV positive sex partner who was taking the new combination drug treatments for HIV, I would be less worried about getting infected by him.

40. If I had an HIV positive sex partner who had a low viral load, I would be less worried about getting infected by him.

41. If my partner had a high viral load I would worry about having sex with him.

42. Because of the combination drugs available for HIV, I am less concerned about becoming infected.

43. Because of the combination drugs available for HIV, I'm not as concerned about slipping and having unsafe sex.

44. With the good news about combination drugs for HIV, I worry less about having sex with partners that might be HIV positive.

45. I'm not as concerned about HIV infection now that there are combination drugs available for HIV.

46. Please share any thoughts, comments or feelings about taking this survey in the box below:

Thank you for taking the time to share your valuable experiences with us as a participant in our study! Please contact Dr. Michael Dentato at mdentato@luc.edu with any follow up questions or concerns.

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VITA

Dr. Michael Lloyd, LSW, CADC completed his Bachelor of Arts Degree from DePaul University in 2000, and his Master's Degree in Social Work and Certification for Alcohol and Drug Counseling (CADC) at the School of Social Work at Loyola University Chicago in 2012. At the time of his graduate studies, Dr. Lloyd also worked as a research fellow for Dr. Maria Vidal de Haymes in the Institute on Migration and International Studies in the School of Social Work at Loyola University Chicago from 2010-2012. While completing his doctoral studies at the School of Social Work, Loyola University Chicago, Dr. Lloyd was a research assistant for Dr. Michael Dentato, focusing on LGBTQ health, health disparities, practice and treatment issues from 2012-2014. Dr. Lloyd's current areas of interest, research and scholarship include HIV/AIDS, substance use and addiction disorders, LGBTQ issues, and co-occurring disorders.

Dr. Lloyd is presently a Clinical Instructor and Interim CADC Program Director at the School of Social Work, Loyola University Chicago, where he teaches in the foundation and advanced social work curriculum, as well as substance use specialization courses.

Dr. Lloyd presently serves as a mental health therapist at Rincon Family Services in Chicago, where he works with clients with co-occurring disorders, homeless LGBTQ youth, as well as clients in the USPO system. Prior to this, he worked as a social worker at Chicago Lakeshore Hospital in the inpatient and outpatient mental health departments.

Dr. Lloyd has been published in several peer-reviewed journals and books including: *The Routledge Handbook on Poverty in the United States; The Journal of Poverty;* and *The Journal of International Social Work Education.* Dr. Lloyd's juried local, state, national and international conference presentations include: The Annual Program Meeting (APM) of The Council on Social Work Education (CSWE); The Chicago LGBTQ Health and Wellness Conference; The NASW-IL State Wide Conference; and The U.S. Global Context, Local Solutions International Social Work Conference in Minneapolis, MN.