NAVIGATING SEXUALITY IN THE STIGMATIZED CONTEXT OF HIV/AIDS:

A STUDY OF HIV-POSITIVE MEN AND WOMEN IN NEW YORK CITY

by

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Abstract

NAVIGATING SEXUALITY IN THE STIGMATIZED CONTEXT OF HIV/AIDS: A STUDY OF HIV-POSITIVE MEN AND WOMEN IN NEW YORK CITY

by

Julia C. Tomassilli

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The current research attempts to understand of the relationship between HIV stigma and sexuality for HIV-positive people. In order to examine this relationship, I used the Comprehensive Process Model of Concealable Stigma (Pachankis, 2007) to conceptually guide analyses. Further, this research examined the role of sexuality in the relationship between HIV stigma and psychological well-being. This study is a secondary data analysis of the quantitative and qualitative data of 60 HIV-positive, sexually active individuals living in the New York City area. Participants were stratified by gender and sexual orientation resulting in a sample of 20 heterosexual men, 20 men who have sex with men (MSM), and 20 women (regardless of sexual orientation).

Internalized HIV stigma (i.e., HIV stigma which emanates from the HIV-positive individual) had the strongest negative impact on psychological, but not behavioral, aspects of sexuality. These aspects of psychosexual well-being (e.g., rumination about HIV during sexual behavior, sexual esteem) were found to mediate the relationship between internalized HIV stigma and psychological well-being. In other words, internalized stigma affected HIV-positive individuals' thoughts and feelings about their own sexuality, and these thoughts and feelings acted in turn to negatively impact depression, perceived stress, and life-satisfaction. Psychosexual well-being mediated the

relationship between HIV stigma and psychological well-being for all gender/sexual orientation groups. However, the particular psychological aspects of sexuality which compose the mediating mechanism may be different for heterosexual men, MSM, and women.

The findings of this study illustrate the important role of internalized HIV stigma in HIV-positive people's thoughts and feelings about their sexual selves, and how these psychological aspects of sexuality impact the relationship between HIV stigma and general well-being. Such findings have important practical implications for both researchers and mental health practitioners invested in the mental health of HIV-positive individuals.

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Chapter 1:

Background and Introduction

Stigma, as defined by Goffman (1963), is the linking of social judgments about a characteristic to an individual who possesses (or is believed to possess) that characteristic. This linkage results in a change in social identity, i.e., how that individual is perceived by others. Goffman (1963) describes this change in identity as discrediting in nature, reducing the individual "from a whole or usual person to a tainted, discounted one" (p. 3). Almost twenty-five years after the first case reports, many individuals living with HIV continue to experience a great deal of stigma (Berger, Ferrans, & Lashley, 2001; Crandall & Coleman, 1992; Laryea & Gien, 1993). One of the most significant detrimental effects of HIV stigma on the lives of HIV-positive people is the disruption of their relationships. Nearly all HIV-positive individuals report that their HIV status has caused rejection by at least one family member, friend, or spouse/lover (Laryea & Gien, 1993; Herek, 1999; Weitz, 1990).

HIV stigma is a multifaceted concept, involving negative social judgments about HIV and therefore individuals infected with it. Stigma generally, and HIV stigma specifically, can take many forms including, but not limited to, negative treatment and discrimination, violence, negative attitudes, hatred, rejection, moral condemnation, dehumanization, being labeled as "other" or "different," stereotypes, and pity. In effect, HIV stigma means HIV-positive individuals experience being perceived as inferior to HIV-negative individuals. HIV stigma, like any other stigma, can be experienced on three levels: the *interpersonal*, the *intrapersonal*, and the *internalized*.

The first level is the *interpersonal*, in which HIV stigma is experienced through

an interaction between at least two people (e.g., discrimination). Interpersonal experiences of HIV stigma can be either direct or indirect. Interpersonal HIV stigma is experienced *directly* when the HIV-positive person him or herself is the target of a negative interaction (e.g. an individual is denied medical treatment because of HIV-status). Interpersonal stigma is experienced *indirectly* when the HIV-positive individual observes or is aware of a stigmatizing interaction taking place for another HIV-positive person (e.g., knowing an HIV-positive friend who was denied housing because of their HIV status), or when negative judgments about HIV-positive people are stated with no individual target (e.g., hearing someone say HIV-positive people should be quarantined).

The second level is the *intrapersonal* and results from experiences of interpersonal stigma. Intrapersonal stigma occurs when an HIV-positive individual's knowledge and/or experience of the stigmatizing beliefs and behaviors of others impacts his or her own thoughts, feelings, beliefs, and behaviors (e.g., feeling angry, believing society doesn't care for HIV-positive people, or choosing to only make friends with other HIV-positive people). Further, the experience of intrapersonal HIV stigma also includes *perceived* stigma, where experiences of interpersonal HIV stigma are so widespread that even without specific stigmatizing experiences an HIV-positive individual perceives an environment of stigmatization and a general sense of being stigmatized.

Finally, HIV stigma may be experienced at the *internalized* level, in which HIV stigma emanates directly from the HIV-positive individual him or herself. Internalized stigma is a direct result of the other two levels, as it indicates that the HIV-positive person has incorporated the negative social judgments about HIV-positive people, and therefore his- or herself, into his or her own belief system and self-concept.

Research has demonstrated that HIV stigma (at any of these levels) has implications for the psychological well-being/mental health, physical health, and behavior of infected individuals. It is well established that HIV stigma is associated with negative consequences such as: depression, anxiety, decreased social support, delayed treatment, physical health symptoms, and medication non-adherence (e.g., Berger, Ferrans, & Lashley, 2001; Chesney & Smith, 1999; Crandall & Coleman, 1992; Heckman, 2003; Laryea & Gien, 1993; Lee, Kochman, & Sikkema, 2002; Simbayi, Kalichman, Strebel, Cloete, Henda, & Mqeketo, 2007; Swendeman, Rotheram-Borus, Comulada, Weiss, & Ramos, 2006; Vanable, Carey, Blair, & Littlewood, 2006). However, there is a dearth of empirical literature on how HIV stigma impacts HIV-positive persons' sexuality, defined as individuals' interpersonal romantic and sexual interactions, as well as their intrapersonal romantic and sexual thoughts, feelings, and behaviors. I posit that HIV stigma is a special case of stigma because it has a unique relationship with sexuality, allowing HIV stigma to significantly and negatively impact many areas of HIV-positive individuals' sexuality. This dissertation is designed to explore the ways in which HIV-positive individuals' sexuality is negatively affected by HIV stigma. I will do so by drawing on the Comprehensive Process Model of Concealable Stigma (Pachankis, 2007) as HIV is a *concealable stigma* (i.e., a stigma not readily apparent to others unlike race or a physical disability).

In this chapter, I will first cover why it is that HIV has become such a highly stigmatized disease today and what it means for HIV to be a concealable stigma. Then I will describe how HIV is a special case of stigma because of the unique relationship HIV has with sexuality. Finally, I will use the Comprehensive Process Model of Concealable

Stigma (Pachankis, 2007) to describe how sexuality related situations can negatively impact the sexuality of HIV-positive persons, and what sexuality related consequences may be expected as a result.

HIV Stigma

There are three types of characteristics which result in stigma and the discrediting of an individual's social identity (Goffman, 1963). One possible explanation for the intense stigmatization HIV-positive people experience is the fact that HIV is an example of at least two, and possibly all three, of these types of stigmatizing characteristics described by Goffman (1963). The first type of stigmatizing characteristics are *abominations of the body*, which are characteristics associated with physical appearance, function, and health. As an illness, HIV is an abomination of the body. Many illnesses are stigmatized, but the root and severity of their stigmatization varies. For example, the unpredictable and uncontrollable nature of epileptic fits offends societal values (Ablon, 2002) resulting in stigmatization of those afflicted. In comparison, the fact that HIV is a contagious and fatal disease results in HIV stigma (Herek, 1999). People logically wish to avoid becoming infected with fatal diseases, and for most contagious diseases people therefore wish to avoid contact with those who carry them. Sontag (1977) theorizes that diseases become metaphors for the deepest fears of humanity (e.g., corruption, decay, weakness) especially when the disease is untreatable and its origins are unclear. Therefore, even when diseases become understood and treatable, they are representations of contagious moral inferiority (Sontag, 1977). In this way, stigmatization overrides scientific knowledge and common sense about what diseases are and how they are transmitted by linking moral judgments associated with disease to people (e.g., unwanted,

polluted, weak, abomination).

The second type of stigmatizing characteristics are called *blemishes of individual character* and are associated with "weak will" or behavior deemed immoral, inappropriate, or unacceptable by society (Goffman, 1963). Contracting HIV can be seen as resulting from a blemish of individual character as many behaviors associated with HIV transmission are stigmatized themselves including: male same-sex sexual intercourse, sex work, sexual intercourse with multiple partners, and intravenous drug use (Herek, 1999; Herek & Glunt, 1988). This stigmatized attribute is amplified because the stigmatized behaviors are seen as "voluntary" and "avoidable" (Swendeman, Rotheram-Borus, Comulada, Weiss, & Ramos, 2006). Returning to Sontag's (1977) theory of disease as a metaphor for moral contamination, HIV has been so linked to negative moral judgments about male same-sex sexuality that the root, quality, and severity of HIV stigma is, in part, a direct result of sexual prejudice (Herek, 1999; Herek & Capitanio, 1999; Herek & Glunt, 1988).

In the early days of HIV this link was very clear in the eyes of the public. In a 1987 article titled "In Houston, 'AIDS is spelled G-A-Y'" the *San Francisco Chronicle* quoted a Houston mayoral candidate as saying that the way to solve the city's burgeoning HIV problem was to "shoot the queers" (as cited in Herek & Glunt, 1988, p. 888). In one study, an HIV-positive participant actually recalled reading this quote and being frightened by the dual stigmatization and threat of extermination (Laryea & Gien, 1993). Also in 1987, *New York Post* political columnist Patrick Buchanan wrote an article titled "AIDS and Moral Bankruptcy" in which he said, "There is one, only one, cause of the AIDS crisis--the willful refusal of homosexuals to cease indulging in the immoral,

unnatural, unsanitary, unhealthy, and suicidal practice of anal intercourse" (as cited in Herek & Glunt, 1988, p.888). For many then, HIV means gay, gay means moral contamination, and the presence of HIV and male same-sex sexuality is a public danger.

Goffman (1963) called the final type of stigmatizing characteristics *tribal stigma,* and specifically identified characteristics passed through families and experienced by all members. Recently, tribal stigma has been used in a more expansive manner, incorporating characteristics associated with membership in groups devalued by society (Crandall & Coleman, 1992). HIV-positive individuals may be seen as having tribal stigma because, in the minds of others, their HIV status reinforces their association with groups already devalued by society, such as gay and bisexual men, and intravenous drug users. There is some evidence that people with negative attitudes towards male same-sex sexuality have the most negative attitudes towards HIV-positive people, regardless of the vector of transmission (Herek & Capitanio, 1999; Pryor, Reeder, & McManus, 1991; Pryor, Reeder, Vinacco, & Kott, 1989). Herek and colleagues term this social linkage of gay and bisexual male identities directly to HIV "symbolic stigma" (Herek & Capitanio, 1999; Herek, Widaman, & Capitanio, 2005).

A significant minority of heterosexuals have linked risk for HIV directly to a gay or bisexual identity *regardless of risk behavior or exposure to the virus* (Herek & Capitanio, 1999; Herek, Widaman, & Capitanio, 2005). Three national telephone surveys of heterosexual adults in the United States were conducted in 1991, 1997, and 1999 (Herek & Capitanio, 1999; Herek, Widaman, & Capitanio, 2005). All three surveys asked participants how likely an HIV-negative gay man was to contract HIV if he had sex with another HIV-negative man one time. The question was asked twice to assess for degree

of perceived risk with and without condom use. While this act has no actual risk of HIV transmission, 19% of the participants in the 1991 survey, 24% in the 1997 survey, and 27% in the 1999 survey believed the man was "almost sure to" or had "a fairly strong chance of" contracting HIV when the men used a condom. Those percentages increased to 47%, 45%, and 39%, respectively, if the men did not use a condom. The 1999 survey also illustrated that these numbers are not solely due to ignorance regarding HIV transmission by the addition of two similar questions involving an uninfected heterosexual couple. While an unfortunate percentage of participants were ignorant about HIV-transmission overall, only 17% and 29% thought the heterosexual couple was at risk if the couple did or did not use condoms, respectively. The fact that more participants believed the gay man's chances of getting HIV were so high indicates a direct link between male same-sex sexuality and HIV in these participants' minds.

HIV as a Concealable Stigma.

Many stigmatizing characteristics are easily identifiable all or much of the time, such as facial deformities and race. It is easy to see how stigma can affect individuals with such visible characteristics through their social interactions and negatively impact their lives. However, not all stigmatizing characteristics are visible to others, and possessing a stigmatizing characteristic of this type is called *concealable stigma*. HIV is generally considered a concealable stigma, as being HIV-positive is usually not visible to others. Highly visible symptoms and medication side effects, such as wasting and lipodystrophy, are less common today than 15 years ago. While many HIV-positive people choose to disclose their status to their friends and family and experience an outpouring of support, others experience a range of negative reactions. These include:

being pitied; being rejected and ostracized; being treated as diseased and untouchable; being told HIV is what they deserve; and having others threaten to or actually disclose their status without permission (Lang, 1991; Laryea & Gien, 1993; Palmer & Bor, 2001; Siegel & Krauss, 1991; Weitz, 1990). In order to avoid these negative reactions, many people choose to keep their HIV status a secret, even from their closest friends and family (Laryea & Gien, 1993; Palmer & Bor, 2001; Siegel & Krauss, 1991; Weitz, 1990). Even when the illness reaches a level where people are visibly sick, some HIV-positive people continue to hide the source of their illness, some telling others that they have a less stigmatizing disease such as cancer (Weitz, 1990).

We might suspect that when HIV is a concealed stigma the negative consequences of stigmatization would be reduced compared to those whose HIV status is visible or known, because interpersonal stigmatization is minimized to the extent that the individual is able to "pass" (i.e., successfully hide their HIV status). However, there is evidence that that the consequences of stigma are actually *amplified* in cases of concealable stigma (Goffman, 1963; Jones et al., 1984; Larson & Chastain, 1990). People with concealable stigma experience social interactions in different ways than people whose stigma are immediately visible. In all of their interactions, those with visible stigmatizing characteristics experience what Goffman (1963) describes as an immediate discrediting of social identity. In contrast, HIV-positive individuals whose HIV status is not known are burdened by the constant *threat* of being discredited (Goffman, 1963). This threat forces them to continually make choices about whether, when, and to whom to reveal their stigmatized HIV status (Larson & Chastain, 1990; Miall, 1986). As such, although HIV-positive people whose status is concealed do not face immediate negative reactions

from others, they are burdened with stressors of hiding. These burdens include secrecy, fear of unintended disclosure, isolation from similarly stigmatized others, and experiences of detachment from the self (Frable, Platt, & Hoey, 1998; Lee & Craft, 2002; Miall, 1986; Pachankis, 2007). Without the ability to pass through society undetected, the visibly stigmatized experience immediate negative consequences as a result of their stigma but avoid the burdens associated with stigma concealment.

HIV as a Special Case of Stigma.

Of particular interest for this dissertation is the way in which HIV is a special case of stigma because of its unique relationship with sexuality. Sexual activity is often a time when people can focus on feeling good physically and emotionally, and can provide a relief from stress and anxiety in their lives (Meston & Buss, 2007). However, for HIV-positive people *sexuality itself may evoke the stigmatized identity*. This is because HIV is indelibly linked with sexuality in the following ways. First, HIV is linked to sexuality because many people contracted the virus through sexual contact and there is the possibility that they may spread the virus this way. Second, this link exists on a social symbolic level, especially for gay and bisexual men, as HIV is symbolically linked to sexual identity (Herek & Capitanio, 1999; Herek, Widaman, & Capitanio, 2005).

Third, through symbolic stigma, the sexuality and sexual behaviors of all HIV-positive people are stigmatized, regardless of their actual engagement in socially undesirable sexual behaviors, because HIV can "stigmatize those traits and behaviors that are deemed to be undesirable and that are also associated with the epidemic" (Swendeman, Rotheram-Borus, Comulada, Weiss, & Ramos, 2006, p. 502). Thus, whether or not sex was involved in contracting the virus and whether or not a person

engages in sexual risk behavior, their sexual behaviors are socially perceived as harmful and immoral just because they have HIV. Fourth, the sexuality of people who are seen as sick or infirm is often ignored as they are stereotyped as being asexual because their possible physical and/or mental impairments may not conform to notions of normal sexuality (Cook, 2000; Fitz-Gerald & Fitz-Gerald, 1979). This dismissal of these stigmatized individuals' sexuality extends even to health care professionals who often neglect the sexual rights and needs their patients may have (Herson Hart, Gordon, & Rintala, 1999; McLaughlin & Cregan, 2005). This is particularly true for HIV-positive people who may feel as though they are expected to cease being sexual or limit themselves to HIV-positive sexual partners because of sexual transmission risk (van Der Straten, Vernon, Knight, Gomez, & Padian, 1998). These behavioral and symbolic links to sexuality make HIV distinctive in stigmatization.

HIV, Stigma, and Sexuality

Having described why HIV is so highly stigmatized, what it means for HIV to be a concealable stigma, and the unique relationship HIV, and therefore HIV stigma, has with sexuality, this next section will review how sexuality related situations are particularly likely to invoke negative sexuality related consequences. Using the Comprehensive Process Model of Concealable Stigma (Pachankis, 2007), I will discuss preliminary evidence supporting the negative impact that HIV stigma has on sexuality in four areas: cognition, affect, behavior, and self-evaluation.

As outlined in the Comprehensive Process Model of Concealable Stigma, both theory and research on stigma indicate that situations with the largest negative impact on individuals with concealable stigma like HIV are those in which: (a) a stigma or a

stigmatized identity is salient; (b) the threat of others discovering an individual's stigmatized status is high; and (c) the interpersonal consequences of stigma (e.g. discrimination, verbal abuse, rejection, or violence) are high (Pachankis, 2007). For HIV-positive individuals, sexuality related situations are likely to meet all three criteria. A range of sexuality related situations can serve as triggers for negative, sexuality related consequences. While sexuality related situations in which a persons' HIV status is hidden are likely to contain all three situational triggers, HIV status does not need to be hidden from a sexual or romantic partner, nor do sexuality related situations need to involve sexual behavior or the presence of a romantic or sexual partner in order to contain situational triggers. Below, the three situational triggers are described first, followed by a discussion of their consequences, all in relation to the sexuality of HIV-positive people. For each situational trigger, examples of sexuality related situations that involve sexual activity and those that do not will be discussed.

Sexuality related situational triggers of negative consequences for HIV-positive people. The first trigger is a situation in which one's stigmatized identity is made particularly salient (Pachankis, 2007). Because of the link between HIV stigma and sexuality, situations that involve sexual activity are highly stigma salient. For people engaged in sexual activity with discordant partners, especially partners that do not know the HIV-positive individual's status, the sexuality related situation is that much more salient because HIV can be transmitted through sexual contact. A sexuality related situation is particularly salient when the possible or current partner's status is negative or unknown, not only because the partner may be at risk for contracting HIV, but because the person with HIV is then alone in his or her stigmatization. Stigma salience is

particularly easy to trigger because any situation which hints at sexuality and any conversation that discusses sexuality is relevant to the HIV-positive persons' stigmatization. These situations include: lighthearted discussions about sexuality with friends, going to bed every night with a spouse, meeting someone and developing a crush, or being out at a bar where others are engaged in courtship.

A second trigger for individuals with concealed stigma is a situation in which their concealed stigma is in danger of being revealed (Pachankis, 2007). Threat of discovery is high in situations where one's identity is under scrutiny or question. Another situation in which there is a high risk of discovery is one in which an individual must discuss or answer questions relating to their concealed stigma. In a situation in which individuals are directly questioned about possessing a stigma, they must decide whether to continue hiding and experience the intrapersonal consequences that result, or reveal their stigmatized characteristic and experience the resulting interpersonal consequences. Sexuality related situations are high in threat of discovery as conversations and questions about an HIV-positive person's sexuality, and possibly HIV status, are likely to occur. Situations in which and HIV-positive person is engaging in sexual activity with a partner who does not know their status are particularly high in discovery risk. Sexual activity often involves discussions about sexually transmitted infections or direct questioning about HIV status, as well as negotiations for condom use, which HIV-positive people indicate is a 'tell' of their HIV status (Krishnan et al., 2007). Many HIV-positive people find that just attempting to initiate or negotiate condom use brings up questions about their HIV status, forcing them to disclose their status and potentially lose a sexual opportunity, or lie and potentially engage in unprotected sex with an HIV-negative

partner (Krishnan et al., 2007). In regards to sexuality related situations that do not directly involve sexual activity, discussions with friends and family concerning sexuality may risk direct questioning and discovery.

The third trigger involves situations in which the *consequences* of being discovered would be high, even when the threat of discovery is minimal. As discussed above, many individuals whose stigma is known experience discrimination to varying degrees. For those with concealable stigma, knowing discrimination is possible can elicit negative consequences. For an HIV-positive person, sexuality related situations may involve high consequences if the individual's HIV status were revealed. Many HIV-positive people report not disclosing their status to their partners for fear of the partners' reaction. While it is possible that a partner may fully accept the HIV-positive individual, there is also the possibility that they could react in a myriad of negative ways from blame to rejection and abandonment (including being forced out of their home) to physical assault (Lévy et al., 1999; Maman et al., 2003; North & Rothenberg, 1993; Parsons, VanOra, Missildine, Purcell, & Gómez, 2004; Siegel & Krauss, 1991; Weitz, 1990). Sexuality related situations need not involve a sexual activity to be high in consequences if discovered. People with whom an HIV-positive individual might converse with about sexuality may be just as likely to react in highly destructive ways, as noted by the large number of HIV-positive people who have reported experiences of discrimination from their friends and family (Gostin & Weber, 1998; Herek, 1999; Laryea & Gien, 1993; Weitz, 1990).

According to the model, these three situations may trigger cognitive, affective, behavioral, and self-evaluative consequences. Although there is scant research on the

issue, existing theory and research would suggest that sexuality related triggers would have negative consequences on psychological, physiological, and interpersonal aspects of sexuality. Below is a description of cognitive, affective, behavioral, and self-evaluative consequences followed by the ways in which HIV-positive people may experience them in regards to sexuality.

Sexuality related cognitive consequences for HIV-positive people. There are three *cognitive consequences* of concealing a stigma directly triggered by the situations described above (Pachankis, 2007): preoccupation, suppression, and intrusive thoughts; vigilance; and suspiciousness. Each of the three situational triggers reminds an individual of their concealed stigma, causing preoccupation with the stigma and efforts to hide it, and because the individual does not wish to let any hint of their stigmatization slip they suppress thoughts about it. However, thought suppression can actually lead to intrusive thoughts, keeping the individual's stigmatization at the forefront of their mind (Lane & Wegner, 1995; Smart & Wegner, 1999). According to Lane and Wegner (1995) intrusive thoughts during a conversation actually put the topic an individual wishes to conceal into a category of possible conversation topics and therefore risks accidental disclosure. The next cognitive consequence is increased vigilance for cues that one's stigma has been discovered and involves individuals with concealed stigma becoming hyper vigilant to the possibility of discovery. Finally, increased suspiciousness and paranoia may be another cognitive consequence of concealing stigma.

While there is little research on the cognitive consequences of concealing HIV in regards to sexuality, it is easy to see how sexuality related situations could trigger the cognitive consequences of preoccupation, suppression, and intrusive thoughts, vigilance,

and suspiciousness, all of which may interfere with sexuality and sexual behavior. Cognitive consequences all consume a great deal of cognitive resources and can negatively affect social behavior so as to interfere with the forming and maintenance of relationships. For example, for an HIV-positive man who is engaged in sexual behavior, the salience of sexuality in the situation brings his HIV status to the forefront in his mind. While he decides he does not want to disclose his status to his partner, the constant presence of HIV related thoughts in his mind risks accidental disclosure. Therefore he becomes preoccupied with not disclosing and vigilant for cues from his partner that he/she may know his status. He may in turn try to suppress thoughts about his HIV status in order to avoid preoccupation, but this only causes more intrusive thoughts about HIV. All of this cognitive effort interferes with his ability to be in the moment with his partner and negatively affects his interactions with his partner, as well as his sexual desire and functioning. In one study, higher levels of HIV stigma were associated with distrust of others (Crandall & Coleman, 1992), and in a qualitative study, participants reported an increase in suspiciousness of others as a result of their HIV stigmatization (Laryea & Gien, 1993). This distrust of others and suspiciousness may result in social isolation, interfering with current and possible romantic and sexual relationships.

Sexuality related affective and behavioral consequences for HIV-positive people. The second and third type of consequences individuals with concealable stigma face are *affective* and *behavioral* (Pachankis, 2007). Like cognitive consequences, affective and behavioral consequences are triggered by the three situations discussed above. Here, both of these consequences will be described separately, and then the sexuality related research on HIV-positive individuals of both will be covered, as these

consequences are hard to tease apart in relation to sexuality.

Affective consequences involve the way a person with concealable stigma feels emotionally. Inherent to hiding something about oneself is shame, as the need to hide something must mean that it is not acceptable for that thing to exist (Derlega, Metts, Petronipo, & Margulis, 1993; Kelly, 2002). In the context of shame, concealing stigma may result in demoralization or problematic self-perception. Individuals who conceal information about themselves rate this information and themselves more negatively than those who do not conceal (Fishbein & Laird, 1979; Kelly, 2002). Concealing information from people can also cause guilt and anxiety in an individual's close relationships. Research has found that those with a variety of concealable stigmas report higher anxiety, depression, and hostility than those with visible stigmas (Frable, Platt, & Hoey, 1998; Major & Gramzow, 1999).

Behavioral consequences are actions resulting from decisions about whether, when, and from whom to hide their stigmatization. There are four behavioral consequences of concealed stigma: impression management and self-monitoring; increased importance of interpersonal feedback on behavior; maladaptive behavior in close relationships; and social avoidance and isolation. A variety of individuals with concealable stigma report engaging in impression management behaviors, including infertile women (e.g., Miall, 1986), sexual minorities (e.g., Cain, 1991; Pachankis & Godfried, 2006), and people with mental illness (e.g., Herman, 1993; Link, Mirotznik, & Cullen, 1991). People with visible stigma engage in these behaviors to monitor and manage the impression their stigma makes on others, but those with concealed stigma do so to keep their stigma hidden and counteract any indication that they are not "normal"

and this requires a great deal of energy (Goffman, 1963).

The increased importance of interpersonal feedback on behavior is the second behavioral consequence of concealed stigma (Pachankis, 2007). Keeping a stigma hidden reduces the amount of feedback one receives about the self, limiting the amount of information one uses to form evaluations of oneself. Therefore when one does disclose their stigma the type of feedback they receive is very important in informing future decision making about disclosure and engaging in interpersonal interaction. Compared to individuals without stigma and with visible stigma, individuals with concealable stigma who experience negative feedback are more likely to refrain from further disclosure and interaction (McKenna & Bargh, 1998). This behavioral consequence directly informs the next – maladaptive behavior in close relationships. Instead of risking negative feedback, individuals may choose not to disclose their concealed stigma to people with whom they are in close relationships. Non-disclosure can hinder the development and maintenance of close relationships (e.g., Cozby, 1972; Halverson & Shore, 1969) as the individual may act in ways that signal their distrust or concealment to their friends, family, and romantic partners. For the people who engage in this behavioral consequence, these relationships become a source of stress, guilt, and anxiety (Harvey & Wenzel, 2002; Lee & Craft, 2002).

Finally, instead of risking negative feedback from disclosure or experiencing the triggers of negative consequences of concealing stigma, it is common for individuals with all types of concealable stigma to engage in social avoidance and isolation (e.g., Corrigan & Mathews, 2003; Croteau, 1996; Goffman, 1963; Lee & Craft, 2002; Link, Mirotznik, & Cullen, 1991). This behavioral consequence can have many negative effects, as it

severely reduces or eliminates social support, an important aspect of people's lives and their resilience in the face of hardships including stigmatization (Frable, Platt, & Hoey, 1998; Goldfried & Goldfried, 2001; Hershberger & D'Augelli, 1995; Safren & Pantalone, 2006). Avoidance and isolation may also cause people to avoid attaining needed health and mental health treatment (Jesse, Dolbier, & Blanchard, 2008; Jones et al., 1984). Even when individuals with concealable stigma do not actively avoid socialization, they may experience social isolation from similarly stigmatized others and miss out on the important social support these others offer (e.g., Frable, Platt, & Hoey, 1998).

Compared to research on cognitive consequences, there is more research on the affective and behavioral consequences of HIV as a concealed stigma in relation to sexuality. Within research sexuality related affect and behavior are often intertwined. Sexual behavior and functioning are often seen as physical responses to or evidence of an affective state, and conversely, affective states are often contextualized in terms of response behavior. For some HIV-positive people, being in a relationship can be a source of stress instead of strength and support (Harvey & Wenzel, 2002). In one study, participants who did not recently disclose to sex partners experienced more distress measured as psychotism, somatic anxiety, hostility, and phobic anxiety (Kalichman & Nachimson, 1999). In another study, half of participants who had disclosed to their partners had done so spontaneously, suddenly unable to bear the psychological distress of hiding (Lévy et al., 1999). Yet this disclosure did not necessarily have positive outcomes as participants reported anxiety, unease, and sadness afterwards (Lévy et al., 1999). These studies indicate that hiding HIV in romantic and sexual relationships creates an interpersonal environment fraught with affective consequences for HIV-positive

individuals and therefore the quality and health of their relationships.

Coping with HIV stigma can lead to many complex and conflicting feelings about sex and relationships, and these feelings can lead to psychological and physiological effects on sexuality (van Der Straten, Vernon, Knight, Gomez, & Padian, 1998). When first diagnosed, many HIV-positive people react by abandoning romance and sexuality (van Der Straten, Vernon, Knight, Gomez, & Padian, 1998). For some this decision is intentional, while for others it may feel as though their sexuality or sexual desire has just slipped away (Palmer & Bor, 2001). Many HIV-positive people speak about a reduction in sexual behavior generally, and sexual risk specifically, as a positive implication of their HIV status and a change in their desire to take care of themselves and protect others (Krishnan et al., 2007; Laryea & Gien, 1993; Sobo, 1997). However, many others are unhappy about their abstinence, low frequency of sexual activity, or decreased sex drive (Lambert, Keegan, & Petrak, 2005; Lang, 1993). In a study of HIV-positive women, 82% cited their HIV diagnosis as the source of their reduction in sexual enjoyment (Lambert, Keegan, & Petrak, 2005).

For some, the loss of sexual desire may be so severe and distressing it is a diagnosable sexual dysfunction (Brown, Kendall, & Ledsky, 1995; Lambert, Keegan, & Petrak, 2005; Trotta et al., 2008). While there is some preliminary evidence that dysfunction is associated with suboptimal adherence (Trotta et al., 2008), there is conflicting evidence over whether dysfunction is associated with HIV disease severity, in terms of physical symptoms, viral load, and CD4 (Brown, Kendall, & Ledsky, 1995; Lambert, Keegan, & Petrak, 2005; Trotta et al., 2008). However, measures of depression appear to be correlated with dysfunction (Lambert, Keegan, & Petrak, 2005), which is in

keeping with the sexual difficulties of person's experiencing other illnesses (e.g., epilepsy; Harden, 2005). Whether or not sexual desire and function are negatively impacted at a clinical level, any reduction in sexual satisfaction as a result of HIV impacts not only the individual but also their partner(s).

HIV-positive people may give up engaging in sexual or romantic relationships altogether, or may abstain from sexual behavior within a romantic relationship. Refraining from romantic and sexual relationships is done for a variety of reasons including avoidance of deciding between either disclosure and the negative reactions that may result, or lying and experiencing the possible negative affective consequences of doing so (Laryea & Gien, 1993). People may also be so afraid of transmitting the virus even when they engage in safe sex that they refrain from sexual activity altogether, even when partners know their status (Laryea & Gien, 1993; Palmer & Bor, 2001; Stevens & Galvao, 2007; van Der Straten, Vernon, Knight, Gomez, & Padian, 1998). Even when an individual not in a relationship wants to engage in sexual activity, self- and other-imposed isolation affects sexuality by limiting contact with possible sexual and romantic partners. Similar to the reactions of HIV-positive people, in a study of people with genital herpes, Lee and Craft (2002) found that all of their participants reported varying degrees of withdrawal from romantic or sexual relationships to avoid discussions of genital herpes. However the change happens, many people experience HIV as a loss of their sexuality; they mourn their previous sexual life and possibly the loss of a piece of themselves (van Der Straten, Vernon, Knight, Gomez, & Padian, 1998). For some HIV-positive people in relationships, the partner may interpret loss of sexuality as a form of rejection, and this causes tension in the relationship (Palmer & Bor, 2001). Sexuality is

an important part of romantic relationships and refraining from engaging in sex, whether purposefully or not, can damage the bond that a couple has, or impede the development of such a bond.

Partnered HIV-positive people may also engage in non-sexual maladaptive behavior within their relationship, threatening relationship stability and possibly leading to the end of a relationship. As noted above, self-disclosure is an important part of developing and maintaining close relationships and the act of non-disclosure has many negative affective consequences for the individual and therefore the relationship. Another important factor in maintaining a relationship is social support from others (Haas, 2002; Harvey & Wenzel, 2002). Some HIV-positive people may experience lowered social support as a result of stigmatization. When HIV status is concealed from friends and family, even people who do not withdraw from social relationships cannot receive the same type of support needed to help them successfully maintain their relationships. They are not able to fully discuss the impact HIV has on their relationship and any discussion of relationships or sexuality may only trigger negative consequences of concealing, including, for example, intrusive thoughts about the relationship which risks unwanted disclosure of HIV status.

Another important sexual behavior possibly affected by HIV- stigma is unprotected sex. There is conflicting evidence concerning the relationship of stigma, disclosure, and unprotected sex. Some HIV-positive people indicate that they have engaged in unprotected sex to feel "normal" again, to feel HIV-negative again, even if just for a little while (Sobo, 1997). Others have attempted to find a relationship between stigma and unprotected sex but have not succeeded (Ryan, Forehand, Solomon, & Miller,

2008; Vanable, Carey, Blair, & Littlewood, 2006). Other researchers have attempted to find a link between non-disclosure (which may be a proxy for stigma) and unprotected sex, with mixed results (see Simoni & Pantalone, 2004 for a review). For example, Kalichman and Nachimson (1999) found that non-disclosure was related to higher rates of unprotected sex, but some HIV-positive people report consistent condom use without disclosure (Sobo, 1997). Simoni and Pantalone (2004) argue that methodological flaws and inconsistencies explain the mixed results in the disclosure literature. These include a lack of partner type and status analyses, non-assessment of timing of disclosure in relation to sexual activity, and failure to account for confounding variables such as age, disease severity, and drug use. Should studies more accurately account for these factors, a clear link between stigma and disclosure may emerge.

These methodological issues may also affect research attempting to find a relationship between stigma and sexual risk. Qualitative studies of HIV-positive women in relationships with HIV-negative men have found that they engage in unprotected sex at the behest of their partners who are aware of their HIV status (Krishnan et al., 2007; Stevens & Galvao, 2007). For HIV-positive women, this suggests a lack of power in relationships that may be related to HIV and gender stigmatization. As noted above, HIV stigma may affect the intimacy or closeness of partners in a relationship and there is some evidence that intimacy is related to sexual risk with unprotected sex being more prevalent in relationships high in intimacy (Theodore, Durán, Antoni, & Fernandez, 2004). So, while the exact nature of stigma's relationship with sexual risk remains unclear, what is clear is that there are several factors associated with both stigma and sexual risk.

Sexuality related self-evaluative consequences for HIV-positive people.

Negative *self-evaluative consequences* may be an indication of internalized stigma as they suggest that the stigmatized individual believes the negative stereotypes about their group are accurate and feel negatively about the self as a result. Concealing a stigma is keeping an integral piece of one's identity secret, which may include lying about one's identity, and may lead to inconsistent attitudes about the self, preventing one from fully appreciating the self, also known as identity ambivalence. Lack of access to group-based self-protective attributes is the second self-evaluative consequence and can be a result of the behavioral consequence of social avoidance and isolation (Pachankis, 2007). Without identification with similarly stigmatized others one cannot access the benefits of group membership such as attributing negative feedback to group membership instead of the self (Crocker & Major, 1989). Having the protection of similarly stigmatized others can also help one avoid identity ambivalence as others provide a safe outlet for the stigmatized individual to express their stigmatized identity.

The third self-evaluative consequence of concealing stigma is a negative view of the self (i.e., lowered self-esteem and self-worth). Having a concealable stigma can result in self-esteem lower than that of individuals without stigma or with visible stigma (Frable, Platt, & Hoey, 1998). This lowered self-esteem may be a consequence of attributional ambiguity and a lack of access to group-based self-protective attributions. One of the protections groups provide is the ability to recognize prejudice and attribute negative feedback to stigmatization. Without the ability to do so individuals may believe the negative feedback they receive applies to them and experience lowered self-worth. The final negative self-evaluation consequence is diminished self-efficacy, i.e., the belief that one is capable of performing in ways that exercise influence over events that affect

their lives (Bandura, 1994). For example, Salovey and Birnbaum (1989) demonstrated that negative affect results in a decline in health related self-efficacy in acutely ill individuals.

Some HIV-positive people report feeling contaminated or "dirty" as a result of their HIV diagnosis (Laryea & Gien, 1993; Siegel & Krauss, 1991). Due to HIV's inexorable link to sexuality, individuals may apply these feeling to their sexuality, as suggested by the study participants who discussed engaging in unprotected sex to feel normal again (Sobo, 1997), refusing to engage in sexual activity, and feeling an unwanted loss of sexual desire (Krishnan et al., 2007; Laryea & Gien, 1993; Palmer & Bor, 2001; van Der Straten, Vernon, Knight, Gomez, & Padian, 1998). For gay and bisexual men, this link may be doubly strong, and there is some indication that the internalization of both HIV and sexual stigma may result in a minority of men forsaking sex with other men after their diagnosis (Layrea & Gien, 1993). These feelings and behaviors again suggest the internalization of HIV and sexual stigma, indicating lowered feelings of sexual self-worth.

Finally, possibly the most important sexuality based, self-evaluative consequence of HIV stigmatization involves people's self-efficacy. While not conclusive, there is some evidence that individuals who do not disclose to their partners are less likely to use condoms than those who do, putting their partners at risk (Kalichman & Nachimson, 1999). Self-efficacy for being able to effectively engage in both of these behaviors is therefore important in preventing the spread of HIV. HIV-positive people who had not disclosed to recent sexual partners scored lower on both of these measures of self-efficacy. Psychological distress, as measured by the BSI and which has a documented

association with HIV stigma, is related to HIV-positive individual's HIV disclosure and condom use self-efficacy. The ability to believe in oneself as having the power to engage in positive behaviors is essential to feelings of self-worth (Bandura, 1994), and HIV stigma, interpersonal, intrapersonal, and internalized, chips away and HIV-positive people's ability to do just that.

Overall, a case can be made for the effect HIV stigma has on the cognitive, affective, behavioral, and self-evaluative aspects of HIV-positive peoples' sexuality. By negatively impacting sexuality, HIV stigma depresses an important part of people's identity, interpersonal interactions, and self-worth, reducing their ability to live meaningful, fulfilling, and satisfactory lives.

Aims and Hypotheses

Given this preliminary evidence of the association between HIV stigma and sexuality, this dissertation directly explored this relationship. Further, the way in which the relationship between HIV stigma and sexuality impacts the psychological well-being of HIV positive people was explored. This study is a secondary data analysis guided by the Comprehensive Process Model of Concealable Stigma (Pachankis, 2007) with four overarching aims.

The *first aim* examined the relationship between HIV stigma and sexuality related cognition, affect, behavior, and self-evaluation among HIV-positive individuals. The *second aim* examined the role of sexuality related cognition, affect, and self-evaluation (collectively termed psychosexual well-being from here on) in the relationship between HIV stigma and psychological well-being. The *third aim* explored differences in each of the relationships examined in Aims 1 and 2 by participants' gender and sexual

orientation. The *fourth* and final aim investigated the qualitative interview data for themes regarding the psychological burden of HIV in relation to sexuality in order to assist in the interpretation of the findings of the previous aims.

Chapter 2:

Methods, Demographics, and Descriptives

Participants and Procedures

Participants were 60 HIV-positive, sexually active adults who participated in a pilot study, called Positive Talk, conducted by the Center for HIV Educational Studies and Training (CHEST) of Hunter College of the City University of New York. Participants were stratified by gender/sexual orientation resulting in 20 heterosexual men, 20 MSM, and 20 women (regardless of sexual orientation), with male sexual orientation defined in terms of reported sexual behavior over the 30 days prior to their appointment. Positive Talk was developed to investigate the interaction between HIV stigma and serosorting (i.e., choosing only HIV-positive sexual partners) on the physical health, mental health, and health behaviors of HIV-positive adults. In order to be eligible for Positive Talk, participants had to (1) be at least 18 years old, (2) be HIV-positive, confirmed using documentation (e.g., lab results, letter of diagnosis), (3) have engaged in at least one act of penile-anal or penile-vaginal sex in the 30 days prior to their appointment, and (4) be able to complete an appointment conducted in English.

Positive Talk participants were recruited using Respondent Driven Sampling (RDS; Heckathorn, 1997, 2002), a network-based recruitment methodology similar to snowball sampling but which utilizes a mathematical model that weights the sample by each participant's social network size to compensate for non-random data collection. With RDS, recruitment begins with a select number of "seeds" who are used to recruit the additional "waves" of participants. Nine people who had been participants in previous CHEST studies were enrolled as seeds in Positive Talk. After completing the assessment

seeds were given two recruitment cards with which they could refer individuals in their social network to the study. Recruitment cards were uniquely numbered allowing them to be linked to the referring participant. Each referred participant was in turn given two uniquely numbered recruitment cards, and so on. Participants were provided with a $25 incentive for each additional participant they recruited, and were limited to recruiting two additional participants.

The Positive Talk assessment consisted of three parts: (1) a 30-day Timeline Follow-Back (TLFB) of sexual behavior (Sobell & Sobell, 1992), (2) a quantitative survey, and (3) a semi-structured qualitative interview. The quantitative survey was completed via Audio Computer Assisted Self Interviewing (ACASI), which uses a computer and voice recordings allowing the participant to both see and hear each question. On average visits lasted one and a half hours.

Measures

HIV stigma was measured using a reduced16-item version of the HIV Stigma Scale (Berger, Ferrans, & Lashley, 2001) with four items selected from each of the four subscales. Participants responded to statements on a 4-point scale from 1 *"Strongly disagree"* to 4 *"Strongly Agree."* Full and subscale scores are sums (full scale ranges from 16 to 64 and subscales from 4 to 16) with higher scores indicating greater stigma. The full scale demonstrated strong reliability (α = .90). The Disclosure Concerns subscale focuses on concern regarding others knowing/finding out about their HIV status (e.g., "I work hard to keep my HIV a secret"). This subscale demonstrated strong reliability (α = .86). The Concerns with Public Attitudes towards People with HIV subscale focuses on the negative attitudes of others towards people with HIV and the

consequences of others knowing their status (e.g., “People with HIV are treated like outcasts”). This subscale demonstrated moderate reliability (α = .60). The Negative Self-Esteem subscale focuses on the negative feelings people may have about themselves because they have HIV (e.g., “I feel guilty because I have HIV”). This subscale demonstrated moderate reliability (α = .50). Personalized Stigma focuses on the experience and fear of rejection (e.g., “Since learning I have HIV, I feel set apart and isolated from the rest of the world”). This subscale demonstrated strong reliability (α = .83). The Negative Self-Esteem and Personalized Stigma subscales were used to assess internalized stigma, and while Personalized Stigma does not directly assess internalized stigma it focuses on the intrapersonal experience of HIV stigma, high levels of which may indicate the internalization of stigma.

Sexuality related cognition was measured using one item focused on HIV rumination during sexual activity (“How much do you think about HIV while you’re having sex?”). Participants responded on a 7-point scale from 0 *“Never”* to 6 *“All of the time”*.

Sexuality related affect was measured using three scales: the Sexual Satisfaction (5-items) and Sexual Anxiety (4-items) subscales from the Multidimensional Sexual Self-Concept Questionnaire (MSSCQ; Snell, 1998), and the Relationship Assessment Scale (7-items; Hendrick, 1988) to assess relationship satisfaction for partnered participants. While sexual and relationship satisfaction may not directly assess affect, they are overall subjective evaluations of emotional states in specific sexuality related areas of life. For Sexual Satisfaction and Anxiety, participants responded to statements (e.g., “I am satisfied with the way my sexual needs are currently being met”; “I worry about the

sexual aspects of my life") on a 5-point scale ranging from 0 *"Not at all characteristic of me"* to 4 *"Very characteristic of me."* Both subscale scores are means of their items ranging from 0 to 4, with higher scores indicating greater satisfaction and anxiety, and both demonstrated good reliability (α = .94 and .78, respectively). For relationship satisfaction, participants responded to questions (e.g., "How well does your partner meet your needs?") on 5-point scales with anchors specific to each question. The scale is a mean ranging from 1 to 5, with higher scores indicating more satisfaction, and demonstrated good reliability (α = .81). The Relationship Assessment Scale was negatively skewed for the full sample and for the women's cohort (but not for either cohort of men), therefore in analyses with the full sample the inverse log is used and with the women's cohort the inverse square root is used. Descriptives of the scale (e.g., *M, SD*) are presented non-transformed.

Sexual behavior over the 30 days prior to the assessment was measured using the TLFB in which the interviewer asked participants to recall their behavior over the past 30-days using a calendar to assist with recall and to record behavior. Each instance of sexual behavior was recorded and included information on type of sex (anal or vaginal), partner type (main or casual), partner sex (male or female), partner HIV status (positive, negative, or unknown), condom use, and whether or not the participant was under the influence of drugs during each act. Using this information several sexual behavior variables were created, both dichotomous and continuous. The dichotomous variables created were: had one sex partner versus two or more, had any transmission risk sex partners (any casual partners or a serodiscordant main partner), had less than 10 sex acts versus 10 or more, had any unprotected sex acts, had any unprotected sex with

transmission risk partners, and had any sex under the influence. For regression analyses dichotomous variables were coded 0/1 with 1 indicating more behavior or risk. Continuous variables created were: number of sex acts, percentage of sex acts that were unprotected, and percentage of sex acts that were unprotected with a transmission risk partner.

Sexuality related self-evaluation was measured using the Sexual Esteem subscale (5-item) of the MSSCQ (Snell, 1998). Like Sexual Satisfaction and Sexual Anxiety, participants responded to statements (e.g., "I am pleased with how I handle my own sexual tendencies and behaviors") on a 5-point scale ranging from 0 *"Not at all characteristic of me"* to 4 *"Very characteristic of me."* The scale is a mean of the items, with scores ranging from 0 to 4 and higher scores indicating greater sexual esteem. The scale demonstrated strong reliability (α = .90).

In order to run mediation and moderation analyses the sexuality related cognition, affect, and the self-evaluation measures were combined into one composite measure of *psychosexual well-being*. Relationship satisfaction was excluded from psychosexual well-being so as not to limit the sample to only participants in relationships. The composite variable was created by first recoding the HIV rumination and sexual anxiety scales so that higher scores indicated greater well-being and then converting all scores to z-scores so that all measures were on the same scale. Finally the four z-scores were averaged creating the psychosexual well-being composite score, which demonstrated moderate reliability (α = .61).

Psychological well-being was measured using three different scales. First, depression was measured using the 20-item Center for Epidemiological Studies –

Depression scale (CES-D; Radloff, 1977), which assesses depressive symptoms over the previous three months. Participants indicated how often they experienced each symptom (e.g., "I did not feel like eating; my appetite was poor") on a 4-point scale from 0 *"Rarely or none of the time"* to 3 *"Most or all of the time."* The scale is a sum ranging from 0 to 60 with higher scores indicating more depressive symptomology. The CES-D demonstrated strong reliability (α = .86). Second, life satisfaction was measured using the 5-item Satisfaction with Life Scale (Diener, Emmonds, Larsen, & Griffin, 1985). Participants responded to statements (e.g., "In most ways, my life is close to ideal") on a 7-point scale from 1 "*Strongly disagree"* to 7 *"Strongly agree."* The scale is a sum ranging from 5 to 35 with higher scores indicating greater life satisfaction, and demonstrated good reliability (α = .83). Third, the 10-item Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) was used to assess stress level over the last month. Participants responded to questions asking how often they had experienced different types of stress (e.g., "In the last month, how often have you been upset because of something that happened unexpectedly?") on a 5-point scale from 0 *"Never"* to 4 *"Very often."* The Perceived Stress Scale is a sum score ranging from 0 to 40 with higher scores indicating more experience of stress. The scale demonstrated good reliability (α = .76).

In order to run mediation and moderation analyses one composite measure of psychological well-being was created using these three measures. This composite of psychological well-being was created using the same methods as that for creating the psychosexual well-being composite. First the CES-D and Perceived Stress scales were recoded so that higher scores indicated greater well-being and then all scores were

converted to z-scores so that all measures were on the same scale. Finally the z-scores were averaged creating the psychological well-being composite score, which demonstrated good reliability (α = .72).

Qualitative interviews were semi-structured, using open-ended questions focused on participants' actual and potential romantic and sexual relationships. Interviews lasted 20-60 minutes, depending on the participant's number of romantic and sexual partners, and covered a variety of areas such as relationship and sexual satisfaction, and the impact of their partners' HIV statuses on entering into relationships, sexual activity, sexual and non-sexual intimacy, and relationship satisfaction (see Appendix for example interview questions). The use of semi-structured interviews encouraged participants to elaborate on their experiences, thoughts, and feelings. Interviews were audio recorded, transcribed, and transcripts verified for accuracy before data analysis. All identifying information was removed from the transcripts to protect participants' privacy, and all names used here are pseudonyms.

Demographics collected included age, gender, race and ethnicity, education, annual income, employment (employed or not), relationship status (single or partnered), year of HIV diagnosis, and whether the participant had ever had an AIDS diagnosis. For analysis, several demographic variables were recoded: race and ethnicity into two levels (Black and non-Black), education into three levels (not a high school graduate, high school graduate, and received education beyond high school), and annual income into two levels (less than $15,000 and $15,000 or more). Due to an error in data collection HIV/AIDS diagnosis variables were only collected for 53 participants.

For regression analyses dichotomous demographics were coded 0/1 with the

following categories coded 0: Black; annual income of less than $15,000; not employed; relationship status of single; never having an AIDS diagnosis. Being three-level categorical variables, gender/sexual orientation cohort and education were dummy coded into two variables each. Cohort was broken into the variables “Heterosexual men” and “MSM” while education was broken into “Not a high school graduate (<HS)” and “High school graduate (HS).” For each of these dummy coded variables participants were coded 0 if they did not belong to that category and 1 if they did.

Demographics and Descriptives

As noted above, the sample was stratified by gender and sexual orientation resulting in 20 heterosexual men, 20 MSM, and 20 women (regardless of sexual orientation; 1 woman reported sexual behavior with both men and women). Participants were, on average, 47.78 years old (*SD* = 6.95, range 27 – 62). The majority of participants were Black, had education beyond high school, had an annual income of less than $15,000, were not employed, and were in a romantic relationship. Participants average time since HIV diagnosis was 13.64 years (SD = 5.90 years, range 0-28), and most had been diagnosed with AIDS. See Table 1 for descriptives of all categorical demographic and sexual behavior variables; see Table 2 for descriptives of all continuous sexuality related and psychological well-being variables.

Chapter 3:

Aim 1 – The Relationship between HIV Stigma and Sexuality Related Cognition, Affect, Behavior, and Self-Evaluation

In the *first aim* of this dissertation I examined the relationship between HIV stigma and sexuality related cognition, affect, behavior, and self-evaluation among HIV-positive individuals. I hypothesized that HIV stigma would be negatively correlated with sexuality related cognition, affect, behavior, and self-evaluation, such that the more stigma people experience the more negative their sexuality related outcomes would be. Further, in this aim I examined whether internalized stigma specifically demonstrates the strongest relationship between HIV stigma and sexuality related consequences. Because internalized stigma emanates from the self, it may be the most influential type of stigma for intimate areas of life like sexuality, especially for those with concealable stigma. I hypothesized that, compared to non-internalized aspects of HIV stigma (i.e., Disclosure Concerns and Concerns with Public Attitudes towards People with HIV subscales), internalized stigma (i.e., Negative Self-Esteem and Personalized Stigma subscales) would be more strongly correlated with sexuality related cognition, affect, behavior, and self-evaluation, and would account for the majority of the variance in the relationship between general HIV stigma and these sexuality related factors.

Data Analysis

In order to assess whether HIV stigma is negatively correlated with sexuality related cognition, affect, behavior, and self-evaluation, such that the more stigma people experience the more negative their sexuality related outcomes, several analyses were run. First, bivariate correlations were used to examine the relationships between the full HIV

stigma scale and continuous outcome variables, and t-tests were used for dichotomous variables. Next, these analyses were repeated with each of the four HIV stigma subscales in order to examine differences in the subscales' relationships with the sexuality related outcomes. For variables for which the relationship with any of the stigma scales was significant (or marginally significant, $p \leq .10$) this relationship was further examined through regression analyses (hierarchical linear regression for continuous variables, binary logistic regression for dichotomous variables), controlling for demographics associated with each dependent variable in bivariate analyses. Demographics were entered into Step 1 of the regression and the HIV stigma subscales entered into Step 2. In order to assess whether internalized stigma was driving the association between stigma and the sexuality related outcomes, all four stigma subscales were used in these regressions to examine which subscales accounted for the most variance in the sexuality related variables.

Results

First, bivariate analyses examined the relationship between the full HIV stigma scale and sexuality cognition, affect, behavior, and self-evaluation. In correlational analyses HIV stigma was significantly and positively associated with HIV rumination and sexual anxiety (see Table 3). T-tests revealed no association between HIV stigma and the dichotomous sexual behaviors.

Next, bivariate analyses were used to examine the relationships between the HIV stigma subscales and the sexuality related measures. The Disclosure Concerns subscale was not significantly associated with any of the sexuality related cognition, affect, or self-evaluation measures, however it did demonstrate marginal significance with percentage

of unprotected sex acts with a transmission risk partner, having a transmission risk sex partner, and having any unprotected sex with a transmission risk partner. Higher disclosure stigma scores were related to a *lower* percentage of unprotected sex acts with a transmission risk partner (see Table 3), having a transmission risk partner (M = 11.03, SD = 2.71 vs. M = 9.42, SD = 3.88), $t(38.45) = -1.76$, $p = .09$, and *not* having unprotected sex with a transmission risk partner (M = 10.74, SD = 3.21 vs. M = 8.92, SD = 3.42), $t(56) = 1.73$, $p = .09$. The Concerns with Public Attitudes towards People with HIV subscale was also not significantly associated with any of the sexuality related cognition, affect, or self-evaluation measures, but was marginally significant with number of sex acts and having unprotected sex with a transmission risk partner. Higher scores on Concerns with Public Attitudes towards People with HIV were associated with greater number of sex acts (see Table 3) and *not* having unprotected sex with a transmission risk partner (M = 10.91, SD = 2.39 vs. M = 9.50, SD = 2.39), $t(52) = 1.80$, $p = .08$.

Significant relationships were found between the internalized stigma subscales and sexuality related cognition, affect, and self-evaluation. Negative Self-Esteem was significantly positively related to both HIV rumination and sexual anxiety, and significantly negatively related to both sexual satisfaction and sexual esteem (see Table 3). No association was found between Negative Self-Esteem and sexual behavior. In regards to the Personalized Stigma subscale, significant positive relationships were found with both HIV rumination and sexual anxiety, and a marginally significant positive association was found with relationship satisfaction (see Table 3). Personalized Stigma also demonstrated a marginally significant relationship with having a transmission risk partner, such that more stigma was related to having a transmission risk partner (M =

10.15, *SD* = 2.90 vs. *M* = 8.71, *SD* = 3.30), *t*(56) = -1.76, *p* = .09.

Regressions were run predicting each sexuality related measure which was at least marginally significantly associated with at least one HIV stigma scale, resulting in eight regression analyses: HIV rumination, sexual satisfaction, sexual anxiety, number of sex acts, percentage of unprotected sex acts with a transmission risk partner, having a transmission risk sex partner, having unprotected sex with a transmission risk partner, and sexual esteem. For each dependent variable, bivariate analyses were run to identify significant associations with demographic factors. Those demographic factors demonstrating at least marginal significance ($p < .10$) were entered as control variables in Step 1 of the regression. In Step 2, all four stigma subscales were entered as a set (see Tables 4 and 5).

Controlling for demographic variables, the stigma subscales as a set accounted for 17% of the variance in HIV rumination scores. Personalized Stigma emerged as the only significant stigma predictor of HIV rumination, with more stigma related to more rumination ($\beta = .47$, $p < .05$). After controlling for demographics the stigma subscales accounted for 13% of the variance in sexual satisfaction. Negative Self-Esteem was the only significant stigma predictor of sexual satisfaction, with more stigma associated with less satisfaction ($\beta = -.43$, $p < .05$). The stigma subscales accounted for 14% of the variance in relationship satisfaction, but Personalized Stigma emerging as the only significant stigma predictor with more stigma related to less satisfaction ($\beta = .58$, $p < .05$).

After controlling for demographics, the stigma subscales as a set accounted for 10% of the variance in percentage of unprotected sex acts with a transmission risk

partner, with Disclosure Concerns as the only significant stigma predictor, such that more stigma was related to *less* sexual risk (β = -.47, p < .05). Controlling for demographics, the stigma subscales accounted for 22% of the variance in sexual esteem, but Negative Self-Esteem emerged as the only significant predictor, with more stigma associated with less sexual esteem (β = -.40, p < .05). Sexual anxiety, number of sex acts, having a transmission risk sex partner, and having any unprotected sex with a transmission risk partner were not significantly predicted by any stigma subscale. Concerns with Public Attitudes towards People with HIV was not a significant predictor of any sexuality related measure.

Discussion

Aim 1 was designed to examine the relationship between HIV stigma and sexuality related cognition, affect, behavior, and self-evaluation. Contrary to hypotheses, the full HIV stigma subscale demonstrated few significant associations with these constructs. Analyses of the individual subscales, however, revealed a more complex pattern of findings. Both of the internalized stigma subscales (Negative Self-Esteem and Personalized Stigma) were significantly positively associated with HIV rumination and sexual anxiety. The Negative Self-Esteem subscale was also negatively associated with sexual satisfaction and esteem. In contrast, the two non-internalized stigma subscales (Disclosure Concerns and Concerns with Public Attitudes towards People with HIV) were marginally associated with sexual behavior rather than cognition, affect, or self-evaluation. Interestingly, higher scores on these types of stigma were associated with *lower* likelihood of high-risk sexual behavior.

In regression analyses controlling for demographic factors, the Personalized

Stigma subscale was most strongly related to sexuality related cognition (i.e., HIV rumination), and both the Personalized Stigma and Negative Self-Esteem subscales were strongly related to sexuality related affect (i.e., sexual satisfaction and relationship satisfaction). The Disclosure Concerns subscale was most strongly related to sexual behavior (i.e., percentage of unprotected sex acts with a transmission risk partner), and the Negative Self-Esteem subscale was most strongly related to sexual self-evaluation (i.e., sexual esteem). The Concerns with Public Attitudes towards People with HIV subscale was not related to any of the sexuality related measures.

These findings support the hypothesis that HIV stigma is negatively correlated with sexuality related cognition, affect, and self-evaluation. The findings also support the contention that these relationships are strongest for internalized stigma. Contrary to hypotheses, HIV stigma was related to less sexual risk, and this association was present only for non-internalized stigma. These data suggest different aspects of HIV stigma may be associated with different sexuality related constructs, with internalized stigma relating most strongly to psychosexual wellbeing and non-internalized stigma relating most strongly to behavior. This pattern of findings is logical given that internalized stigma resides within the individual and is therefore more likely to affect psychological factors of sexuality, while non-internalized stigma (i.e., interpersonal and intrapersonal) results from interaction with others and is therefore more likely to affect behavioral factors which are interpersonal in nature.

As discussed in Chapter 1, it is well established that HIV stigma has a negative impact on the psychological well-being of HIV-positive people. The findings of this aim suggest that the aspects of sexuality which are most negatively impacted by HIV stigma

are psychological. Understanding this relationship provides insight into the relationship between HIV stigma and psychological well-being. Therefore, the next aim explored the ways in which psychological aspects of sexuality (i.e., psychosexual well-being) may impact the relationship between HIV stigma and psychological well-being.

Chapter 4:

Aim 2 – The Role of Psychosexual Well-Being in the Relationship between HIV Stigma and Psychological Well-Being

In the *second aim* I examined the role of psychosexual well-being in the relationship between HIV stigma and psychological well-being. I hypothesized two possible processes through which psychosexual well-being may influence this relationship (see Figure 1). First, psychosexual well-being may *moderate* the relationship between HIV stigma and psychological well-being. In other words, the relationship between HIV stigma and psychological well-being may differ depending on the *level* of psychosexual well-being. I hypothesized that where moderation relationships were found, the relationships between the factors would be as such: in Path1) Participants with low HIV stigma and high psychosexual well-being would have high psychological well-being (denoted in Figure 1a by ⟶); Path 2) participants with high stigma and low psychosexual well-being would have low psychological well-being (denoted by —·⟶); Path 3) participants with low stigma and low psychosexual well-being would have high psychological well-being (denoted by – – –►); and Path 4) participants with high stigma and high psychosexual well-being would have low psychological well-being (denoted by ·····►; see Figure 1a). Second, psychosexual well-being may *mediate* the relationship between HIV stigma and psychological well-being (see Figure 1b). In other words, HIV stigma may affect psychosexual well-being, which in turn affects psychological well-being.

Data Analysis

Due to the small sample size, the analyses for this aim were exploratory in nature

and sought to identify models of relationships that may prove promising for future research. The analyses examined psychosexual well-being as both a moderator and mediator of each of the HIV stigma subscales and psychological well-being. The psychosexual well-being and psychological well-being composites were used for these analyses. Each possible process was examined four times, once for each of the four HIV stigma subscales.

Moderation analyses were conducted as outlined by Aiken and West (1991). Using this method, hierarchical linear regressions were run with psychological well-being as the outcome variable. Mean centered HIV stigma and mean centered psychosexual well-being were entered into Step 1 with their interaction term (a multiplication of the mean centered terms) entered into Step 2. Moderation is present if the interaction term is significant.

Mediation analyses were conducted as outlined Baron and Kenny (1986). Testing mediation using this method happens in three steps, with significance required in the first two to move on to the third. First, the relationships between each predictor variable (i.e., the HIV stigma subscales) and the mediator (i.e., psychosexual well-being) were examined for significance. Second, the relationship between the mediator and the outcome variable (i.e., psychological well-being) was examined for significance. Third, for those HIV stigma subscales for which the first two steps demonstrating significance, hierarchical linear regressions predicting psychological well-being were run with HIV stigma entered in Step 1 and psychosexual well-being entered in Step 2. Mediation is present if HIV stigma is significant in Step 1 but loses predictive power (partial mediation) or becomes non-significant (full mediation) in Step 2 with the addition of

psychosexual well-being as a significant predictor.

Results

Psychosexual well-being was examined as a moderator of each of the four HIV stigma subscales and psychological well-being in four hierarchical linear regressions. None of the four interaction terms were significant, providing no evidence for moderation.

Next psychosexual well-being was examined as a mediator of each of the four HIV stigma subscales and psychological well-being. Correlations examining the relationship between the HIV stigma scales and psychosexual well-being demonstrated significance only for the internalized stigma subscales (see Table 3). Psychosexual well-being and psychological well-being were significantly positively correlated $r(56) = .66$, $p < .001$.

With the prerequisites for mediational analysis met for the Negative Self-Esteem and Personalized Stigma subscales, a hierarchical linear regression was run for each (see Table 6). Psychosexual well-being demonstrated full mediation between Negative Self-Esteem and psychological well-being, accounting for an additional 26% of the variance. Negative Self-Esteem was a significant predictor of psychological well-being in Step 1 ($\beta = -.43$, $p < .001$) but not Step 2 ($\beta = -.16$, $p > .05$), while psychosexual well-being was significant in Step 2 ($\beta = .54$, $p < .001$). Psychosexual well-being demonstrated partial mediation between Personalized Stigma and psychological well-being, accounting for an additional 29% of the variance. The predictive power of Personalized Stigma diminished from Step 1 ($\beta = -.48$, $p < .001$) to Step 2 ($\beta = -.28$, $p < .01$), and psychosexual well-being was significant in Step 2 ($\beta = .58$, $p < .001$).

Discussion

Aim 2 was designed to examine the role of psychosexual well-being in the relationship between HIV stigma and psychological well-being. Although analyses did not find evidence of moderation, evidence was found suggesting psychosexual well-being is a mediator of the relationship between HIV stigma and psychological well-being. Supporting the Aim 1 findings, these analyses found evidence of mediation only for the internalized stigma subscales. Psychosexual well-being fully mediated the relationship between Negative Self-Esteem and psychological well-being, and partially mediated the relationship between Personalized Stigma and psychological well-being. These findings suggest that psychological aspects of sexuality are a mechanism through which internalized stigma affects the mental health of HIV-positive people. In other words, internalized stigma affects HIV-positive individuals' thoughts and feelings about their own sexuality, and these thoughts and feelings act in turn to negatively impact depression, perceived stress, and life-satisfaction.

In the following Aim, the role of psychosexual well-being in the relationship between HIV stigma and psychological well-being will be explored by gender and sexual orientation. Psychosexual well-being may play a different role in the relationship between HIV stigma and psychological wellbeing for each of the gender/sexual orientation cohorts.

Chapter 5:

Aim 3 – Aims 1 and 2 within Gender and Sexual Orientation Cohort

In the *third aim* I explored differences in each of the relationships examined in Aims 1 and 2 by participants' gender and sexual orientation. Specifically, in this aim I explored whether the relationships between HIV stigma, sexuality related cognition, affect, behavior, and self-evaluation, and psychological well-being differed between heterosexual men, men who have sex with men (MSM), and women (regardless of sexual orientation). While there were no specific hypotheses in regards to this aim, I hypothesized that these gender/sexual orientation cohorts would demonstrate some differences in which type of relationships were present or strongest.

Data Analysis

Each of the analyses detailed above were repeated within each gender and sexual orientation cohort (heterosexual men, MSM, women) in order to see whether certain relationships were present for some cohorts and not others, and/or if the relationships' strengths differed by cohort. Again, due to the small sample size the analysis for this aim was exploratory in nature and sought to identify differences in relationships that may prove promising for future research.

Results

Full statistics are not reported because these exploratory analyses are not technically appropriate for the small sample sizes.

Aim 1. Each of the gender and sexual orientation cohort analyses were run as with the full sample. Relationships between each HIV stigma scale and each sexuality related measure were examined in bivariate analyses. Then each sexuality related

measure that was at least marginally significant with any of the HIV stigma scales was regressed on the four stigma subscales, controlling for demographics (see Table 7).

Disclosure Concerns and Concerns with Public Attitudes towards People with HIV were not significant predictors of any sexuality related measures in regression analyses. For heterosexual men, Negative Self-Esteem significantly predicted sexual satisfaction and sexual esteem, while Personalized Stigma significantly predicted relationship satisfaction. The changes in variance between Steps 1 and 2 were sizable for each regression (23%-45%), if not significant. For MSM, Personalized Stigma was a marginally significant predictor of HIV rumination, accounting for 37% of the variance, which was not significant. Finally for women, Negative Self-Esteem was a significant predictor of HIV rumination, accounting for a significant 78% of the variance. Sexual anxiety and sexual behavior were not predicted by any stigma subscale for any of the cohorts.

Aim 2. Similar to the full scale, psychosexual well-being was examined as a moderator of each of the four HIV stigma subscales and psychological well-being for each of the gender and sexual orientation cohorts. None of the interaction terms were significant for any of the cohorts, providing no evidence for moderation.

As with the full sample, psychosexual well-being was then examined as a mediator of the HIV stigma subscales and psychological well-being within each cohort. Disclosure Concerns and Concerns with Public Attitudes towards People with HIV were not significantly associated with psychosexual well-being for any cohort. Negative Self-Esteem was significantly associated with psychosexual well-being for all cohorts, and Personalized Stigma was only significant for MSM. Psychosexual well-being and

psychological well-being were significantly positively correlated for all cohorts.

Hierarchical linear regressions were run to test psychosexual well-being as a mediator of Negative Self-Esteem for all cohorts and of Personalized Stigma for MSM. Psychosexual well-being demonstrated full mediation for Negative Self-Esteem with each cohort, with significant changes in variance between Steps 1 and 2 (see Table 8). Mediation was not found with Personalized Stigma for MSM as the psychosexual well-being variable was not a significant predictor in Step 2.

Discussion

Aim 3 was designed to explore differences by gender/sexual orientation cohort in the relationships examined in Aims 1 and 2. In regards to Aim 1, regression analyses controlling for demographics suggest that different patterns of relationships exist between internalized stigma (Negative Self-Esteem and Personalized Stigma) and sexuality related cognition, affect, and self-evaluation for heterosexual men, MSM, and women. For heterosexual men, Negative Self-Esteem predicted sexual satisfaction and esteem, and Personalized Stigma predicted relationship satisfaction. For MSM, HIV rumination was significantly associated with Personalized Stigma; for women, HIV rumination was significantly associated with Negative Self-Esteem. As with the full sample, no associations were found between internalized stigma and sexual behavior, or between non-internalized stigma (Disclosure Concerns and Concerns with Public Attitudes towards People with HIV subscales) and sexuality related cognition, affect, or self-evaluation. Unlike with the full scale, there were no associations between non-internalized stigma and sexual behavior.

As with the full sample in Aim 2, psychosexual well-being did not appear to

moderate the relationship between HIV stigma and psychological well-being for any of the three gender/sexual orientation cohorts. Nor was there evidence that the relationship between non-internalized stigma and psychological well-being was mediated by psychosexual well-being. Analyses supported psychosexual well-being as a full mediator of the relationship between the Negative Self-Esteem subscale and psychological well-being for all three cohorts. However no mediation was found with the Personalized Stigma subscale for any of the cohorts.

In partial support of hypotheses, Aim 1 analyses by cohort found differences among the cohorts. Analyses demonstrated that internalized stigma may be most salient for sexuality related affect and self-evaluation in heterosexual men and most salient for sexuality related cognition in MSM and women. In contrast, Aim 2 findings were consistent across cohorts. For all cohorts, support was found for sexuality as a mediating mechanism through which HIV stigma affects mental health. These findings suggest that different psychological aspects of sexuality may compose this mediating mechanism for different gender and sexual orientation groups.

In the next chapter, findings from the qualitative interview data are presented. Qualitative analyses were guided by the findings from Aims 1 and 2, for which support was found in this aim.

Chapter 6:

Aim 4 – Investigation of Qualitative Data

In the *fourth* and final aim I investigated the qualitative interview data for themes regarding the psychological burden of HIV in relation to sexuality. The inclusion of qualitative data helps to interpret, clarify, and contextualize quantitative results by elucidating participants' experience of sexuality in the stigmatized context of HIV. Guided primarily by the findings of Aims 1 and 2, my analysis identified the negative impact of participants' experiences of HIV on sexuality-related outcomes, and I examined how these experiences were associated with expressions of general well-being. Additionally, guided by the mediation findings from Aim 2, in this aim I examined the relationships between each theme and the quantitative measures of psychosexual and psychological well-being.

Data Analysis

Transcribed qualitative interviews were analyzed using thematic coding, with both a 'top-down' (etic) and 'bottom-up' (emic) approach (Auerbach & Silverstien, 2003; Miles & Huberman, 1994). The quantitative data provided evidence to theoretically guide the qualitative analysis, as per etic coding, providing a general focus for initial coding. However, specific constructs were not identified prior to analyses. Based on the quantitative data, expressions specifically referencing the negative impact of HIV on psychological aspects of sexuality were sought for and identified. These expressions were then organized into groups of repeating ideas, allowing patterns within the data to emerge, in accordance with emic coding. From these patterns, themes concerning the psychological burden of HIV in regards to sexuality were identified, and transcripts were

then recoded using the identified themes. The numbers of participants who expressed each theme were totaled, and exemplar statements for each theme were identified. This type of analysis contextualizes quantitative findings by directly examining participants' experiences and understanding of their sexuality in the stigmatized context of HIV (Onwueguzie & Teddlie, 2003).

In order to examine the mediating results from Aim 2 in more depth, qualitative themes were examined in relation to the psychosexual and psychological well-being measures. Participants were stratified into high and low well-being groups on both of the well-being measures using median splits, allowing for comparative analyses (Bazeley, 2003; Onwueguzie & Teddlie, 2003). Additionally, a well-being interaction variable was created to allow for comparison between participants who scored high on both psychosexual and psychological well-being and those who scored low on both. Each of these three well-being variables (psychosexual, psychological, and their interaction) were then compared to the qualitative themes, exploring differences in well-being between participants who did and did not endorse each thematic code. These comparisons were run using chi-square analyses with Fisher's exact tests when expected cell counts ($n = 5$) were not met for the chi-square.

Results

Investigation of the qualitative data revealed two broad categories, each encompassing 3-4 themes. The first broad category centers on the extent to which the *disease related burden* of HIV infection is experienced as an emotional burden. Within this category are three themes of disease related burden: (1) transmission risk; (2) reinfection risk; and (3) sexual difficulties. The second category focuses on the

interpersonal burden of HIV infection and its resulting psychological consequences. Within this category four themes were identified: (1) lack of agency; (2) rejection; (3) negative treatment by an HIV-negative partner; and (4) internalized stigma. Nearly all participants (*n* = 55, 92%) reported experiencing at least one of the seven themes. Frequencies of each category and theme can be seen in Table 9.

Disease related burden of HIV infection. Participants described how the ever-present need to think about their HIV infection, the possibility for transmission, and condom use during sexual situations became an emotional and psychological burden. This category was the most common psychological burden cited by participants (*n* = 48, 80%). Likelihood of reporting disease related burden did not differ by scores on psychosexual well-being, psychological well-being, or their interaction (see Table 9).

Transmission risk. Transmission risk as an emotional burden was the most commonly cited theme (*n* = 36, 60%). In this theme, participants expressed feeling (or projected that they would feel) worry over possibly transmitting HIV to an HIV-negative sexual partner, and that infecting a partner would lead to pervasive feelings of guilt. These feelings, in turn, were reported to negatively affect their sexual and romantic relationships with HIV-negative partners.

> *It makes it difficult to have sex, you know, and not think. Every time we have sex we have to think about it.* (Paul, MSM, low psychosexual well-being, low psychological well-being)

> *When I've been involved with a couple of negative guys there's always been tension. It's always, you know, um, you're always conscious that something could go wrong. So it's sort of awkward. So it never transcends that, that point, to become intimate…. it's always like I'm, I am um, potentially the culprit or the um, the um, that I could potentially infect them, and that's, that's a lot of weight on any individual.* (Ken, MSM, low psychosexual well-being, low psychological well-being)

> *I'd always be worried about you know if I don't want to give it to you, you know because when you're in a relationship… it's hard to use condoms every night. Ok so you know and I don't want the guilt…. I don't want to be feeling guilty…. with a person that is negative you always have to remember you know for their sakes... you're really not enjoying the fullest of the relationship because you're feeling: "I'm going to make this person sick" or you're always worried about making them sick, so you're really- you're in a relationship but you're really not in a relationship....And you're worried about it, especially if you love this person you know you're going to worry.* (Sheila, woman, high psychosexual well-being, low psychological well-being)

> *Even if I use a condom you know I feeling guilty what if the condom break you know I cum in her and I give her the virus.* (Bill, heterosexual man, low psychosexual well-being, low psychological well-being)

Not only did participants express worry or guilt, but they indicated a high level of personal responsibility about infecting a partner. Several participants spoke of transmitting HIV as causing someone's death and some therefore choose not to have sex with HIV-negative partners.

> *I'm not trying to take anybody with me.* (Patrick, MSM, high psychosexual well-being, low psychological well-being)

> *That's a person's life that I'm putting in jeopardy, you know, it's playing Russian roulette with their life.* (Matt, heterosexual man, high psychosexual well-being, high psychological well-being)

> *[I] don't want to put, or hang, this noose on somebody that is negative…. I don't want to give that negative person a death certificate, you know.* (Grace, woman, low psychosexual well-being, high psychological well-being)

> *That's like, uh, partially murder someone.* (Derek, heterosexual man, high psychosexual well-being, low psychological well-being)

Likelihood of reporting transmission risk burden did not differ by psychosexual well-being, psychological well-being, or their interaction (see Table 9).

Reinfection risk. For participants with HIV-positive sexual partners, reinfecting a partner or being reinfected by their partner was a considerable worry and, for many participants, reinforced regular condom use even when condom use presented a barrier to

sexual satisfaction or intimacy. Nearly half of participants reported experiencing this burden (n = 27, 45%).

> *I don't want to get reinfected by the virus.* (Jon, heterosexual man, high psychosexual well-being, high psychological well-being)

> *Condoms all the time… the different strains you can be reinfected…. At first I was sort of like reluctant, you don't, it doesn't feel as good with the condom as it did but you know, what's more important how good I feel, how good this- it's relative.* (Will, MSM, high psychosexual well-being, low psychological well-being)

> Interviewer: *Any other dimensions to the intimacy, that's affected by the fact that you guys are both positive?* Marcus: *Yea, because you know, you can't do certain things, when you, when you, when you positive, you know. It's protection, protection, protection, you know mean? So, it's because I'm positive, we can't really go all out have all kinds of sex all kinds of ways and you know as far as the not using the protection, we have to use protection.* (Marcus, heterosexual man, high psychosexual well-being, high psychological well-being)

> *And getting reinfected and stuff like that, that's always on our minds when we don't use condoms.* (Kara, woman, high psychosexual well-being, high psychological well-being)

Participants who reported reinfection burden were more likely to have high than low psychosexual well-being, $X^2(1, 60) = 5.46$, $p = .02$ (see Table 9). There were not differences by psychological well-being or the interaction of psychosexual and psychological well-being (see Table 9).

Sexual difficulties. Several participants (n = 9, 15%) identified HIV and the risk of transmission and reinfection as the source of a sexual difficulty they experienced. Difficulties were both physical (e.g., unable to have an erection) and psychological (e.g., not desiring sex) in nature, but were not necessarily sexual dysfunction.

> *Well it's strange. When I became positive it just- I had problems with [being insertive]. I think it's something psychological. My doctor has had it assessed with an urologist and everything's fine. But it just, it's problematic.* (Ken, MSM, low psychosexual well-being, low psychological well-being)

> *Sometimes, 'cause, sometimes I don't feel like having sex with him, 'cause I don't*

> *really want to infect him.... So that's why I drew away from sex, I drew away from sex with him because I don't want to see him sick.* (Jennifer, woman, high psychosexual well-being, high psychological well-being)
>
> *Isolation. Don't want to hurt nobody, thought I couldn't have sex no more.* (Jon, heterosexual man, high psychosexual well-being, high psychological well-being)
>
> *Before, no, I was like I didn't want to have nothing to do with sex most definitely you know. And then, it took a long time when I found out that I had it to even really want to be bothered with a man I think because that's the most- the only way I got it... it came through sex, so it was, it kind of took a long time you know....I was celibate and it's like, I was- I turned into a nun.* (Sheila, woman, high psychosexual well-being, low psychological well-being)
>
> *It took a while for us to get, you know with the stuff and me, um, I thought I was gonna make it worse with the sex wise.* (Emily, woman, high psychosexual well-being, low psychological well-being)

Likelihood of reporting sexual difficulties did not differ by psychosexual well-being, psychological well-being, or their interaction (see Table 9).

Interpersonal burden of HIV infection. The majority of participants (n = 38, 63%) reported experiencing negative interpersonal effects on their sexual and romantic lives as a result of being HIV-positive. Participants who reported such interpersonal effects were marginally more likely to have low psychosexual well-being, $X^2(1, 60) = 2.58$, $p = .10$ (see Table 9). They were also more likely to have low psychological well-being, $X^2(1, 56) = 3.73$, $p = .05$, and low interaction of well-being groups, $X^2(1, 36) = 4.21$, $p = .04$ (see Table 9).

Lack of agency. As a result of being HIV-positive, several participants (n = 13, 22%) spoke about potential HIV-negative romantic and sexual partners as having the power to choose whether or not to engage in sex or a relationship with them. Sometimes this choice was seen as something HIV-negative people possessed while the HIV-positive person did not. However, more often choice was expressed as something the HIV-

positive person actively gave to HIV-negative person through disclosure of status, and the HIV-negative person's right to make that choice was motivation for disclosure.

> *Obviously if the guy is negative then it's kind of like it's his choice in a way. I mean it's kind of a weird dynamic, it's really, really brutal for the person who is HIV positive…. I mean you always feel at a disadvantage, because the other person has the upper hand.* (Ken, MSM, low psychosexual well-being, low psychological well-being)

> *I put it in their court to decide if they want to be with me, go out with me knowing I'm positive.* (Demitry, MSM, low psychosexual well-being, unknown psychological well-being)

> *I felt that he would need to know, you know, because then he'd be able to make a choice if he wanted to back out.* (Patricia, woman, high psychosexual well-being, high psychological well-being)

Reporting lack of agency was not related to psychosexual well-being or the interaction of psychological and psychosexual well-being (see Table 9). However those who reported lack of agency were marginally more likely to have low psychological well-being, $X^2(1, 56) = 2.83$, $p = .09$ (see Table 9).

Rejection. Being rejected by a partner was a major concern for nearly half of participants ($n = 329$, 48%). Rejection had intense negative effects and was often spoken of as something to be avoided.

> *No one wants to be rejected and feel diseased and feel unwanted and, so it's a very a very sensitive point in meeting someone.... I am diseased, but to feel diseased, you know, it's, it's not a good place to be in, and um, when you're rejected, you tend to feel that way. You feel, um, you feel contagious, you feel uh, you feel harmful… and then psychologically it begins to work on your sense of self worth, your self esteem.... I have thought about just going after guys who are positive, because it ends a lot of confusion, uncertainty, pain, and um, psychological… impairment. I mean, every rejection is, you know, it's long lasting. I mean, of course you suppress it, and you deal with it, and you move on, but it leaves its imprint…. Before you even get to step one or step two, you're already dismissed. You're already, you know, deemed a vampire.* (Ken, MSM, low psychosexual well-being, low psychological well-being)

> *I was living my life in a rejected state of mind…. I fear rejection….The fear, and*

> *an impending doom of absolutely being rejected. You know that's what hurts the most.* (Jamal, MSM, low psychosexual well-being, unknown psychological well-being)

> *For them it's like 'I can't be with this so I'm gone' and then they go and they find somebody. Me I'm stuck here…I get hurt a lot put it that way.… I go from rejection and then I go into drug use ....I don't care if [they're] negative or positive, there's always a fear that they're gonna to leave you.* (Reggie, heterosexual man, low psychosexual well-being, low psychological well-being)

> *I got a lot of rejection and I felt like a leper... I don't do well with rejection. I don't think anyone does but I take it really personally... So, rejection is, it's hard... [I] only date people who are positive… mostly out of experience of rejection.* (Maurice, MSM, low psychosexual well-being, low psychological well-being)

Although likelihood of reporting rejection burden did differ by psychosexual well-being, those who did report feelings of rejection were marginally more likely to have low psychological well-being, $X^2(1, 56) = 3.50$, $p = .06$, and low interaction of psychosexual and psychological well-being, $X^2(1, 36) = 2.79$, $p = .10$ (see Table 9).

Negative treatment by an HIV-negative partner. Some participants who had HIV-negative partners (past or current) reported that a partner had treated them in a negative way or made them feel bad because of their HIV status ($n = 12$, 20%). This treatment could be a barrier to intimacy, both sexual and romantic.

> *The first one [HIV-negative partner after finding out he was HIV-positive] was like that....Throw it at me because of my status and, and use it against me and try and dominate and control me because uh, knowing that I fear rejection.* (Jamal, MSM, low psychosexual well-being, unknown psychological well-being)

> *She babies me too much. I think because of my status she babies me a little too much... She treats me almost like one of her children sometimes. I'm thinkin' it's because of the status. Like, "When you go outside make sure you got your clothes on." or, you understand, little things like that.* (Andre, heterosexual man, high psychosexual well-being, low psychological well-being)

> *Sometimes it's emotional because sometimes I feel she don't want to me touch her. I get upset. I always throw it in her face, "You're scared of me." She says, "No, I'm not. No, I'm not". I said "Why you keep acting funny?" She said just*

> *the way she is.* (Josh, heterosexual man, low psychosexual well-being, high psychological well-being)

> *Most people have been totally fearful, which led to estrangement, which led to termination of our relationship on whatever level…. Even though we were primarily sexual, we were very passionate. We kissed, we, we um, caressed each other, et cetera. After he found out my status, he stopped kissing me.* (Ken, MSM, low psychosexual well-being, low psychological well-being)

Likelihood of reporting negative treatment by an HIV-negative partner did not differ by psychosexual or psychological well-being, or the interaction of the two (see Table 9).

Internalized stigma. As a result of the negative interpersonal consequences that several participants experienced they reported feeling negatively about themselves as a sexual being because of their HIV status (n = 7, 12%). These feelings were especially prominent when diagnosed with HIV.

> *When I, I found out that I was positive I, I looked at myself as damaged goods.* (Daniel, heterosexual man, high psychosexual well-being, low psychological well-being)

> *I always looked at HIV as being negative in the sense that if I got it you don't want anything to do with me, so I was looking down on myself because I had it.* (Thomas, heterosexual man, low psychosexual well-being, high psychological well-being)

> *You know, I felt dirty, you know.* (Emily, woman high psychosexual well-being, low psychological well-being)

> *I didn't know whether or not I would be attractive to someone because I didn't see myself as being attractive.* (Elizabeth, woman, low psychosexual well-being, low psychological well-being)

> *I ain't got nothing to offer her but the virus….what she want from me, I ain't got nothing, you understand? ... I am HIV positive, she makes over 90,000 dollars a year, what do I got? A virus..... And I didn't care for myself, I didn't, don't get me wrong I didn't wanna hurt myself or nothing, I just didn't love myself, and I still don't in my own little way.* (Steven, heterosexual man, low psychosexual well-being, low psychological well-being)

Another example of internalized stigma, especially as a result of another interpersonal burden, can be seen in Ken's quote about rejection above, where he speaks about feeling "diseased" when he is rejected.

Reporting internalized stigma was marginally associated with low psychosexual well-being, $X^2(1, 60) = 4.04$, $p = .10$, and significantly associated with low psychological well-being, $X^2(1, 56) = 4.08$, $p = .04$, and low interaction of psychosexual and psychological well-being, $X^2(1, 36) = 5.81$, $p = .02$ (see Table 9).

Discussion

In qualitative analysis of participant interviews, two broad categories emerged to describe participants' discussion of sexuality-related burdens associated with HIV. The first, *disease related burden of HIV infection,* demonstrates how the burden of having a physically infectious disease becomes a psychological burden, through the pervasive necessity to think about the infectiousness of HIV during sexual situations (i.e., HIV rumination). The themes of transmission and reinfection risk illustrate how this sexuality related cognitive burden negatively impacts psychological well-being by presenting a chronic stressor. Participants' experiencing this burden reported feelings of guilt and worry, avoidance of sexual and romantic relationships with HIV-negative people, and, for some, resulted in difficulties in engaging in sexual activity as illustrated by the sexual difficulties theme. These findings support the strong role of sexuality related cognition demonstrated in Aims 1 and 3.

The second category, *interpersonal burden of HIV infection*, focuses on the negative effects HIV infection has on people's romantic interactions and the resulting psychological consequences. The themes within this category demonstrate the

detrimental effects that HIV can have on the sexual and romantic lives of HIV-positive people through disruption of the formation and maintenance of relationships. The HIV-positive person's role in the formation of the relationship is restricted (as seen in the themes lack of agency and rejection) and his/her relationship security and intimacy are undermined (rejection, negative treatment by an HIV-negative partner).

This category illustrates how interpersonal stigma can result in the internalization of HIV stigma. Rejection, in particular, was experienced by a high number of participants and its influence is clearly visible in some participants' expressions of internalized stigma, indicating a belief that they were not worthy of being romantic or sexual partners. While internalized stigma statements were some of the least reported, they demonstrated the strongest relationships with psychosexual and psychological well-being compared to any other theme. These findings highlight the importance of internalized stigma in both sexuality and mental health, providing support for the quantitative findings of Aim 1.

Each of these broad categories contextualize the quantitative findings of Aim 2 by illustrating how sexuality mediates HIV stigma's affect on mental health. The disease related burden narratives provide substantial support for sexuality related cognition as an aspect of the mediating mechanism between HIV stigma and mental health. The interpersonal burden themes provide a narrative demonstrating how sexuality related interactions involving stigma (i.e., lack of agency, rejection, negative treatment by an HIV-negative partner) result in internalization of stigma, negatively impacting participants' *sexual* self-worth. This category was predominantly related to low psychological well-being, providing further evidence for sexuality related self-evaluation a as an aspect of the mediating mechanism between HIV stigma and mental health.

Chapter 7:

Discussion

This study attempts to contribute to our understanding of the relationship between HIV stigma and sexuality for HIV-positive people. Although there is little research directly examining HIV stigma and sexuality, what does exist supports the hypothesis that stigma negatively impacts sexuality. In order to examine this relationship, this study used the Comprehensive Process Model of Concealable Stigma (Pachankis, 2007) to conceptually guide analyses. Additionally, this study explored how sexuality impacts the relationship between HIV stigma and psychological well-being. Past research has demonstrated that HIV stigma has detrimental effects on the mental health of HIV-positive people, but has failed to examine the role sexuality plays in this relationship. This study specifically focused on the affects of internalized stigma in the relationships between HIV stigma, sexuality, and mental health. Due to the myriad of analyses conducted in this study, I will begin with a review of the findings of each aim. Then I will discuss the implications of findings across the study aims, followed by practical implications of the study findings. Next, I will discuss the limitations of this study and recommendations regarding future directions for this research. Finally, I will end with some final conclusions, revisiting the concept of HIV stigma.

Summary of Findings by Aim

Aim 1 – The relationship between HIV stigma and sexuality related cognition, affect, behavior, and self-evaluation. Bivariate analyses examining the full HIV stigma scale and sexuality related cognition, affect, behavior, and self-evaluation revealed few significant findings. The Disclosure Concerns and Concerns with Public

Attitudes towards People with HIV subscales were marginally associated with sexual behavior, but not cognition, affect, or self-evaluation, and these relationships were opposite direction of hypotheses. However, as predicted, the Negative Self-Esteem and Personalized Stigma subscales -- used to operationalize internalized stigma -- were negatively associated with sexuality related cognition, affect, and self-evaluation.

Regressions controlling for demographics demonstrated further support for the patterns of relationships revealed in bivariate analyses. Disclosure Concerns but not Concerns with Public Attitudes towards People with HIV, continued to predict lower percentage of sexual risk behavior. Sexuality related cognition, affect, and self-evaluation were all significantly predicted by the internalized stigma subscales, such that higher stigma scores were associated with greater HIV rumination, higher sexual anxiety, and lower sexual esteem. The one exception was sexual anxiety, which was not significantly predicted by any stigma subscale. Significant internalized stigma predictors accounted for a sizable portion of variance after controlling for demographics (13%-22%). While this change in variance was not always significant, likely due to the small sample sizes, the large effect size elicits confidence in the existence of these relationships in the larger population. Overall, findings from this aim suggest that internalized HIV stigma plays an important role in the way HIV-positive people think and feel about themselves sexually, but that it does not impact their sexual behavior.

Aim 2 – The role of psychosexual well-being in the relationship between HIV stigma and psychological well-being. Psychosexual well-being was examined as both a moderator and mediator of HIV stigma and psychological well-being. There was no evidence of moderation for any of the HIV stigma subscales as none of the interaction

terms between the subscales and psychosexual well-being were significant predictors of psychological well-being. Mediation analyses could not be conducted for the non-internalized stigma subscales as they did not meet prerequisites. Psychosexual well-being did emerge as a significant mediator of the relationship for each of the internalized stigma subscales and psychological wellbeing. In both cases, psychosexual well-being accounted for over 25% of the variance in the relationship between internalized HIV stigma and psychological well-being. In other words, sexuality accounted for a large portion of the relationship between internalized HIV stigma and mental health. The large effect sizes observed with a small sample size provide strong evidence that this relationship is present within the larger HIV-positive population.

Aim 3 – Aims 1 and 2 within gender and sexual orientation cohort. Repeating the analyses of Aim 1 by cohort produced interesting and illuminating results, even with the small sample sizes and exploratory nature of this aim. Findings supported the importance of internalized stigma, as those subscales were significant predictors of sexuality related cognition, affect, and self-evaluation, but the non-internalized stigma subscales were not. Further, these findings support the relative lack of association between stigma and sexual behavior. Results suggest a stark difference between the relationships present for heterosexual men and those present for MSM and women. Sexual satisfaction, relationship satisfaction, and sexual esteem were significantly predicted by internalized stigma for heterosexual men. Conversely, HIV rumination was the only sexuality related measure predicted by internalized stigma for MSM and women. Given these differences between the groups, these results suggest that HIV stigma negatively affects sexuality related affect and self-evaluation for heterosexual men and

sexuality related cognition for MSM and women.

When Aim 2 analyses were repeated within each cohort, all three cohorts demonstrated similar relationships. The relationship between internalized stigma and psychological well-being was fully mediated by psychosexual well-being for all three cohorts. These results further support sexuality as a mechanism through which internalized HIV stigma negatively affects the mental health of HIV-positive people.

Given the differences between cohorts in Aim 1 analyses and the similarity across cohorts in Aim 2 analyses, these findings suggest that while sexuality is a mechanism through which internalized HIV stigma affects mental health, different components of sexuality may be involved in this relationship for people of different genders and sexual orientations. For heterosexual men this mechanism appears to be composed of their romantic and sexual satisfaction, as well as how they value themselves as a sexual person. For MSM and women, this mechanism appears to consist of how cognitively burdensome HIV is during sexual activity. Across all analyses the effect sizes were large, especially given the small sample sizes, and are highly supportive of these relationships existing not only in the population at large, but within the larger gender/sexual orientation subpopulations as well.

Aim 4 – Investigation of qualitative data. Two broad categories of psychological burden emerged from participants' interviews describing their negative experiences of HIV infection in relation to sexuality: *disease related burden* and *interpersonal burden*. Over three-quarters of participants reported at least one type of *disease related burden,* and the transmission risk theme within this category was the theme endorsed by the greatest number of participants. These high prevalence rates

demonstrate how pervasive a psychological burden having an infectious disease such as HIV can be. In the transmission and reinfection risk themes, participants' evince how the physical burden of HIV is a chronic cognitive stressor in sexual situations, and therefore becomes an emotional burden. The sexual difficulties theme reveals how, for some people, the cognitive and emotional burden of transmission and reinfection risk translated into physical and psychological barriers to sexual activity. Participants' narratives of disease related burden provide context for the process by which sexuality related cognition (i.e., HIV rumination) acts as an aspect of the mediating mechanism of sexuality in the relationship between internalized HIV stigma and psychological well-being.

Over half of participants reported at least one *interpersonal burden*, including rejection, the second most commonly reported theme overall. In this category, themes demonstrate the detrimental effects interpersonal HIV stigma can have on romantic and sexual interactions (i.e., lack of agency, rejection, negative treatment by an HIV-negative partner), causing internalized stigma in relation to sexuality. The majority of themes in this category were related to low psychological well-being, demonstrating how the negative impact of stigma on sexuality directly affects more general well-being and mental health. The theme of internalized stigma in particular illuminates how stigmatizing sexual situations negatively affect sexuality related self-evaluation. Although internalized stigma statements were some of the least reported participants who did report them demonstrated the most negative consequences as compared to any other theme.

Implications across Aims

Internalized stigma. While previous research has found that internalized HIV stigma negatively affects the psychological well-being of HIV positive people (Lee, Kochman, & Sikkema, 2002; Simbayi, Kalichman, Strebel, Cloete, Henda, & Mqeketo, 2007), there is little research directly examining its affect on sexuality. This study found that internalized HIV stigma is an important factor in psychological aspects of sexuality, but possibly not sexual behavior. As hypothesized, internalized HIV stigma demonstrated the strongest relationships with sexuality related cognition, affect, and self-evaluation, with higher stigma predicting worse outcomes. However, this pattern did not hold true for sexual behavior, which showed little association with internalized stigma.

The effects of internalized stigma on sexuality were different by gender and sexual orientation cohort (with internalized stigma associated with sexuality related affect and self-evaluation for heterosexual men and sexuality related cognition for MSM and women), but supported the important role of internalized stigma in the psychological aspects of sexuality and not sexual behavior. In the qualitative data, participants spoke directly about how their HIV status caused them to feel negatively about themselves as sexual beings, and analyses showed that this theme was the most negatively related to psychological and sexual well-being. Internalized stigma was also the only type of stigma for which psychosexual well-being mediated its affect on psychological well-being.

This pattern of relationships is understandable given that internalized stigma emanates from within the self, making it most salient for internal, psychological processes as opposed to interpersonal interactions. Sexuality can be an intensely intimate/personal aspect of life, and internalized stigma may therefore be particularly pertinent for it. Below I will discuss the implications of internalized stigma's association

with each of the sexuality related consequences and the mediation model.

Sexuality related cognition. As noted in Chapter 1, the Comprehensive Process Model of Concealable Stigma suggests that sexual situations can be triggers for HIV stigma and lead to sexuality related consequences. This study demonstrates that sexuality related cognition -- in the form of HIV rumination during sexual activity -- is negatively affected by internalized HIV stigma. This finding is consistent with the model, as rumination is a form of preoccupation, one of the cognitive consequences triggered by stigma related situational triggers. HIV rumination also comprised part of the psychosexual well-being mediating mechanism, which is consistent with past research demonstrating rumination predicts negative mental health (i.e., depression, anxiety; Nolen-Hoeksema, 2000; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; Rood, Roelofs, Bögels, Nolen-Hoeksema, & Schouten, 2009).

Findings from this study also suggest that the relationship between internalized HIV stigma and sexuality related cognition might be present only for MSM and women, but not for heterosexual men. Past research has found women and sexual minorities are more likely to engage in rumination, which may explain gender and sexual orientation differences in depression and anxiety (Nolen-Hoeksema & Corte, 2004; Nolen-Hoeksema, Larson, & Grayson, 1999; Hatzenbuehler, McLaughlin, & Nolen-Hoeksema, 2008). These differences found in past research suggest that the rumination of MSM and women in this study is more susceptible to the effects of internalized stigma than that of heterosexual men because it is a more salient cognitive response style for these groups.

Sexuality related affect. There is evidence that an HIV diagnosis directly contributes to a reduction in sexual enjoyment for some HIV-positive people (Lambert,

Keegan, & Petrak, 2005). Other research suggests that HIV might make sexual and romantic relationships a source of stress and anxiety as opposed to support (Harvey & Wenzel, 2002), especially when the HIV-positive partner experiences a reduction in sexual desire and/or satisfaction (Palmer & Bor, 2001). While this previous research did not tap HIV stigma directly, it does suggest that an HIV diagnosis creates a negative atmosphere for the HIV positive person. This negative atmosphere can be interpreted as an environment of stigmatization, including internalized stigmatization.

In this study, sexuality related affect was composed of three components: sexual satisfaction, sexual anxiety, and relationships satisfaction. Sexual satisfaction demonstrated a consistent relationship with internalized stigma across analyses with the full sample, however it was only significantly predicted by internalized stigma for heterosexual men when analyses were run for each gender/sexual orientation cohort. Of all the sexuality related measures, sexual anxiety was one of the most strongly correlated with internalized stigma in Aim 1 bivariate analyses. However in regression analyses controlling for race/ethnicity internalized stigma no longer predicted sexual anxiety. Nor was sexual anxiety significantly predicted in regressions for any gender/sexual orientation cohort. Because regression analyses controlled for demographics, these results suggest that race/ethnicity is a more salient predictor of sexual anxiety than stigma, with Blacks demonstrating less anxiety. Relationship satisfaction was only marginally correlated with internalized stigma in Aim 1 bivariate analyses, yet in regression analyses controlling for gender/sexual orientation cohort, internalized stigma became a significant predictor. In Aim 3 regression analyses found that relationship satisfaction was only predicted by internalized stigma for heterosexual men. The strong association between

internalized stigma and relationship satisfaction in the regression as compared to the bivariate analyses of Aim 1 is understandable as the regression controlled for participant cohort and in Aim 3 internalized stigma is only a salient factor in relationship satisfaction for heterosexual men. These findings suggests that although sexuality related affect is negatively affected by internalized stigma, this relationship may only be present, or be strongest, for heterosexual men as compared to MSM and women.

Sexual behavior. Previous research suggests that HIV stigma would be associated with reduced sexual activity (Laryea & Gien, 1993; Palmer & Bor, 2001; Stevens & Galvao, 2007; van Der Straten, Vernon, Knight, Gomez, & Padian, 1998) and possibly more sexual risk (Sobo, 1997), though the research in this area is inconsistent (Ryan, Forehand, Solomon, & Miller, 2008; Vanable, Carey, Blair, & Littlewood, 2006). I also hypothesized that internalized stigma would be the strongest predictor of negative sexual behavior outcomes, as qualitative research has found evidence of internalized stigma that may be related to sexuality, with people expressing feeling "dirty" or contaminated due to their HIV status (Laryea & Gien, 1993; Siegel & Krauss, 1991).

Although this study found evidence of internalized stigma directly related to sexuality in both quantitative and qualitative analyses, the specific relationship with sexual behavior was not as expected. Internalized stigma demonstrated no stable relationship with any sexual behavior variables in the full sample or in the gender/sexual orientation cohorts. With the full sample, relationships were found between non-internalized stigma and unprotected sex with a transmission risk partner; however the relationship was opposite of the direction expected, with more stigma related to less sexual risk. This relationship may be the result of persons with high levels of non-

internalized stigma avoiding disclosure of HIV status with transmission risk partners by using condoms and essentially removing transmission risk. In qualitative analyses participants demonstrated how disclosure can lead to stigmatization causing psychological burden (i.e., rejection, lack of agency, negative treatment by an HIV-negative partner). The relationship between non-internalized stigma and sexual risk behavior was not found within any of the gender/sexual orientation cohorts; however this may be due to the small sample sizes and low variability in sexual behavior.

Sexuality related self-evaluation. In this study, sexuality related self-evaluation was measured using sexual esteem, which specifically taps the self-evaluative consequence of negative view of the self. Sexual esteem was well correlated with internalized stigma in the bivariate analyses of Aim 1, and in regression analyses was the sexuality related measure most strongly predicted by internalized stigma, demonstrated by the greatest change in variance. Despite these strong findings with the full sample, sexual esteem was only significantly predicted by internalized stigma for the heterosexual men, not MSM or women. The strongest link between internalized HIV stigma and sexuality related self-evaluation can be seen in the qualitative analyses, where statements about negatively viewing the sexual self as a result of HIV status (i.e., internalized stigma theme) were present. Qualitative analyses for this study resembled other previous research, with participants reporting feeling “dirty”, like “damaged goods”, and as though they have nothing of value to offer a partner as a result of their HIV status (Laryea & Gien, 1993; Siegel & Krauss, 1991).

Psychosexual well-being as a mediator of internalized HIV stigma and psychological well-being. In analyses both with the full sample and within each of the

gender/sexual orientation cohorts, psychosexual well-being accounted for a large portion of the relationship between internalized stigma and mental health. This study provides overwhelming evidence for psychosexual well-being as a mediating mechanism, suggesting that internalized HIV stigma negatively impacts mental health through its affect on sexuality. This mediating mechanism is composed of psychological aspects of sexuality, as opposed to sexual behavior. In the qualitative interviews, participants' expressions of *disease burden* demonstrated how the infectious nature of HIV negatively impacted psychological well-being due to constant worrying (i.e., sexuality related cognition). In the *interpersonal burden* category, participants expressed how their experiences of interpersonal HIV stigma (e.g., lack of agency, rejection, and negative treatment by an HIV-negative partner) with possible and actual romantic/sexual partners caused internalized stigma in relation to their sexuality, negatively impacting their perceptions of self-worth not only as an HIV-positive person, but as a sexual being. This category demonstrated the greatest association with psychological well-being, providing evidence for the causal link from internalized HIV stigma to psychosexual well-being to psychological well-being.

Finally, this study suggests that the mediating mechanism is likely composed of different psychological aspects of sexuality for different gender/sexual orientation groups. Affective and self-evaluative aspects of sexuality appear to be the most salient for heterosexual men, and cognitive aspects appear to be the most salient for MSM and women.

Practical Implications

HIV stigma and its effects are particularly difficult to intervene on at the

individual level, due to the interpersonal nature of stigma, for both mental health practitioners and intervention providers. The findings of this study have several important practical implications for mental health practitioners and intervention providers who work with HIV-positive individuals. First, this study demonstrates the importance of internalized HIV stigma and the tremendous danger it poses to multiple aspects of HIV-positive individuals' well-being. Professionals promoting the well-being of HIV-positive people can use measures of internalized stigma to identify individuals particularly at risk for poor mental health and sexuality related consequences.

Second, because internalized stigma emanates from the self, this level of stigma allows mental health practitioners and intervention providers to intervene at the individual level. For example, an HIV-positive woman may have a high Disclosure Concerns score because the people in her life would react negatively to learning her status. This type of stigma is difficult to intervene on at the individual level because her mental health practitioner cannot change the reactions of the people in her life. Further, the concerns over disclosure may actually be protective, helping the HIV-positive woman stay safe by being discrete about her status. However, the same woman has a high Negative Self-Esteem score indicating that she feels she is a bad person because she has HIV. This level of stigma emanates from the woman herself, allowing her mental health practitioner to directly intervene on her thoughts, feelings, and beliefs about herself. Effective intervention on this level would not only reduce internalized stigma, but likely improve both the woman's psychosexual and psychological well-being, raising her quality of life.

Third, this study clearly demonstrates the importance of sexuality in the well-

being of HIV-positive people. Health and mental health practitioners and intervention providers invested in the general well-being of their HIV-positive patients must address sexuality. Unfortunately sexuality is not an area that many doctors and other health practitioners feel comfortable speaking about with their patients, and therefore sexuality is often ignored, not only for HIV-positive patients, but for patients generally (Giami & Pacey, 2003; Salvage, 1997). It is not solely the behavioral aspects of sexuality that must be addressed as the psychological aspects of sexuality seem to be the most affected by stigma. These psychological aspects comprise the mediating mechanism of sexuality in the relationship between internalized HIV stigma and psychological well-being. This mediating mechanism presents another point at which interventions can be tailored to intercede on the impact of internalized HIV stigma on general psychological well-being. Using the example of the HIV-positive woman above, her mental health practitioner can address not only her internalized stigma in order to improve quality of life, but also her thoughts and feelings about her sexuality. Integrating these two aspects allows for a two pronged approach in improving psychological well-being.

Limitations and Future Research Directions

This study had several limitations. First we used a reduced version of the HIV Stigma Scale (Berger, Ferrans, & Lashley, 2001), which resulted in lower reliabilities for the subscales Concerns about Public Attitudes towards People Living with HIV and Negative Self-Esteem. Future research should examine the relationships between HIV stigma, sexuality, and psychological well-being with the full scales. Another measurement limitation relates to the qualitative interview, which was not designed for this analysis. It is possible that the design of the interview led to lack of reporting of other

highly relevant themes, and under reporting of the themes identified because participants were not specifically questioned about them. The fact that nearly all participants reported at least one burden when not specifically prompted lends credence to the salience of psychological burden of HIV in regards to sexuality. In regards to the mediation and moderation analyses, these data are not able to assess causality. The strength of the mediation findings warrants future study with longitudinal data to better test causal mediation. This study was also limited by the small sample sizes available for the analyses employed, however, effect sizes were high, providing confidence for these findings accurately representing relationships present in the population.

Future research is needed to truly understand the role of stigma in the well-being of HIV-positive people, including their sexuality and the role sexuality plays in general psychological well-being. The significant internalized stigma findings of this study coupled with the general non-significance of non-internalized stigma indicates that the different levels of stigma must be examined separately and not as a general concept. Future research needs to use measures of stigma that either have subscales tapping the different levels, such as the HIV Stigma Scale (Berger, Ferrans, & Lashley, 2001), or specifically tap a single level of stigma. Examination in greater depth of the role of internalized stigma in HIV-positive people's well-being is warranted and future research should try to replicate these findings with these and other sexuality related measures that tap the constructs of the Comprehensive Process Model of Concealable Stigma (Pachankis, 2007).

The findings of this study also highlight the need for future research to take sexuality into account when studying the mental health of HIV-positive people. The

study of sexuality must not be limited to sexual behavior, but include psychological aspects of sexuality. However, additional research is needed to explore the relationship between HIV stigma and sexual behavior with a more sexually diverse population, including HIV-positive people who are not engaged in sexual activity. A more diverse sample would allow for greater variability within variables and greater variability in the type and number of variables available. Additional research is also need to analyze which aspects of sexuality constitute the mediating mechanism between internalized stigma and psychological well-being. This study suggests that these aspects are different for people of different genders and sexual orientations, therefore future research should examine these groups separately.

Finally, future directions this area of research takes should include examining not only the negative affect internalized HIV stigma has on sexuality, but also how sexuality is related to stigma resilience and stress-related growth. Also the mediating mechanism of sexuality should be examined with physical health and health behavior outcomes.

HIV Stigma Revisited – Final Thoughts

According to Goffman (1963), stigma results in a change in social identity, changing the way others perceive a stigmatized individual, reducing them to an inferior being. Of particular interest to this dissertation is the way in which HIV is a special case of stigma because of its relationship with sexuality. For the HIV-positive individual, HIV stigma disrupts their relationships, interfering with romantic and sexual interactions. This study focused Goffman's concept of stigma to the area of sexuality, demonstrating how HIV stigma reduces the *sexual self* "from a whole or usual person to a tainted, discounted one" (1963, p. 3) in the eyes of the individual themselves (i.e., internalized stigma).

I posited that due to the association between HIV and sexuality, sexual activity may not provide the usual cognitive and emotional relief for HIV-positive individuals as it does for the general population. Instead, the link between HIV and sexuality means that *sexuality itself may evoke the stigmatized identity*, interfering with the generally positive affects sexual activity can have for an individual. The Comprehensive Process Model of Concealable Stigma (Pachankis, 2007) reveals the process by which the stigmatized identity is evoked and negatively impacts the stigmatized individual. According to this model, stigma relevant situations can cause psychological consequences. By incorporating HIV and sexuality into this model, this study demonstrated that *sexuality relevant situations can cause sexuality related consequences* for the HIV-positive individual.

Internalized HIV stigma insidiously attacks the well-being of HIV-positive people by restricting positive effects of sexuality, sowing seeds of distress in an area of life from which people derive pleasure. However, through understanding these relationships, researchers and mental health providers may develop methods of combating the devastating effects internalized HIV stigma can have on HIV-positive individual, improving quality of life.

Appendix:

Example Qualitative Interview Questions

<u>For participants in romantic relationships:</u>

1. Tell me a little bit about your relationship.
    a. Length (overall and in relation to diagnosis)
    b. Exclusivity (IF NOT EXCLUSIVE, MAKE SURE TO INCLUDE SECTION B)
    c. Knowledge of status (both their knowledge of their partner's status and their partner's knowledge of their status)

2. How does being ____ (the same/a different) HIV-status influence or impact your relationship?
    a. Intimacy
    b. Mutual understanding regarding living with HIV
    c. Relationship satisfaction

3. How does being ____ (the same/a different HIV-status influence or impact your sexual relationship?
    a. What do you do sexually? (oral/anal/vaginal; insertive/receptive/no insertion; etc.)
    b. Condom use
    c. Sexual intimacy/satisfaction

<u>For participants with casual partners:</u>

1. Do you think about HIV status when ***choosing*** a sexual partner? Why/why not?
    a. IF YES: How do you usually find out a person's HIV status?
    b. IF NO: Can you think of any circumstances under which HIV status might play a role for you in choosing a sexual partner?

2. Do you think about HIV status when ***deciding what to do sexually*** with a partner? Why/why not?
    a. Activity (oral/anal/vaginal; insertive/receptive/no insertion; etc.)
    b. Condom Use
    c. What role does HIV status play in sexual intimacy?
    d. How does the HIV status of your partner affect how you feel about sex?

3. Do you think about HIV status when choosing a ***romantic/dating*** partner? Why/why not?
    a. IF YES: How do you usually find out a person's HIV status?
    b. IF NO: Can you think of any circumstances under which HIV status might play a role for you in choosing a romantic partner?

Table 1

Descriptives of Categorical Demographic and Sexual Behavior Variables

Demographic	*n*	*%*	Sexual Behavior	*n*	*%*
Race and Ethnicity			Had More than 1 Sex Partner		
Black	47	78.3	No	39	65.0
Hispanic/Latino	7	11.7	Yes	21	35.0
White	4	6.7	Had Transmission Risk Partners		
Multiracial	1	1.7	No	24	40.0
Refuse to Answer	1	1.7	Yes	36	60.0
Education			Had 10 or More Sex Acts		
Not a High School Graduate	17	28.3	No	33	55.0
			Yes	27	45.0
High School Graduate	20	33.3	Any Unprotected Sex Acts		
Education Beyond High School	21	35.0	No	39	65.0
			Yes	21	35.0
Refuse to Answer	2	3.3	Any Unprotected Sex with Transmission Risk Partner		
Annual Income					
Less than $15,000	36	60.3	No	48	80.0
$15,000 or more	17	28.3	Yes	12	20.0
Refuse to Answer	7	11.7	Any Sex Under the Influence		
Employment			No	36	60.0
Not Employed	47	78.3	Yes	24	40.0
Employed	13	21.7			
Relationship Status					
Single	15	25.0			
Partnered	44	73.3			
I Don’t Know	1	1.7			
Diagnosed with AIDS					
No	22	41.5			
Yes	28	52.8			
Refuse to Answer	3	5.7			

Table 2

Descriptives of Continuous Sexuality Related and Psychological Well-Being Measures

Variable	*n*	*M*	*SD*	*Range*
HIV Stigma Scale (Full)	54[a]	39.17	9.60	18-56
Disclosure Concerns	58[a]	10.36	3.31	4-16
Concerns w/ Public Attitudes	54[a]	10.59	2.44	5-16
Negative Self-Esteem	60	8.48	2.20	4-13
Personalized Stigma	58[a]	9.55	3.13	4-16
Sexuality Related Cognition				
HIV Rumination	58[b]	2.33	2.23	0-6
Sexuality Related Affect				
Sexual Satisfaction	60	2.58	1.31	0-4
Sexual Anxiety	60	1.38	1.09	0-4
Relationship Satisfaction	45[c]	4.10	0.83	1.57-5.00
Sexual Behavior				
Number of Sex Acts	60	12.42	11.91	1-60
% of Unprotected Sex Acts	60	18.60	33.65	0-100
% of Unprotected Sex Acts with Transmission Risk Partner	60	9.61	25.12	0-100
Sexuality Related Self-Evaluation				
Sexual Esteem	60	2.66	1.15	0-4
Psychosexual Well-Being Composite	60	-0.002	0.68	-1.86-1.10
Psychological Well-Being				
CES-D	57[a]	16.11	9.40	0-35
Satisfaction with Life Scale	60	19.52	7.51	7-35
Perceived Stress Scale	58[a]	16.14	5.62	4-28
Psychological Well-Being Composite	56[a]	0.02	0.80	-1.44-1.76

[a]Sample sizes vary for sum score variables due to items skipped by participants.
[b]Two participants refused to answer the HIV Rumination item.
[c]The Relationship Assessment Scale was completed by all 44 participants who indicated being in a relationship and 1 participant who indicated not knowing whether they were in a relationship during the computer administered survey.

Table 3

Correlations between HIV Stigma Scales and Continuous Sexuality Related Measures

	HIV Stigma Scale (Full)	Disclosure Concerns	Concerns w/ Public Attitudes	Negative Self-Esteem	Personalized Stigma
Sexuality Related Cognition					
HIV Rumination	.27*	.12	.02	.35**	.45**
Sexuality Related Affect					
Sexual Satisfaction	-.11	.01	-.15	-.31*	-.12
Sexual Anxiety	.32*	.20	.20	.38**	.43**
Relationship Satisfaction (Inv log)	.06	-.06	-.03	.01	.28†
Sexual Behavior					
Number of Sex Acts	.17	.15	.23†	.16	.07
% of Unprotected Sex Acts	-.10	-.21	-.001	-.003	-.03
% of Unprotected Sex Acts with Transmission Risk Partner	-.16	-.25†	-.15	.003	-.07
Sexuality Related Self-Evaluation					
Sexual Esteem	-.17	-.09	-.23	-.32**	-.15
Psychosexual Well-Being Composite	-.34*	-.16†	-.23	-.51***	-.42***

†$p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table 4

Hierarchical Regressions of HIV Stigma Subscales Predicting Continuous Sexuality Related Measures, Controlling for Demographics

Predictor	Sexuality Related Dependent Variable								
	HIV Rumination (n = 43)			Sexual Satisfaction (n = 45)			Sexual Anxiety (n = 51)		
	β	SE	ΔR^2	β	SE	ΔR^2	β	SE	ΔR^2
Step 1			.402***			.242**			.222**
Cohort (Heterosexual Men)	[a]			[a]			[a]		
Cohort (MSM)	[a]			[a]			[a]		
Age	[a]			[a]			[a]		
Race/Ethnicity	.232	.708		-.355*	.418		.269*	.334	
Education (<HS)	.017	.741		[a]			.143	.368	
Education (HS)	-.312	.835		[a]			-.247	.426	
Annual Income	-.260	.635		[a]			[a]		
Employment	[a]			[a]			-.167	.383	
Relationship Status	-.207	.727		[a]			[a]		
Year of HIV Diagnosis	[a]			.149	.034		[a]		
AIDS Diagnosis	[a]			[a]			[a]		
Step 2			.170*			.125			.068
Disclosure Concerns	-.042	.163		.350	.104		.117	.079	
Concerns w/Public Attitudes	-.491	.231		-.257	.136		-.167	.104	
Negative Self-Esteem	.122	.190		-.434*	.112		-.008	.100	
Personalized Stigma	.465*	.136		.186	.084		.267	.071	

*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$

[a]Variable not included in regression because relationship with dependent variable was not significant in bivariate analyses.

Table 4 (cont.)

Hierarchical Regressions of HIV Stigma Subscales Predicting Continuous Sexuality Related Measures, Controlling for Demographics

Predictor	Sexuality Related Dependent Variable								
	Relationship Satisfaction (Inv log) (n = 41)			Number of Sex Acts (n = 48)			% of Unprotected Sex Acts with Transmission Risk Partner (n = 53)		
	β	SE	ΔR^2	β	SE	ΔR^2	β	SE	ΔR^2
Step 1			.159*			.048			.074*
Cohort (Heterosexual Men)	-.057	.062		[a]			[a]		
Cohort (MSM)	.321	.067		[a]			[a]		
Age	[a]			[a]			-.271	.005	
Race/Ethnicity	[a]			[a]			[a]		
Education (<HS)	[a]			[a]			[a]		
Education (HS)	[a]			[a]			[a]		
Annual Income	[a]			-.181	4.150		[a]		
Employment	[a]			[a]			[a]		
Relationship Status	[b]			[a]			[a]		
Year of HIV Diagnosis	[a]			[a]			[a]		
AIDS Diagnosis	[a]			[a]			[a]		
Step 2			.136			.063			.100
Disclosure Concerns	-.303	.013		.009	1.028		-.473*	.018	
Concerns w/Public Attitudes	.050	.016		.277	1.271		.115	.023	
Negative Self-Esteem	-.134	.016		.046	1.273		.089	.024	
Personalized Stigma	.584*	.013		-.124	0.905		.071	.017	

*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$

[a]Variable not included in regression because relationship with dependent variable was not significant in bivariate analyses.

[b]Not applicable as only participants who reported being in a relationship were assessed for relationship satisfaction.

Table 4 (cont.)

Hierarchical Regressions of HIV Stigma Subscales Predicting Continuous Sexuality Related Measures, Controlling for Demographics

Predictor	Sexual Esteem (n = 44)		
	β	SE	ΔR^2
Step 1			.126†
Cohort (Heterosexual Men)	[a]		
Cohort (MSM)	[a]		
Age	[a]		
Race/Ethnicity	[a]		
Education (<HS)	[a]		
Education (HS)	[a]		
Annual Income	[a]		
Employment	.079	.421	
Relationship Status	[a]		
Year of HIV Diagnosis	[a]		
AIDS Diagnosis	.351*	.299	
Step 2			.216*
Disclosure Concerns	.438	.080	
Concerns w/Public Attitudes	-.481	.108	
Negative Self-Esteem	-.396*	.093	
Personalized Stigma	.175	.072	

*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$

[a]Variable not included in regression because relationship with dependent variable was not significant in bivariate analyses.

Table 5

Logistic Regressions of HIV Stigma Subscales Predicting Dichotomous Sexual Behavior Variables, Controlling for Demographics (n = 53)

	Had Transmission Risk Partners					
	Step 1 Demographics			Step 2 Stigma Subscales		
Model χ^2	13.70**			18.56**		
df	3			7		
Nagelkerke R^2	.31			.40		
	β	Exp. β	95% CI	β	Exp. β	95% CI
Constant	2.56	12.93		0.58	1.78	
Cohort (Heterosexual Men)	-0.95	0.39	0.09-1.66	-0.92	0.40	0.07-2.16
Cohort (MSM)	0.82	2.28	0.43-12.04	1.50	4.48	0.63-31.83
Relationship Status	-2.41	0.09	0.01-0.85*	-2.21	0.11	0.10-1.23
Disclosure Concerns				0.29	1.34	0.94-1.91
Concerns w/ Public Attitudes				-0.17	0.84	0.54-1.32
Negative Self-Esteem				0.11	1.12	0.73-1.72
Personalized Stigma				-0.06	0.95	0.68-1.32

	Had Any Unprotected Sex with Transmission Risk Partner					
	Step 1 Demographics			Step 2 Stigma Subscales		
Model χ^2	2.09			6.35		
df	1			5		
Nagelkerke R^2	.06			.17		
	β	Exp. β	95% CI	β	Exp. β	95% CI
Constant	1.96	7.11		4.27	71.65	
Age	-0.07	0.93	0.85-1.03	-0.70	0.93	0.84-1.04
Disclosure Concerns				-0.13	0.88	0.62-1.26
Concerns w/ Public Attitudes				-0.20	0.82	0.52-1.30
Negative Self-Esteem				0.17	1.19	0.72-1.95
Personalized Stigma				-0.05	0.95	0.66-1.38

*$p \leq .05$; **$p \leq .01$

Note. Only those demographics significantly associated with the dependent variable were included in analyses.

Table 6

Hierarchical Regression Analyses Examining Psychosexual Well-Being as a Mediator between the Internalized Stigma Subscales and Psychological Well-Being

	Internalized Stigma Subscale Predictor					
	Negative Self-Esteem Subscale (n = 56)			Personalized Stigma Subscale (n = 54)		
	β	SE	ΔR^2	β	SE	ΔR^2
Step 1			.187***			.227***
Internalized Stigma	-.432***	.045		-.477***	.033	
Step 2			. 264***			.292***
Internalized Stigma	-.156	.042		-.275**	.028	
Psychosexual Well-Being	.538***	.146		.576***	.133	
Full Model R^2			.451			.519

**$p \leq .01$; ***$p \leq .001$

Note. ANOVAs for Model 2 of each regression: Negative Self-Esteem, $F(2, 54) = 21.73$, $p < .001$; Personalized Stigma, $F(2, 53) = 27.50$, $p < .001$.

Table 7

Exploratory Hierarchical Regressions of HIV Stigma Subscales Predicting Sexuality Related Measures, Controlling for Demographics, Within Each Gender/Sexual Orientation Cohort

	Heterosexual Men		MSM		Women[a]	
Dependent Variable	Predicting Subscale	ΔR^2	Predicting Subscale	ΔR^2	Predicting Subscale	ΔR^2
HIV Rumination	[b]		Personalized Stigma†	.372	Negative Self-Esteem **	.777***
Sexual Satisfaction	Negative Self-Esteem**	.448†	[c]		[b]	
Relationship Satisfaction	Personalized Stigma*	.479	[b]		[c]	
Sexual Esteem	Negative Self-Esteem*	.225	[c]		[b]	

[a]For the women the relationship satisfaction scale was skewed and its inverse square root of was used
[b]Regression analyses not run as no significance was found in bivariate relationships
[c]No stigma subscales were significant predictors in regression analyses
†$p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table 8

Exploratory Hierarchical Regression Analyses Examining Psychosexual Well-Being as a Mediator between the Negative Self-Esteem Subscale and Psychological Well-Being, Within Each Gender/Sexual Orientation Cohort

	Heterosexual Men			MSM			Women		
	β	SE	ΔR^2	β	SE	ΔR^2	β	SE	ΔR^2
Step 1			.301**			.272*			.231*
Negative Self-Esteem	-.548**	.057		-.522*	.064		-4.81*	.083	
Step 2			.198*			.200*			.216*
Negative Self-Esteem	-.278	.058		-.189	.070		-.249	.081	
Psychosexual Well-Being	.521*	.223		.557*	.241		.520*	.266	

* $p \leq .05$; ** $p \leq .01$

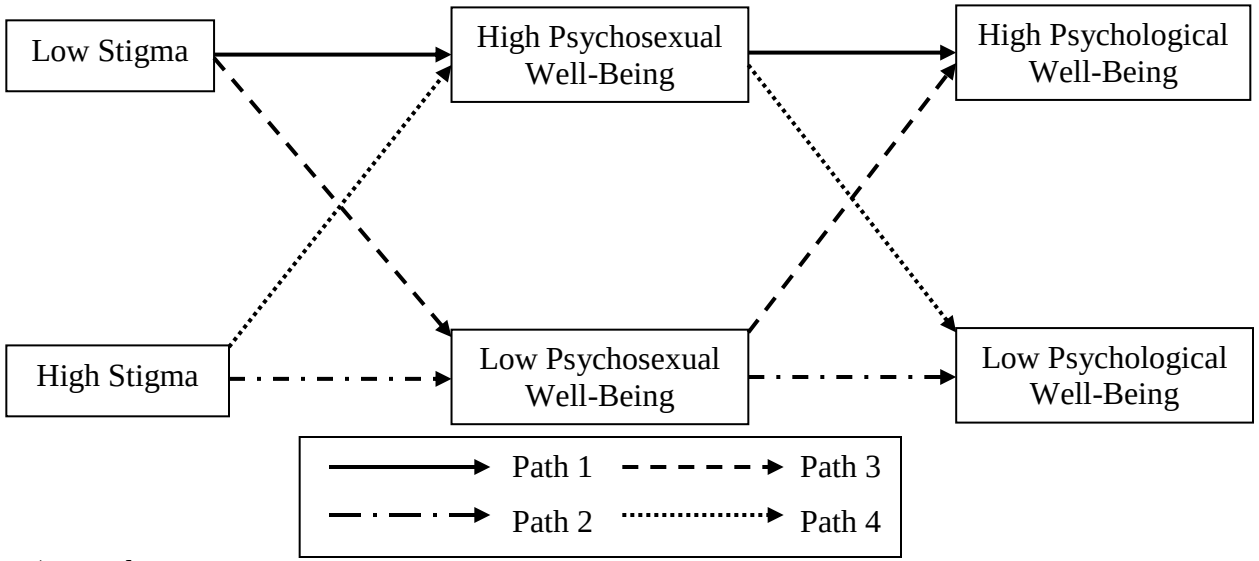
Table 9

Frequencies of Qualitative Categories/Themes and Comparison by Psychosexual and Psychological Well-Being

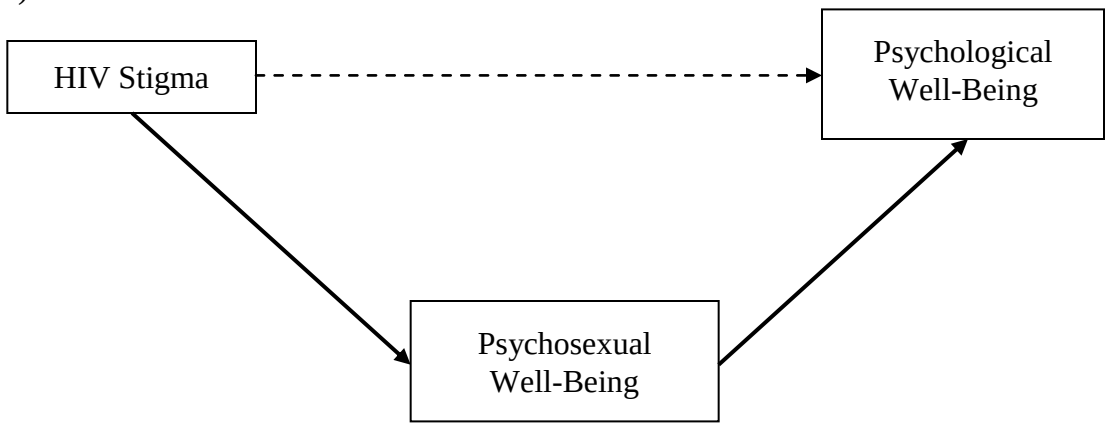
	Total (n = 60)	Psychosexual Well-Being (n = 30, per group)		Psychological Well-Being (n = 28, per group)		Well-Being Interaction (n = 18, per group)	
		Low	High	Low	High	Low/Low	High/High
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Any Theme	55 (91.7)	--	--	--	--	--	--
Disease Related	48 (80.0)	23 (76.7)	25 (83.3)	23 (82.1)	22 (78.6)	15 (83.3)	16 (88.9)
Transmission	36 (60.0)	19 (63.3)	17 (56.7)	18 (64.3)	15 (53.6)	12 (33.3)	10 (27.8)
Reinfection	27 (45.0)	9 (30.0)	18 (60.0)*	13 (46.4)	12 (42.9)	6 (33.3)	10 (55.6)
Sexual Difficulties	9 (15.0)	4 (13.3)	5 (16.7)	5 (17.9)	4 (14.3)	3 (16.7)	3 (16.7)
Interpersonal	38 (63.3)	19 (73.3)†	16 (53.3)	21 (75.0)*	14 (50.0)	14 (77.8)*	8 (44.4)
Agency	13 (21.7)	5 (16.7)	8 (26.7)	8 (28.6)†	3 (10.7)	4 (22.2)	3 (16.7)
Rejection	29 (48.3)	16 (53.3)	13 (43.3)	17 (60.7)†	10 (34.7)	11 (61.1)†	6 (33.3)
Negative Treatment	12 (20.0)	8 (26.7)	4 (13.3)	7 (25.0)	4 (14.3)	4 (22.2)	1 (5.6)
Internalized Stigma	7 (11.7)	6 (20.0)†	1 (3.3)	6 (21.4)*	1 (3.6)	5 (27.8)*	0 (0.0)

†$p \leq .10$; * $p \leq .05$

Figure 1. Diagram of possible relationships between HIV stigma, psychosexual well-being, and psychological well-being.



a) Moderation



b) Mediation

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