BACK IN MY HANDS: THE ROLE OF SELF-FORGIVENESS AND STIGMA IN HIV-POSITIVE ADULTS

William Q. Hua

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APPROVED:

Mark Vosvick, Major Professor
Ed Watkins, Committee Member
Kim Kelly, Committee Member
Vicki Campbell, Chair of the Department of Psychology
Mark Wardell, Acting Dean of the Toulouse Graduate School

While advancements in treatment have made HIV a more manageable disease, only recently have psychosocial variables associated with the health of persons living with HIV (PLH) began to receive increased scrutiny. HIV-related stigma, considered by some researchers to be a “second epidemic,” is one such psychosocial variable and is associated with negative physiological and psychological health outcomes. In an effort to alleviate the effects of stress, increased research attention has focused on forgiveness as a teachable coping strategy. Current forgiveness interventions demonstrate encouraging results in decreasing anger and neutralizing stress but have not been applied to HIV-positive populations. In this study, Lazarus and Folkman’s transactional model of stress and coping (1984) and Prochaska and Velicer’s transtheoretical model of health behavior (1997) were utilized as theoretical frameworks to inform a randomized clinical trial that examines coping skills, particularly forgiveness, in PLH and perceived HIV-related stigma.

An ethnically diverse sample of HIV-positive adults ($n = 57$) was randomized into a treatment or control group. The treatment group participated in six weeks of cognitive-behavioral group therapy that focused on the teaching of forgiveness as an effective coping tool while the control group was psychoeducational in nature and did not involve mention of forgiveness. Data was obtained on a variety of medical and psychosocial variables, including types of forgiveness (dispositional forgiveness, forgiveness of self, forgiveness of others, and forgiveness of situations) and perceived HIV-related stigma. Data were collected at three time points: at
baseline (Time 1) prior to randomization of participants to the treatment or control group, immediately post intervention (Time 2), and at six-month follow-up (Time 3).

Importantly, forgiveness was shown to be a teachable skill that PLH can use to potentially improve mental health. Men in the treatment group reported significantly higher levels of dispositional forgiveness and self-forgiveness than men in the control group at six-month follow up. Additionally, self-forgiveness at Time 1 and self-forgiveness at Time 3 significantly accounted for 34% and 28% of the variance, respectively, in HIV-related stigma at Time 3. Though self-forgiveness was shown to be better than forgiveness of others in predicting HIV-related stigma, the forgiveness intervention was not effective in reducing overall HIV-related stigma in PLH. HIV-related stigma is likely more complex than originally conceptualized. Implications and future directions in improving interventions to mitigate HIV-related stigma are discussed.
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CHAPTER 1
INTRODUCTION

In the United States alone, the Centers for Disease Control estimates that over one million people currently live with HIV or AIDS (CDC, 2007). The Texas Department of State Health Services (TDSHS, 2008) reports that about 20,000 persons live with HIV/AIDS in Region 3 of Texas, an area that includes Dallas, Fort Worth, and surrounding counties. The approximate breakdown of ethnicity for persons living with HIV/AIDS in this region is as follows: 44% White, 38% Black, 17% Hispanic, and 1% other. Approximately 80% of persons living with HIV/AIDS in this region are male.

HIV/AIDS was first introduced as a terminal illness. Due to advances in medical treatment, HIV/AIDS is now viewed by many as a chronic illness. Significantly, the introduction of highly active antiretroviral therapy (HAART) in 1996 represented a dramatic breakthrough in HIV research and treatment. HAART led to significant decreases in the morbidity and mortality of persons living with HIV or AIDS and an overall improvement in the quality of life of persons infected with the disease (CDC, 2006). Despite medical advances, persons living with HIV (PLH) or AIDS continue to face many challenges, both physiological and psychosocial, that can decrease quality of life. While advancements in treatment make HIV a much more manageable disease, other variables have surfaced that affect health.

The ensuing perception of the manageability of HIV and the associated potential increases in quality of life spurred researchers to identify additional factors amenable to clinical manipulation. One factor identified by researchers early in the HIV epidemic is the stigma associated with HIV. Because of HAART, PLH are living longer, are healthier, and are more actively integrated into society, which potentially increases their exposure to HIV-related stigma.
Before antiretroviral drugs became available, the study of stigma and discrimination in PLH was overshadowed by the priority of combating the disease. At present, efforts to mitigate HIV-related stigma have substantially increased.

Researchers hypothesized that the various dimensions of stigma associated with HIV (e.g. gay identity, drug use, sex work) were barriers to both testing and care (Vanable, Carey, Blair, & Littlewood 2006; Lee, Kochman, Sikkema, 2002). Additionally, the stress associated with stigma and other psychosocial variables was hypothesized to be an impediment to immune function (Leserman, 2008). The seriousness of stigma’s barrier to care for PLH and its association with stress provoked a response in researchers, which engendered a search for effective tools to reduce the stress associated with HIV-related stigma. The concept of forgiveness may represent one such tool.

Forgiveness has received increased attention as a coping strategy that may offset the negative impact of psychosocial stress. Researchers assert that forgiveness is a teachable skill that can help an individual successfully deal with problems and significantly reduce anger and decrease feelings of hurt (Luskin, 2002; Luskin, Ginzburg, & Thoresen, 2005). The author of this study argues that it may be an effective strategy to offset the stress associated with HIV-related stigma.

HIV-related stigma and forgiveness are two key concepts that were used to inform an intervention that was designed to improve overall physiological and psychological health in PLH. This study examined the relationships between HIV-related stigma, self-forgiveness, gender, and other demographic and medical variables in the context of a randomized clinical trial. This study contributes to the existing literature as the first randomized clinical trial, to the
author’s knowledge, that aims to increase forgiveness as a coping strategy in PLH in the United States.
CHAPTER 2
REVIEW OF THE LITERATURE

HIV-Related Stigma

Goffman (1963), a stigma theorist, defined stigma as a social label that assigns undesirable attributes and traits to a person, which consequentially leads to shame and a devalued identity. Stigma can involve a sense of feeling discredited as an individual. HIV/AIDS is especially susceptible to stigmatization due to the marginalization of the disease in American and Western European society (Herdt & Lindenbaum, 1992), both by its association with previously stigmatized groups (e.g., drug users, gay men, sex workers), and by its link to disease, disability, and death (Crandall & Coleman, 1992). Responsibility for contracting HIV is frequently attributed to immoral behavior, which subtly shifts blame to persons living with HIV (PLH) and reduces their social status. An assumption that an HIV-positive female is a sex worker, is promiscuous, or has no morals is an example of HIV-related stigma. The assumptions lead to a devalued identity and assign an unwarranted mark of shame, both psychosocial factors associated with poor health outcomes in PLH (Miles, Gillespie, & Holditch-Davis, 2001; Vanable, Carey, Blair, & Littlewood, 2006). Discourse on the marginalization of the ill and socially stigmatized (particularly ethnic and sexual minorities disproportionately affected by HIV in the U.S.) led to a significant body of literature devoted to HIV-related stigma and it’s affects on PLH.

Layered Stigma

Some PLH do not experience stigma; however, most PLH do experience stigma to some degree (Crandall & Coleman, 1992; Lee, Kochman, & Sikkema, 2002). Unfortunately, as is the
case for many HIV-positive persons, HIV-related stigma and stigmatizing attitudes are often packaged; that is, individuals who belong to other stigmatized populations, such as intravenous drug users or the Lesbian, Gay, Bisexual, Transgender (LGBT) community, receive multiple layers of stigma (Herek, 1999; Swendeman, Rotheram-Borus, Comulada, Weiss & Ramos, 2006; Hergovich, Ratky, & Stollreiter, 2003; Reidpath & Chan, 2005). Researchers use the terms “multiple stigma” or “layered stigma” in reference to PLH who endure stigma directed toward them as a result of their HIV status in addition to stigma that stems from ethnicity, socioeconomic status, gender, sexual orientation, drug and substance use, and sex work (Swendeman et al., 2006; Buseh et al., 2006). However, the extant empirical research on layered stigma is limited.

Crandall (1991) asserted “our feelings towards those with AIDS are intimately associated with our feelings towards homosexuals and IV drug users.” To examine the role of multiple layers of HIV-related stigma, he presented 16 different versions of a character named “Dan” to 393 undergraduate students. In each version, “Dan” was described as having one of four medical conditions: AIDS, infectious hepatitis, paraplegia, or the flu; additionally, the character was described as potentially being at risk for acquiring HIV through one of four ways: gay sexual activity, IV drug use, coming into contact with infected blood as a medical employee, or receiving a blood transfusion. Perhaps expectedly, AIDS was the most stigmatized condition, and was significantly more stigmatized than the second most stigmatized condition, hepatitis. Among modes of potential HIV transmission, IV drug use and gay sexual activity was most stigmatized, and was significantly more stigmatized than the other two modes of transmission. While this study lends support for the concept of layered HIV-related stigma, Crandall (1991) also concluded that PLH are highly stigmatized regardless of the mode of disease transmission.
In a more recent study, Wohl et al. (2011) found that among PLH who had disclosed their seropositive status, women were more likely than men who have sex with men (MSM) to maintain consistent medical care for the management of HIV. The authors contend that this finding may underscore the layer of stigma that MSM have due to their sexual orientation that is added to HIV-related stigma and negatively impacts physical and mental health.

Layered stigma in MSM was addressed by Swendeman, Rotheram-Borus, Comulada, Weiss, and Ramos (2006). The authors found that gay or bisexual identity and injection drug use predicted stigma in the form of actual cases of discrimination (e.g. being threatened or hassled), or enacted stigma, but ethnicity and poverty did not. In addition, being a sex worker in this study predicted both enacted stigma and perceived stigma. This suggests that layered stigma impacts PLH to a lesser degree if the additional stigma is seen as a trait or behavior that cannot be changed, such as ethnicity (Swendeman et al., 2006).

A handful of studies have examined stigma in HIV-positive African Americans. A study by Radcliffe, Doty, Hawkins, Gaskins, Beidas, and Rudy (2010) found high levels of perceived stigma in HIV-positive African American adolescent MSM. The authors found that the perceived stigma was related to both the participants’ sexual orientation and HIV-status, which provides some support for layered stigma within an ethnic minority population. However, the study utilized a convenience sample and did not involve non African American participants for comparison. In a study of HIV-positive African Americans, Galvan, Davis, Banks, and Bing (2008) found that perceived social support from family members and friends was correlated with decreased stigma. In contrast, HIV-positive African American women can also experience increased stigma and fear of stigma that stem from their own support groups, such as family members and members of church communities (Black & Miles, 2002).
Research by Lee, Kochman, and Sikkema (2002) suggests that heterosexual PLH may be more stigmatized than gay PLH. They found that heterosexual adults, when compared to gay adults, were more likely to have a high level of internalized stigma. The authors speculated that heterosexual orientation is more stigmatized due to a fear of being categorized according to the popular societal belief that HIV is associated with gay identity and drug users; that is, heterosexual PLH may be concerned that others will assume that they are gay or are an IV drug user and consequently internalize HIV-related stigma. Additionally, PLH who are gay may have the added benefit of community-based organizations that advocate for LGBT communities and provide a source of support.

Stigma and Mental Health

Several researchers examined the connection between stigma and mental health variables in PLH. HIV-related stigma is associated with depression or depressive symptoms in diverse populations such as adults over the age of 50 (Heckman, Kochman, Sikkema, 2002; Grov, Golub, Parsons, Brennan, & Karpiak, 2010), mothers with HIV (Miles, Gillespie, & Holditch-Davis, 2001), African American men and women (Vyavaharkar et al., 2010; Galvan, Davis, Banks, & Bing, 2008), HIV-positive caregivers of PLH (Wight, 2000), and gay men (Dowshen, Binns, & Garofalo, 2009; Hatzenbuehler, O’Cleirigh, Mayer, Mimiaga, & Safren, 2011). Demi et al. (1997) found that even family members who provide care to PLH, through secondary stigma, may be at greater risk for depression. Hatzenbuehler et al. (2011) found that higher perceived HIV-related stigma among MSM was correlated with higher self-reported depressive symptoms, more panic, and generalized anxiety. HIV-related stigma was also found to be associated with greater illness-related anxiety in HIV-positive adolescent women (Andrinopoulos et al., 2011).
HIV-related stigma is associated with greater psychological distress as defined by increased depression and anxiety and less positive affect (Stutterheim et al., 2011). PLH who experience greater stress as a result of the burden of stigma report increased suicidal ideation (Heckman, Miller, Kochman, Kalichman, Carlson, & Silverthorn, 2002). Loneliness and HIV-related stigma are associated with greater risk for depressive symptoms in older adults (Grov, 2010). HIV-positive women with comorbid depressive symptoms also show increased progression of disease (Ickovics et al., 2001). Other mental health variables associated with HIV-related stigma include increased hopelessness and anxiety (Lee, Kochman, & Sikkema, 2002), less self-esteem (Stutterheim et al., 2011), impaired social relationships (Crandall & Coleman, 1992), loneliness (Ware, Wyatt, & Tugenberg, 2006), post-traumatic stress disorder (Katz & Nevid, 2005) and increased alcohol use (Wright, Naar-King, Lam, Templin, & Frey, 2007).

In a 2011 study, researchers recognized the need for longitudinal data that expanded on the current HIV-related stigma literature. Hatzenbuehler, O’Cleirigh, Mayer, Mimiaga, and Safren (2011) studied a diverse sample of 314 HIV-positive men who have sex with men (MSM) and who receive their primary HIV-related medical care at a hospital in Boston. Data were collected at baseline and 3, 6, 9, and 12 month follow-ups. Whereas previous research revealed cross-sectional relationships with HIV-related stigma and mental health, the authors found that HIV-related was causally related to symptoms of depression, panic, and generalized anxiety over time. It is not clear whether HIV-related stigma leads to poorer mental health or decreased mental health leads to increased HIV-related stigma. In addition, the study only involved MSM and results should not be generalized to the general HIV/AIDS population. However, these findings were important in providing causal evidence for the harmful influence that HIV-related
stigma can have on HIV-positive MSM, with the study demonstrating that adverse mental health symptoms persisted for 12 months.

Stigma and Physiological Health

Many of stigma’s effects on physiological health can occur indirectly via disease management or behaviors that negatively affect physiology. In a study with HIV-positive adolescents between the ages of 17 and 25, HIV-related stigma was associated with nonadherence to HAART (Rao, Kekwaletswe, Hosek, Martinez, & Rodriguez, 2007). This is problematic given that a benchmark of 95% adherence to HAART medications has been established as necessary for treatment success and is associated with better virologic outcomes (Paterson & Swindells, 2000). Nonadherence or poor adherence can lead to unfavorable outcomes, such as the development of HIV mutations that are resistant to medications (Wainberg & Friedland, 1998) and a higher susceptibility to opportunistic infections (Gebo, Diener-West, & Moore, 2001). PLH with more severe HIV symptoms or opportunistic infections, which usually means that the disease is more visible, are more stigmatized (Lee, Kochman, & Sikkema, 2002). Vanable et al. (2006) found that stigma is associated with a higher occurrence of HIV-related symptoms, including cognitive and physical symptoms. Stigma also is linked to poor medication adherence (Sayles, Wong, Kinsler, Martins, & Cunningham, 2009; Whetten, Reif, Whetten, Murphy-McMillan, & Kathleen, 2008). Waite, Paasche-Orlow, Rintamaki, Davis, and Wolf (2008) expanded upon stigma and adherence research and found that increased levels of stigma mediated the relationship between low literacy rates and poor medical adherence; low literacy PLH feel more stigmatized and miss medication doses at a significantly higher rate than literate PLH.
Stigma and Health-Related Behavior

HIV-related stigma is predictive of dropout rates in mental health clients (Reece, 2003) and is correlated with a higher likelihood of missing clinic appointments (Vanable et al., 2006). In Reece’s study, the level of stigma was significantly higher among dropouts than among those who returned for care. In addition, PLH may experience added stigma associated with the receipt of mental health services (e.g. a PLH being seen utilizing the services of an AIDS service organization). To provide more effective mental health care to PLH, Reece (2003) contends that mental health care providers must make adjustments and adaptations to cater to the specific needs of highly stigmatized PLH. One example would be for mental health providers to make concerted efforts to understand the societal and personal issues related to HIV that impact their patient living with HIV.

HIV-related stigma may also be associated with increased risky sexual behavior in PLH, which increases the risk of transmitting HIV or other sexually transmitted diseases. A cross-sectional study involving HIV-positive adolescent MSM found that perceived HIV-related stigma was associated with greater likelihood of risky sexual intercourse while under the influence of alcohol or drugs (Radcliffe, Doty, Hawkins, Gaskins, Beidas, & Rudy, 2010). Further, in a longitudinal study that involved 314 HIV-positive MSM, Hatzenbuehler, O’Cleirigh, Mayer, Mimiaga, and Safren (2011) found that higher perceived HIV-related stigma was linked to greater likelihood of having unsafe, unprotected sexual intercourse with partners. This finding is particularly distressing since unprotected anal intercourse among MSM is the sexual activity that carries the highest risk of HIV transmission (Varghese, Maher, Peterman, Branson, & Steketee, 2002). Hatzenbuehler et al. (2011) also found that both depressive symptoms and HIV-related stigma in PLH were associated with higher occurrence of
unprotected anal sex with HIV-negative partners, further elucidating the relationship between HIV-related stigma, mental health, and risky sexual behavior that can result in the transmission of HIV.

HIV-related stigma, like most social phenomena, is circular. A PLH who feels stigmatized may engage in behaviors that lead to further stigmatization. Stigma may lead a PLH to make a decision that introduces barriers to receiving care. For example, high levels of HIV-related stigma can affect a PLH’s decision to disclose their status, which decreases the likelihood that mental health services (i.e. psychotherapy, community support groups) that may mitigate the effects of stigma is sought. Consequently, the stigma is not addressed or adequately coped with and can lead to further stigmatization (Vanable, Carey, Blair, & Littlewood, 2006). Highly stigmatized PLH report less access to treatment and care, such as convenient access to a medical center (Sayles, Wong, Kinsler, Martins, & Cunningham, 2009). Stigma is also cyclical in that levels of stigmatization may wax and wane. A more recent diagnosis of HIV is associated with higher stigma (Lee, Kochman, & Sikkema, 2002; Galvan, Davis, Banks, & Bing, 2008). However, stigma seems to decrease after initial diagnosis of HIV (Sayles, Wong, Kinsler, Martins, and Cunningham, 2009; Galvan, Davis, Banks, & Bing, 2008). In addition, stigma may be negatively associated with age, in which younger PLH perceive greater HIV-related stigma (Logie & Gadalla, 2009). Therefore, HIV-related stigma may play more of a role early on in HIV diagnosis, then decrease due to psychosocial adjustment to disease. Stigma may increase again when the disease progresses or when HIV symptoms become more visible. The circular and cyclical nature of the disease underscores the importance of access to resources to help PLH combat stress and stigma. Effective coping strategies that target developmentally predictable stressors must be identified.
Stigma and Disclosure

HIV-related stigma can influence whether or not an HIV-positive individual decides to make the critical decision to disclose information about their status (Vanable, Carey, Blair, & Littlewood, 2006; Derlega, Winstead, Greene, Serovich, & Elwood, 2002; Clark, Lindner, Armistead, & Austin, 2003). There are both positive and negative consequences to disclosure of HIV status. For example, disclosure of HIV status to sexual partners is important because it promotes communication about safer sex practices, an important component to reducing the spread of the HIV epidemic (Crepaz & Marks, 2003). In addition, studies have shown that nondisclosure of HIV status is associated with more drug use, which can be a catalyst to unsafe sex practices (Duru et al. 2006). In contrast, disclosure of HIV status can result in a loss of an existing romantic relationship or decrease interest from potential romantic partners. Thus, PLH may be reticent to disclose their seropositive status because of fear that they will be stigmatized and discounted by others, including potential sexual and romantic partners (Mayfield Arnold, Rice, Flannery, & Rotheram-Borus, 2008).

There is support for a negative relationship between perceived HIV-related stigma and disclosure; that is, highly stigmatized PLH are less likely to disclose their status (Wohl et al., 2011; Clark, Lindner, Armistead, & Austin, 2003). It may be that, in PLH who are already highly stigmatized, not disclosing their serostatus to others is self-protective; by not disclosing status of a highly stigmatized, and often misunderstood, disease, individuals can avoid judgment from others as well as the potential for physical and psychological harm. This is supported by research that found that high and frequent disclosure is associated with decreased psychological functioning and increased stigmatization (Clark et al, 2003). In other cases, HIV-related stigma may have a positive relationship with disclosure. Highly stigmatized PLH may worry more about
the possibility of spreading disease to their sexual partners, which may increase the likelihood that these individuals end up disclosing HIV status to their partners (Lee, 2002). In addition, PLH may actually be able to reduce stigmatization by disclosing their status because it may subsequently result in increased social support from family members, friends, and others who are empathetic to their situation (Li, Lee, Thammawijaya, Jiraphongsa, & Rotheram-Borus, 2009). Stutterheim et al. (2011) further examined social support and stigma and found that social support mediated the relationship between distress and self-esteem in PLH; thus, the authors contend that social support can be a defense against the adverse costs associated with HIV-related stigma. In a Los Angeles County-based study with African American and Latino women and MSM, more disclosure of HIV status was associated with greater engagement in HIV care, such as through adherence to medical appointments (Wohl et al., 2011); it may be that recipients of the disclosure were able to help facilitate health care access or helped to keep the PLH accountable for his or her health maintenance. In sum, while some PLH may benefit from disclosure of HIV status via increased social support and the utilization of community resources that serve the HIV community, other PLH may similarly choose not to disclose so as to avoid the stigmatization of societal members.

Many factors can influence whether or not a PLH chooses to disclose seropositive status, such as the recipient of the disclosure (e.g. parent, child, sexual partner, friend, co-worker). Derlega, Winstead, Greene, Serovich, and Elwood (2002) explained that it might be more difficult to disclose HIV status within relationships that are involuntary in nature (e.g. parents), than it is to disclose status to voluntary relationships (e.g. friends). Thus, HIV-related stigma may play a larger role in the decision to disclose to a parent when compared to the decision to disclose to a friend or intimate partner. Researchers suggest that the relationship between
disclosure and stigma may be contingent on other factors as well, such as sexual orientation of the PLH (Derlega et al., 2002). For example, gay men who are HIV-positive often have the burden of multiple layers of stigma whereby they are stigmatized by disease and by their sexual orientation. However, these individuals may have an increased capacity to cope with stigma, a stressor, by utilizing social support from the LGBT community. These adaptive coping strategies may result in an increased likelihood of status disclosure, at least to individuals who are similarly members of the LGBT community.

Disclosure and stigma among PLH represents a complex relationship. Letteney (2004), among others, contends that successful management of HIV-related stigma is dependent on the management of HIV disclosure. However, as discussed in this section, management of HIV disclosure can be difficult and is oftentimes contingent on factors that are outside the control of a PLH.

Stigma and Social Support

Highly stigmatized PLH may be less likely to have social support, may seek the support of their friends less, and may be less likely to disclose seropositive status to their support system (Waddell & Messeri, 2006; Lee, Kochman, & Sikkema, 2002). Additionally, highly stigmatized PLH are less likely to attend HIV support groups and are less able to share their life stories with other PLH (Lee, Kochman, & Sikkema, 2002), experiences that can mitigate stigma. Ample research supports social support as a buffer against HIV-related stigma (Stutterheim, Bos, Pryor, brands, Liebregts, & Schaalma, 2011; Galvan, Davis, Banks, & Bing, 2008). Others have found that increased perceived social support is associated with less HIV-related symptoms, such as
persistent fatigue or dry cough, a year later (Ashton et al., 2005). HIV-positive gay males who fear disclosure are less likely to have good social networks (Dowshen, Binns, & Garofalo, 2009).

Stigma and Coping

Stigma is a significant stressor in the lives of PLH (Heckman, Heckman, Kochman, Sikkema, Suhr, & Goodkin, 2002). Coping is any response that a person might use to combat stress and reduce the impact of the stressor. A person’s coping response can be considered adaptive or maladaptive; coping can also be categorized as active or avoidant. Use of maladaptive coping strategies (e.g. avoidance) to combat stress in HIV-positive individuals is associated with decreased quality of life (Vosvick et al., 2002). Active coping strategies have the purpose of directly addressing stress or a stressor and are considered a more adaptive way of coping with stress; examples of active coping include praying and learning more about an issue. Avoidant coping strategies typically lead a person to withdrawal from a stressful situation and not address the stressor directly; examples of avoidant coping include isolating oneself from friends and family or avoiding social events. Use of active coping in PLH is associated with decreased psychological distress; in contrast, PLH who cope with stress using avoidant strategies have greater psychological distress (Schmitz & Crystal, 2000). The use of adaptive coping strategies to manage HIV (e.g. seeking social support) is associated with a slower progression of HIV (Mulder, Antoni, Duivenvoorden, Kauffman, & Goodkin, 1995), whereas maladaptive coping (e.g. avoidance) is associated with decreased medication adherence and increased use of alcohol and cigarettes (Sanchez, Rice, Stein, Milburn, & Rotheram-Borus, 2009). Heckman, Anderson, Sikkema, Kochman, Kalichman and Anderson (2004) found social support and avoidant coping behaviors to mediate the positive relationship between stigma and emotional
distress in a study where most of the participants were European American gay men; participants who had less social support tended to engage in more avoidance coping, which increased the potential for perceived stigma and greater distress. Spirituality is generally accepted as an adaptive coping strategy; however, stigma associated with HIV-positive status can lead HIV-positive women to avoid worship at public places (e.g. a church) and instead turn to other methods of practicing spirituality (Dalmida, Holstad, Dilorio, & Laderman, 2009).

Stigma and Gender

Men and women who are HIV-positive cope with the stress of living with HIV and of HIV-related stigma in different ways. Vosvick, Martin, Smith & Jenkins (2010) found that HIV-positive men tend to use distraction, an avoidant coping style, more often than HIV-positive women. Vanable, Carey, Blair, & Littlewood (2006) found no differences in perceived stigma among men and women. In a meta-analysis of demographic correlates of HIV-related stigma reported in studies from 2000 to 2007, Logie and Gadalla (2009) reported nonsignificant associations between stigma and gender. Additional research is needed that examines how men and women living with HIV experience and cope with stigma differently based on gender-specific levels of anxiety and control.

As researchers continue to uncover the associations between HIV-related stigma and poor physiological and psychological health outcomes, it is no longer enough to simply understand how stigma operates within various HIV/AIDS communities. To that end, dozens of HIV studies advocate for the development of interventions for PLH that address issues such as stigma and aim to increase adaptive coping skills. Suggestions for content to be included in such
interventions have been made, yet very few interventions have actually been developed and evaluated.

Forgiveness

One definition of forgiveness involves “the willful giving up of resentment in the face of another’s (or others’) considerable injustice and responding with beneficence to the offender even though that offender has no right to the forgiver’s moral goodness” (Baskin & Enright, 2004). Luskin (2002) offered a different perspective on forgiveness and defined it as “the experience of peace and understanding that can be felt in the present moment” and a “powerful assertion that bad things will not ruin your today even though they may have spoiled your past.” Luskin further reported that forgiveness can lead to decreased stress and improvement in emotional well-being and physical health. Forgiveness in general has received a substantial increase in research attention in psychology and related fields.

A set of studies by Pronk, Karremans, Overbeek, Vermulst, & Wigboldus (2010) contributed to the forgiveness literature by finding that executive functioning (e.g. ability to switch tasks, inhibition) was correlated with and predicted dispositional forgiveness in situations in which the transgression to be forgiven is severe and not when the transgression is seen as mild, such as canceling a date. The authors contend that severe offenses are more impactful and thus may require executive functioning to assist in the process of forgiveness. Walker and Gorsuch (2002) examined forgiveness in relation to the Big Five model of personality (i.e. openness, conscientiousness, extraversion, agreeableness, and neuroticism) and found that facets of personality, especially neuroticism, are good correlates of forgiveness. Forgiveness of self was positively associated with personality factors associated with emotional stability and extraversion.
and negatively associated with anxiety. Forgiveness of others was positively associated with personality factors associated with emotional stability as well, but to a lesser degree than forgiveness of self, and negatively associated with factors such as neuroticism, anxiety, and distrust (Walker & Gorsuch, 2002). It is worth noting that anxiety was negatively correlated with self-forgiveness and other-forgiveness; this will be important to keep in mind, given the high prevalence of anxiety or anxiety-related symptoms in PLH (Kerrihard, Breitbart, & Strout, 1999; Kemppainen et al., 2003).

Although some studies report no sex differences in forgiveness (Berry, Worthington, Parrott, O’Connor, and Wade, 2001) there is insufficient evidence to conclude that men and women differ in their ability to forgive. Sidelinger, Frisby, and McMullen (2009) acknowledged this gap in the literature and studied gender and forgiveness in 145 romantic couples ($n = 290$). They found that men had a greater tendency than women to forgive the transgressions (i.e. canceling plans, infidelity) of their heterosexual partner; interestingly, men in the study reported feeling less hurt than women when these transgressions transpired, which may help explain why men were more easily able to forgive. Further, Sidelinger et al. (2009) used the Bem Sex Role Inventory (BSRI) to examine men and women when further categorized by masculine and feminine traits on a continuum. In this way, men and women can endorse masculine and feminine traits and each be further categorized as masculine, feminine, undifferentiated (i.e. low scores on masculinity and femininity), or androgynous (i.e. high scores on masculinity and femininity). They found that feminine and androgynous individuals, regardless of whether they are male or female, had a greater likelihood of forgiving the transgressions of others.
Self-Forgiveness

While the amount of forgiveness literature has substantially grown, many researchers make reference to the relative lack of extant research on self-forgiveness, or intrapersonal forgiveness (Wohl, DeShea, & Wahkinney, 2008; Rangganadhan & Todorov, 2010; Hall & Fincham, 2008). In fact, the dearth of intrapersonal forgiveness research was substantial enough to prompt Hall and Fincham (2005) to term self-forgiveness the “stepchild of forgiveness research.” Moreover, there is a paucity of research that examines the concept of forgiveness in specific medical populations or that describes the mechanisms through which forgiveness may be of benefit.

Hall and Fincham (2005) conceptualized a model of forgiveness that focuses on self-forgiveness. They allude to the lack of interventions that specifically include self-forgiveness. In their model, they identify several variables that potentially contribute to self-forgiveness, including emotion (i.e. guilt, shame), social-cognitive (i.e. attributions toward forgiveness), and offense-related (i.e. conciliatory behavior, perceived forgiveness from victim or higher power, severity of the offense) correlates. Later studies by Hall and Fincham (2008) with 148 college undergraduates who self-identified as doing something to another person that they later regretted found that self-forgiveness tends to increase consistently following the transgression. Although the consistent increase in self-forgiveness was seen despite the utilization of an intervention designed to address forgiveness, it is uncertain as to whether this phenomenon would be observed in a stigmatized medical population such as the HIV/AIDS community.

One particular study found that the degree to which the transgressor was deemed by the victim to be responsible for the transgression influenced whether actual forgiveness took place (Struthers, Eaton, Mendoza, Santelli, & Shirvani, 2010). The authors found that when a victim
perceives a transgressor to be highly responsible for the behavior or event in question, then the victim views forgiveness as inappropriate and therefore actual forgiveness toward the transgressor is low. This finding might suggest that PLH would find it difficult to forgive the person who infected them with HIV.

A study by Webb, Toussaint, Kalpakjian, & Tate (2010) examined how forgiveness, including self-forgiveness and forgiveness of others, could benefit individuals who suffered severe spinal cord injuries. In a sample of 144 participants, they found that increased self-forgiveness contributed to greater satisfaction with life; individuals who were able to let go of resentment and other negative emotions were better adapted to take care of themselves and thus potentially prevent the development of complications to their injury. The authors also contend that self-forgiveness possibly plays a larger role than forgiveness of others in health maintenance and well-being. It may be that self-forgiveness is more beneficial than other-forgiveness because the practice of health maintenance often involves an internal aspect of control (in order to remain healthy) that requires forgiveness directed internally.

Macaskill (2012) studied both self-forgiveness and forgiveness of others (termed “other-forgiveness” in this particular study) to examine if the type of forgiveness was associated with mental health outcomes. Macaskill (2012) points out that though the forgiveness literature seems to suggest that self-forgiveness and other-forgiveness involves disparate processes, there was scant empirical evidence to support the notion that self-forgiveness and other-forgiveness had a distinct impact on mental health. It was found that low levels of self-forgiveness was correlated with higher scores on trait anger, trait anxiety, shame, general health, and life dissatisfaction. In contrast, low levels of other-forgiveness was correlated with trait anger, trait anxiety, and life dissatisfaction, and not general health or shame. Regression analyses indicated that a lack of self-
Forgiveness significantly contributed to poorer mental health (i.e. increased anxiety, anger, and shame) and greater life dissatisfaction while a lack of other-forgiveness did not. Further, anxiety predicted states of unforgiveness of self and not unforgiveness of others, which supports the notion that the two can have differential influence on mental health outcomes. This is consistent with earlier forgiveness literature that asserted that self-forgiveness is more powerful than forgiveness of others in its association with improved mental health (Mauger et al., 1992). Further investigation of the differences in self-forgiveness and other-forgiveness is warranted. As the forgiveness literature continues to grow, studies such as Macaskill’s (2012) lend support to self-forgiveness as potentially more beneficial than other-forgiveness in helping PLH to cope with stressors.

Self-forgiveness in an HIV/AIDS population is anticipated to be unique for each individual person due to several factors, including the context in which each person was infected and whether or not he/she was involved in the transmission of HIV to others. Several variables may factor into which aspects of a HIV-positive person’s life would benefit from self-forgiveness. It is contended that every HIV-positive individual, regardless of the method of HIV transmission and the life experiences that color his/her perceptions, could benefit from self-forgiveness. For some individuals, forgiveness might address situations in which they hurt other people; for others, forgiveness might address negative feelings directed internally because they feel that they allowed themselves to be hurt by others. To illustrate, the example of a heterosexual monogamous relationship in which the man was unfaithful to his partner will be utilized; the unfaithful partner became infected with HIV and then unknowingly transmitted the disease to his partner. Both partners are now HIV-positive yet may have divergent feelings about the other. In this case, the woman may perceive the man to be highly responsible and at fault in
the transgression and thus find forgiveness of others to be inappropriate and difficult, as suggested by a study by Struthers, Eaton, Mendoza, Santelli, and Shirvani (2010). The man must now live with the knowledge that he transmitted HIV to his partner; the woman may have negative feelings about herself for blindly trusting her partner, may regret not using a condom, or may believe that she drove her partner to infidelity. Each individual in this case can choose to forgive themselves for the behaviors and decisions that led them to become HIV-positive. Self-forgiveness, then, may be beneficial and salient regardless of whether an individual perceives himself/herself as the victim or the transgressor.

Forgiveness Interventions

In their review of interventions designed to encourage forgiveness and decrease unforgiveness, Wade and Worthington (2005) identified what they deemed as “core elements” in forgiveness interventions that serve as themes in the promotion of forgiveness; these core elements included defining forgiveness, recalling the hurt or grievance, building empathy, acknowledging one’s own offenses, committing to forgiveness, and overcoming unforgiveness. It was concluded that interventions to promote forgiveness might be most useful when delivered via psychoeducational group treatments.

In a separate analysis, Baskin and Enright (2004) examined nine forgiveness interventions and grouped them into three types of interventions: decision-based interventions (which involves helping a person come to a decision to forgive a transgressor), processed-based group interventions, and individually tailored process-based interventions. After calculation of effect sizes and comparison to a control group, the study identified individually tailored process-based forgiveness work as having large effects, followed by smaller, but significant effects for
the process-based forgiveness groups, and no effects for the decision-based forgiveness groups. Further, the authors assert that forgiveness intervention therapies not only have large effect sizes, but also are 2-3 times as effective as an intervention with a minimally large effect size (Baskin & Enright, 2004). Though the number of empirically supported forgiveness interventions remains diminutive and its application as a successful therapy across populations is widely untested, the outlook for forgiveness interventions seems promising.

HIV-Related Stigma and Forgiveness

Based on previous research, Temoshok (as cited in Temoshok & Chandra, 2000) conceptualized a theoretical framework for forgiveness specifically tailored to the HIV community. In this framework, consequences and outcomes are hypothesized for PLH who use forgiveness as well as PLH who do not use forgiveness as a coping strategy. Their research showed relationships between forgiveness and better health outcomes and better quality of life. Temoshok conceptualizes beneficial behavioral outcomes of forgiveness, such as increased medical adherence and social support, and psychological outcomes of forgiveness, such as self-esteem and hope. PLH unable to forgive are more likely to have interpersonal conflicts, be socially isolated, and participate in self-destructive behaviors, which can result in overall worse health outcomes.

Through interviews with HIV-positive men and women living in India, Temoshok and Chandra (2000) reported that women, most of whom were sex workers, found it difficult to apply forgiveness to the situations that led to their infection. Similarly, it was difficult for these women to forgive others, particularly the men who transmitted HIV to them. The men who were interviewed had a more difficult time with self-forgiveness.
HIV and Psychoneuroimmunology

The field of psychoneuroimmunology (PNI) involves the study of psychosocial processes and its associations with the nervous and immune systems. Historically, HIV was difficult to examine from a PNI perspective; PLH have compromised immune systems, which makes it difficult to rely on traditional markers of stress, such as cortisol. In addition, although many researchers report disease markers in their studies, such as viral load or CD4 cell counts, these numbers are usually self-reported. Despite these difficulties, conceptualizing HIV in the context of PNI is useful to examine how stress, coping, and psychosocial variables might influence immune functioning. PNI models can help us better understand the impact of stigma on physiological and immunological health and develop effective interventions to address these issues in PLH.

In a review of longitudinal studies, Leserman (2008) contends that psychosocial variables such as depression can negatively influence immunological functioning in PLH. Ickovics et al. (2001) suggests that depression is associated with lower CD4 cell counts. In a cross-sectional study with HIV-positive gay and bisexual men in Sweden, low social support was associated with low CD4 cell counts, suggesting that psychological processes are associated with immune functioning in PLH. A current literature review examined randomized clinical trials that involved interventions for PLH and possible influences on neuroendocrine or immune systems (Carrico & Antoni, 2008). The authors identified seven randomized clinical trials that had an effect on disease progression and concluded that interventions that improve psychological functioning may serve as an effective mechanism for improving immune function.

Other studies demonstrated contrary findings. Montagne, Lalonde, and Brouillette (1994) reviewed HIV and PNI studies and concluded that psychological variables do not influence the
immune functioning of PLH. Nott, Vedhara, and Spickett (1995), in their review of the HIV and PNI literature, concluded that the association between stress in PLH and physiological and immunological health remained unclear. No association was found between depression and immune function as indicated by CD4 cell count in a study by Dalmida, Holstad, Dilorio, and Laderman (2009). Mulder, Antoni, Duivenvoorden, Kauffmann and Goodkin (1995) found no relationship between social support, stressful events, and CD4 cell counts; however, their study did find active coping strategies to be associated with less disease progression. The authors contend that PNI models may be useful in understanding this finding.

Miller, Nott, and Vedhara (1994) addressed the equivocal nature of understanding HIV within a PNI context. They specified several areas necessary to better understand HIV’s relationship to immune functioning, including the need to develop more valid and reliable psychosocial instruments for use in HIV populations. Miller, Nott, and Vedhara (1994) also argued for a strong theoretical paradigm to aid future PNI research in HIV populations. Antoni (2003) posited one such framework, in which he described stress management interventions as a way to increase coping resources to combat stress and subsequently reduce immunosuppression. Antoni (2003) recognized biological and psychosocial processes that influence health maintenance in PLH and proposed that interventions should strive to teach more adaptive coping skills.

Forgiveness may represent one such adaptive coping skill. Solomon, Kemeny, & Temoshok (as cited in Temoshok & Chandra, 2000) described a psychoneuroimmunological link of forgiveness to physiological health – lack of forgiveness in PLH can lead to stress and maintenance of anger states, which are connected to poor health outcomes in PLH.
HIV-Related Intervention Studies

Several studies suggest that perceived stigma in PLH is higher upon initial diagnosis of HIV (Galvan, Davis, Banks, & Bing, 2008; Lee, Kochman, & Sikkema, 2002). This highlights the importance of developing effective interventions to reduce perceived stigma and address other psychosocial factors in PLH. Two types of interventions will be discussed - interventions to reduce HIV-related stigma and interventions to reduce stress in PLH, or stress management programs.

Stigma Interventions

A review of 22 interventions implemented before the year 2002 and designed to decrease HIV stigma concluded that while most interventions had small, encouraging outcomes in decreasing stigma, there simply are not enough interventions that address the issue of stigma as experienced by the person living with HIV (Brown, Macintyre, & Trujillo, 2003). Only one of the 22 interventions involved participants who were HIV-positive, while the remaining 21 interventions attempted to assess attitudes toward HIV-positive persons as endorsed by individuals who are HIV-negative. HIV education was the primary method used in the interventions to increase knowledge of HIV and emphasize tolerance toward PLH. Heijnders and van der Meij (2006) conducted a separate literature review on stigma and commented on how HIV education is simply not enough to combat HIV-related stigma. The authors further assert the need to empower PLH to take an active role in stigma reduction and also encouraged community members to not let PLH carry the burden of HIV-related stigma on their own.

A more recent review of interventions aimed at decreasing HIV-related stigma was conducted by Sengupta, Banks, Jonas, Miles, and Smith (2011). The authors asserted that what
was lacking in the two previous HIV intervention reviews conducted by Brown, Macintyre, and Trujillo (2003) and Heijnders and van der Meij (2006) was a “systematic review to determine the quality of these studies vis-à-vis their effectiveness in reducing HIV/AIDS stigma.” In addition, the current review included more recent intervention studies that were developed subsequent to the publication of the reviews by Brown et al. (2003) and Heijnders and van der Meij (2006). Altogether, the study reviewed 19 HIV-related interventions that included HIV-related stigma as a dependent variable; however, only three studies involved participants who were HIV-positive. Over half of the studies employed unvalidated items or measures of stigma. Fourteen studies were identified as being effective in decreasing HIV-related stigma. However, only two studies were given overall ratings of “good” based on factors such as randomization of participants and strength in minimizing selection, confounding, and measurement bias. This finding illuminates the severe lack of existing interventions aimed at reducing HIV-related stigma, which is disconcerting given the negative effects of HIV-related stigma that is currently highlighted by the literature. The authors make the following suggestions to be addressed in future interventions developed to decrease HIV-related stigma: use internally validated measures of HIV-related stigma that involves more than a few items, use a randomized clinical trial methodological design, and incorporate public health factors related to HIV-related stigma reduction, such as increased HIV testing (Sengupta et al., 2011).

While there is certainly value to interventions that may reduce HIV stigma as enacted by sero-negative individuals, these methods may not be the most effective. Societal attitudes and beliefs are difficult to change and require a great amount of time. Researchers assert that the most powerful and effective way to combat stigma would be to involve and empower the actual communities that experience the stigmatization (Parker & Aggleton, 2003). Interventions that
target PLH would be more efficient because internalized stigma can be addressed and PLH are likely more motivated than the general public to initiate behavioral change. While persons who live with HIV/AIDS cannot control the actions of persons who hold stigmatizing beliefs, they have a greater capacity to minimize the effect that HIV-related stigma has on them.

**Stress Management Interventions**

Brown and Vanable (2008) reviewed and critiqued 21 stress management interventions for PLH that applied a cognitive-behavioral framework and concluded that stress management interventions are overall effective in the reduction of perceived stress in PLH. While the interventions generally improved the psychological functioning of PLH, there was a dearth of evidence that suggests stress management interventions can improve physiological health and functioning. Several suggestions for the development of future stress management interventions were cited, including longer follow-up assessments and a focus on addressing specific stressors that PLH confront. A separate meta-analysis of randomized clinical trials from 1989 to 2006 examined stress management interventions for HIV-positive adults (Scott-Sheldon, Kalichman, Carey, & Fielder, 2008). The authors assert that stress management interventions can improve psychological health via decreased distress, anxiety, and depression in PLH but, once again, have little impact on physiological processes. O’Cleirigh and Safren (2008) supplement the meta-analysis of stress management interventions provided by Scott-Sheldon et al. (2008) and suggest specifically addressing depression and medication adherence in order to maximize the effectiveness of stress management interventions. O’Cleirigh and Safren (2008) also point to the prevalence of substance use in the HIV community as an area to target, but acknowledge that doing so in the context of a stress management intervention may be difficult.
Theoretical Model

Lazarus and Folkman’s transactional model of stress and coping (1984) guided the present study. This model (Figure 1) is one of the most widely utilized conceptual models of stress and coping. The model emphasizes that stress occurs when an individual’s ability to cope is exceeded by the demands placed on that person. Stress is not conceptualized as a direct response to a stressor. Instead, a potential stressor becomes stressful if an individual appraises the event or situation as stressful and does not have effective resources to cope with the stress. Lazarus and Folkman identify three phases of appraisal in this model: primary appraisal, secondary appraisal, and reappraisal.

First (primary appraisal), a potential stressor is appraised as a challenge or a threat to the individual. Next (secondary appraisal), the individual appraises his/her resources to cope with the stressor. A potential stressor that is perceived as a challenge is easier to cope with and is less likely to result in stress. A stressor that is perceived as a threat must be met with a way to cope. Therefore, the negative impact of a potential stressor is decreased if the person does not perceive the potential stressor as a threat or has the coping skills necessary to combat the potential stressor. The effectiveness of the coping strategy determines the outcome (i.e. whether the potential stressor became stress) and is reassessed in the reappraisal stage.

Lazarus and Folkman’s transactional model of stress and coping (1984) is used to propose a theoretical model to demonstrate the interplay between forgiveness and HIV-related stigma (Figure 2) in the preposed study. HIV-related stigma, due to its association with distress and other negative medical and mental health outcomes, can be conceptualized as a potential stressor (Heckman, Heckman, Kochman, Sikkema, Suhr, & Goodkin, 2002). HIV-related stigma is first appraised as either a potential threat or a challenge.
A challenge can be considered a stressor that is more easily managed. The resources available to cope with stigma, such as social support, are also appraised. If the PLH appraises HIV-related stigma as a challenge, or if he/she appraises HIV-related stigma as a threat but has the coping resources to combat the potential stressor, the impact of stigma on the PLH may be low. If stigma is appraised as a threat and the PLH does not have effective tools to cope, stigma is far more likely to have a negative impact on the PLH.

PLH can choose how to cope with stigma. If the coping style is adaptive in that it successfully manages the stressor, stigma may be perceived as a decreased burden on the PLH. If the coping style is maladaptive and fails to combat the potential stressor, stigma may manifest into stress. Maladaptive coping styles are associated with decreased quality of life in HIV-positive adults (Vosvick et al., 2002). It is critical for PLH to learn and use coping strategies to deal with stigma as it may prevent or decrease the occurrence of negative health outcomes due to perceived stigma. Forgiveness, as a proven effective coping strategy (Luskin, 2002; Webb,
Toussaint, Kalpakjian, & Tate, 2010), may be one way in which PLH can combat stress and reduce the negative effects of stigma.

![Theoretical model of HIV-related stigma and forgiveness via Lazarus & Folkman’s (1984) transactional model of stress and coping.](image)

**Figure 2.** Theoretical model of HIV-related stigma and forgiveness via Lazarus & Folkman’s (1984) transactional model of stress and coping.

**Rationale for Proposed Study**

Interventions that include learning new skills or coping behaviors are one way to potentially reduce the impact of stigma. Luskin (2002) studied one such coping strategy, the concept of forgiveness. Previous results from intervention research found that forgiveness can be an effective coping strategy for people with a variety of health-related problems (Luskin, 2002). His work in forgiveness therapy demonstrated increases in self-efficacy, optimism, and conflict resolution skills in a variety of populations, including men and women who lost a family member as a result of the conflicts in Northern Ireland. However, his forgiveness intervention has not, until now, been examined within an HIV-positive population.
Project Forgive

Project Forgive is a pilot randomized clinical trial based on the results of a prior study conducted at the University of North Texas Center for Psychosocial Health Research. Findings from this previous study, which included an examination of the relationships between HIV-related stigma, coping, stress, and quality of life, were included in the development of Project Forgive as an intervention focused on mitigating the effects of stigma in HIV-positive adults. Project Forgive essentially draws upon previous forgiveness intervention research pioneered by Luskin (2002) and extends the application of forgiveness as a coping skill to a population of HIV-positive adults. Project Forgive applied cognitive behavioral approaches to increase coping resources and decrease depression, feelings of anger, and stress. Other goals of the study included reducing the amount of anger felt as a result of seropositive status and improving overall psychosocial and spiritual functioning.

Project Forgive incorporates five of the six “core elements” (i.e. defining forgiveness, recalling the hurt, building empathy toward the transgressor, acknowledging own offenses, committing to forgiveness, and overcoming unforgiveness) of forgiveness interventions as identified by Wade and Worthington (2005). The treatment intervention of Project Forgive included defining forgiveness (e.g. forgiveness is good for you, forgiveness is about you) as well as defining what forgiveness is not (e.g. forgiveness is not condoning unkindness, forgiveness is not minimizing your hurt). Participants were asked to recall their grievances (similar to recalling the hurt) in order to let go of the control that the grievances had over the person’s life. Participants were also asked to acknowledge their own offenses so as to be able to forgive themselves and the role that they played in the transmission of HIV. The practice of forgiveness was encouraged or, at the very least, an attempt to decrease the amount of unforgiveness toward
the self. However, participants were not asked to build empathy toward their transgressors as the focus was on forgiveness of the self instead of forgiveness of others.

Project Forgive participants were randomized into two groups, a treatment group and a control group. The treatment group received cognitive-behavioral group therapy that focused on teaching self-forgiveness as an effective coping strategy. The control group received education on topics such as medication adherence and men’s and women’s health. Participants also completed a total of three surveys: Survey 1 (baseline), Survey 2 (post intervention) and Survey 3 (follow-up).

Project Forgive is innovative in that it is the first randomized clinical trial, to my knowledge, that focuses on increasing forgiveness as a coping strategy in PLH in the United States. The intervention can be conceptualized as both a forgiveness intervention and a stress management intervention, both of which have the potential to improve overall health and functioning in PLH (Brown and Vanable, 2008) and decrease deleterious effects of anger (Luskin, 2002). The study identifies stigma as a unique stressor that PLH face and includes a focus on a specific coping skill that may reduce the threat of a potential stressor (Lazarus & Folkman, 1984). Project Forgive takes into account the various biological and psychosocial factors that can affect immune functioning. Additionally, the study mobilizes PLH to address intrapersonal barriers to treatment and care. As Parker and Aggleton (2003) assert, “the time is therefore ripe to build upon existing empirical evidence…to begin developing new models for advocacy and social change in response to HIV and AIDS-related stigmatization and discrimination.”
Research Questions and Hypotheses

The present study aims to address the following research questions and hypotheses:

RQ 1: Will participants in the treatment group utilize forgiveness as a coping strategy more than participants in the control group? Hypothesis 1: It is hypothesized that forgiveness as reported by participants in the treatment group is higher than forgiveness reported by participants in the control group post intervention (Time 2) and six-month follow-up (Time 3).

RQ 2: Will forgiveness change over time? Hypothesis 2: It is hypothesized that self-forgiveness as reported by participants in the treatment group is higher post intervention (Time 2) and six-month follow-up (Time 3) than self-forgiveness at baseline (Time 1). Hypothesis 3: It is hypothesized self-forgiveness as reported by participants in the control group will not be significantly different post intervention (Time 2) or at six-month follow-up (Time 3).

RQ 3: Will participants in the treatment group have beneficial outcomes, such as decreased perceptions of HIV stigma? If so, were these significant beneficial outcomes different for participants in the control group? Hypothesis 4: It is hypothesized that participants in the treatment group have lower levels of perceived HIV-related stigma than the control group at Time 2 and Time 3.

RQ 4: Will there be gender differences in the utilization of forgiveness as a coping strategy? Are there gender-specific issues that can be addressed in future interventions? Hypothesis 5: It is hypothesized that HIV-positive women will report higher forgiveness than HIV-positive men at post intervention (Time 2) or six-month follow-up (Time 3).
RQ 5: Will this study confirm findings that self-forgiveness is a more effective coping tool than forgiveness of others (Mauger et al., 1992; Macaskill, 2012). Will self-forgiveness be a more salient factor than forgiveness of others in predicting decreased HIV-related stigma? Hypothesis 6: It is hypothesized that self-forgiveness significantly predicts HIV-related stigma. Hypothesis 7: It is hypothesized that forgiveness of others does not predict HIV-related stigma.
CHAPTER 3

METHOD

Participants

Participants were recruited from the Dallas/Fort Worth area via established cooperative relationships with various AIDS service organizations (ASOs). In addition, project fliers were posted at various businesses in Dallas and Fort Worth. Approval from the University of North Texas Institutional Review Board was obtained.

Procedure

All recruited participants were first screened to determine if they met the study criteria. Study inclusion criteria included: (1) a documented HIV-positive status; (2) 18 years of age or older; (3) the ability to speak, read and write English; (4) the ability and willingness to provide informed consent (see Appendix A for informed consent form). Participants that met the inclusion criteria were given a description of the project and then asked to consent to participation. Following initial screening, participants completed four separate components to the study: Survey 1 (baseline), six weeks of 90-minute group sessions, Survey 2 (post intervention), and Survey 3 (follow-up). Trained researchers were available during each survey administration to answer questions. The participants completed the surveys electronically using the Questionnaire Development System (QDS). Surveys were used to collect demographic and medical data as well as data on variables of interest, such as HIV-related stigma, forgiveness, coping strategies utilized, depression, social support, and quality of life. Upon completion of Survey 1, participants received $15 for their participation and a debriefing form. Fifty-seven participants (29 men, 28 women) participated in the first part of the study, Survey 1 (baseline).
Following baseline surveys, participants were randomized into two groups, a forgiveness intervention (treatment) group or an educational intervention (control) group. Each gender-segregated group consisted of five to seven HIV-positive adults. Groups met once a week for six consecutive weeks for 90-minute sessions. A group facilitator contacted participants who had a contact number in the early evening the day before each survey or session. Participants were paid $10 per session for the first three sessions, and $15 per session for sessions four through six.

Five advanced doctoral psychology students provided the intervention component of the study and were trained to deliver either the forgiveness intervention or the educational intervention; two facilitators were assigned per group, with the same two doctoral psychology students facilitating each of the six sessions for each particular group. Each facilitator was trained to identify signs of emotional distress that may occur as personal topics were discussed throughout the group sessions; in addition, a list of referral sources and mental health clinics were provided in case a participant experienced undue stress as a result of participation in the study. Group supervision took place weekly with all facilitators and a doctoral-level psychologist.

Treatment group sessions involved cognitive-behavioral group therapy that focused on teaching forgiveness as a coping strategy, specifically self-forgiveness, instead of forgiveness of others, in letting go of grievances. Self-forgiveness was presented as a teachable skill that can improve physiological and psychological health and functioning. A control group was implemented to control for a possible Hawthorne effect. Control group sessions were educational in nature and focused on various issues such as medication adherence, relationships, disclosure, and men’s and women’s health, respectively. Control groups were matched with the treatment
groups vis a vis time and contact with facilitators. All sessions were recorded using audio equipment to gather qualitative data.

After six weeks of group sessions, each participant completed the same survey administered at baseline. Participants received $15 for completion of Survey 2 (post intervention), which was completed within two weeks after the final group session. A total of 41 participants completed Survey 2 (8 males in forgiveness intervention, 12 males in control group, 13 females in forgiveness intervention, 8 females in control group; see Table 6). Approximately six months after completion of the group sessions, participants were contacted to complete Survey 3 (follow up). Twenty-one participants completed the final stage of the study (5 males in treatment group, 6 males in control group, 6 females in treatment group, 4 females in control group; see Table 1), and received $20 for Survey 3.

Transtheoretical Model

Prochaska and Velicer’s (1997) transtheoretical model of health behavior, or the stages of change model, provided a useful framework to conceptualize how PLH might proceed through behavior change in a randomized clinical trial. The model includes the following stages: precontemplation, contemplation, preparation, action, and maintenance; the model can also include a sixth stage – relapse. In the precontemplation stage, an individual may not recognize the need for behavioral change, much less think about and intend to make behavioral change. As an individual enters the contemplation stage, he/she may start to recognize the need for behavioral change and may begin to weigh the pros and cons of such changes, but has not begun to make actual changes. In the preparation stage, the individual is past merely contemplating change and commits to initiate behavioral change in the near future. Actual performance of the
behavioral change is initiated in the action stage. Once the behavioral change occurs, individuals attempt to preserve their gains in the maintenance stage. This can be a very difficult stage and many will relapse to a former behavior. Upon relapse, individuals can choose to retain the former behavior and go back to their former patterns, or to restart and go back through the stages.

Guided by the transtheoretical model of health behavior (Figure 3), the intervention component of Project Forgive emphasized the concept of forgiveness as an effective coping tool and as an aspect of self-change that PLH can learn as a way to regain a sense of peace. Prior to beginning the study, participants may not realize that they have a grievance and are allowing the grievance to hurt them. When the intervention first begins and the concept of forgiveness is introduced, participants may progress to the contemplation stage of change as they begin to recognize the effects that nonforgiveness has had on their lives. Participants move on to the preparation stage once they decide that they want to learn forgiveness. Each participant is likely to have a unique experience as they proceed past the preparation stage and onto the action stage, where they evaluate their behaviors and make active attempts to learn forgiveness and decide whether or not to apply it to their lives. Following completion of the six-week intervention and potentially gaining a sense of peace or at the least an additional coping tool, PLH must then work on maintaining the use of forgiveness to maximize its effect. By the time participants return for the six-month follow-up survey administration, it is anticipated that some participants will have resorted back to previous maladaptive coping strategies to deal with stress, while other participants will have shown continued use of forgiveness, particularly self-forgiveness, in response to grievances.
Figure 3. Theoretical model of the learning of forgiveness as a coping strategy in HIV-positive adults via Prochaska and Velicer’s (1997) transtheoretical model of health behavior. Stages are listed on the left along with study points at which we might be able to observe behavior; a description of the learned behavior we might see is listed on the right.

Measures

Psychosocial and Medical Demographics

A set of psychosocial and medical items was included in this survey. These items included basic demographic information (i.e. age, ethnicity, religion, gender, sexual orientation,
marital status, education level), medical information (i.e. AIDS status, viral load, CD4 cell count, number of HIV-related symptoms), and psychosocial information (i.e. living environment, perceived social support, access to health care).

Perceived HIV-Related Stigma

The HIV Stigma Scale (HSS; Berger, Ferrans, & Lashley, 2001) is a 40-item instrument that was developed to better understand stigma as perceived by HIV-positive individuals. Each item is on a 4-point likert-type scale with the following responses: strongly disagree, disagree, agree, and strongly agree. Possible scores range from 40 to 160. The scale divides stigma into four factors/subscales: Factor 1 – Personalized Stigma, Factor 2 – Disclosure, Factor 3 – Negative Self-image, and Factor 4 – Public Attitudes. The HSS also includes a higher-order factor called Generalized Perceived Stigma that represents a single construct.

When the instrument is completed, two of the items are reverse scored. Once reversed, each scale or subscale’s score is calculated by adding up the raw values of the items belonging to that scale or subscale. Sixteen items belong to more than one subscale, reflecting the intercorrelations of the factors on which the subscales are based. Therefore, a total HIV Stigma Scale score is obtained as well as scores for the four subscales. Higher scores indicate a higher perception of HIV stigma as reported by the person living with HIV. An example item is, “People’s attitudes about HIV make me feel worse about myself.”

The HSS was standardized on 318 HIV-positive adults and has high internal consistency (coefficient alpha of .96 for the total score and coefficient alpha of .90 to .93 for each of the four subscales). Test-retest reliability was found to be .92 for the total scale and .87-.90 for the subscales. Construct validity was demonstrated by examining the relationships between the HIV
Stigma Scale and measures of related constructs: self-esteem ($r = -0.60, p < .01$), depression ($r = .63, p < .01$), aspects of social support ($r = -0.54-0.65, p < .01$), and social conflict ($r = .59, p < .01$).

Forgiveness

An instrument commonly used to measure forgiveness is the Heartland Forgiveness Scale (HFS; Thompson et al., 2005). The HFS is an 18-item self-report instrument used to measure dispositional forgiveness. The authors define forgiveness as transforming “a perceived transgression” from “negative to neutral or positive.” Each item is rated on a 7-point likert-type scale (1 = almost always false of me, 7 = almost always true of me). There are six items for each of three subscales – Forgiveness of Self, Forgiveness of Others, and Forgiveness of Situations; all 18 items are computed to form a total dispositional forgiveness score. Higher scores on the overall dispositional forgiveness scale indicate a higher level of forgiveness endorsed by the participant. Higher scores on the subscales indicate higher self-forgiveness or ability to forgive oneself, ability to forgive others, and ability to forgive situations, respectively. Forgiveness of situations refers to a person’s ability to use forgiveness in light of situations in which the person has no control over, such as acquiring a chronic illness. An example of a self-forgiveness item is, “Although I feel bad at first when I mess up, over time I can give myself some slack.”

The Heartland Forgiveness Scale (Thompson et al., 2005) has good internal consistency reliability for the total dispositional forgiveness scale (coefficient alpha of .86-.87), forgiveness of self subscale (coefficient alpha of .72-.76), forgiveness of others subscale (coefficient alpha of .78-.81), and the forgiveness of situations subscale (coefficient alpha of .77-.82). The scale demonstrates good convergent, construct, and discriminant validity as well as good test-retest
reliability at three weeks (r = .83 for the overall scale; r = .72 for the forgiveness of self subscale; r = .73 for the forgiveness of others subscale; r = .77 for the forgiveness of situations subscale) and nine months (r = .78 for the overall scale; r = .69 for the forgiveness of self subscale; r = .69 for the forgiveness of others subscale; r = .68 for the forgiveness of situations subscale).

Data Analysis

An a priori power analysis was conducted to determine the sample size required for a linear multiple regression which utilized two independent variables, an alpha error probability level of .05, and a power of .80. Based on previous stigma outcome research, a medium effect size is desired (Logie & Gadalla, 2009). It was determined that a sample of 24 participants was required for the analysis (G*Power; Faul & Erdfelder, 1992).

Exploratory data analyses were conducted to gain an initial understanding of the data. The data were plotted, via histograms, graphs, and scatterplots, in order to gain a visual understanding of the variables and their relationships to each other. Graphical displays of the data allowed outliers to be detected. The data were examined to ensure that the variables were normally distributed, which allowed inferences to be made from this sample to the population. The data were normally distributed. Levene’s tests for equality of variances were conducted to ensure homogeneity of variance. The data were examined for missing data; however, there were no significant problems with missing data due to the nature of the computerized survey (i.e. utilizing QDS); participants were asked to complete all questions and were encouraged to consult with the researcher in the room if they had any questions. Missing data were interpolated as long as at least 80% of the items within a specific instrument were answered completely.
Attrition of participants can be expected for any study. This study is at particular risk for participant attrition due to 1) the longitudinal nature of the study (time elapsed from initial participant recruitment to completion of the six-month follow-up survey was approximately eight months), 2) the time commitment of the study in which participants are asked to participate in six weeks of the intervention and complete three surveys, 3) the generally low socioeconomic status of participants, with potential barriers (e.g. transportation and lack of a phone number), and 4) the often debilitating effects of HIV and the consequences of disease on the health of participants. An attrition analysis was conducted to better understand how this study tracked and retained participants and to assess sampling bias.

Measures of central tendency, including mean, mode, and median, were examined in order to understand the data and the center of the distribution. Measures of dispersion, including standard deviation and range, were examined in order to understand the variability of the data. Cronbach’s alphas were calculated to check the internal consistency and reliability of each scale.

Pearson product-moment correlation coefficients were computed for interval and ratio data, including demographic variables and the variables of interest (i.e. self-forgiveness, HIV-related stigma) to understand the relationships between the variables. These bivariate correlations were examined at Time 1 (baseline), Time 2 (post intervention), and Time 3 (follow-up) individually.

Independent-samples t-tests were used to compare HIV-related stigma and self-forgiveness scores between the treatment and control groups. This was done at each survey time and informed us whether there is a significant difference between the two groups with the variables of interest. A one-way repeated measures ANOVA was conducted to compare scores on HIV-related stigma and the four forgiveness types at Time 1, Time 2, and Time 3. This
allowed for an examination of whether the variables of interest (i.e. HIV-related stigma, dispositional forgiveness, forgiveness of self, forgiveness of others, and forgiveness of situations) changed over time.

Independent-samples *t*-tests were also used to compare HIV-related stigma, dispositional forgiveness, forgiveness of self, forgiveness of others, and forgiveness of situations between men and women in the control and treatment groups. In addition, as suggested by Vosvick, Martin, Smith, and Jenkins (2010), variables were examined by gender separately (instead of controlling for gender) so as to better identify gender differences in HIV-related stigma and forgiveness.

Linear multiple regressions were calculated using data from Survey 1, Survey 2, and Survey 3. Inclusion of a slope score, or change score, was planned to examine if the treatment intervention was efficacious. The slope score was to be calculated by subtracting forgiveness scores at Survey 2 from forgiveness scores at Survey 1 with a second slope score calculated by subtracting forgiveness scores at Survey 3 from forgiveness scores at Survey 2. The slope score was to be included as an independent variable that predicted HIV-related stigma in a linear multiple regression analysis. Inclusion of the slope score would have allowed us to examine the relationship between changes in forgiveness as a coping strategy and HIV-related stigma (i.e. an increase in forgiveness from Survey 1 to Survey 2 or from Survey 2 to Survey 3 predicts a decrease in HIV-related stigma). A positive slope score would indicate an increase in forgiveness following six weeks of the treatment or control intervention, and provides support for the efficacy of the intervention. This was not done because the number of recruited participants was lower than expected; thus, the slope score as part of the linear multiple regression analyses was not included. Inclusion of the slope score as a predictor would have resulted in this study being underpowered. Instead, several regressions were analyzed to test a model with forgiveness of self
or forgiveness of others as the main independent variable and HIV-related stigma as the
dependent variable. This was completed with data from Survey 1, Survey 2, and Survey 3,
respectively. Group type (i.e. treatment or control) and forgiveness (forgiveness of self or
forgiveness of others) was included as independent variables and HIV-related stigma as the
dependent variable. All independent variables were entered simultaneously. This was done for
both the treatment and control groups.

Multicollinearity was examined by analyzing the tolerance levels and variable inflation
factors. In addition to the quantitative data from Surveys 1, 2, and 3, respectively, qualitative
data were collected via recordings made during the treatment and control group sessions. This
was used as anecdotal data to supplement quantitative findings. However, the qualitative data
were not coded or categorized for this study.
CHAPTER 4

RESULTS

Sample Characteristics

The sample ($N = 57$) was ethnically diverse (64.9% African American, 31.6% European American, 3.5% other ethnicity) and gender-balanced (50.9% male, 49.1% female). Participants ranged from 32 to 66 years of age ($M = 49.0$, $SD = 7.2$); education level ranged from 7 to 23 years of education ($M = 13.0$, $SD = 2.8$). Most participants (75.4%) identified as having a Christian religious affiliation. All of the women ($n = 28$) in this study identified as heterosexual. In contrast, a majority of the 29 men in this study identified as a sexual minority (69.0% gay, 13.9% bisexual); of the 24 men that identified as gay or bisexual, 70.8% reported that they are “definitely out” about their sexual orientation while the remaining 29.2% reported that they are “mostly out” meaning “out more than closeted.” Most participants (80.7%) were not in a relationship when the initial survey was taken (Time 1). Less than half (40.4%) of participants reported having at least one child.

A majority (80.7%) of participants were not employed at the time the initial survey was administered (Time 1); all the participants who were employed held a part-time job (less than 30 hours per week). While most participants (42.1%) reported that they live alone in a house or apartment, others lived with a spouse/partner (19.3), with parents or other family members (17.6%), with their children (10.5%), with friends (8.8%), or in a community shelter (1.7%). Even though most participants (86.0%) reported that they have been seen by a mental health professional before (e.g. psychotherapist, clinical social worker), and 63.2% of participants were engaged in mental health treatment at the time the initial survey was taken (Time 1), over half (59.6%) reported that they did not feel that they had adequate support for managing HIV; most
(63.2%) reported that they would be interested in participating in a support group for HIV-positive adults.

Most participants (70.2%) contracted HIV through sexual intercourse or sexual activities, while 14.0% reported transmission through IV drug use, and 15.8% did not know or reported “other” but did not elaborate on this information. About half of the participants (54.4%) reported that they have been diagnosed with AIDS; male participants were over twice as likely as female participants to be diagnosed with AIDS (72.4% and 35.7%, respectively).

Descriptive Statistics of HIV-Related Stigma and Forgiveness Scales

The mean scores for HIV-related stigma and the forgiveness factors (i.e. dispositional forgiveness, forgiveness of self, forgiveness of others, forgiveness of situations) at Time 1, Time 2, and Time 3 is listed on Table 1; values are provided for treatment and control groups, as well as for male participants, female participants, and all participants. Independent t-tests were calculated to determine whether the treatment and control groups reported significantly different levels of HIV-related stigma or forgiveness at each phase of the study.

At Time 1, participants in the treatment and control group did not differ in terms of their reported levels of HIV-related stigma or levels of forgiveness. Although participants in the treatment group were given an intervention that specifically focused on teaching forgiveness as a coping strategy, there were no significant differences in forgiveness or HIV-related stigma between the treatment and control groups at Time 2 (the Time 2 survey was completed at the end of the intervention). At Time 3 (six months after the intervention), men in the treatment group reported a significantly higher level of dispositional forgiveness and forgiveness of self than men in the control group. A one-way repeated measures ANOVA was used to determine if the
variables of interest significantly changed over time based on group condition, treatment or control (see Table 2). The only significant change occurred in the control group \( F(2, 7) = 4.54, p < 0.05; \) Wilks’ Lambda = .47) in which forgiveness of situations increased from Time 2 \( (M = 28.1, SD = 5.8) \) to Time 3 \( (M = 30.0, SD = 6.0) \).

Gender Differences in HIV-Related Stigma and Forgiveness across Time

Independent-samples t-tests were used to compare HIV-related stigma, dispositional forgiveness, forgiveness of self, forgiveness of others, and forgiveness of situations between men and women in the control and treatment groups. See Table 1 for the mean scores of variables of interest.

Control Group

There were no significant differences in scores for males and females for HIV-related stigma at Time 1 \( t(26) = .07, p = .94 \), Time 2 \( t(18) = -.24, p = .81 \), or Time 3 \( t(8) = 1.64, p = .14 \). There were no significant difference in scores for males and females for dispositional forgiveness at Time 1 \( t(26) = -.71, p = .48 \) or Time 3 \( t(8) = -1.86, p = .16 \); however, there was a difference in scores at Time 2 \( t(18) = -2.06, p = .05 \), in which females \( (M = 90.38, SD = 15.86) \) reported higher levels of dispositional forgiveness when compared to males \( (M = 79.33, SD = 8.15) \). This represents a large effect size (eta squared = .19) for the differences in the mean scores, as proposed by Cohen (1988). Males and females did not differ in their self-report of forgiveness of self at Time 1 \( t(26) = -.41, p = .69 \), Time 2 \( t(18) = -1.21, p = .24 \), or Time 3 \( t(8) = -1.75, p = .18 \).
Table 1

\textit{HIV-Related Stigma and Forgiveness among Men and Women for Treatment and Control Groups at Time 1, 2, and 3}

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control</th>
<th>Treatment</th>
<th>t</th>
<th>Control</th>
<th>Treatment</th>
<th>t</th>
<th>Control</th>
<th>Treatment</th>
<th>t</th>
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<td></td>
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</tr>
<tr>
<td>Men</td>
<td>99.36</td>
<td>97.87</td>
<td>.22</td>
<td>98.08</td>
<td>96.63</td>
<td>.19</td>
<td>100.00</td>
<td>100.00</td>
<td>.00</td>
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<td>.45</td>
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<td>.23</td>
<td>76.75</td>
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<td>-1.02</td>
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<td>.20</td>
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<td>96.82</td>
<td>-.61</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Men</td>
<td>81.57</td>
<td>80.53</td>
<td>.20</td>
<td>79.33</td>
<td>86.00</td>
<td>-1.02</td>
<td>76.00</td>
<td>92.20</td>
<td>-2.54*</td>
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<td>90.38</td>
<td>92.08</td>
<td>-.22</td>
<td>97.25</td>
<td>86.17</td>
<td>1.08</td>
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<tr>
<td>Both</td>
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<td>-.22</td>
<td>83.75</td>
<td>89.76</td>
<td>-1.28</td>
<td>84.50</td>
<td>88.91</td>
<td>-.68</td>
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<tr>
<td>Forgiveness of self</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Men</td>
<td>27.71</td>
<td>27.00</td>
<td>.37</td>
<td>27.67</td>
<td>29.25</td>
<td>-.61</td>
<td>24.17</td>
<td>32.20</td>
<td>-4.70**</td>
</tr>
<tr>
<td>Women</td>
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<td>-.64</td>
<td>31.00</td>
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<td>.44</td>
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<tr>
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<td>26.90</td>
<td>30.55</td>
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<tr>
<td>Men</td>
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<td>24.58</td>
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<td>29.50</td>
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<td>-.20</td>
<td>33.25</td>
<td>29.00</td>
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<tr>
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<td>27.76</td>
<td>-.12</td>
<td>26.55</td>
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<td>27.60</td>
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<td>-.15</td>
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<tr>
<td>Forgiveness of situations</td>
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<td></td>
<td></td>
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<td></td>
</tr>
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<td>.20</td>
<td>27.08</td>
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<td>-1.07</td>
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<tr>
<td>Women</td>
<td>28.86</td>
<td>30.79</td>
<td>-.80</td>
<td>31.25</td>
<td>30.69</td>
<td>.19</td>
<td>33.00</td>
<td>28.00</td>
<td>1.24</td>
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<tr>
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<td>28.69</td>
<td>-.43</td>
<td>28.10</td>
<td>30.24</td>
<td>-.81</td>
<td>30.00</td>
<td>30.37</td>
<td>-.15</td>
</tr>
</tbody>
</table>

\textit{Note.} Values under the treatment and control columns represent mean scores for that variable; values for the variables listed can have the following range of scores: HIV-related stigma (40-160), dispositional forgiveness (18-126); forgiveness of self, forgiveness of others, and forgiveness of situations (6-42). Independent \(t\)-tests were used to compare scores between treatment and control groups. *\(p < .05\). **\(p < .01\).
Table 2

**F Scores and Wilks’ Lambda Values for Change in HIV-related Stigma and Forgiveness**

<table>
<thead>
<tr>
<th>Variable + Condition</th>
<th>F</th>
<th>Wilks’ Lambda</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV-related stigma</td>
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</tr>
<tr>
<td>Treatment</td>
<td>.06</td>
<td>.99</td>
</tr>
<tr>
<td>Control</td>
<td>.66</td>
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</tr>
<tr>
<td>Dispositional forgiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>.01</td>
<td>.99</td>
</tr>
<tr>
<td>Control</td>
<td>.72</td>
<td>.85</td>
</tr>
<tr>
<td>Forgiveness of self</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>.17</td>
<td>.96</td>
</tr>
<tr>
<td>Control</td>
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<td>Forgiveness of others</td>
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<tr>
<td>Treatment</td>
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<td>.97</td>
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<tr>
<td>Control</td>
<td>4.54</td>
<td>.47*</td>
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</tbody>
</table>

*Note.* Values reported are from one-way repeated measures ANOVA. *p < .05. **p < .01.

There was no significant gender differences for forgiveness of others at Time 1 \(t(26) = -.72, p = .48\) and Time 3 \(t(8) = -2.30, p = .09\), but females \(M = 29.50, SD = 5.24\) had higher scores than males \(M = 24.58, SD = 5.23\) for forgiveness of others at Time 2 \(t(18) = -2.06, p = .05\). The magnitude of the differences in the means was large (eta squared = .19). Finally, there was no significant difference in scores for males and females for forgiveness of situations at Time 1 \(t(26) = -.71, p = .49\), Time 2 \(t(18) = -1.69, p = .11\), or Time 3 \(t(8) = -1.34, p = .22\).

**Treatment Group**

For participants in the treatment group, there were no gender differences between males and females for any of the variables of interest at Time 1, 2, or 3. There were no gender
differences in HIV-related stigma at Time 1 \( t(27) = .39, p = .70 \), Time 2 \( t(19) = -.38, p = .71 \), Time 3 \( t(9) = .42, p = .68 \); dispositional forgiveness at Time 1 \( t(27) = -1.57, p = .13 \), Time 2 \( t(19) = -.77, p = .48 \), or Time 3 \( t(9) = .80, p = .45 \); forgiveness of self at Time 1 \( t(27) = -1.20, p = .24 \), Time 2 \( t(19) = -.69, p = .50 \), or Time 3 \( t(9) = 1.02, p = .33 \); forgiveness of others at Time 1 \( t(27) = -1.05, p = .30 \), Time 2 \( t(19) = -.85, p = .41 \), or Time 3 \( t(9) = -.69, p = .51 \); forgiveness of situations at Time 1 \( t(27) = -1.95, p = .06 \), Time 2 \( t(19) = -.43, p = .68 \), or Time 3 \( t(9) = 1.74, p = .12 \).

**Relationship between HIV-Related Stigma, Forgiveness, and Demographic Variables**

Bivariate correlations were computed for the variables of interest (HIV-related stigma, forgiveness) and select demographic (i.e. age, gender, ethnicity, religion, sexual orientation) and medical (i.e. whether or not participant has been diagnosed with AIDS) variables. Please refer to Table 3 (Time 1 – baseline), Table 4 (Time 2 – post intervention), and Table 5 (Time 3 – six-month follow-up) for the intercorrelation matrices. At Time 1, age was positively associated with forgiveness of self \( r = .28 \). Gay sexual orientation was negatively associated with forgiveness of situations \( r = -.29 \). Forgiveness of situations was negatively associated with HIV-related stigma \( r = -.26 \). At Time 2, age continued to be positively correlated with forgiveness of self \( r = .31 \). Female gender was positively associated with dispositional forgiveness \( r = .31 \) and forgiveness of others \( r = .32 \). Religious affiliation with Christianity was positively associated with dispositional forgiveness \( r = .39 \), forgiveness of self \( r = .40 \), and forgiveness of situations \( r = .43 \). Gay sexual orientation was negatively associated with all four types of forgiveness – dispositional forgiveness \( r = -.43 \), forgiveness of self \( r = -.31 \), forgiveness of others \( r = -.43 \), forgiveness of situations \( r = -.34 \). Forgiveness of situations was negatively
correlated with HIV-related stigma ($r = -.31$). At Time 3, age was again positively associated with forgiveness of self ($r = .50$), along with dispositional forgiveness ($r = .61$), forgiveness of others ($r = .46$), and forgiveness of situations ($r = .64$). Female gender was positively associated with forgiveness of others ($r = .49$). Gay sexual identity was negatively correlated with forgiveness of others ($r = -.46$). Dispositional forgiveness ($r = -.43$) and forgiveness of self ($r = -.45$) were both negatively associated with HIV-related stigma.

Hierarchical Multiple Regression for HIV-Related Stigma

Hierarchical multiple regression analyses were utilized to examine if self-forgiveness or forgiveness of others significantly predicts HIV-related stigma at Time 1, 2, and 3, respectively. This resulted in 12 separate multiple regressions analyses: self-forgiveness at Time 1 predicting HIV-related stigma at Time 1, 2, and 3; self-forgiveness at Time 2 predicting HIV-related stigma at Time 2 and 3; self-forgiveness at Time 3 predicting HIV-related stigma at Time 3; forgiveness of others at Time 1 predicting HIV-related stigma at Time 1, 2, and 3; forgiveness of others at Time 2 predicting HIV-related stigma at Time 2 and 3; forgiveness of others at Time 3 predicting HIV-related stigma at Time 3. In each regression, group type (i.e. treatment or control) as a control variable was included.

Forgiveness of others at Time 1 did not predict HIV-related stigma at Time 1 (beta = -.11, $p = .42$), Time 2 (beta = -1.26, $p = .22$), or Time 3 (beta = -1.31, $p = .21$). Forgiveness of others at Time 2 did not predict HIV-related stigma at Time 2 (beta = -.28, $p = .09$) or Time 3 (beta = - .26, $p = .80$). Forgiveness of others at Time 3 did not predict HIV-related stigma at Time 3 (beta = -.32, $p = .17$).
Table 3

*Intercorrelations among Variables at Time 1 – Baseline (n = 57)*

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*p < .05. **p < .01.
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*p < .05. **p < .01.
Table 5

*Intercorrelations among Variables at Survey 3 – Six-Month Follow-up (n = 21)*

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<td>.01</td>
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<td>.18</td>
<td>-.43*</td>
<td>-.45*</td>
<td>-.31</td>
<td>-.35</td>
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</table>

*p < .05, **p < .01
Self-forgiveness at Time 1 did not predict HIV-related stigma at Time 1 (beta = -.10, \(p = .45\)) or Time 2 (beta = -1.74, \(p = .09\)). However, self-forgiveness at Time 1 significantly predicted HIV-related stigma at Time 3 (beta = -.57, \(p = .01\)). Further, self-forgiveness at Time 1 accounted for 34% of the variance (\(r^2\) change = .34) in HIV-related stigma at Time 3 \([F(2, 18) = 4.72, p = .02]\) after controlling for the effects of group type (i.e. treatment or control group). Self-forgiveness at Time 2 did not predict HIV-related stigma at Time 2 (beta = -.11, \(p = .52\)) or Time 3 (beta = -1.17, \(p = .26\)). However, self-forgiveness at Time 3 significantly predicted HIV-related stigma at Time 3 (beta = -.56, \(p = .02\)). Further, self-forgiveness at Time 3 accounted for 28% of the variance (\(r^2\) change = .28) in HIV-related stigma at Time 3 \([F(2, 18) = 3.82, p = .04]\) after controlling for the effects of group type (i.e. treatment or control group).

**Study Hypotheses**

**Hypothesis 1 – Somewhat Supported**

It was hypothesized that forgiveness as reported by participants in the treatment group is higher than forgiveness reported by participants in the control group post intervention at Time 2 and Time 3. This was examined with independent samples t-tests as seen in Table 1. There were no significant differences in reported forgiveness of any type (i.e. dispositional, self, others, situation) between men, women, or both genders combined between the treatment and control groups at Time 2. However, by the six-month follow-up (Time 3), men in the treatment group reported significantly higher levels of dispositional forgiveness \((M = 92.20, SD = 15.06)\) and self-forgiveness \((M = 32.20, SD = 3.96)\) than men in the control group \((M = 76.00, SD = 4.34\) and \(M = 24.17, SD = 1.33\), respectively).
Hypothesis 2 – Not Supported

A one-way repeated measures ANOVA was used to test hypothesis 2 in which it was hypothesized that self-forgiveness reported by participants in the treatment group would be higher post intervention (Time 2 or Time 3) than at baseline (Time 1). Table 2 shows that there was no difference in scores for self-forgiveness for the treatment group from baseline (Time 1) to post intervention (Time 2 or Time 3).

Hypothesis 3 – Supported

It was hypothesized that self-forgiveness would not change for the control group from baseline (Time 1) to post intervention (Time 2 or Time 3), which was tested using a one-way repeated measures ANOVA. Self-forgiveness scores reported by the control group did not significantly change from Time 1 to Time 2 or Time 3.

Hypothesis 4 – Not Supported

Independent samples t-tests were performed to examine whether participants in the treatment group have lower levels of perceived HIV-related stigma than the control group at Time 2 and Time 3. As seen in Table 1, participants in the treatment group did not have different levels of perceived HIV-related stigma when compared to the control group at Time 2 or Time 3. There were no statistically significant differences among the treatment and control group for men, women, or when both male and female participants were combined.

Hypothesis 5 – Not Supported

Independent samples t-tests were utilized to determine if there were gender differences in
self-forgiveness as reported by men and women in the study. There were no gender differences in reported self-forgiveness in the control group or the treatment group at Time 1, 2, or 3. However, women in the control group reported greater levels of dispositional forgiveness and forgiveness of others than men in the control group at Time 2 only.

Hypothesis 6 – Somewhat Supported

Hierarchical regression analyses were utilized to determine if self-forgiveness significantly predicted HIV-related stigma. Although self-forgiveness at Time 1 did not predict HIV-related stigma at Time 1 and self-forgiveness at Time 2 did not predict HIV-related stigma at Time 2, self-forgiveness at Time 3 predicted HIV-related stigma at Time 3, and accounted for 28% of the variance in HIV-related stigma at Time 3 \( F(2, 18) = 3.82, p = .04 \).

Hypothesis 7 – Supported

Similar to hypothesis 6, hierarchical regression analyses were used to determine if forgiveness of others significantly predicted HIV-related stigma. As hypothesized, forgiveness of others did not predict HIV-related stigma at any phase of the study (i.e. Time 1, 2, or 3).

Reliability Analysis

Cronbach alpha coefficients were computed for each instrument/scale at each time. In the current study, the HIV Stigma Scale had good internal reliability at Time 1 (\( \alpha = .94 \)), Time 2 (\( \alpha = .94 \)), and Time 3 (\( \alpha = .97 \)). At Time 1, Cronbach alpha coefficient for the Heartland Forgiveness Scale was .84 for the dispositional forgiveness scale and .62-.65 for the forgiveness subscales. The dispositional forgiveness scale maintained good internal reliability at Time 2 (\( \alpha = \))
.73) and Time 3 (α = .72). However, the forgiveness subscales did not fare as well at Time 2 (α = .54-.67) or Time 3 (α = .39-.52). The Cronbach alpha coefficients may be low for the forgiveness subscales due to a low number of items (six items for each forgiveness subscales) and increased attrition of participants (i.e. 57 participants at Time 1 to 21 participants at Time 3). When alpha values for a scale are lower than .7, one could consider removing items with low item-total correlations. However, all items in the scales were included in order to maintain an equal number of items across Time 1, 2, and 3.

Attrition

As seen in Table 6, there was attrition through every phase of Project Forgive. T-tests were used to conduct an attrition analysis. Frequency counts or descriptive statistics were obtained and examined at Time 1, 2, and 3 for the following medical or psychosocial variables: age, sexual orientation, gender, years of education, ethnic background, religious affiliation, and AIDS diagnosis. None of the variables examined significantly contributed to attrition in the study. That is, attrition in this particular study appears to have occurred randomly. For example, PLH with a diagnosis of AIDS were no more likely to attrit than PLH who did not have a diagnosis of AIDS.
Table 6

*Flow of Participants Through Each Phase of Project Forgive*

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<th>Time 3 (Follow-Up)</th>
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*Note.* Participants were not randomized into treatment and control groups until after they completed the baseline survey. Values under the Time 1 (baseline) column are meant to indicate placement of an individual following randomization.
CHAPTER 5
DISCUSSION

Participants in the study either participated in six weeks of a cognitive-behavioral group therapy intervention focused on teaching forgiveness as a coping strategy (treatment group) or six weeks of a psychoeducational group that did not include teaching of forgiveness (control group). HIV-related stigma was identified as an intervention focal point. It was hypothesized that persons living with HIV or AIDS (PLH) would learn forgiveness as an adaptive coping skill that is useful in letting go of long-held grievances and that perceived HIV-related stigma would decrease. Participants were surveyed prior to the six-week intervention (Time 1 – baseline), immediately after completion of the six-week intervention (Time 2 – end survey), and six months after completion of the intervention (Time 3 – follow-up).

Importantly, it was demonstrated that forgiveness is a teachable skill, which is consistent with Luskin’s (2002) forgiveness work. Dispositional forgiveness, self-forgiveness, forgiveness of others, and forgiveness of situations were similar for men in the treatment and control groups at the beginning of the study, Time 1. That is, male participants, regardless of which group they were in, initially reported similar levels of forgiveness. This changed by the six-month follow-up, Time 3. Men in the treatment group reported significantly higher levels of dispositional forgiveness than men in the control group at Time 3; similarly, men in the treatment group reported significantly higher levels of self-forgiveness than men in the control group at Time 3. Luskin found that forgiveness can decrease feelings of anger and increase feelings of hope and optimism. This intervention was tailored from Luskin’s forgiveness intervention and applied the approach to an HIV-positive population for the first time. While forgiveness did not decrease stigma in the study, the fact that forgiveness was learned by some of the participants is
encouraging, especially given that forgiveness has known benefits. As one male participant in the treatment group offered to the facilitators at the end of the last session: “I never thought I could forgive myself. I have regained so much that I thought was lost forever.”

Though the presented intervention was not effective in reducing HIV-related stigma, it is believed that the intervention was successful and has the potential to demonstrate efficacy in improving mental health and quality of life in PLH. Participants in the treatment group did not report lower levels of perceived HIV-related stigma after the intervention when compared to participants in the control group. Further, perceived HIV-related stigma did not change over time for participants in either the treatment or control groups, respectively. It may be that the presented intervention did not have enough of a focus on HIV-related stigma and thus did not impact participants in that regard. It could also be that HIV-related stigma is more pervasive and complex than could have been anticipated. Research on trauma, racism, racial harassment, and homophobia may help to explain the difficulty with reducing stigma in this particular sample, given that the majority of the women in this study are women of color and the majority of the men in this study identify as gay or bisexual. Racism can be viewed not just as a stressor to persons of color, but also as a chronic stressor that can lead to deeply traumatic stress (Carter, 2007; Franklin-Jackson & Carter, 2007). Carter (2007) proposed a race-based traumatic stress injury model in which racial discrimination and racial and discriminatory harassment may be experienced as negative events that contributes to loss of memory, severe guilt, and depression as well as symptoms such as flashbacks and nightmares. Similarly, internalized homophobia and victimization due to sexual orientation (via both verbal and physical assault) have been shown to predict symptoms similar to those found in individuals suffering from post-traumatic stress disorder (e.g. occurrence of nightmares, difficulty controlling one’s temper). Thus, the
combination of traumatic stress in the form of racism or homophobia and HIV-related stigma, which is already a significant stressor (Heckman et al., 2002), may be difficult to manage and even more difficult to mitigate, particularly in a short six-week intervention. To that end, it may have been useful to add a focus on layered stigma (e.g. stigma related to gender, ethnicity, sexual orientation) instead of focusing only on HIV-related stigma.

Unexpectedly, at Time 2, participants in the treatment group did not report higher levels of forgiveness (dispositional, self, others, or situational) than participants in the control group (hypothesis 1). In reference to the theoretical model of learning forgiveness (Prochaska & Velicer, 1997), it may be that participants in this study were still in the contemplative stage of change or were preparing themselves to forgive but were not ready to commit to the action of forgiveness. It may also be that six weeks was not an adequate amount of time for PLH to learn and then apply forgiveness as a new coping strategy in their lives, given the strength of their grievances. During the second session of a treatment group, one female participant commented, “Forgiveness is not something I give very easily, even if it’s to myself.”

Similar results were found at Time 3 except when the groups were compared by gender. Men who participated in the treatment group reported significantly higher levels of both dispositional forgiveness and self-forgiveness than men in the control group. These differences were not found with women in the study. Also, men in this study reported lower levels of forgiveness than women at baseline, prior to participation in a treatment or control group intervention. This is consistent with a recent meta-analysis on forgiveness and gender that found that women are more forgiving than men (Miller, Worthington, & McDaniel, 2008). Thus, it may be that men in this study were more likely than women to augment their ability to forgive as a result of the intervention because they used forgiveness as a coping strategy less than women at
baseline and thus would be more impacted by an intervention that taught forgiveness. That is, women may have already had practice with using forgiveness and it was more likely for forgiveness to be a novel concept for men. Additionally, the fact that the majority of the men in this study are gay while all of the women in the study identify as heterosexual must be taken into consideration. Gay men, given their sexual minority status, are already stigmatized by society; thus, a PLH who identifies as gay likely has to cope with added layers of stigma or other grievances that can be difficult to manage. It may be that gay men who were in the treatment group had a greater need to learn forgiveness in order to combat the stress of multiple layers of stigma. Also, it may be that men in the treatment group who learned forgiveness and were able to forgive themselves for the role that they played in the transmission of HIV, or who were able to let go of some of their grievances associated with their seropositive status benefited most from participation in this study. Thus, these men in the treatment group were likely the participants who continued practicing forgiveness after the intervention ended and subsequently reported significantly higher levels of dispositional forgiveness and self-forgiveness at Time 3 when compared to men in the control group.

Women in the control group reported higher levels of dispositional forgiveness and forgiveness of others than men in the control group at Time 2. This finding is consistent with other studies that examined gender and forgiveness (Ghaemmaghami, Allemand, & Martin, 2011). Another consideration is that the majority of the women in this study were not only African American, but also identified as Christian (about 90%). It may be that these women already had high levels of spirituality or religiosity, which is often associated with forgiveness (McCullough & Worthington, 1999). According to an analysis by The Pew Forum on Religion & Public Life (Sahgal & Smith, 2009), African American women are the most likely group of men
or women to endorse religiosity of some form. In addition, the analysis reported that over three-fourths of African American women indicate that religion is “very important” to them. Although the conceptualization of forgiveness for this study does not focus on religion, forgiveness is likely influenced by one’s religious affiliation. This may explain why women in this study reported significantly more forgiveness than men at Time 2; women in this study may be more predisposed to forgive, given their predominantly Christian belief systems. Interestingly, these differences were not retained at Time 3; that is, men and women did not significantly differ in their level of dispositional forgiveness. Although not statistically significant, men reported less dispositional forgiveness ($M = 79.33$ to $M = 76.00$) and less forgiveness of others ($M = 24.58$ to $M = 23.83$) from Time 2 to Time 3; conversely, women reported more dispositional forgiveness ($M = 90.38$ to $M = 97.25$) and forgiveness of others ($M = 29.50$ to $M = 33.25$) in the same time period. This suggests that the difference between men and women in regards to dispositional forgiveness and forgiveness of others should have actually increased; however, it is important to note that there were only six men and four women in the control group that completed the survey at Time 3. The assumption of equal variances was not met; if this study had more participants that were able to complete the follow-up survey at Time 3, a significant difference in dispositional forgiveness and forgiveness of others between men and women may have been observed.

Although self-forgiveness was the focus of the treatment group, it was not expected that participants would immediately begin to use forgiveness at the end of the six-week treatment intervention, at Time 2. This may be why participants in the treatment group (both men and women combined) did not report higher levels of self-forgiveness at the end of the intervention at Time 2 or Time 3 (hypothesis 2). Consistent with information processing theory, it may
simply be that it takes a while to encode learned information before it can be stored in long-term memory. It can be difficult to let go of long-held grievances related to HIV status. Thus, use of forgiveness may take a while before it becomes part of a PLH’s repertoire of coping skills or before forgiveness is consistently applied to a participant’s life. It is possible that participants were not given enough time to implement forgiveness into their lives or to practice forgiveness enough times to see a significant change at Time 2 or Time 3. If this study were repeated, participants could be invited to a “booster session” after the intervention was completed (e.g. at the time of the six-month follow-up) to review the concept of forgiveness and to reinforce learning. Similar to the treatment group, participants in the control group (both men and women) did not report higher levels of self-forgiveness at the end of the intervention at Time 2 or Time 3; this is expected given that the control group was psychoeducational in nature and did not include a focus on teaching self-forgiveness.

This study demonstrated that self-forgiveness, and not forgiveness of others, is a more salient factor in predicting decreased HIV-related stigma. That self-forgiveness at Time 1 and self-forgiveness at Time 3 both significantly predicted HIV-related stigma at Time 3 lends further support for this study. Throughout the treatment intervention, forgiveness was taught as being about personal healing, taking back power, taking responsibility for one’s feelings, and letting go of grievances; a discussion of how forgiveness is not about condoning unkindness, reconciling with an offender, or denying personal hurt was also presented. Thus, the emphasis was on self-forgiveness, and not forgiveness of others, as the path to letting go of longstanding grievances that were held by the participants.

Similar to other forgiveness studies, it was found that age is positively correlated with forgiveness (Toussaint, Williams, Musick, & Everson, 2001; Cheng & Yim, 2008). Throughout
each phase of the study, older PLH were more likely than their younger counterparts to participate in self-forgiveness. By Time 3, older age was also associated with dispositional forgiveness, forgiveness of others, and forgiveness of situations. It seems likely that older PLH have held grievances for longer than younger PLH and thus have had more time to practice forgiveness or were more likely to realize the need to forgive themselves in order to cope with stressors.

Individuals in the control group likely benefited from the added social support that group members provided; in addition, participation in a support group can help to destigmatize HIV. This may account for some of the reasons why a greater difference was not found between the treatment and control groups. Indeed, the “dodo effect,” in which common factors between treatments (e.g. group participation and support) account for the benefits of therapy may help to explain why significant differences were not found between the treatment and control groups (Wampold, Mondin, Moody, Stich, Benson, & Ahn, 1997).

As expected, attrition was a problem in this study. Only 37% of the sample (21 out of 57 participants) completed all phases of the study. Further, most participants (82% of the female participants, 59% of the male participants) missed at least one of six sessions of the treatment or control interventions, respectively. The rate of attrition in this study is comparable to attrition rates found in other longitudinal studies that involve PLH (Hessol et al. 2001). Nonetheless, this makes it difficult to examine the impact of the proposed intervention on HIV-related stigma and other variables of interest. Unfortunately, follow up with participants who did not complete the study was not a possibility for this particular sample and explanation as to why nearly two-thirds of participants were lost to attrition can only be explained by speculation. However, it is known that highly stigmatized PLH are less likely to follow up with clinic appointments (Vanable,
Carey, Blair, & Littlewood, 2006) and mental health treatment (Reece, 2003). Thus, it is possible that dropout among PLH holds true for research participation as well, particularly in a study that consisted of a psychological intervention or education component and that included the sharing of personal stories related to participants’ grievances and other hurtful experiences. While factors that were associated with dropout in this study could not be identified, other studies have examined this occurrence and have identified variables involved with attrition. Further progression of disease as indicated by higher viral load and lower CD4 T-cell counts has been identified as correlated with higher likelihood of attrition (Brown et al., 2006); also, in a study of HIV-positive women, African American race, previous participation in HIV studies, and use of HAART medications were associated with study retention (Hessol et al., 2001).

There are several limitations that should be taken into account when considering the results of this study. Over two-thirds of participants identified as belonging to an ethnic minority group. However, about 95% of ethnic minority participants identified as African American, while only one participant identified as Latino and one participant identified as Alaskan/American Indian. Most participants had a low-SES background and a majority utilized resources from various AIDS service organizations in the Dallas-Fort Worth metropolitan area. Thus, this study should not be generalized to the general HIV/AIDS population. In addition, participants in this study ranged in age from 32 to 66 years ($M = 49.0$, $SD = 7.2$); thus, this study should not be generalized to younger PLH. Future research should strive to include younger PLH and should control for additional variables, such as time since diagnosis of HIV and route of transmission.

Doctoral clinical and counseling psychology students facilitated the intervention component of this study. A pair of students was assigned to each treatment or control group. The
facilitators were not matched by gender (i.e. two female facilitators for an all-female group of participants). However, there was at least one female facilitator for the female groups and at least one male facilitator for the male groups. While the participants were randomized into groups, the facilitators were not randomized; instead, facilitators were assigned to specific groups based on convenience and availability of the facilitator based on the timing of group sessions.

Additionally, some of the female participants in this study were infected with HIV through male partners and the grievances surrounding their mode of transmission; therefore, it is likely that better clinical outcomes could be had if matching facilitators by gender was possible; on the other hand, research does not seem to support gender matching as a predictor of better treatment outcomes or therapeutic gains (Zlotnick, Elkin, & Shea, 1998; Blow, Timm, & Cox, 2008; Beutler, et al, 2004).

Lastly, participants were self-selected into the study, which limits the generalizability of results. This study likely excluded highly stigmatized HIV-positive individuals who did not want to be “outed” as being HIV-positive or whose internalized stigma prevented them from wanting to participate in the study. Individuals who did participate in the study had to be comfortable with going to an AIDS service organization (ASO) and potentially being seen by other individuals as well as sharing personal information about themselves to other participants.

To my knowledge, this study represents the first randomized clinical trial that involved HIV-positive adults and examined HIV-related stigma and the concept of forgiveness as utilized by PLH. In that regard, this pilot study represents a success in many ways. Nonetheless, there were many barriers involved with the implementation of this intervention. Despite a sizable HIV/AIDS population in the Dallas-Fort Worth area, recruitment and retention of participants was much more difficult than anticipated. Participants were predominantly low-SES which often
meant limited access to transportation. Many participants vented about the frustrations of having to take public transportation to the sessions, relying on others’ time schedules, or feeling that they were placing a burden on their friends or family members. As a result of these factors, some participants had to leave sessions early in order to have transportation back home; others had to miss sessions altogether. Future studies could try to provide transportation to their participants or have sessions in a central location that is easily accessible via public transportation. Further, missing a session due to illness or due to having a medical or mental health appointment was a common occurrence in immunocompromised participants. Consequently, few participants experienced the impact of the intervention in its entirety. Frequent absence from the intervention sessions potentially caused a disrupted experience for both the participant and their peers. In one particular session, only one male participant was able to come to a control group session, which meant that there were more facilitators than were participants (i.e. two facilitators, one participant), which probably impacted the overall experience for all participants in that particular group.

Future randomized clinical trials or longitudinal studies that examine forgiveness and HIV-related stigma should expand from six sessions to 8, 10, or perhaps 12 sessions, with longer duration of psychotherapeutic process-based forgiveness interventions reported to have larger effects (Baskin & Enright, 2004). Future studies should attempt to include younger (i.e. adolescent) and older (i.e. over the age of 65) PLH. Studies would be improved by controlling for time since HIV diagnosis as well as addressing HIV-related stigma at various stages of disease progression. HIV and its relationship to psychoneuroimmunology were discussed in this paper but remain understudied. Thus, studies that measure biomarkers of stress would be a considerable contribution to the literature. One current study at the Center for Psychosocial
Health Research hopes to address this gap through examination of heart rate variability in PLH and its relationship with HIV-related stigma and forgiveness.

The HIV epidemic has taken millions of lives. In 1996, HAART medications gave new life to the fight against HIV. Perhaps now more than ever, interventions must be developed to empower PLH and to mitigate the negative effects of the second epidemic of this disease, HIV-related stigma. The current pilot study provides encouraging support for self-forgiveness as an intervention by which PLH can learn and use as an effective coping skill that can help to combat HIV-related stigma. For PLH, self-forgiveness can be a mechanism to facilitate the recovery of what was lost and place life, as one participant noted, “back in my hands.”
APPENDIX

RESEARCH CONSENT FOR ALL PARTICIPANTS: PROJECT FORGIVE
Title of Study: Project Forgive
Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose and benefits of the study and how it will be conducted.

Principal Investigator: Mark Vosvick, Ph.D. Assistant Professor, University of North Texas (UNT), Department of Psychology, Division of Health Psychology and Behavioral Medicine

Co-Investigator: Chwee Lye Chng, Ph.D., Regents Professor, Department of Kinesiology, Health Promotion and Recreation, University of North Texas (UNT).

Purpose of the Study:
You are being asked to participate in a research study. The study will measure the effects of a cognitive-behavioral intervention on your mental health and physical health as related to living with HIV. This information will be used to help improve the health of HIV+ individuals and to decrease transmission of the HIV virus.

Description of the Study:
Your participation in the study will include two parts. The first part involves completing an initial set of survey questions and participating in 6 group sessions over a six-week period. At the end of the six-week period, you will be asked to complete a second set of survey questions. The second part involves taking a set of survey questions 6 months after the group sessions were completed.

Procedures:
Surveys will be administered in a private area at the Resource Center of Dallas. Each survey will take approximately 2 hours to complete and each group session will take approximately 1.5 – 2 hours. Group sessions will consist of seven members (all male or all female) and also be held at the Resource Center of Dallas. Both surveys and group sessions will be led by either the principal investigators or by trained project facilitators. Sessions will be audio-taped for later transcription and analysis.

The survey includes questions on living with HIV. Some topics include experiences with HIV, self-esteem, social support, coping, HIV knowledge, adjustment, and adherence to medication. The group sessions will be a cognitive-behavioral intervention that teaches skills for coping with living with HIV.

______________________________    ______________
Signature of Participant      Date
Foreseeable Risks:
Although unlikely, survey questions and discussion within the group sessions may induce anxiety, stress, fear, confusion, embarrassment, depression, guilt, or surprise. You will be given toll-free phone numbers to crisis lines and low-cost services to help you cope with any problems that could arise. Should a researcher feel that you are experiencing high levels of distress, they have been trained to encourage you to use one of these community resources.

Benefits to the Subjects or Others:
You may learn new skills to help cope with stresses related to living with HIV. Additionally, you may gain some insight into your health and health behaviors. Findings from this study will help future researchers to develop more effective methods of improving the quality of life of individuals living with HIV.

Compensation for Participants:
After finishing each group session and each survey you will be reimbursed in increasing amounts as the study progresses. The table below is a schedule for the participant reimbursement throughout the study. All participants will sign a receipt for compensation.

<table>
<thead>
<tr>
<th>Group Session Reimbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Sessions 1-3 @ $10 for each participant</td>
</tr>
<tr>
<td>Group Sessions 4-6 @ $15 for each participant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Survey Reimbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Survey @ $15 for each participant</td>
</tr>
<tr>
<td>Intervention End Survey @ $15 for each participant</td>
</tr>
<tr>
<td>6-month Follow-up Survey @ $20 for each participant</td>
</tr>
</tbody>
</table>

Confidentiality:
Data collection for the survey questions and the group sessions will be conducted in private rooms at community resource centers to ensure confidentiality. You will be assigned an individual code that will be used for identification each time a survey is taken. No one other than the principal investigators will have access to the participant code list. During the group sessions, you will be encouraged to not use your name since the session will be audio taped. Should names accidentally be used, transcribers are trained to delete them. All data will be secured and accessed only by research staff. At the completion of the study, all recordings will be destroyed. In addition, you will initial informed consent rather than sign it to protect your confidentiality. The only time that your name will be used is when you provide documentation of your HIV status and for the survey participant code list. Should data pertaining to this research be published, your identity will not be revealed.

Signature of Participant ___________________________ Date ___________________________
Voluntary Participation:
Participation in this research study is voluntary and you are free to withdraw your consent at any time without penalty or losing benefit to which you are otherwise entitled.

Questions about the Study:
If you have any questions about the study, you may contact The Center for Psychosocial Health at telephone number: (940) 891-6844 or Mark Vosvick, Ph.D., Department of Psychology, (940) 565-4715 or by email at vosvick@unt.edu.

Review for the Protection of Participants:
This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 for any questions regarding the rights of research subjects.

Research Participants’ Rights:
Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:
- Dr. Vosvick or a designated research assistant from the Center for Psychosocial Health has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You understand that you will receive a copy of this consent form.

________________________________                        __________
Printed Name of Participant                                     Date

________________________________                        __________
Signature of Participant                                      Date

For the Principal Investigator or Designee:
I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

________________________________________________________
Signature of Principal Investigator or Designee       Date
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